



SAKARYA  
UNIVERSITY

# 2014 INTE

INTERNATIONAL  
CONFERENCE ON NEW HORIZONS  
IN EDUCATION

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## Foreword

Dear Guests,

Welcome to the 5<sup>th</sup> 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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Prof. Dr. Vincent Ru - Chu SHIH

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Leveraging Institutional Capacity Through Research Based Evaluation

Prof. Dr. Douglas Franklin

Ohio University, USA



Why We MOOC: "Philosophy and operations of HarvardX and EdX"

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Harvard University, USA

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# Innovative management techniques in the field of environmental education

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## Abstract

Nowadays the global trend of transition to a knowledge economy is promoted. Establishment of such an economy is necessarily connected with the creation of an efficient innovation system of the labor force. Educational role that can transform the growing volume of information into an effective knowledge, which they can subsequently apply. The support process of innovation has become the most important part of science, development and application of knowledge-based society. Advanced economies consider science, research and innovation for the most important tools of technology independence and of long-term economic growth. An essential rule of any economy is therefore to support the creation of knowledge and innovation. To support the managing process formed has been a set of innovation management techniques (IMTs), are invariably considered to be effective tools for boosting competitiveness.

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*Keywords:* environmental education; innovative management; techniques; waste

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## Introduction

The need to enhance, using IMTs, follows from the existing shortages in innovations managing. **Major barriers to managing innovations are outlined below:** Absence of transparent methodology: managers are often confusingly taking innovations for purely technical or economical methods of developing a new product; Innovative culture is being absent throughout the entire organization; Absence of the model of processes and activities flows: despite the host of innovations supporting methods at hand the road to realizing and organizing the innovation remains obscured; Knowledge management is absent: 70 % – 80 % of the knowledge generated at searching for an innovative solution are lost and remain unprocessed; Quantification of results is missing: this important step is often neglected; Absence of complex innovation management: in majority of cases, the functions are common.

## Defining the IMTs

IMTs may be conceived as a broad palette of tools, techniques and methods that help institution to systematically adapt to conditions on and challenges of the market. IMTs are the methodology or the tool that allow coping with institution innovations management with more ease.

**Undisputable benefits of IMTs for institution, as they:** Enhance flexibility and efficiency; Allow to be knowledge management more effective; Step-up productivity and reduce the time of introducing an innovation; Facilitate team-wise cooperation; Allow collecting on-line acquired marketing information; Improve mutual relations; Integrate information acquired from a variety of sources; Facilitate more effective relations and cooperation with customers; Eliminate redundant processes; Reduce costs applying ICT based solutions; Lower the administrative task share (i. e. eliminate value-not-adding activities); Support e-learning and e-commerce; Improve mutual relations among employees within the enterprise culture framework.

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## Origination of innovation management techniques

Development of innovation management techniques derives from diversity of innovative procedures. Resulting from each theory are relevant techniques: *Science and research supporting techniques* – innovations derived from science and research. Innovation opportunities are based on applying results and conclusions of research; *Market survey techniques* – innovations resulting from demands and needs of the market; market-driven innovations. The theory expands the research leading position by market factor; *Innovative cooperation techniques* – innovations based on the relations existing among innovation designing players. Connections between the research, engineering, production, marketing and the customers and suppliers, respectively; *Communications, support of design, etc. techniques* – innovations following from changes in the technology. The theory of innovation emphasises importance of information technologies; *Human resource managing techniques* – on social networks based innovations. Important is to emphasise the knowledge as driving force of information through education and creative environment.

## Integrating innovation management techniques

IMTs are resolving, provided that they enjoy support of an innovative environment, identified problems and barriers to innovations. Their source and tool at a time are creativity, research and development. Whereas they are employed in all kinds of innovation projects they subscribe to enhance competitiveness.

Existent presently is an enormous set of tools, methods and techniques supporting the innovation managing. They differ by their situating in the innovation process, by degree of their fragmenting, universality and other features. Their basic models systemise iMTs.

**Creators and users of IMTs** – The innovative management players can be included in the following teams: **IMTs promoters:** *Organisations that are spreading information and create awareness on these techniques; in question are counselling companies that follow the government policy creators;* **Creators or developers of the innovative management techniques:** *These are proposing new innovation managing techniques; such are academic centres, consulting and counselling companies and operating companies.*

**Major users of the innovative management techniques:** Consulting and counselling companies; Entrepreneurial educational academies; Higher education centres; Business-making supporting organizations; Industrial companies; Financial organisations; Governments and state administration institutions.

**IMTs for Knowledge-Based Economy** – The review of identified techniques reflects their potential for knowledge-based economy.

Tab. 1 Typology of the innovation management key techniques for knowledge economy

IMTs Typology		Methods and tools
1	Knowledge managing techniques	Automatic classification tools; Balance scorecard; bibliographic methods; brainstorming; intelligence information systems; cluster cooperation techniques analysis; practice communities; management of the content; creativity supporting software; CRM system; data acquisition; decision-making supporting systems; platforms; environment condition scanning; internal and external benchmarking; knowledge and skills audit; projects managing; web monitoring; process maps
2	Market survey techniques	Technological observations; patents analyses; entrepreneurial intelligence; web monitoring; geo-marketing; customers management; virtual community
3	Cooperation and networking collaboration techniques	Marketing interfaces; creation of teams; reverse engineering; QFD methodology; TQM systems; JIT systems; continual improvements; videoconferencing tools; supply networks managing; clusters; ecosystem networks; partnerships of companies and universities; virtual commerce
4	Human resources management techniques	Needs mapping processes; on-line recruitment of personnel; competences assessment; leadership models; communication practices; outsourcing
5	Interfaces managing techniques	Marketing of interfaces; virtual models of companies; production portfolio management
6	Creativity developing techniques	Brainstorming; lateral thinking; TRIZ: creative problems solving; thought maps
7	Processes improving techniques	Benchmarking; workflow; lean production; redesign and reengineering; Kaizen; JIT; SMED
8	Innovation projects managing techniques	Project managing; projects evaluation; projects portfolio management
9	Management designing techniques	CAD systems; Rapid Prototyping; knowledge sharing; value analysis

10	Companies forming techniques	Virtual incubators; spin-offs from market surveys; best business practices; simulation of business making
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Source: Original design

### VERITE model – Virtual environment for management of innovation technologies

Project VERITE (Virtual Environment for Innovation Management Technologies) stands for a trans-regional network of the IMTs supporting, and it is primarily directed to the innovation management technology tools. Especially emphasised are the below outlined IMTs: *Industrial design; Human resources management; Technology centres; Planning of resources; Supply chains managing; Creativity techniques; Value analysis; Partners based cooperation; Logistics; Proprietary rights management; CAD modelling; Innovation cycles managing; E-business making; Applying patents; Rapid Prototyping; Virtual modelling; QFD, FMEA, SCM systems.*

#### Features of selected creativity techniques:

**BRAINSTORMING** – is kind of an upgrade to the trial and error methods. It does not eliminate confusion in searching for a solution but, quite to the contrary, utilises it for searching in multiple directions. Rules of brainstorming: Team of 8 to 12 members; Presenting the issue, not formulating a task; The session is managed by the organizer; Absence of evaluations at sessions – absolute freedom of ideas; Fear of assessing ideas as bad or faulty is eliminated; Ideas are written down (blackboard, large sheet of paper); Brainstorming is over once there are no more ideas.; pon completion, the themes are included into groups; Out of the theme ideas are excluded; Selected are ideas for further processing, evaluation or verification; Kept on brainstorming are records and the resulting solution is subject to opposing.

**SYNECTICS** – (synectis – from Greek – stands for “union of seemingly unrelated subject matters“). The objective is to disturb the habitual view of a problem and to attain an unusual, original solution. Synectic method is a form of controlled discussion the result of which are themes arrived at by linking seemingly unrelated and differing elements resulting from analogy with use of free associations. The method is applied in the form of team meeting of professionally mixed participants and a head (Chair). Sessions of groups are held by adhering to the rules of brainstorming. When a suggestion is discussed within a group, used are four kinds of analogies: **Direct analogy; Personal analogy (empathy); Symbolic analogy; Fantasizing analogy.**

**CAUSE AND EFFECT CHART** – Problem-solving is based on identifying and defining relations between the cause and their effects. Analysis of the solution is visualized using the fishbone diagram. Procedure: Defining the problem through causes and effects using an arbitrary ideas generating technique (e.g. brainstorming); Defining major problematic areas (e.g. employees, logistics, technology, marketing, etc.) and their plotting in the chart as fish bones. Later on, the chart may be modified and problem areas can be subdivided or joined; Updating the chart by records of effects and their reasons based on creative ideas and on investigating of causalities; Solutions on the chart focused on determining principal causes, their joining, dividing, relocating and systemizing. It is expected that once the cause is identified found can be adequate means to eliminate their effects.

**SCAMPER** – The technique consists of a list of the questions that stimulate creation of ideas: **S: Substitute?** (Substitute things, places, times, processes, people, ideas...); **C: Combine?** (Combine themes, concepts, ideas, emotions...); **A: Adapt?** (Adapt ideas from various contexts, times, persons, styles...); **M: Modify?** (Modify, add something more into an idea or a product, and thus transform it.); **P: Put to another use?** (Apply to another use; extract hidden possibilities from products, ideas.); **E: Eliminate?** (Eliminate or decrease the number of elements to minimum; select concepts, parts and integral parts of the problem.); **R: Reverse?** (Reverse, reorganize or add elements, places, times, roles...);

**THOUGHT MAPS** – A technique that substitutes traditional (linear) wording of analyzing and solving by use of structural map. Procedure: The problem is entered into the middle of a sheet – this grants the possibility to proceed in any direction whilst solving the issue; Individual thoughts and ideas are entered around the middle, into “branches”; In the process of resolving, notes are entered randomly, in circles from whichever corner; Entered are only the most important ideas; When analysing, the problem becomes restructured and new relations surface; Used are various marks, symbols, drawings and colours.

**CATWOE** – A creativity technique titled to reflect first letters of individual aspects that are used at analysing and resolving a problem: **C – Customer** – The system receiver. Customer is the one to who are results of solving intended and the one benefiting from the system. Analysis is to find the one whom and how will be influenced by resolving the problem; **A – Actor** – Executor. Included here are any constituents that

perform activities within the system and from activities of which is the system dependent; **T – Transformation process** – that reworks the system so that inputs become quality outputs; **W – World view** – General elements that act upon the system and influence it; **O – Owners** – System owners. Analysed are element that can start the system running or that can stop its running; **E – Environmental constrains** – Any elements of influence upon resulting quality of the system if they have connections with the environment within which is the system to be functioning.

**THE TRIZ METHOD** – Globally used TRIZ acronym derives from the Russian (теория решения изобретательских задач, *teoriya resheniya izobretatelskikh zadatch*) and means “theory of resolving patent assignments“. It was developed based on regularities in developing, determined by studies of tens of thousands patent files with the objective to find out what is common in them, and from the abstraction to derive generally usable theory for resolving research assignments to support engineering creativity. **TRIZ is based on two principles:** *Technical system are always developed through overcoming a technical or physical conflict; Formation and development of technical systems proceeds in harmony with general technology development trends.* **TRIZ methodology consists of two parts: Functional cost analysis (FNA)**, which helps to answer the question “what?“ to improve and “why?“ . Well thought-over answers to these questions are helpful at precise formulating the assignment – prerequisite of rational solution; **Inventive assignments resolving algorithm (ARIZ)**, which suggests to the solver how to **eliminate** – identify the problem and how to resolve technical and physical conflicts.

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# In-school variables supporting and inhibiting organizational learning in secondary education institutions<sup>1</sup>

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## Abstract

The purpose of this study is to determine the factors that support and inhibit organizational learning process. This study was designed as a qualitative research and phenomenological research techniques were used. Research was performed with mixed purposive sampling method in Çankaya district of Ankara in 4 Anatolian high schools. Interviews were conducted with a total of 16 people, 4 of them were school administrators and 12 of them were teachers. The data collected were analysed by using descriptive analysis and content analysis techniques. The factors that support or hinder organizational learning are addressed in the context of in-school variables. In-school factors discussed in "organizational-structural and school culture" sub-themes.

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*Keywords:* Type your keywords here, separated by semicolons ;

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## Introduction

Uncertainty of environmental conditions requires learning and to be flexible, and educational organizations are forced to think on these concepts (Collinson & Cook, 2007). Educational organizations, to adapt to changes, to show adequate and competitive performance, and to enhance their effectiveness, attempt to improve their organizational learning capacities by obtaining new information, and sharing and institutionalizing this information (Marks & Louis, 1999). However, learning is not always taking place in a desired way in educational organizations. Challenges in the learning process can inhibit organizational learning (Collinson & Cook, 2001; Garcia-Morales, Lopez-Martin, & Llamas-Sanchez, 2006; Rusch, 2005). Organizations can face individual, organizational and environmental barriers in the process of organizational learning (Schilling & Kluge, 2009). In this context, a systemic approach is thought to be beneficial that examine supporting and inhibiting factors together in organizational learning process in educational organizations. This research was carried out for this purpose. In this study, the following questions were sought:

1. Which in-school factors (related to organizational-structural and school culture) are supporting organizational learning process in schools?
2. Which in-school factors (related to organizational-structural and school culture) are inhibiting organizational learning process in schools?
3. How to improve the organizational learning process more in secondary education institutions?

## 2. Theoretical framework

Different definitions have been made in the literature on organizational learning. According to Fiol and Lyles (1985, p. 803), organizational learning is a process of improving organizational actions through better knowledge and understanding. According to Argyris (1999), organizational learning takes place in an organization when mismatches are identified and fixed or organizational learning occurs when a match is found for the first time between organizational objectives and results. Collinson and Cook (2007, p. 8) define organizational learning as a deliberate use of individual, group, and system learning to embed new thinking and practices to renew and transform the organization around shared objectives.

In-school factors are conditions that occur or present in school. These conditions can support or prevent organizational learning. School Mission and vision, school culture, decision-making structures, strategies used in

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<sup>1</sup> This study is produced from Şahin's (2014) master's thesis

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change process, availability of resources and distribution of them constitute in-school factors (Leithwood, Leonard, & Sharratt, 1998).

In this research, in-school variables are examined in the context of organizational-structural factors and school culture. As in the study of Leithwood et al. (1998), in this study, school culture is not within the organizational-structural factors, are discussed separately.

### 3. Method

This research is a qualitative research and phenomenological research method was used in this study. The study group consists of four school administrators and twelve teachers working in four Anatolian high schools in Çankaya district of Ankara in the 2013-2014 academic year. Interviews with school administrators and teachers from different branches show that maximum variation sampling method was used. Schools are coded S1-S2-S3-S4, and participants are coded P1-T1-T2-T3 by the researchers. For example, participant coded as S1-P1 refers to P1 school administrator in S1 school. The interviews took an average of 45 minutes. Nine of the participants are male (56%) and 7 of them are females (44%). On average, participants are working for about 7 years in their current schools. Therefore, it can be said that participants know enough about their schools.

A semi-structured interview form was used in this study. Interview form consists of basic questions and sub-questions related to the research problem. Researchers applied to opinion of field expert, measurement and evaluation, and Turkish language expert. Each participant was interviewed by appointment. A voice recorder was used to collect research data accurately with the approval of participants. The purpose of interview is clearly indicated to participants, and participants was expressed their personal information will be kept confidential to ensure confidence.

Qualitative data analysis techniques, descriptive analysis and content analysis, was used. When analyzing data in the study primarily the data was carefully examined, then the codes were formed from concept or set of concepts, and finally themes are formed by synthesizing the codes with a holistic approach.

### 4. Findings

Findings on organizational-structural factors that support organizational learning process are given in Table 1.

Table 1. Findings related to organizational-structural factors that support organizational learning process

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School administrators;
• To be open to comments and suggestions from teachers and be supportive in this regard (n=13)
• To create appropriate physical environment that improve organizational learning at school (n=9)
• To take opinions of relevant stakeholders in the decision making process (n=7)
• To be open to sharing and learning (n=6)
• To facilitate the work of teachers (n=5)
• To work in collaboration with stakeholders (n=5)
• To support the professional development of teachers (n=5)
• To support the personal development of teachers (n=4)
• To do evaluation meetings with school staff for school improvement (n=4)
• To motivate teachers to work (n=3)
• Creating a climate of trust in school (n=3)
• To create appropriate learning environments for teachers (n=3)
• To be fair against teachers (n=2)
• To do informative meetings with school staff on matters related to school (n=2)

---

A participant opinion on organizational-structural factors that support organizational learning process is given below:

*S2-P1: I manage any process by sharing with friends. I share what I know through formal and informal meetings with my friends. Almost everyone is able to tell what they do in school and what would be done in the future. We take decisions together. That's why it is easier for us to implement decisions.*

Findings related to school culture that support organizational learning process are given in Table 2.

Table 2. Findings related to school culture that supports organizational learning process

- 
- School staff;
    - Share their knowledge, skills and experiences with each other (n=8)
    - Work in collaboration (n=7)
    - Share the problems relevance to the school (n=5)
    - Act respectfully towards each other (n=4)
    - Give importance to teamwork (n=4)
    - Effort for the success of the school (n=3)
    - See learning as a constant need (n=2)
    - Indicate organizational commitment (n=2)
    - Know each other well (n=2)
  - There is a climate of trust in the school. (n=4)
  - Priority in the school development activities is benefit of students (n=2)
- 

A participant opinion on school culture that support organizational learning process is given below:

*S4-P1: We have a good teaching staff that communicate well with each other, know each other well, and respect for each other. This is very important for organizational learning. They do not misunderstand each other. They comfortably share the problems they experienced at school with each other. They want help from each other, and support one another.*

Findings on organizational-structural factors that inhibit organizational learning process are given in Table 3.

Table 3. Findings related to organizational-structural factors that support organizational learning process

- 
- Lack of response to the needs of the teachers of the school administration (n=4)
  - Teachers' lack of sufficient time to sharing (n=4)
  - Incomplete use of physical and technical capacity of school (n=3)
  - Teachers' workload is too much (n=3)
  - School administration fails to generate solutions to problems in school (n=3)
  - School development activities not planned well (n=2)
  - Failure to implement the decisions taken at meetings (n=2)
  - Lack of appropriate environment that can meet the social and individual needs of teachers (n=2)
  - Teacher not to ask for his/her opinions on the issues that concern him/her (n=2)
- 

A participant opinion on organizational-structural factors that inhibit organizational learning process is given below:

*S2-P1: One of the biggest problems we face is the lack of time. Teachers spend most of their time with teaching in the school. They do not have enough time to spend time with their colleagues, and discuss the problems of school. Teachers should have sufficient common time to enhance organizational learning. Due to lack of time cannot do many things that we want do.*

Findings related to school culture that inhibit organizational learning process are given in Table 4.

Table 4. Findings related to school culture that inhibit organizational learning process

- 
- The lack of a culture of learning in school (n=5)
  - The unwillingness of teachers to come together to share their knowledge (n=5)
  - The weak interaction between branches (n=5)
  - The lack of collaboration between teachers (n=4)
  - Lack of trust between colleagues (n=4)
  - Act with habits (n=3)
- 

A participant opinion on school culture that inhibit organizational learning process is given below:

*S3-T3: There is a certain communication and interaction between people there. However, I do not think teachers are in an effort to learn something from each other. So do not think there is a culture of learning in schools.*

Findings about how to improve organizational learning process more are given in Table 5.

Table 5. Findings on how to improve organizational learning process

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<ul style="list-style-type: none"> <li>• To create a democratic school culture (n=9)</li> <li>• School staff communicate better with each other (n=7)</li> <li>• School staff to develop themselves professionally (n=7)</li> <li>• Teacher's profession of love (n=7)</li> <li>• To create an environment of trust (n=6)</li> <li>• School administration and teachers to be open to change (n=6)</li> <li>• School administration and teachers to be open to innovation (n=5)</li> <li>• Do not distinguish between employees of school administration (n=5)</li> <li>• To create appropriate physical environment that encourages organizational learning (n=3)</li> </ul>
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A participant opinion on how to improve organizational learning process is given below:

*S4-T2: If you are not good at the subject you are teaching your colleagues and students do not listen willingly to you. Your opinion is not given much importance because of your incompetence.*

## 5. Discussion

### 5.1. Supporting and inhibiting variables in the context of organizational-structural factors

Organizational-structural factors that support organizational learning at school as “to be open to comments and suggestions from teachers and be supportive in this regard, and to take opinions of relevant stakeholders in the decision making process” and organizational-structural factors that inhibit organizational learning at school as “failure to implement the decisions taken at meetings, and not to ask for teachers’ opinions on the issues that concern them” can be evaluated in the context of participation in decision-making process. According to Hoy and Miskel (2012), giving teachers the opportunity to contribute to school improvement in the process of determining the policies has a positive effect on the morale of the teachers and makes them more willing to work. According to Silins, Mulford and Zarins (2002), schools that want to improve the organizational learning process provide the active participation of teachers in the process of determining school policies, revising existing school applications, identifying future goals, and to ensure sharing of information with the public, families. Collective decision-making is seen an important factor in the creation of a learning environment which is necessary for organizational learning in a study conducted by Leithwood et al. (1998). According to Marks and Louise (1999), teachers' participation in decision-making processes is a key element that improves the learning capacity of school. Therefore, it can be said that participation in decision-making process is essential for organizational learning.

Organizational-structural factors that support organizational learning at school as “to create appropriate physical environment that improve organizational learning at school, and to work in collaboration with stakeholders” and organizational-structural factors that inhibit organizational learning at school as “incomplete use of physical and technical capacity of school, and lack of appropriate environment that can meet the social and individual needs of teachers” can be evaluated in the context of coordinating. Human and material resources’ contributions to organizational objectives are provided simultaneously in coordinating (Aydin, 2010). Make a sustainable connection between the actors (school administrators and teachers who are change agents) and structure will contribute to the development of learning at the individual, interpersonal and organizational level (Giles, 2007).

Organizational-structural factors that inhibit organizational learning at school as “teachers' lack of sufficient time to sharing, excessive workload of teachers, and not to plan well school development activities” can be evaluated in the context of planning. How and when to something is important in planning (Aydm, 2010). Collinson and Cook (2007) express that lack of time in school constraints sharing knowledge, analyzing knowledge, and institutionalizing knowledge. Sufficient time for the professional development of school staff is seen as an improving factor that improve organizational learning process (Silins et al., 2002).

Organizational-structural factors that support organizational learning at school as “to be open to sharing and learning, to facilitate the work of teachers, to support the professional and personal development of teachers, to

do evaluation and informative meetings with school staff for school improvement, to motivate teachers to work, to create a climate of trust in school, and to be fair against teachers” can be evaluated in the context of influence. Aydin (2010) says that providing satisfaction in organizational relationships, providing the necessary information to employees, and providing individual development are important behavior to affect school staff. Because teachers are essential elements in the school success, teacher's professional and personal development should be encouraged (Garcia-Morales et al., 2006).

### *5.2. Supporting and inhibiting variables in the context of school culture*

Factors related to school culture that support organizational learning at school as “to share their knowledge, skills and experiences with each other, work in collaboration, share the problems relevance to the school, give importance to teamwork, effort for the success of the school, and see learning as a constant need” and factors related to school culture that inhibit organizational learning at school as “lack of a culture of learning in school, weak interaction between branches, unwillingness of teachers to come together to share their knowledge, and lack of collaboration between teachers” can be evaluated in the context of collective activity oriented school culture. According to Hoy and Miskel (2012), school staff efforts to achieve the objectives of the school, and share with each other regarding their capacity and capability in a collective activity oriented school. A school culture that supports organizational learning process has an open and honest communication, and collaboration and collegiality are common in this school (Leithwood et al., 1998). According to Kokmaz and Cemaloğlu (2010), relationship between employees are weak in organizations that collaboration is lacking, and this situation can lead to employee to isolate himself from the organizational environment. Schools have powerful culture of learning that support school staff to be entrepreneurial and to take risks. Learning is continuous and developing a shared understanding is essential in that school (Silins and Mulford, 2002; Silins et al., 2002).

Factors related to school culture that support organizational learning at school as “school staff act respectfully towards each other and know each other well, there is a climate of trust in the school, an school staff indicate organizational commitment” and factor related to school culture that inhibit organizational learning at school as “lack of trust between colleagues” can be evaluated in the context of school climate based on trust. Because of the interdependence there is a need to trust in the school. All stakeholders feel mutual trust towards each other in a school culture that organizational trust is strong, and this mutual trust allows them to work together (Hoy & Miskel, 2012). Teachers can close themselves to sharing in a school climate where the teachers do not trust each other.

Factor related to school culture that inhibit organizational learning at school as “act with habits” can be evaluated in the context of school climate based on control. Argyris (1999) explains this situation via organizational defensive routines concept. Organizational defensive routines inhibit both individual and organizational learning. Attitudes and habits that prevent change process, and defensive attitudes hinder organizational learning (Collinson & Cook, 2004).

### *5.3. How to improve organizational learning process more?*

Factors related to how to improve organizational learning process more as “to create a democratic school culture, and school administrators not to distinguish between school staff” can be evaluated in the context of commitment to democratic principles. Commitment to democratic principles in seen an important factor in the creation of political environment that is required for the development of organizational learning process (Collinson, 2008). Similarly to the findings of this study, creation of a democratic school environment is emphasized for the development of organizational learning capacity in the study conducted by Marks and Louis (1999). A school culture based on democratic principles supports organizational learning Collinson and Cook (2007).

Factors related to how to improve organizational learning process more as “school staff communicate better with each other, to create an environment of trust” can be evaluated in the context of attending in human relationships and trust. Collinson and Cook (2007) says that participation in human relationships supports organizational learning. Participation in human relationships is seen important in the creation of intellectual and social environment, and a trustworthy climate is seen important in the creation of ethical environment (Collinson, 2008).

Factors related to how to improve organizational learning process more as “school staff to develop themselves professionally, teacher's profession of love, school administrators and teachers to be open to change and innovation, and to create appropriate physical environment that encourages organizational learning ” can be evaluated in the context of attending in human relationships and trust. According to Katzenmeyer and Moller (2013), supportive conditions, and human capacity of the school affect schools to turn into a professional

learning community. Prioritizing learning for all members and ensuring the individual's self-actualization improve organizational learning process (Collinson and Cook, 2007).

## 6. Conclusion and recommendations

### 6.1. Conclusion

According to the results of the research, “school administrators to be open to comments and suggestions from teachers and to take a supportive role, to create appropriate learning environments for school staff, and to involve relevant stakeholders in the decision making process; school staff to share their knowledge, skills and experiences with each other, to collaborate, and to share identified problems in school with each other” are frequently expressed in-school variables that support organizational learning in the context of the organizational-structural factors and school culture. “School administrators not to respond to the needs of teachers, lack of sufficient time for teachers to share with each other, and insufficient use of physical and technical capacity of the school; lack of a culture of learning in school, teacher unwillingness to come together to share with each other, and weak interaction between groups” are frequently expressed in-school variables that inhibit organizational learning in the context of the organizational-structural factors and school culture.

Consequently, “creating a democratic organizational culture in school, school staff to communicate well with each other, and to develop themselves from professional aspects, teachers to love teaching profession, and to create an atmosphere of mutual trust in school” are frequently expressed supporting factors which enhance organizational learning more in school.

### 6.2. Recommendations

#### Recommendations for school administrators and teachers

- School administrators to be open to comments and suggestions from teachers and be supportive in this regard, and to create appropriate learning environments for them.
- School administrators to create common time for teachers when setting the courses in order to ensure teachers to share.
- School administrators to be sensitive to the social and individual needs of teachers, and to take an active role in meeting the needs.
- School administrators to apply to the opinions of all relevant stakeholders, and to develop their discourse and behaviors that encourage participation when making decisions on matters relating to the school or developing policies.
- School administrators to develop their knowledge, skills and experience, to share these acquisitions with school staff, and to benefit from school staff's knowledge, skills and experience.
- School administrators to organize the activities that provide personal and professional development of teachers.
- School administrators to act fairly towards school staff, and to create an environment of trust which is necessary for school staff's shares.
- Teacher to be open to learning, to take time to learning, to develop knowledge and skills through learning, and not to remain with his existing competencies.
- Teacher to ask for help from colleagues to improve classroom practices.
- Teacher to be sensitive to the wishes of his colleagues, and to develop positive relationships with them.
- Teacher to develop a positive attitude towards teaching profession, and to fulfill the requirements of the profession.

#### Recommendations for researchers

Researchers who are interested in organizational learning in educational organizations can study on how a motivating systemic mechanism can be established, and can search the answer to this problem.

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# Instructional system design for worker education in multicultural and knowledge-based society

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## Abstract

This study was to design and develop the new learning environment for workers in workplace, particularly in the industrial factory. The workplace in modern world was not only for earning their lives but also for developing the quality of lives in knowledge-based society. The multicultural education was also essential for Muslim, Chinese, and Thai workers in the southernmost of Thailand to work and live in harmony. The instructional system design was implemented in worker education to balance the working competencies and life quality. The new learning approach for andragogy was proposed for worker education based on multicultural and knowledge-based society.

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*Keywords:* Instructional System Design; Worker Education; Multicultural ; Knowledge-based Society

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## Introduction

The southernmost provinces of Thailand, Pattani, Yala, Narathiwat, and Satun are dominated by Malayu-speaking Muslims around 80% and the others are Buddhist Thais and Chinese Thais, while for whole country Buddhist Thais are the majority. Most Thai Muslims are Malay descent, reflecting the common cultural heritage Thailand's southernmost provinces share with Malaysia (Ministry of Foreign Affairs, 2011). It is the land of multicultural society including Thai Muslim, southern Thai, and Chinese Thai to identify the uniqueness of the area. However, the southernmost Thai provinces are poorer than the rest of the country, and their main business sectors – agriculture, fishing and tourism – have been hurt by the violence. Several thousand people have been killed in Muslim separatist unrest in the far south which flared in January 2004. Civilians bear the brunt of the violence (Thompson Reuter Foundation, 2013). In spite of the fact that there is the unrest situation in this area, people still live and work in peace and understand each other. In schools, colleges, workplace like government services, business and industrial factories, they have stayed and worked together in peace and been taught to be aware of the cultural diversity. In workplace like in factories in the southernmost areas, it also reflects the multicultural society by Thai Muslims, Buddhist Thai, and Chinese Thai workers. The realization of cultural diversity has strengthened the economic development as well as social development.

In industrial factories in this area, it reflects a model of the nation, the workers are comprised of Muslim, Thai, and Chinese. They have worked and lived together in harmony. Many factories have treated these workers as the valuable human resources rather than their employees. They have made benefits to the factories, at the same time they need to get more benefits in return both in cash and in kind. The workers need to be trained not only for working skills, but also for improving their quality of lives. Currently, technology innovations play important roles in creating the new learning environment for adult learners.

Malcolm Knowles (1984) presented theory of Andragogy which was the theory specifically for adult learning. Andragogy, which is the art and science of helping adult learn, is under the following assumption about design of learning:

1. Adults need to know why they need to learn something – Adults need to be involved in the planning and evaluation of their instruction;
2. Adults need to learn experientially – Experiences including failure and mistakes provide the basic for learning activities;

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3. Adult approach learning as problem-solving – Adults are most interested in learning subjects that have immediate relevance to their job or personal life;

4. Adults learn best when the topic is of immediate value - In practical terms, andragogy implies that instruction for adults needs to focus more on the process and less on the content being taught. Instructional strategies like case studies, class discussion, role playing, simulations, and self-study are most useful.

Instructors adopt a role of facilitator or resource rather than lecturer. They design instructional approaches, provide them with instructional resources and facilitate them to learn themselves and create the community of learners.

Technology innovations are the key issues for adult learning in knowledge-based society which refers to the societies that are well-educated, and rely on the knowledge of their citizens to drive the innovation, and dynamism of that society's progress. More perspectives about technology and adult learning are introduced. It proposes the approaches for integrating technology into adult learning and then considers how technology can be implemented to support and expand adult learning (Imel, 1998). Ginsburg (1998 cited in Imel, 1998) proposed how to integrate technology into adult learning by proposing four basic approaches: technology as curriculum, delivery mechanism, complement to instruction, and instructional tool.

1. Technology as curriculum: Adults learn not only content through technology, they can also learn about technology itself,

2. Technology as a delivery mechanism: This approach for integrating technology into adult learning is to use it as means for instructional delivery,

3. Technology as a complement to instruction: Technology is frequently used to complement instruction and extend adult learning.

4. Technology as an Instructional Tool: When technology is used as an instructional tool, it is integrated into instructional activities for adult learning.

This study is to find out the instructional system design for worker education in multicultural and knowledge-based society to support and increase the working competencies and the quality of lives of workers and people who live and work in the factories in the sensitive areas of the southernmost provinces of Thailand.

### **Objective of the study**

1. To study the fundamental information and knowledge related to the worker education, multicultural society, and knowledge-based society in order to upgrade the life quality of workers in industrial factories in three southernmost provinces of Thailand;

2. To design an instructional system model for worker education in multicultural and knowledge-based society;

3. To propose a model of learning innovation to increase the workers' competencies under multicultural society and sufficiency economy in order to upgrade the life quality of workers in industrial factories in three southernmost provinces of Thailand.

### **Methodology of Study**

Step I The fundamental information was studied. It included:

1. The related literature in worker education, adult learning, instructional technology was reviewed;
2. The in-depth interview with experts in adult learning, instructional technology, instructional system design, industrial factory administrators, and representatives from workers' development agency was conducted;
3. The in-depth interview with workers, employees in industrial factories in the southernmost provinces of Thailand was conducted.

Step II The instructional system design was developed. It included:

1. The focus group discussion of educators, entrepreneurs, industry and labor related government officers was organized to set a framework of an instructional system model for adult learners in southernmost provinces of Thailand with emphasis on multicultural and knowledge-based society;
2. A Prototype of Instructional System Design Model for adult learners in industrial factories in southernmost provinces of Thailand with emphasis on multicultural and knowledge-based society was proposed;
3. Final approval of an Instructional System Design Model for adult learners in industrial factories in southernmost provinces of Thailand as conducted was conducted. It was approved by the experts including adult learning experts, human resource development personnel, educators in adult learning and instructional technology.

## Findings

### *4.1. Step 1 Fundamental information*

From the literature reviews, Malcolm Knowles's Andragogy is the art and science of helping adults with two attributes that learners are self-directed and autonomous and the teachers is a facilitators of learning rather than presenter of content. Six assumptions of andragogy are the learner's need to know, the learner's self-concept, the learner's experience, readiness to learn, orientation to learning, and motivation to learn. According to Vandenberg (1998), five principles of adult learning are identified: (1) personal benefits, (2) experiences, self-direction, application and action, and learning styles. Adult learners bring experiences and self-awareness to learning that younger learners do not. To understand adult learning, we should understand learning domains, learning styles, and how and why adults learn. The popularity of distance-learning and computer-based training for both formal and informal learning has made it more and more important that adults be comfortable with using computers to learn for both work and personal enrichment (Johnson, 2007). Technology innovation made possible for adult learners anywhere anytime.

The in-depth interview with experts in adult learning, instructional technology, instructional system design, industrial factory administrators, and representatives from workers' development agency reflected that all workers needed to be developed for not only working skills and competencies but also a quality of life. The new learning environment for workers as adult learners should be introduced by integrating technology innovations in worker education for these adult learners. Currently technology-based training has emerged as an alternative to instructor-led training. The blended learning, also referred to as hybrid learning is a combination of face-to-face instruction and web-based learning delivery, and make better use of instructional resources and facilities. It is also introduced to create the new learning environment for on the job training for workers in industrial factories.

The in-depth interview with workers in three southernmost provinces of Thailand reflected that they wanted to be trained to have more skills in working, safety in working, computer and technology literacy, a quality of life development, living in multicultural and modern society. They expected the workplace should have invested more in worker development. Technology-based training was also a challenge for them to work and learn in workplace.

### *4.2. Step 2 Instructional system design for worker education*

The focus group discussion of educators, entrepreneurs, industry and labor related government officers was organized to set a framework of an instructional system model for adult learners in southernmost provinces of Thailand with emphasis on multicultural and knowledge-based society.

1. Malcolm Knowles's andragogy was introduced in developing workers as adult learners in both working skills and competencies. It included involvement in instruction, positive experiences in learning new things, problem-solving activities, and active learning;

2. Donald Schon's reflective practitioner was also introduced for worker development. Even though the principle of reflective practitioners are introduced for the professional development, the focus group discussion indicated that it was also of great benefit for worker education to develop working skills and competencies as well as life skills. If possible, reflection-in-action should be the issue for training workers as well as professionals.

3. Technology innovations should have been the hot issues in education for workers in knowledge-based society; particularly the blended learning which integrate technology-based training with face-to-face training. The workplace should have implemented more technologies for training their workers.

4. The issues of education for workers should not limited to working skills but also to increase a quality of life; particularly in the southernmost provinces of Thailand, the multicultural issues should be emphasized.

5. The issues of information society and knowledge-based society should have been considered in the instructional system design for workers as adult learners and to create the new learning environment for worker development.

A Prototype of Instructional System Design Model for adult learners or worker in industrial factories in southernmost provinces of Thailand with emphasis on multicultural and knowledge-based society was proposed as indicated in Fig 1.

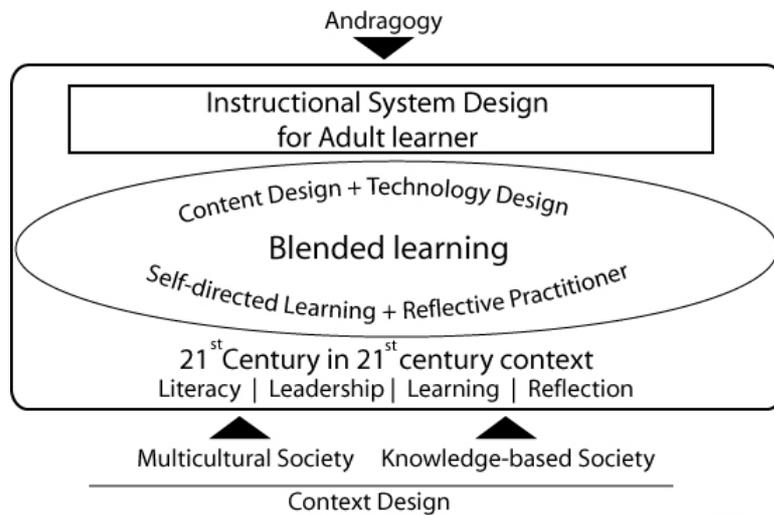


Fig. 1. An Instructional System Model for Worker Education in Multicultural and Knowledge-based Society

The principle of Malcolm Knowles's andragogy was the fundamental framework for the instructional system design for worker education. Adult learners are self-directed and must have some control over what they are learning. They can learn best when they are facilitated to learn rather than they are taught. They are motivated to learn if they can take charge of their learning and make decisions about the content and process; they contribute to the learning of their co-learners; and they have some degree of independence in the learning process.

In this model the foundation is identified as the context design. It included two aspects: the multicultural society and the knowledge-based society. These two important issues need to be considered for the instructional system design for worker education in the southernmost provinces of Thailand. This area is dominated with Muslim Thais, why Buddhist Thais and Chinese Thais are minority. People in this area need to learn to live in multicultural context. They should learn to understand and respect the culture of each group of people, live together in harmony, and how to strengthen the society by multicultural application. A knowledge-based society refers to the society that is well-educated, and who therefore relies on the knowledge of its citizens to drive the innovation, entrepreneurship and dynamism of that society's economy.

The instructional system design for worker education is unique for adult learner and developed based on principle of six assumption of andragogy which promotes self-directed learning with KAB framework: Knowledge, attitude, and behavior. Some proposals are: Emphasis on personal benefit of training, Creation of supportive environment, Use of active training methods, Use of variety of teaching methods, Provision of structured learning opportunities, provision of immediate feedback on practice, and meeting of trainee's individual learning needs.

21st Century for 21 Century Context include Literacy, Leadership, Learning, and Reflection. Literacy is more than 3R's – Reading –Writing-Arithmetics, but also includes information literacy, technology literacy. All workers needs to be trained and developed in leadership in personality and performing their career. All employees need to be trained to be learning persons in order to change the workplace to be the learning organization. All workers need to be trained to be the reflective practitioners. Reflective practice is the capacity to reflect on action so as to engage in a process of continuous learning. Even though Donald Schon's reflective practice is emphasized for the professional, we can apply this principle for workers as adult learners.

The Blended Learning are proposed for on-the job training of workers as adult learners in knowledge-based society. The blended learning is an instructional process by integrated face-to-face learning environment with on-line or technology-based learning. Instructional system design needs to make use of in class learning integrated with technology-based learning.

The content design for adult learners should be relevant to their lives. They can make use of those contents immediately. The contents should include working skill development and life development. Technology should be considered for enhancing their learning and working experiences.

All workers need to be trained to be self-directed learners as well as reflective practitioners in order to step up to be learning employees. They can learn to work and learn to live.

Finally, an Instructional system design for worker education in multicultural and knowledge-based society was proposed to the focus group discussion of five experts in adult education, instructional technology and human resource management personnel . They agreed with the proposed model. for worker education in multicultural and knowledge-based society.

## Discussion and Conclusion

The new roles of employer or entrepreneur are to design and develop the new learning environment in workplace. The plant is not only for working, but also for learning to have better life. Therefore, they need to be trained in working performance as well as life skill development. The workers as adult learners needs to be supported by principle of andragogy (Knowles, 1987) as well as the reflective practice (Schon, 2003). Technology becomes popular tools to provide the content for life-long learning since internet-based training has made the classroom available anywhere anytime. The blended learning which is the combination of traditional face-to-face on the job training along with technology-based training should be implemented in worker development. Currently, use of the term blended learning mostly involves combining Internet and digital media with established classroom forms that require the physical co-presence of teacher and students (Bonk & Graham, 2004). Finally, the context of workplace in the southern most provinces of Thailand is Muslim-dominated areas with combination of Buddhist Thais and Chinese need to be raised for multicultural workplace in knowledge-based society.

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# Integrating faith in second language acquisition curricula: A case study

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## Abstract

The benefits of integrating culture into second language acquisition curricula are extensively documented. Less is known about “faith integration,” a term describing modules that some Christian colleges expect every course to implement. I document one such module, “Haïti: Un Pays en Crise,” a series of multimedia activities focusing on Haïti’s post-2010 humanitarian crisis presented in a 2012 French II course at a private southern California university. I analyze the module’s effectiveness, discuss its instructional benefits and challenges, describe alternative strategies adopted by foreign language instructors at other colleges, and close with suggestions for implementing similar modules at non-denominational and secular institutions.

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*Keywords:* College French; second language acquisition; cultural integration; foreign language instruction; affective elements; symbolic expression; faith integration

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## Introduction

“Faith integration” is a term used by private U.S. evangelical Christian colleges to designate a required religious component or module that every syllabus is expected to include. Also known as “integration of faith and learning,” the term appears in discussions of Christian higher education, for example in a 2000 speech to the Research Institute of Ethics and Religious Liberty identifying faith integration as “the essential issue for defining Christian higher education,” tracing a provenance from Newman’s *Idea of a University* and recommending implementation “across campus and across the curriculum” (Dockery, 2000). Practically speaking, the term has two meanings: first, the general reconciliation of religious doctrine and scriptural teaching with course content, and secondly, what is sometimes called instructor “intentionality” or “deliberateness” (Harris, 2003), meaning the development of course materials designed to integrate religious instruction into class activities. Each campus and divisions handles this directive differently, some giving instructors wide latitude and asking students to assess their success in final course evaluations, and others addressing the issue institutionally via annually planned campus programs that every course is expected to contribute to.

The subject of this case study is an example of the latter, a second-semester first-year French course, FR-102, taught at a mid-sized Christian university in southern California, Azusa Pacific, in the spring of 2012. The present author was invited to teach a section of the course which was led by Dr. James Fujitani. The required course text was the beautifully designed and “highly successful” *Promenades*, then in its first edition (Dziedzic, 2014). The text and its ancillaries, though rich in cultural material, avoid all mention of religion, apart from occasional vocabulary items such as *église* (Mitschke & Tano, 2010). Christian and Islamic holidays such as *Nöel*, *Pâques*, and *Ramadan* for example make no appearance. The course proceeded according to a judicious and briskly-paced schedule combining lectures, lab sessions, workbook assignments, quizzes, exams, and activities designed to introduce students to a full menu of second-semester vocabulary items and grammatical structures and to provide ample opportunity for practicing them.

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## 2. The case study module: Elements

The FR-102 Faith Integration module focused on the humanitarian emergency in Haïti arising from the devastating Port-au-Prince earthquake of January 12, 2010. The module consisted of the following elements, distributed over a period of approximately three months, from mid-February to mid-April 2012:

- Two news articles, a January 2010 account of the quake and a 2012 Oxfam report on the progress of reconstruction, distributed to students via e-mail in mid-February (Curran, 2010; Cohen, 2012);
- A PowerPoint presentation, “Haiti: Un Pays en Crise,” giving background on the Haïti’s colonial and recent history, including the Toussaint L'Ouverture rebellion and the election, removal, reinstatement, and re-removal of former President Jean-Bertrand Aristide (Fujitani 2012);
- A screening of a documentary feature film, *Ghosts of Cité Soleil*, set in a pre-quake suburb of Port-au-Prince that students were asked to view either online or at an on-campus evening screening in late March (Leth, 2006);
- A three-chapter excerpt of a 2011 book, *Haiti quake 2010, Chronicle of a year of crisis: Requiem or kairos* by Dr. Jules Casséus, Director of l’Université Chrétienne du Nord d’Haïti in Limbe, Haïti, also distributed to students via email;
- An evening lecture-discussion by Dr. and Laurel Casséus, visiting scholars in residence for the 2011-12 year, addressing a wide range of issues pertaining to the Haïtian reconstruction efforts and Haïtian life generally;
- A short (2-page) Faith Integration essay, assigned directly after the Casséus lecture, asking students to reflect on and respond to the various module materials and to suggest a suitable personal response to the crisis.

Students were given advance notice of the evening activities, film screening and lecture, in early January, and reminded regularly in the weeks leading up to them. Some students’ personal schedules prevented them from attending one or both evening events, and attendance was therefore optional, but since both activities replaced weekly lab meetings, students were given alternative assignments in the event they missed one or the other. Students were given approximately two weeks to prepare the essay.

### 3.3. Analysis.

#### 3.1. The film.

Attendance at the evening screening of *Cité Soleil* was approximately 30 students, or 50% the class, which consisted of three sections of about twenty students each. (Attendance at the Casséus lecture, by contrast, was approximately 80%). Judging from a quiz given after the film, many students either did not watch it or did not attend to the details, which were somewhat obscured by a somewhat predictable reggae-gangsta formula plot. Loosely based on real events and purportedly real characters, including a narrating French health worker named Lele whose participation in the film’s events include a sexual relationship with one of the lead characters. The film focuses on a conflict between a pair of feuding gangster brothers, one loyal to Aristide and one challenging his administration, and their efforts to control *Cité Soleil*, an impoverished urban district of Port-au-Prince. Both brothers come to sad ends, one in prison and the other presumed dead, and their efforts to succeed via avenues legal and illegal – black marketeering and weapons trading – come to a violent conclusion with the 2006 arrival of the UN peace-keeping forces that eventually took control of area from community leaders.

Student reaction to the film was somewhat mixed. Many did not do well on the film quiz, and few mentioned it in their Faith Integration essays. Nor was the film mentioned in the Casséus lecture or in the discussion that followed. Overall it was something of a disappointment as it filmed six years prior to the 2010 earthquake and offered little insight into it. And while drawing abundant attention to the poverty and lawlessness of Haïti’s urban poor, the film says very little about Haïti’s history, francophone culture, or natural beauty. It does however present vernacular French in a *verité* setting, in this case a patois creole of French and English that can be discerned without subtitles, which are nonetheless provided, providing an instructive contrast to the academic French taught in the course. It also makes Haïti a less abstract location, although the film has much in common with *The Harder they Come*, the Jamaican classic starring Jimmy Cliff as a reggae criminal (Henzell, 1972), and *City of God*, a genre film set in a Brazilian favela and focusing like *Cité Soleil* on rival brothers (Meirelles, 2002)..

#### 3.2. The book.

Dr. Casséus’ book is a thoughtful, well-researched analysis written from a millennial perspective in the form of a prescription for a new Haïtian polity organized from the wreckage of the 2010 quake, with bulleted lists of guidelines for what Dr. Casséus calls the “mental reconstruction” of Haitian society, a phrase taken from a

similar “document for theological reflection,” “The Prophetic Mission of the Church in Haiti,” sponsored by Compassion International (p. 69). This reconstruction includes the replacement of prevailing Haïtian mentalities of “fatalism,” “blame,” “I do not really care about Haiti,” and “traditionalism” with “the mentality of God” and an invigorated “Haitian Corpus Christi” or evangelical church (pp. 90-93, 122-23). Dr. Casséus calls on Haïtians to seize the opportunity of Haïti’s “ecological disaster” to reorganize and re-evangelize the country (p. 70).

Student responses to Dr. Casséus book were also somewhat mixed. While Dr. Casséus in person is extremely wise, affable, and inspiring, his book does not radiate the same warmth, and seems rather remote and detached from the urgent problems it seeks to address. The prophetic register was also somewhat difficult for students to navigate, as class discussions typically kept to a practical and limited range of concrete discourse. Student were asked to include at least one citation from the book in their essays, and most did, but few seemed to have penetrated further than the paragraphs discussed in class. The book is also written in English, so apart from introducing students to its author, it did not have a direct bearing on second-language acquisition.

### 3.3. The Casséus lecture

The lecture by Jules and Laurel Casséus was far and away the most compelling element of the module, and had the best attendance. Fittingly, it came toward the end of the semester, in the week before Easter vacation, which lent the evening a holiday air. Weekly lab sections were also cancelled to in order to allow students to attend. The Casséuses brought a number of slides, old and new, showing the progress of their small rural evangelical university, which greatly enhanced their lecture. For the most part, they described the cultural experience of living in Haiti, the educational system, and practical opportunities for conducting humanitarian work there, including suggestions for students interested in volunteering. Both were born in Haïti (Laurel’s missionary parents founded the university as a seminary) and both are fluent in French and English. Although prophetic elements of his book were not directly addressed, Dr. Casséus articulated a somewhat condensed expression of his vision for a newly evangelized Haïti.

Student responses to the Casséus lecture were highly positive. Most were taken by the pair’s humility and charity and several had questions, many about popular culture, for example the language of radio and television broadcasts, the reliability of busses, and the availability of electricity. Students also asked about the system of private and public schools, class size and attendance, educational fees, and types of universities. Several expressed interest in volunteering over the summer and the Casséuses personally shared their contact information after the lecture. A few students asked about the dialects spoken in Haïtian homes and schools, and Dr. Casséus explained that French literacy, particularly written literacy, was sometimes used as a discriminatory factor, most Haïtians speaking a modified Anglo-French *patois* or créole. There were also a few questions about the current political regime and the whereabouts of Jean-Bertrande Aristide, who makes a brief appearance in *Cité Soleil* via news footage. Haïti’s colonial ties to France were not discussed in either the lecture or film.

### 3.4. Contributions to second-language acquisition

The Faith Integration module made the following observable contributions to student second-language acquisition:

- The Haïti material added considerable cultural interest to the second semester, relieving an otherwise relentless stream of new vocabulary to be memorized and increasingly complex constructions to be learned, and helped stave off the - ennui that often sets in after the initial excitement of learning to communicate in a new language subsides.
- It gave struggling students another way to succeed, using English materials and sources, and gave students whose French was more advanced something fresh and new to focus on.
- It replaced the religious cultural material missing from *Promenades* and similar first-year French textbooks, for example Heinle-Cengage’s *Horizons*, which also lacks discussion of religion, although it explains how to say *ils sont catholique* and *à la synagogue* in marginal *vocabulaire supplémentaire*, and offers a few religious terms in the end-of-book glossary: *juif, mosque, synagogue* (Manley, Smith, McMinn, & Prévost, 2015). Prentice Hall-Pearson’s popular *Chez Nous* goes further, and in its latest edition includes a calendar of liturgical feasts and holidays, along with a second-semester discussion of *les rites et les rituels religieux* and *les fêtes populaire: le ramadan et les fêtes du Carnaval et le Mardis gras*. It also touches on *les racines multiples (arabes, juives, françaises)* and *l’identité franco-marocaine* (Valdman, Pons, & Scullen, 2014).
- By focusing on an urgent crisis and identifying opportunities for volunteer service, the module gave students a concrete, socially engaged *raison-d’être* for second-language acquisition, beyond such abstract goals as

the ability to order drinks in a café or describe one's clothes. This real-world immediacy would be difficult to replace using only literary or film artifacts, as they are necessarily produced far in advance of the course.

### 3.5. Instructor challenges

The Faith Integration module presented certain challenges to the instructor. One was the class time needed to present and discuss the various materials, which necessarily took time away from the technical instruction and practice. Another was that module elements were presented mainly in English, which occasionally conflicted with the goal of French immersion during class. Additionally, Dr. Casséus' vision for a reconstructed Haïtian *mentalité* rejects "tradition" and embraces indigenous entrepreneurship, thus diminishing the legacy of Haïti's colonial origins, including the importance of correct French expression in academic, government, and professional spheres. Neither the film, book, nor lecture presented France, French, or the Francophone world in a flattering light, and Haïti itself appeared as a rather backward and dysfunctional object of charitable attention.

On balance, however, it was my observation that few students were troubled by these challenges, or felt a need to reconcile them, and that their interest in learning French was not diminished by them. On the contrary, students found the Casséuses personally inspiring and their descriptions of Haïtian life intriguing. In that respect, the lecture had a tonic effect on the class, making French fresh again and invigorating students at the brink of final exams. This effect was widely reflected in the Faith Integration essays, as most students chose the Casséus lecture as their point of departure.

## 4. Alternative settings

### 4.1. Other denominational institutions

Instructors at other Christian universities have approached the Faith Integration directive differently. For example, one instructor at Pepperdine University in Malibu has described her initial perplexity at being asked to devise a module for her French I class, for the reason that she expected first-year foreign language students to lack the proficiency required for serious religious discussion: "how can students talk about deep, faith-centered topics when they are still learning to count and tell time in the target language?" (Binkley, 2007, p. 430). The solution in this case came in the form of a weekly "convocation," or required chapel attendance, offered weekly at Pepperdine offered in three languages. Charged with organizing the French convocation, the instructor decided to replace the oral component of the final with a convocation preparation, asking her French I students to select French hymns and readings for recital, which in cases of scheduling conflicts were performed at the close of end-of-semester classes: "the last 10 minutes are often devoted to a student singing a hymn, reading a poem, or reading a scripture in French," with results described as "inspiring" and "better-than-expected": "The benefits of this integration of faith and learning have been countless. The students who have presented [ . . . ] have helped create a new and different classroom dynamic that is significant in its positive effect" (p. 433).

A slightly different scenario is presented to instructors at Catholic colleges such as Loyola Marymount University in Los Angeles, which does not require "faith integration," but asks instructors to be mindful of non-Catholic students while also providing a spiritually enriching educational experience. In such cases, there are many opportunities for integrating French prayers, hymns, clerical documents, devotional materials, and similar *realia*, even French language religious services via internet, for example *La Messe*, broadcast weekly on [www.FranceCulture.fr](http://www.FranceCulture.fr), or to attend French-language services during the French summer abroad program.

### 4.2. Non-religious institutions

In non-denominational and secular settings, foreign language instructors would of course need to consider both administrative guidelines governing religious speech and the religious backgrounds of their students, and work within these to develop projects that giving students a chance to express themselves religiously using francophone materials from their own faith traditions, if they choose to, or alternatively, using non-religious materials such as songs and lyrics to which they feel a strong affinity, which instructors can help students select.

## 5. Conclusion

The case study Faith integration module, even where not directly related to second-language acquisition, added interest, variety, and opportunities for self-reflection, self-development, and self-expression to the course, as well as fresh knowledge and a strong affective component that would be hard to tease out of a strictly linguistic course. It also presented struggling and advanced students with fresh subject matter they could

approach on an equal footing. Assessing the religious value of the module is beyond the scope of this essay, but it should be pointed out that students at many denominational universities, including APU, come from a variety of faith traditions, and do not expect to be proselytized, and the module elements I observed did not make direct reference to religious doctrine or to tendentious passages of scripture. It was also my observation that the Faith Integration module, although mandated, provided considerable instructional benefit to second-language acquisition by enhancing students' affective investment in the course and motivating their efforts at mastering the target language.

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# Intention to publish in open access journal: the case of Multimedia University Malaysia

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## Abstract

The main purpose of this research is to identify the intention to publish in open access journals based on six factors which are perceived journal's reputation; perceive visible advantage; perceived speed and ease of publishing; perceived career benefit; perceived topical relevance; and awareness and familiarity. Using the survey research method involving 114 respondents from Multimedia University Malaysia, perceived journal's reputation; perceived visible advantage; perceived topical relevance; perceived career benefits; and awareness and familiarity have a relationship with intention to publish in open access journals. Further analysis shows that perceived visible advantage; perceived career benefits; and awareness and familiarity are the significant predictors of intention to publish in open access journals. The present study provides both a theoretical and practical contributions to understanding the predictors of intention to publish in an open access journal and should be of interest to both researchers and practitioners.

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*Keywords:* Open access journal; predictors; adoption; survey; Malaysia

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## Introduction

The emergence of electronic publishing has changed the landscape of scholarly publication. Open access journal (OAJ) has now become one of the popular mediums for publishing of research articles among academicians, and scholars. The term "open access" denotes free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself (Budapest Open Access Initiative, 2002). The primary index for all open access journals would be the Directory of Open Access Journal (DOAJ) which currently listing around 9,158 peer-reviewed open access journal titles.

Today, open access journal has also gained its momentum by having their own impact factor and also indexed in various databases such as Web of Science and SCOPUS. Driven by this development, the growth rate for the open access journal has increased rapidly over the year and regarded as phenomena in today's scholarly publishing landscape. Academicians and scholars have shown great interest, signaling their acceptance on this mode of publishing. One of the most highlighted advantages of open access journal is the free access to the journal content. Unlike the traditional publishing model where users have to pay, open access journal allows free access to almost everyone. Restrictions or barriers that are normally created through subscriptions have been totally eliminated, hence accelerating the pace of dissemination and creation of knowledge. Moneys that are normally used for journal subscriptions can now be used by the libraries for other development activities. This fascinating development of the open access journal is however not synchronized with studies focusing on its adoption among scholars. The extant literature proof that not much research had been done. Due to this, theoretical models or frameworks explaining adoption phenomenon among scholars is also very limited. The available studies are also limited to countries other than Malaysia. Inspired by this scenario, this study was conducted with the aim of (i) identifying factors that will influence scholars to publish in open access journals, (ii) identifying the strongest predictors of intention to publish in open access journals.

## Literature Review

Mining the literature unveiled that several studies have been done focusing on open access journal adoption. Swan & Brown (2004) conducted a quantitative study and identified factors that influence intention to publish in open access journal are principle of free access to all readers; ease and fast publication; larger readership; and the believe that the article will be more frequently cited. Rowland & Nicholas (2005) found that researcher's intention to publish in open access journal was influenced by the journal's reputation (related with impact factor and reputation of the editorial board); wider readership; speed and ease of publication; allows preprint and post-print publishing; and allows authors to retain copyright. Thompson (2007), disregarding either it is a subscription based journal or open access journal, identified factors that influence scholars' decision to publish is a particular journal are (i) visibility, (ii) journal impact factor, (iii) journal focus or topic, (iv) publication timelines, (v) journal accessibility, (vi) author cost and journal governance. Among the aforementioned factors, the most influential factor is the recognition factor such the impact factor, peer-reviewed and being indexed in well-known databases.

Xia (2010) conducted a longitudinal study (1990's – 2008), examining the changing pattern of scholars' attitude towards open access journal. This study found the scholars' attitude towards the open access journal remained the same and these are journal prestige, unfamiliarity, publishing speed, free access, and career advantage. In a recent study by Nariani & Fernandez (2012), found that the determinants that influence author intention to publish in open access journal are journal reputation; capability to reach a wider readership; speed of publication; being indexed in Scopus and Web of Science; career advancement; and journal subject scope or topical relevance. The study also revealed that the article processing fee has a negative relationship with scholar intention. Another study by Ellingford (2012) also found that ease of publishing, promotion and perceived quality of open access outlets as some of the themes that influence scholar to publish in open access journals.

## Research Framework

Figure 1 illustrates the research framework used in this study to identify the level of intention among the scholars of Multimedia University towards publishing in open access journals and to explore the factors that influence the scholars' intention to publish in open access journals.

### *.1. Perceived Journal Reputation*

The journal's reputation is defined as a perception academic community of the journal's position and ranking. The perceived reputation is also associated with impact factor, editorial board performance and peer-reviewed quality. Ji-Hong & Qian (2007) found that perceived journal's reputation is significantly affecting scholar intention to publish in open access journals. Similarly, study by Ji-Hong (2009) also found that journal's reputation (in term of authority) has influenced the authors' behavior and significantly influence scholars' intention. Nariani & Fernandez (2012) found that journal's reputation as a significant predictor of the selection of open access journal as a medium for publishing. Another study by Bjork & Holmstrom (2006) showed that journal's prestige has a direct influence on the authors' intention to submit their manuscript. With this background, the following hypothesis is developed: *H1- Perceived journal's reputation is a significant predictor of the intention to publish in open access journals*

## .2. Perceived Visible Advantage

Ji-Hong (2009) defines perceived visible advantage as the extent to which a scientist or scholar believes that publishing in an open access journal will enhance the visibility of his or her research. Ji-Hong & Qian (2007) found that perceived availability is significantly affecting scholars' intention to publish and use an open access journal. A web survey conducted to 481 researchers by Mann et al. (2009) revealed that the significant determinant of intention is the capability to disseminate new findings widely and rapidly. Ji-Hong (2009) also unveiled that perceived visible advantage is one of the main predictor of intention to publish in open access journals. Another study by Nariani & Fernandez (2012) found that readership level was associated with intention to publish in open access journals. Based on the findings of the aforementioned studies, it is hypothesized that: *H2 - Perceived visible advantage is a significant predictor of the intention to publish in open access journals.*

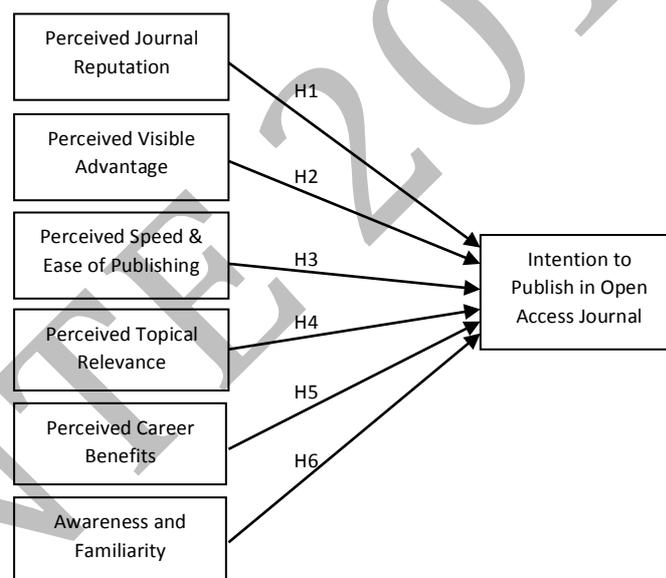


Fig. 1 Theoretical Framework

### *.3. Perceived Speed and Ease of Publishing*

Perceived speed and ease of publishing is the extent to which scholar think publishing in open access journals is faster and easier than traditional subscription journal. Ji-Hong & Qian (2007) found that one of the social construct that drive the intention of scholar to publish in open access journals is the demand for faster, wider, and more effective dissemination of research products. Nariani & Fernandez (2012) also discovered that the authors perceived turnaround time as an important factor in the choice of an open access journal. Since the open access journal is available free online, the submission and review process also are made online, thus allowing for the article to be published immediately after the peer-review stage. This was considered an important factor in influencing the intention to publish in open access journals. Bjork & Holmstrom (2006) showed that speed of publication is an important factor that will directly influence the author's intention to publish in any journal (either open access journal or subscription journal). Even though this study does not directly focusing on open access journal, but it is still applicable. Given this context, we hypothesize: *H3 - Perceived speed & ease of publishing is a significant predictor of the intention to publish in open access journals.*

### *.4. Perceived Topical Relevance*

Another factor that would influence the choice of a journal is the extent to which the journal's scope fits with the scholar's subject interest, termed as topic relevance. Ji-Hong (2009) defined the perceived topical relevance is the extent to which a scholar believes that the topic of an open access journal will be consistent with his or her academic interests. Ji-Hong & Qian (2007) found that perceived topical relevance is significantly affecting scholar intention to publish and use an open access journal. Ji-Hong (2009) also showed that perceived topical compatibility is one of the main predictor that has influenced the author to publish and adopt an open access journal. Nariani & Fernandez (2012) also found that the subject scope of the journal as an important element that influence the author's intention to publish. Consistent with the above findings, it is therefore hypothesized that: *H4- Perceived topical relevance is a significant predictor of intention to publish in open access journals.*

### *.5. Perceived Career Benefits*

Perceived career benefit is the extent to which a scholar believes that publishing in an open access journal will be beneficial in further developing his or her academic career (Ji-Hong, 2009). Most of the scholar feels that the reason for them to involve in publication is to communicate their research findings to other peer and to gain career advantage. Ji-Hong & Qian (2007) found that perceived career benefit is significantly affecting scholar intention to publish and use an open access journal. Another study by Ji-Hong (2009) also found that perceived career benefit has influenced the author behavior and significantly influence scholar intention to publish and adopt open access journal publishing. Mann *et al.* (2009) discovered that intention to publish in the open access journal is greatly influenced with a perceived career advantage. Nariani & Fernandez (2012) found that publishing in open access journal was not perceived as a barrier for career advancement because the granting council recognized publication in open access journals. To this effect, the next hypothesis is put forward: *H5 - Perceived visible advantage is a significant predictor of intention to publish in open access journals.*

### *.6. Awareness and Familiarity*

Ji-Hong (2009) define perceived awareness is the extent to which scholar or scientist's belief that he or she is aware of an open access journal, based on previous experiences such as visiting the journal's web site or publishing, reading, or citing articles from the journal. Ji-Hong (2009) found that perceived awareness has influenced the author behavior and significantly influence scholar intention to publish. Nariani & Fernandez (2012) found that author awareness of the open access journal has increased their intention to utilize the open access journal as publication medium. Some of the reasons of their awareness is through the experience as reader of open access journal and recommendation from peers. Both of these factors, have not only give awareness, but also familiarity with open access journal which in return increase the intention level to publish. Based on this premise, the last hypothesis is formulated: *H6 - Awareness & familiarity is a significant predictor of intention to publish in open access journals.*

## **Research Methodology**

The study used a survey method with questionnaire as the instrument for data collection. The questionnaire was developed based on the instruments used by previous studies (Ji-Hong & Qian, 2007; Ji-Hong, 2009;

Nariani & Fernandez, 2012). Perceptual measures in the form of statements were used for measuring each variable with a corresponding Likert scale anchored as 1 for “Strongly Disagree”; 2 for “Disagree”; 3 for “Neither Agree Nor Disagree”; 4 for “Agree” and 5 for “Strongly Agree”. The questionnaire was pre-tested with several experts and prospective respondents. Subsequently, it was pilot tested with 30 students. The results of the pilot test are illustrated in Table 1 showed that the Cronbach Alpha for all variables were well above 0.7, indicating that the questionnaire was acceptably reliable.

The population of the study was academicians working in Multimedia University Malaysia. A total of 581 questionnaires was sent to the targeted academicians. After the duration of the data collection was over, a total of 121 questionnaires were returned. However, seven were found to be unusable for further analysis as they were incomplete. The remaining 114 were analyzed using IBM SPSS. The statistical analyses carried out were frequency analysis; descriptive analysis focusing mean and standard deviation; factor analysis (EFA) for assessing common method bias; correlation analysis for looking into the relationship between variables; and multiple regression for testing research hypotheses.

Table 1. Sources of measurements of variables and results of pilot test

Variable	No of items	Sources of measurement	Cronbach Alpha of pilot test
Perceived Journal Reputation	5	Ji-Hong & Qian (2007);	0.858
Perceived Visible Advantage	5	Ji-Hong (2009); Nariani	0.810
Perceived Speed and Ease of Publishing	5	& Fernandez (2012)	0.736
Perceived Topical Relevance	5		0.720
Perceived Career benefits	5		0.660
Awareness and Familiarity	5		0.864
Intention to Publish	5		0.797

## Findings

Table 2 showcases the demographic profile of the respondents. Out of 114 respondents, 63.2% were female while the remaining 36.8% were male. In terms of position, the majority indicated to be holding the position of lecturer (65.8%) while the minority were professor (2.6%).

Table 2. Demographic Profile

		Frequency	Percent
Gender	Male	72	63.2
	Female	42	36.8
Position	Lecturer	75	65.8
	Senior Lecturer	28	24.6
	Assoc. Prof.	8	7.0
	Professor	3	2.6

In order to identify whether the data is experiencing common method bias, Harman’s single factor test was executed. All items from all constructs under study were entered for analysis and constrained to only a single factor. The results showed that the single factor explained only 31.0%, less than the benchmark value of 50% of the total variance, implying that the collected data is free from the problem of common method variance. Accordingly reliability analysis was also performed and the results indicate that the Cronbach Alpha values are well above the cutoff value of 0.7. The recorded Cronbach Alpha values are between 0.776 and 0.918 implying that the instrument used in this study is highly reliable.

The mean scores of all variable are well above the mid value (i.e. The middle value of the Likert scale is 3), suggesting that in general, the respondents of the study inclined to agree with the listed characteristics which are journal reputation; visible advantage; speed and ease of publishing; and topical relevance (refer Table 3). They also agreed that open access publishing provides career benefits. They also indicated to be fully aware and familiar with open access journal. In addition, they respondents also indicated that publishing in an open access journal will provide career benefits. The mean value for intention to publish is also bigger than three, suggesting that the respondents have strong intention to publish their article on open access journal. The results of the correlation analysis suggest that, except for journal reputation, other independent variables have a moderate relationship with intention to publish. This finding denotes that each independent variable by itself, has some influence with intention to publish. The strongest relationship is for the variable perceived career benefit ( $r = 0.546$ ,  $p < 0.01$ ), followed by perceived visibility ( $r = 0.430$ ,  $p < 0.01$ ).

Table 3. Mean, Standard Deviation and Correlation Analysis

	Cronbach Alpha	Mean	Std. Deviation	[1]	[2]	[3]	[4]	[5]	[6]	[7]
[1] Visible	0.870	4.1965	0.54916	1.000						

[2] Speed	0.781	3.6281	0.61190	0.199*	1.000					
[3] Reputation	0.884	3.4842	0.69021	0.386**	0.104	1.000				
[4] Relevance	0.776	3.8825	0.52936	0.497**	0.388**	0.502**	1.000			
[5] Benefit	0.918	3.6351	0.74845	0.437**	0.211**	0.589**	0.444**	1.000		
[6] Familiarity	0.874	3.5930	0.75066	0.286**	0.215*	0.237*	0.499**	0.233*	1.000	
[7] Intention	0.886	3.4246	0.76431	0.430**	0.073	0.378**	0.366**	0.546**	0.373**	1.000

\*. Correlation is significant at the 0.05 level (2-tailed). \*\*. Correlation is significant at the 0.01 level (2-tailed).

Regression analysis was performed to test the proposed hypotheses and the results are displayed in Table 4. The F statistics produced ( $F = 11.781$ ,  $p < 0.01$ ), thus confirming the fitness for the regression model. The coefficient of determination,  $R^2$  was 0.40 which suggests that the six factors can significantly account for 40.0% in the scholars' intention to publish in open access journals. However, only three factors were found to be the significant predictors which are perceived visibility; perceived career benefits; awareness and familiarity. Based on this results the established hypotheses H2, H5 and H6 are fully supported, while the remaining (H1, H3 and H4) is not supported.

Table 4. Results of Regression Analysis

R	0.632				
R <sup>2</sup>	0.400				
F	11.781				
P value of F	0.000				
Variables in the equation					
	<i>b</i>	SE <i>b</i>	Beta ( $\beta$ )	<i>t</i>	<i>p</i> value
Constant	0.302	0.544		0.555	0.580
Visible	0.276	0.125	0.198	2.197	<b>0.030</b>
Speed	-0.131	0.101	-0.105	-1.298	0.197
Reputation	0.015	0.110	0.014	0.136	0.892
Relevance	-0.019	0.153	-0.013	-0.121	0.904
Benefit	0.432	0.100	0.423	4.315	<b>0.000</b>
Familiarity	0.248	0.088	0.244	2.810	<b>0.006</b>

## Discussion

The present study provides both a theoretical and practical contributions to understanding the determinants of intention to publish in an open access journal. Out of the six investigated independent variables, five variables were found to have some relationship with intention to publish. Specifically, these variables are perceived journal's reputation; perceived visible advantage; perceived topical relevance; perceived career benefits; and awareness and familiarity. Contradict to our expectation, it turned out that perceived speed and ease of publishing has no relationship with intention to publish. While the respondents agreed that publishing in open access offers quick and fast publication, it is however not a key driver that moves them toward publishing. Two other variables, perceived reputation (tested as H1) and perceived topical relevance (tested as H4) are also found to be insignificant predictors. This result suggests that the absence of perceived speed and ease of publishing; perceived reputation and perceived topical relevance will not affect significantly on their intention to publish in an open access journal.

The perceived career benefit is found to be the strongest predictor ( $\beta = 0.423$ ,  $p < 0.01$ ). The result suggests that the higher is the perceived career benefits, the higher would be the intention to publish in open access journals. This finding is consistent with that of Ji-Hong & Qian (2007); Ji-Hong (2009); and Nariani & Fernandez (2012). The implication of this result is that the authorities concerned, such as the top management of the university should initiate efforts to increase the perceived benefits of publishing in open access journals. This can be done through continuous campaign promoting the benefits of open access publication.

The second predictor that is found to have a profound effect on intention to publish open access journal is awareness and familiarity ( $\beta = 0.244$ ,  $p < 0.01$ ). This finding is in tandem with Ji-Hong (2009) and Nariani &

Fernandez (2012) and suggests that the higher is the awareness and familiarity of the scholars regarding open access journal, the higher is their intention to publish their research findings in that medium. This finding should alert the management of the universities on the importance of making their academicians, well informed about open access journals. Perhaps, activities geared towards promoting and exposing open access journal will make these academicians more aware and familiar with open access journal and this in turn would further intensify their inclination to publish.

The third significant predictor discovered in this study is perceived visible advantage ( $\beta = 0.198, p < 0.05$ ). This finding further support previous research by Ji-Hong & Qian (2007); Ma et al. (2009); Ji-Hong (2009); and Nariani & Fernandez (2012). As pointed out by these authors, wider readership is just one of the important reasons by scholars to publish their research findings in open access journals. Nonetheless, this finding suggests that as the perception on visible advantage increases, the possibility for the academician will sparingly increase.

## Conclusion

The purpose of this article has been to explore factors that influence the intention of users to publish in open access journals. To achieve this purpose, an empirical based framework mainly drawn from previous empirical studies has been developed. The results of the analyses suggest perceived journal's reputation; perceived visible advantage; perceived topical relevance; perceived career benefits; and awareness and familiarity have a relationship with the intention to publish in open access journals. Further analysis shows that perceived visible advantage; perceived career benefits; and awareness and familiarity are the truly significant predictors.

While this study has achieved its objectives, it is still subject to several limitations which are mainly associated with the chosen data analysis and the sample size. In this study, non-response bias was not assessed. Secondly, the small sample size involved in this study has prevented the authors from using more reliable analysis such as Structural Equation Modeling. Future study should not only address this issue, but also consider extending the framework by integrating other independent variables.

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# Interaction intensity levels in blended learning environment

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## Abstract

This paper deals with the concept of blended learning in foreign language teaching. It describes human and non-human types of interaction in a blended learning environment. The way to help students achieve high interactive online/real-world learning experiences to shift them into a different paradigm of learning based at high, intermediate and low interaction intensity levels using group work will be discussed.

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*Keywords:* blended learning environment; social competence; group work; types of interaction; interaction intensity levels

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## 1. Introduction

One of key trends to acquire foreign language competences through blended learning has led to the fundamental issue: how to make this education form most useful. There is a wide variety of models to organize blended learning at university foreign language courses. The choice of blended learning models depends on the learning environment, general purposes and traditions in foreign language teaching.

Considering blended learning in certain foreign language teaching (FLT) contexts, there is a pressing need to rethink issues such as interaction types and their intensity in the electronic environment compared to the interaction in the traditional classroom. These differences are crucial for group work organization and collaboration of all subjects of the educational process. The focus of this research is the social interaction in the group work in the blended learning environment, its types and intensity levels, because it is a challenge for the teacher to design a thoughtful blended learning course which is based not only on a non-human but also human/social interaction.

In section 2 the concept of blended learning and features of the social competence development in the virtual environment will be analyzed.

In section 3 different interaction types that can be used in a blended learning environment for FLT will be discussed.

Interaction intensity levels and their influence on aspects of the pedagogical course design will be considered in section 4 in the research focus on group work.

## 2. Blended learning and social competence

### 2.1. Blended learning

In section 2 the concept of blended learning and features of the social competence development in the virtual environment will be analyzed.

In recent years the concept of blended learning is actively discussed. In modern pedagogical literature three main environment types to deliver education are described: online/distance learning, face-to-face (F2F) in the traditional classroom and F2F online learning / live virtual classroom. F2F learning in the traditional classroom means that students and the teacher (instructor) are in one place at this time. Synchronous F2F in a live virtual classroom implies that students and the teacher work together simultaneously but in different places. Synchronous delivery online creates a sense of a virtual community. It means that everyone has to be at the computer at this time. It requires that students should coordinate with the instructor and classmates to plan a schedule to be available at a prescribed time (McVay Lynch, 2004). An asynchronous environment delivers education in non-real-time. The most common interaction type in the e-learning environment is asynchronous. Students participate in an asynchronous activity at convenient time (Klink, 2006).

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When the delivery environment is no longer purely synchronous or asynchronous we could say that it is the *blended learning environment*.

There are many interpretations of this term, but all of them summarize the understanding of blended learning, or what is also referred to as hybrid learning, that is understood as a combination of multiple learning approaches.

Driscoll & Carliner (USA, 2005) mention that blended learning integrates both offline and online interaction methods, so it can present material through an asynchronous format as well as through a synchronous one. According to Malcevski, Maestri, Marmioli (Italy, 2011) blended learning is the combination of multiple approaches to learning. These methods may also include a mixture of face-to-face classrooms, self paced learning and online classrooms. Boddy, Detellier, Duarte et al. (Canada, 2013) define blended learning as a combination of best online and face-to-face instructions to improve outcomes and increase access in a cost-effective way. Blended learning is the “thoughtful integration of classroom face-to-face learning experience with online learning experiences” (Klink, 2006).

We agree that this educational approach is important today because it has unchallengeable advantages in comparison with the traditional classroom or online distance learning in their pure form. Boddy, Detellier, Duarte et al., 2013, in the *Report of the E-Learning Working Group* point out the following benefits of blended learning:

- Students gain a positive experience and attitude towards technology-mediated teaching and learning;
- It supports different styles of learning;
- It fosters improved learning outcomes and increases interaction quality among learners, between students and instructors, as well as with outside experts and communities, and the variety of learning resources;
- It creates flexibility and provides greater time to reflect in online discussions;
- It provides a more dynamic and interactive learning environment which results in a higher level of engagement;
- It highlights the importance of the instructional design for optimal learning outcomes;
- It provides an opportunity to a fundamental redesign of teaching and learning approaches to realize increased effectiveness, convenience and efficiency;
- It provides better ways to address multiple needs of learners and learning styles, as well as a strong pedagogical foundation for engaged and sustained learning.

Blended learning integrates both learning programs in different formats to achieve a common goal and synchronous and asynchronous (multimedia, online) learning activities. There are numerous possibilities to combine synchronous and asynchronous delivery environments and interaction methods (Klink 2006).

## 2.2. Social competence development in virtual environment

The purposes and uses of foreign languages can be very diverse, but regardless of the reason for learning foreign languages have something to offer everyone. In *Standards for Foreign Language Learning* (American Council on the Teaching of Foreign Languages) five goal areas that encompass all of these reasons are pointed out: Communication, Cultures, Connections, Comparisons, and Communities - the five C's of foreign language education. All C's are important for FLT, but communication is at the heart of the language learning, no matter whether the communication takes place face-to-face, in writing, or across centuries through the reading of literature.

One of targeted competencies in FLT as the base for the efficient interaction and communication is social competence, which includes personal, interpersonal and intercultural competences and covers all forms of behaviour that give help individuals to participate effectively and constructively in social and working life, particularly in increasingly diverse societies, as well as to resolve conflicts, if it is necessary (*Key competences for lifelong learning. European Reference Framework, 2007*). This is also one of key competences in the life-long-learning concept.

It is important for blended learning course designers and teachers to keep in mind that the social competence development in the blended learning environment has some differences in comparison with the traditional classroom. Technological, didactic, methodological resources of blended learning facilitate the development of social competence, but not all teachers are able to take advantages of this potential.

New skills and competencies (such as good communication skills, independent learning, ethics/responsibility, teamwork, flexibility, thinking skills / critical literacies, knowledge navigation, IT-skills embedded in the subject area) are required in the present day society and it plays an important role in their development. According to Bates and Sangra, 2011, one of the core competencies required in nearly all subject domains, and more specifically in different occupations and professions, is embedded digital literacy, i.e. the ability to use information and communications technologies in ways that are specific to a particular knowledge or occupational domain. This trend has led to changes in technology, methods, means and forms of FLT and the

learning process.

One of highly effective ways of social competence development in FLT is team-work in blended learning, including online-collaborations and different strategies of group work. Group work, on the contrary, is a condition for efficient communication, interaction in FLT, therefore for the efficient social competence development.

Group work (including pair work) is increasingly used in foreign language university courses as the instructional focus has shifted from teaching discreet aspects of language, such as grammar and vocabulary, to developing students' social competence. In group work students can have ample opportunities to interact with each other in a foreign language in natural ways, that is likely to develop their social competence. In these circumstances, students benefit from recognizing overall success of the group and from observing the success of its individual members (Johnson & Johnson, 1999). They claim that cooperative group work can enhance learning outcomes, communication skills, learning motivation, and psychological health (Fushino, 2010).

The social competence development in a virtual environment has advantages both in asynchronous and synchronous delivery environments. Klink (2006) mentions that blended learning allows designers to adapt the learning content to needs of different educational levels in student groups. Further she describes the benefits of different delivery environments. However, flexibility of virtual asynchronous environment gives the access to the teaching material, on the Web or in computer conference discussions, it can take place at any time and from any location with an Internet. In blended learning students, who can demonstrate mastery of the prerequisite content, can skip the online part and pass directly to the classroom section. Those who are not good at the content can learn it at any time, without other students nearby, who already know the material and express their frustration with these beginners. Such frustration could be a hindrance for the group success.

In FLT the context it is important that students should have time to reflect: rather than to react immediately, asynchronous systems give students time to think over ideas, formulated in a foreign language, check references, go back to previous messages and take the amount of time to prepare a comment. In this way they contribute more successfully to the corporate group results.

On the other hand, the synchronous environment promotes the group synergism. The instantaneous interaction with its opportunity to convey tone and nuance helps develop group cohesion and the sense of being a part of the learning community. Synchronous systems provide quick feedback to ideas, support consensus and decision-making in group activities. Students complete group-work to improve their social and critical thinking skills. They get access to group knowledge and support through collaborative problem solving.

### 3. Types of interaction in FLT in blended learning environment

In section 3 different types of the interaction that can be used in a blended learning environment for FLT will be discussed. The concept of the interaction is defined as an essential ingredient in both online and traditional classroom FLT, but in comparison with the classroom one, the interaction in the blended learning environment group working is indirect.

The interaction is a crucial concept in a learning environment and makes the environment interactive. The word interactivity is used in a variety of ways. The meaning – interaction between two or more people – is not the only one. It would be useful if the word 'interactivity' were reserved for educational situations in which human responses – either vocal or written – referred to previous human responses. The educational value of any specific interactive session could then be seen in terms of the degree to which each statement is built on previous ones (Daniel, 1996, cited by Klink, 2006).

When one is designing a course that is delivered in a blended learning environment, different types of interactions can be included. In table 1 the different types of interactions are shown:

Table 1. Interaction types in a blended learning environment.

Stanley, 2013	Liang & Bonk, 2009	Gilbert & Moore, 1998	Hanna, Glowacki-Dudka & Conceição-Runlee, 2000
student-to-student student-to-teacher student-to-community student-to-material student-to-technology	learner-content, learner-learner learner-instructor learner-self learner-interface	student-content student-instructor student-student	human interactions non-human interaction

Here we deal with definitions of Gilbert & Moore (1998) and Hanna, Glowacki-Dudka & Conceição-Runlee (2000). Gilbert & Moore consider the student-content interaction which occurs when the student reflects on the content and asks questions on the course material in order to analyze, synthesize, and evaluate it. The student-instructor interaction refers to the interaction in which the student and the instructor have view exchanges in which the instructor seeks to stimulate interest, clarify questions, guide, motivate, and have a dialogue with the student. The student-student interaction refers to the interaction among students. Hanna, Glowacki-Dudka & Conceição-Runlee distinguish human interactions and non-human ones. Human interactions include student-

teacher, student-student, student-guest expert or student-community member interactions. Non-human interactions are interactions between student-tools, student-content and student-environment.

In the focus of this research we take up the position that when blended learning courses are designed, types of the interaction must take an important place in reasoning how to structure the courses depending on objectives interrelated with the development of the social competence and communicative foreign language skills.

#### 4. Interaction intensity levels

In section 4 interaction intensity levels and their influence on aspects of pedagogical course design including the students group work will be considered. Group work allows, firstly, to develop the personality of the student as an active subject of learning and cognitive activity; secondly, to engage him in various forms of the social interaction in the process of FLT; thirdly, to promote student knowledge as the action mode in the social world. The group work in the virtual environment provides high learning efficiency, and creates a real social communication.

We have chosen some blended learning instructional and students strategies and activities based on group work which provides the development of the social competence due to the interaction level: discussions, chat, brainstorming, debate teams, team work by keeping blogs, working with glossaries, forums, online discussions in which the teacher and students can post messages to each other, and keep track of individual discussions, instant messaging, conference calls, video conferences, communication with guest experts, student-led discussions, group student presentations, project collaboration forums, participation on threaded discussions, group collaborative video/web analyses, group games, chat, online collaboration in communities of practice, problem-based learning exercises, action learning projects, research modules, debate teams, self-paced content / Multimedia, guided discussion (email, threaded discussion, forums).

Due to the concept of blended learning the following aspects of the pedagogical course design can be identified: *Content Delivery, Communication and Assessment*.

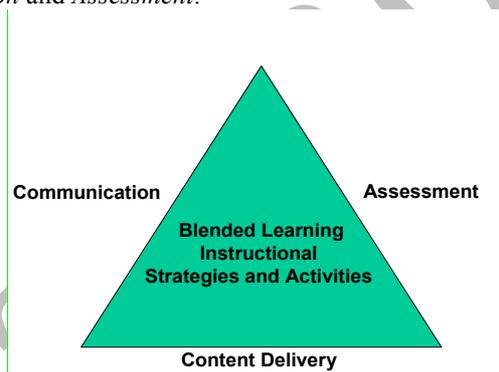


Fig. 1. Aspects of pedagogical blended learning course design

These aspects are the objectives which the teacher would like to achieve during the specified part of the blended learning course and each of them includes three delivery environments: traditional classroom, virtual synchronous and asynchronous. Content Delivery (F2F and online) should relate to course goals and objectives and be presented in a well-planned yet flexible sequence. It could be mini-lectures, demonstrations, video presentations, etc. Communication (F2F and Online) should be engaged and connect both F2F and online contents. Communication includes discussions, group work, chat, question and answer sessions, etc. Assessment (F2F and online) should match course objectives. Assessments can be held in the form of exams, quizzes, projects, papers, reflective journals, one minute papers, portfolios, etc.

Further interaction intensity levels and their correlation with the above mentioned aspects of the pedagogical course design and delivery environments will be described. We distinguish *low, intermediate and high interaction intensity levels*:

1. At the low intensity level participants of the blended learning course do not interact synchronously or asynchronously but they use the content to interact indirectly with each other without any interference into the communication behaviour of other participants under or without teacher guidance. Students choose topics, texts, exercises and activities to practice foreign language skills in the assigned news sites, keep blogs, work with glossaries, make up a searchable bank relating to a group work aim, create wikis, etc. They deal here mostly with the non-human interaction.
2. The intermediate level incorporates elements of social and technological interactions so it includes non-human and human interaction features. Students interact asynchronously, but they react on the interactive manipulations of other participants with the course virtual content and get feedback asynchronously.

Emphasis is put on student participation in collaborative activities with peers in both F2F and online interactions. Students are expected to take a more active part by expressing their ideas and communicating with group members. The activities which can be used for effective group work in online-collaboration are forums, online discussions when the teacher and students can post messages to each other, and keep track of individual discussions.

3. A high interaction intensity level involves the immediate communication. The interaction occurs synchronously in the form of instant messaging, conference calls, video conferences, communication with guest experts or asynchronously as student-led discussions, group student presentations, project collaboration forums, participation on threaded discussions, group collaborative video/web analyses etc. To participate effectively in the interaction at this level students must have advanced foreign language level.

The interaction in virtual and real environment at a high interaction level develops facilities for oral and written communicative foreign language skills and creates an authentic foreign language environment, that is very important for students who learn foreign languages in the countries distanced from native-speaking communities. The low intensity and intermediate levels are the stages to achieve a high level of interaction, on the one hand, and, on the other hand, they are the condition for meaningful students participation in the blended learning courses which outcome is the development of communicative skills in FLT.

## 5. Conclusions

In short, the main conclusions of this research are:

1. The opportunity of thoughtful combination of three delivery environments such as F2F synchronous in the traditional classroom (same time/same place), F2F synchronous as a live virtual classroom (same time/different place) and asynchronous (different time/different place) gives blended learning advantages in comparison with pure traditional or distance learning environment.
2. Group work as a pedagogical form used in FLT has a beneficial effect on the development of the social competence which is one of important competences in the modern world. Due to its technological, didactic and methodological resources the blended learning can facilitate the development of social competence.
3. There are two main types of interaction in FLT in the blended learning environment: human and non-human, which have an influence on the pedagogical design of blended learning courses.
4. The interaction in the virtual environment occurs on different intensity bases which can be divided into three levels (low, intermediate and high). Each level supposes using of specific instructional strategies and students activities of blended learning. Though a high interaction intensity level confers an advanced foreign language level and creates a sense of authentic communication, the previous levels are important for communicative skills in a foreign language too/as well.

Further, to each section of this research articles describing practical pilot blended learning courses in different disciplines at the Tomsk polytechnic university will be suggested.

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# Interactive activities and its impact on students' performance in reading comprehension in senior secondary schools in Kaduna, Nigeria.

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## Abstract

The research investigated the impact of interactive activities on students' performance in reading comprehension. Two secondary schools were used for the study. Eighty (80) homogenized senior secondary school II students were used for the study, i.e 40 students from each school. The two schools were located far apart i.e government secondary school Doka, Kaduna North, Government Secondary School, Makera in Kaduna South. Two instruments were administered on the students. T-test was used to analyse the result of the tests. The results revealed that interactive activities had significant impact on students' performance in reading comprehension. The findings suggest that interactive activities are helpful in understanding and comprehending written. It also helps teacher to see how students' individual thought processes are working with the information received from texts. Teachers are encouraged to use interactive activities to facilitate students' reading comprehension. Interactive activities such as turn on the meaning by engaging students in purposeful strategic conversations provide students with ample opportunities to interact with the text, teacher and peers. Curriculum planners are equally encouraged to include interactive activities in the reading component of the English language curriculum for senior secondary schools.

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*Keywords: Interactive, Impact, Performance, Reading Comprehension*

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## Introduction

Most teacher-training institutions in Nigeria are not adequately equipped and oriented to prepare teachers meaningfully for reading instruction at the primary and secondary school level (Oyetunde, 2009). Furthermore, poor methodology has been identified as the main cause of students' reading failure. Investigations of the curriculum in teacher training colleges in Nigeria have shown that reading methodology is either ignored completely or is very poorly taught with the English methods course. Researches Oyetunde, (2009), Yusuf, (2010, 2013) have equally proved that providing opportunities for students to talk or discuss reading texts can promote reading fluency. Promoting conversations in classrooms can increase children's use of language. This present study sets out to investigate the impact of interactive activities on students' reading comprehension with the aim of suggesting ways of improving the teaching of reading in secondary schools in Nigeria.

## 2. Review of related literature

Reading is far more than looking at individual words and saying them. Readers are in the fortunate position of encouraging language that is created mostly by unknown individuals who may be distant in space and time. Reading is a transaction between the text and the reader Ruddel, (1994); that is the reader constructs unique meanings through integrating background knowledge, emotions, attitudes, and expectations with the meaning the writer expresses.

Various Reading Scholars such as Adams, (1980), Oyetunde, (2009), Stanovich, (1993) state that reading is not only deciphering a sign code, but also understanding the information covered by the text and integrating this information with the reader's previous knowledge. Thus, reading involves processes at different levels, from recognition of graphemes to the integration of global ideas from the text into the reader's knowledge. In this sense Adams, (1980) identifies three levels of processing that intervene in reading: word

recognition, syntactic processing and semantic processing.

Different explanatory models of the reading process have been developed on the basis of these theses Ruedel & Singer, (1994), Perfetti, (1985). The existing models differ in explaining how these processes relate functionally with each other; essentially they differ in acknowledging or not the need to complete one of the processes in order to pass the information on to the next one. According to Ruedel & Singer, (1994) these differences have given rise to three types of models: bottom-up processing, top-down processing and the interactive model, which is more widely accepted nowadays. The latter advocate a parallel distributed processing, where top-down and bottom-up information happens at the same time, the processing is then both interacting and compensating at the same time Stanovich, (1993). They suggest teaching of reading comprehension should focus on learning and mastering the basic abilities of word understanding and should focus on the construction and integration of the text's significance in the reader's memory.

The present study has made use of interactive activities such as turning on the meaning by engaging students in purposeful strategic conversations. Interactive activities are activities learners can be exposed to that demand high level of students' participation and various forms of group activities ranging from discussion to retelling. The teacher guides students to perform different learning tasks at various levels of interaction. By turning on the meaning, students learn about the mental processes involved in activating ideas and making connections between known and new ideas. This strategy makes students aware that three different kinds of meaning can be constructed during reading – literal, inferential and personal. They develop understanding that a reader's prior knowledge plays a significant role in constructing meaning and that multiple meanings exists around a text.

#### **Objective of the study**

To determine the impact of interactive activities on students' performance in reading comprehension in senior secondary schools.

#### **4. Research Question**

What is the impact of interactive activities on students' performance in reading comprehension in senior secondary schools?

#### **5. Hypothesis**

There is no significant difference in the performance of students taught reading comprehension using interactive activities and those taught without interactive activities in senior secondary schools.

#### **6. Methodology**

Two senior secondary schools were used for the study. Eighty (80) senior secondary I i.e SSI students were used for the study. The two schools were located far apart to minimize possible interaction between the two groups. Government secondary school (GSS) Doka was used as the experimental group while Government Secondary School (GSS) Makera was used as the control group. Intact classes made up of forty (40) students from each school were used for the study.

#### **7. Research Design**

A pre-test, post-test quasi experimental design was used for the study. The pre-text was administered eight weeks before the students were taught. This was done in order to establish the homogeneity of the two groups.

#### **8. Instrumentation**

The instruments for the study were two reading comprehension tests. Eight (8) passages were carefully selected from the "Senior English project for secondary schools" text book I. The passages were selected because they were interesting in nature, relevant to the subject matter and of interest to both gender. The passages were educative and informative.

## 9. Administration of instruments

A pretest was administered to both control and experimental groups to establish the homogeneity of the students. The experimental group was taught reading comprehension using interacting activities for eight weeks while the control group had their normal reading comprehension lessons taught by their teacher. A post test on the passages that were taught was administered on the two groups after eight weeks of teaching to determine the impact of interactive activities on students' performance in reading comprehension.

## 10. Treatment

- Step 1:** Teacher introduces the metaphor of turning on a light in a person's mind when they have a "bright idea" Teacher asks the question, "How is getting an idea like turning on a light bulb in your mind?"
- Step 2:** Teacher explains that as students read, they can "turn on" the meaning by using questions as "switches" to help them understand the writer's ideas.
- Step 3:** Teacher ask students if there is only one meaning in a text. Discuss how there can be more than one interpretation, more than one kind of meaning.
- Step 4:** Teacher introduces the poster for these activities. Teacher explains that there are three different kinds of light bulbs on the poster and that we are going to learn how to turn on the meaning for each one of them.
- Step 5:** Teacher draws students' attention to the first light bulb and explains that readers sometimes don't understand what they are reading because they don't understand the words. Teacher explains that what the words say is one kind meaning and it is called the literal meaning.
- Step 6:** Teacher draws students' attention to the second light bulb and explains that sometimes sentences mean more than just what the words say. As readers construct meaning they make inferences – these are ideas suggested by the words. When readers link these inferences to other things they know, they are constructing inferential meaning.
- Step 7:** Teacher talks about the third light bulb, explains that an idea in a text can have special significance for some people because it connects to something personal; it might remind them of what happened to them or how they felt in the past. People can make personal meaning when they read any text. Information in texts can mean different things to different people.
- Step 8:** Teacher asks students to read the passage in their text books through the guided reading questions and discuss the different levels of comprehension involved in answering the questions. As teacher works through the inferential questions, show students that the passage did not say these things exactly. Talk about how readers build ideas from the words they say and what they already know. Through answering the personal meaning questions, teacher helps students develop understanding that reader's prior knowledge plays a significant role in constructing meaning and that multiple meanings exist around a text.
- Step 9:** To practice and consolidate teacher asks students to silently read the passage and then write a question (literal, inferential, personal) under each of the light bulbs. Students can then exchange questions with a partner, answer the questions, and discuss whether the question really were literal, inferential or personal as categorized.
- Step 10:** Teacher splits the students into small groups to discuss answers to the comprehension questions. Teacher moves round the class to facilitate the group discussions.

## 11. Data presentation

**Table I: Mean scores of students in the pre-test and post-test for experimental and control groups in reading comprehension test no. 1 (Cloze test)**

Group	N	Df	Pre-tes X̄	Post-test X̄	Standard deviation
Experimental	40	39	47.66	56.58	12.28
Control	40	39	46.88	49.00	11.14

## 12. Table II: Mean score of students in the pre-test and post-test for experimental and control groups in reading comprehension test no 2 (Retelling test)

Group	N	Df	Pre-tes X̄	Post-test X̄	Standard deviation
Experimental	40	39	49.50	58.52	8.62
Control	48.00	39	48.00	50.00	7.42

The data on table 1 and 2 show a difference in the pre-test and post test scores of students in the experimental and control groups. The scores of students in the experimental group is higher than those of the

control group in reading comprehension test no 1 and 2 i.e cloze test and retelling test respectively. The answer to the research question therefore is that there were differences between the pre-test and post test scores of students in the experimental group and control group in cloze and retelling tests. The mean scores recorded in the performance of the experimental and control groups could be probably as a result of the instruction both groups were exposed to for eight weeks. Both groups were taught reading comprehension for eight weeks. The result, however, revealed that interactive activities have a positive impact on students' reading comprehension.

**Table III: Comparison of mean scores of students of the two groups in reading comprehension test no 1 (Cloze test)**

Group	N	Df	Pre-test $\bar{X}$	Post-test $\bar{X}$	t-cal	t-crit	Decision
Experimental	40	39	47.66	56.58	2.09	1.96	Reject
Control	40	39	46.88	49.00	1.22	1.15	Reject

**Table IV: Comparison of the mean scores of students of the two groups in reading comprehension test no. 2 (Retelling test)**

Group	N	Df	Pre-test $\bar{X}$	Post-test $\bar{X}$	t-cal	t-crit	Decision
Experimental	40	39	49.00	58.52	1.97	1.65	Reject
Control	40	39	48.00	50.00	1.53	1.44	Reject

The hypothesis was tested using T-test as a statistical tool. The null hypothesis states that there is no significant difference in the post test gain scores of students in the experimental group and those of the control group in cloze and retelling tests.

Table 3 and 4 indicate that students in the experimental group performed better than those in the control group. The mean scores of students in the experimental group is much higher than those of the control group. One could therefore conclude that interactive activities could improve one's reading comprehension performance by motivating students through positive interaction between teacher and student and between students and students. This finding is in line with (Stanovich, 1993, Perfetti, 1985, Oyetunde, 2009, Yusuf, 2010, 2013 and Ruddel, 1994) who asserted that providing students with opportunities for students to talk or discuss reading texts can promote reading fluency and also help students construct meaning from a given text. The findings revealed that students were more lively, active and excited in having purposeful conversations with the teacher. Interactive activities made it easy for teachers to see how individual thought process are working with received from texts. It is worthy of note that the effectiveness of interactive activities could also depend on a number of factors such as background experiences, class size, classroom situation, school type, location and so on.

## 12. Conclusion

Reading comprehension can be facilitated by providing students with ample opportunities to discuss reading texts through purposeful strategic conversations. Promoting conversation through turning on the meaning using light bulbs, multiple activities and experiences using various channels of communications such as teacher-student, student-teacher, student-students' could increase students' use of language as well as improve reading fluency. The goal of reading instruction should be to assist students/learners interact with print meaningfully. Students should be trained to be independent readers by being able to obtain meaning from print and make sense of the content of what is read.

## 13. Recommendations

- Teachers should expose students to interactive activities that will encourage students to interact meaningfully with texts during reading comprehension lessons. This should be done through multiple activities and experiences.
- Teachers should as much as possible, use purposeful, strategic conversations in reading comprehension lesson by encouraging interactions in the classroom via teacher-student talk student-teacher talk and student-student talk.
- The use of interactive activities in reading comprehension lessons could be creative inspiration for curriculum planners, textbook writers, teachers and students. The result of this study should inspire curriculum planners, textbook writers and instructional material designers to include interactive activities in students' guides. Teacher training colleges should provide courses in reading instruction to prepare teachers to teach reading at various levels of education.

- Teachers should be flexible in teaching reading comprehension. They should adopt strategies that students' interest, attitudes and abilities. This will motivate students to make use of their innate schemata to make reading enjoyable and more meaningful.
- Through interactive activities such as “turn on the meaning using light bulbs, students learn to activate ideas and make connections between known and new ideas. Students learn to turn on light in their minds when they have a bright idea. They also learn to turn on meaningful by using switches to help them understand the writer's ideas.

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# Intermonitor variability of RT3 accelerometer during different activities

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## Abstract

Purpose of this study was to analyze reliability and variability of the RT3 accelerometers. The RT3 was administrated to two repeated trials of six activities; rest, two steps, walking, and two running. One person performed all trials (male: age 28 yr, 169 cm, 63 kg). Each activity lasted 12 min. Data were analyzed for activity, monitor, and trial effects. The replacement of monitors also analyzed for left and right side differences and association between heart rate and accelerometer counts was analyzed. A three-way interaction was found for vector magnitude ( $F_{35,0} = 190732.08$   $p < 0.029$ ) and X ( $F_{35,0} = 267589.97$ ,  $p < 0.001$ ) and Y ( $F_{35,0} = 182169.56$ ,  $p < 0.001$ ) and Z axes ( $F_{35,0} = 815995.11$ ,  $p < 0.001$ ). A two way interaction was found for VM ( $p < 0.002$ ), X, Y, and Z axes ( $p < 0.001$ ). Placement differences between right and left monitors were found for vector magnitude, X and Z axes. At both trials 1 and 2 there was no significant heart rate differences. The Y axis of the RT3 accelerometer was the most reliable in this study. RT3 accelerometer is reliable for physical activity level.

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*Keywords:* Accelerometer; RT3; variability; reliability; heart rate.

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## 1. Introduction

Physical activity is essential component of healthy life style. There is growing evidence that physical activity is important to the short and long term health of children and adolescents (Sallis, Patrick, 1994). Among youth, physical activity is inversely associated with a number of cardiovascular disease, risk factors, including hypertension (Alpert and Wilmore, 1994), elevated blood lipids (Armstrong, and Simons-Morton, 1994; Thorland and Gilliam, 1985), obesity (Bar-Or, Baranowski 1994; Ward and Evans, 1995), and cigarette smoking (Lee, Jung, Park, Rhee, Kim, 2005), while positively associated with physical fitness (Malina, 1995; Moller, Kaufman, 2005), HDL cholesterol (Borodulin et al., 2005; Ekelund et al. 2005), bone mass (Chen, Yang, 2004), and psychological well-being (Calfas, and Taylor, 1994; Chen, 2004). On the basis of this evidence, an expert panel recommended that adolescents be physically active on a daily or near daily basis and complete at least three bouts of continuous moderate to vigorous physical activity on a weekly basis (Sallis, Patrick, 1994). These recommendations are outlined in Healthy People 2000 and the ACSM recommendation for physical activity and public health (Pate, 1993).

The measurement of physical activity has been limited by methodological problems (Pate, 1993), but accelerometers may offer a solution to these problems. In order to measure physical activity a three dimensional triaxial accelerometers have been used. The RT3 triaxial accelerometer is relatively small and replaced the TriTrac-R3D as a more researcher and user friendly device (Powell and Rowlands, 2004). To our knowledge accelerometers are acceptable to most children. However, researchers working with middle school students should carefully monitor compliance to ensure that devices are worn properly and regularly.

Powel and Rowland (Powell and Rowlands, 2004) studied on the reliability of the RT3 accelerometers during two trials of six activities: rest; walking, running and repeated sit to stand. In our institute RT3 accelerometers have been used for measure physical activity of children with Intellectual Disability.

The purpose of this study was to investigate the reliability and intermonitor variability of RT3 accelerometers.

## 2. Material and Methods

### 2.1. Instrumentation

In order to measure physical activity a three dimensional triaxial accelerometers have been used. The RT3 triaxial accelerometer is relatively small and replaced the TriTrac-R3D as a more researcher and user friendly device (16). All monitors tested were worn at the same time by one participant (male: age 28 yr, height 169.0cm, weight 63 kg) in a laboratory setting.

The RT3 accelerometer: The RT3 is a small (68 x 48 x 18 mm), lightweight (65.2 g), battery-powered monitor. Eight RT3 accelerometers were selected randomly from a sample of 12, which were all 1 year old and previously used in some investigations. The third mode was selected. All RT3 accelerometers were initialized via a computer interface, simultaneously started, and split into two sets of four according to Powel and Rowlands' procedure (Powell and Rowlands, 2004).

Heart rate was measured using a Polar (S610i) HR monitor (Polar Electro Oy, Kempele Finland). The HR monitor was programmed to store the heartbeat every minute, allowing synchronization in time with the accelerometer. After activities, the data were downloaded to computer files.

## 2.2. Procedure

The reliability and intermonitor variability of RT3 was assessed during two trials of 6 activities: rest, walking (5.2 km.h<sup>-1</sup> 3 Mets), running (8.4 and 10.5 km.h<sup>-1</sup>: 9 and 11 Mets performed on an electronically driven treadmill (model: LE 200 CE) and two different step activities (height 10 cm, 20 up-down/min., and height 30cm, 30 up-down/min; 3 and 9 METs respectively). Each activity was performed for 12 min. The two trials were performed 2 apart. After each trial, RT3 monitors were removed and data downloaded. The RT3 accelerometers were placed at the same position at each trial. The first and last minute of each 12-min bout was deleted, leaving 10 min at each activity for each trial. Data output were counts per minute (cts-1), (Powell and Rowlands, 2004). All monitors tested were worn at the same time by one participant (male: age 28 yr, height 169.0cm, weight 63 kg) in a laboratory setting (Lippincott & Wilkins, Baltimore 2000.)

## 2.3. Data Analysis

Descriptive statistics were calculated for each activity at trial 1 and trial 2. Inter-monitor coefficient of variation (CV) for each activity at each trial was calculated. A three-way mixed model ANOVA was performed to examine the inter-monitor variability and reliability of RT3 for each vector. Pearson correlation coefficient was used to obtain association between HR monitor and accelerometer counts.

## 3. Results

Descriptive data are shown in table 1. Inter-monitor CV showed low variation for all axis (Table 2) during walking and running (<5.2%). However, relatively high variation was evident during step activities (3,4-15,6%). Due to very low mean score at rest the CV was inflated and not considered meaningful, therefore, it is not presented in table 2.

Table 1 Activity by vector descriptive statistics (cts min<sup>-1</sup>, beat min<sup>-1</sup>mean ± SD)

Trial	Rest	Step 1 3 Met	Step 2 9 Met	5,2 km h <sup>-1</sup>	8,4 km h <sup>-1</sup>	10,5 km h <sup>-1</sup>
VM 1	21,2 ± 28,7	502,0 ± 33,7	1774,6 ± 138,5	3247,0 ± 74,7	6343,8 ± 143,0	6575,0 ± 278,7
2	11,3 ± 28,6	610,8 ± 55,7	1956,3 ± 216,8	2610,8 ± 51,9	5546,6 ± 158,6	5960,4 ± 125,0
X 1	6,9 ± 11,9	320,3 ± 15,1	1173,8 ± 135,9	1210,7 ± 47,7	3058,9 ± 85,0	3399,2 ± 135,2
2	2,1 ± 5,5	368,1 ± 57,4	1304,3 ± 180,7	1189,6 ± 36,6	3256,3 ± 120,8	3660,1 ± 109,9
Y 1	10,1 ± 13,6	292,3 ± 33,0	972,2 ± 85,0	1799,9 ± 58,2	3181,5 ± 81,1	3223,0 ± 153,3
2	3,8 ± 9,5	348,9 ± 33,5	1081,3 ± 98,7	1611,7 ± 43,1	2793,4 ± 99,0	2923,9 ± 98,7
Z 1	7,5 ± 6,9	229,9 ± 18,9	825,2 ± 28,4	2350,7 ± 53,6	4332,8 ± 125,0	4420,0 ± 230,3
2	8,8 ± 23,2	311,4 ± 26,8	913,5 ± 97,0	1590,6 ± 47,8	3387,7 ± 164,0	3603,2 ± 104,2
HR 1	80±5.2	96.3±1.64	160.1±9.5	95.7±1.5	139.2±5.5	161.0±2.7
2	82.7±6.0	103.2±4.1	161.6±6.2	107.6±1.2	140.8±3.8	161.4±2.7

Table 2 Intermonitor coefficients of variation by activity (CV, %)

Trial		step 3 met	step 9 met	5,2 km.h <sup>-1</sup>	8,4 km.h <sup>-1</sup>	10,5 km.h <sup>-1</sup>
Vm	1	6,7	7,8	2,3	2,3	4,2
	2	9,1	11,1	2,0	2,9	2,1
X	1	4,7	11,6	3,9	2,8	4,0
	2	15,6	13,9	3,1	3,7	3,0
Y	1	11,3	8,7	3,2	2,5	4,8
	2	9,6	9,1	2,7	3,5	3,4
Z	1	8,2	3,4	2,3	2,9	5,2
	2	8,6	10,6	3,0	4,8	2,9

### 3.1. Vector magnitude

A three way interaction was found ( $F_{35.0} = 190732.08$   $p < 0.029$ ). The significant activity x monitor interactions were found at trial 1 ( $F_{35.0} = 227.02$ ,  $p < 0.02$ ) and trial 2 ( $F_{35} = 181.9$ ,  $p < 0.005$ , Figure 1). At both trial 1 and trial 2 all activities were significantly different from each other with the exception of 8.2 and 10.5 km.h<sup>-1</sup> (12% at trial 1 and trial 2, Fig. 2). Within activities, there were no significant differences between monitors at rest, step1 or step2 at trial 1 or trial2. However, as intensity increased (5.2-10.5 km.h<sup>-1</sup>) in walking and running the intermonitor difference decreased. In opposition to this situation as intensity increased in step exercises (3 Mets- 9 Mets) the inter-monitor difference increased. There was activity X trial interaction ( $F_{5.0} = 23.88$ ,  $p < 0.001$ ); however, there was no a monitor x trial interactions. No monitors were significantly different between trial 1 and 2 (Fig. 1).

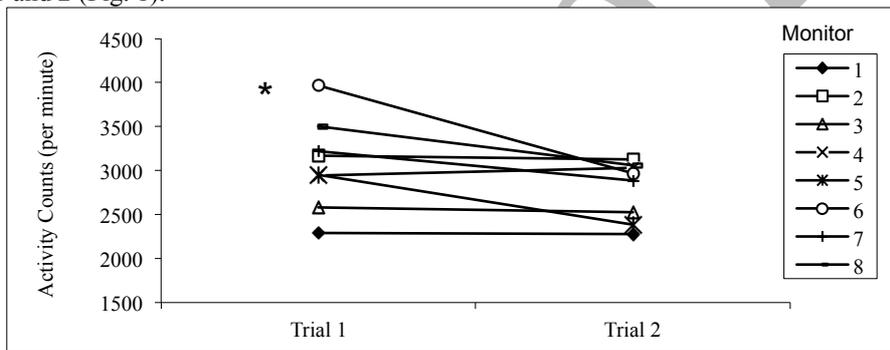


Figure 1. Monitor by trial: vector magnitude (mean  $\pm$  standard error).

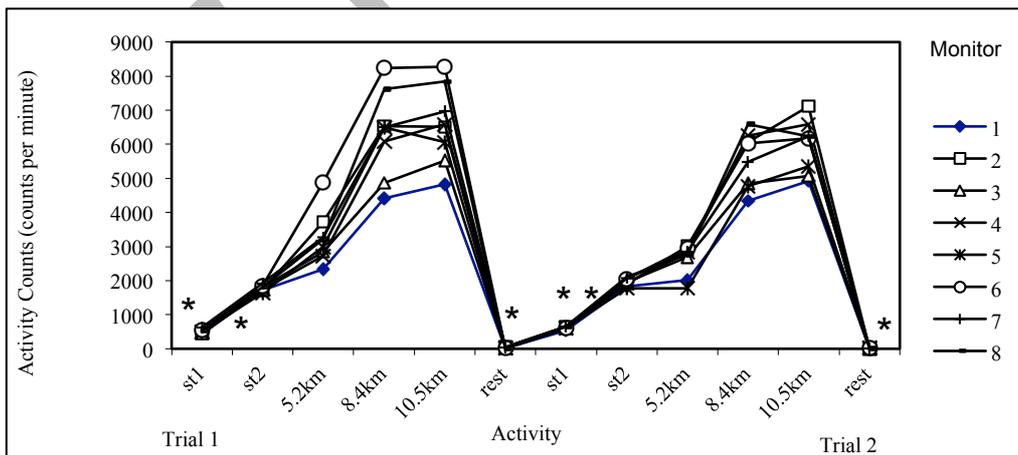


Figure 2. Monitor by activity: vector magnitude (mean  $\pm$ SEM).

Activities 5.2, 8.4, 10.5 km.h<sup>-1</sup> step1 and step2.\* No significant differences between monitors at rest, or step1,step 2.

### 3.2. X axis.

A three-way interaction (activity x monitor x trial) was found ( $F_{35.0} = 267589.97$ ,  $p < 0.001$ ). The significant activity X monitor interactions were found at trial 1 ( $F_{35} = 179.68$ ,  $p < 0.001$ ) and trial 2 ( $F_{35} = 160.58$ ,  $p < 0.001$ ). All activities were significantly different from each other with the exceptions of rest, step1 and step 2. However intensity increased the intermonitor difference increased (9-56%, Table 3). Within activities there were no significant differences between monitors at rest. No difference across trials was shown for the X axis (Tables 2-4).

Table 3: Percentage of possible pairings of monitors significantly different within each activity

Trial	Rest	St1	St2	5,2 km.h <sup>-1</sup>	8,4 km.h <sup>-1</sup>	10,5 km.h <sup>-1</sup>	
VM	1	0	7	8	10	23	33
	2	0	8	15	12	33	40
X	1	0	9	12	13	23	56
	2	0	10	30	14	46	52
Y	1	0	8	13	13	31	27
	2	0	9	19	13	35	40
Z	1	0	7	14	13	36	35
	2	0	10	17	16	47	38

Table 4: Percentage of possible pairings of monitors that differentiate between activities

Trial	Rest-St1	ST1-St2	St2-5.2 km.h <sup>-1</sup>	5.2 km.h <sup>-1</sup> -8,4 km.h <sup>-1</sup>	8,4 km.h <sup>-1</sup> -10,5 km.h <sup>-1</sup>	
VM	1	100	8	10	23	33
	2	100	15	15	32	40
X	1	100	12	13	23	56
	2	100	30	18	45	52
Y	1	100	13	13	30	30
	2	100	18	19	34	39
Z	1	100	15	15	35	35
	2	100	16	16	47	47

### 3.3. Y axis.

A three-way interaction (activity x monitor x trial) was found ( $F_{35.0} = 182169.56$ ,  $p < 0.001$ ). Follow-up two-way ANOVA revealed significant activity x monitor interactions, at trial 1 ( $F_{35.0} = 174.92$ ,  $p < 0.001$ ) and trial2 ( $F_{35.0} = 108.99$ ,  $p < 0.001$ ). At both trials 1 and 2, rest and stepping 1 were not significantly different from each other, and a proportion of possible monitor pairings, increasing with intensity, did not differentiate between step1 and step2, step2 and 5.4 km.h<sup>-1</sup>, 5.2 km.h<sup>-1</sup> and 8,4 km.h<sup>-1</sup>, 8.4 km.h<sup>-1</sup> and 10.5 km.h<sup>-1</sup> (13-39%, Table 1-4). Within activities, there were no significant differences between monitors at rest or stepping 1, for trial 1 or trial 2. There is no differentiating on the inter monitor variability between increasing activities (8-40%, Table 2-3). There was however significant activity X monitor interaction ( $F_{35.0} = 7.1$ ,  $p < 0.001$ ). No difference across trials was shown for the Y axis.

### 3.4. Z axis.

A three-way interaction was found ( $F_{35.0} = 815995.11$ ,  $p < 0.001$ ). Follow-up two-way ANOVA revealed significant activity x monitor interactions, at trial 1 ( $F_{35.0} = 171.78$ ,  $p < 0.001$ ), and trial2 ( $F_{35.0} = 111.13$ ,

p<0.001). At both trials 1 and 2, step1 and step2, step2 and 5.2 km.h<sup>-1</sup> were not significantly different from each other, and a proportion of possible monitor pairings, increasing with intensity, did not differentiate between step1 and step2, step2 and 5.2 km.h<sup>-1</sup> (15-47%, Table 4). Within activities, there were no significant differences between monitors at rest or step activities, for trial 1 or trial 2. However, as intensity increased the inter-monitor variability increased (7-38%, Table 3). There were four monitors that revealed significantly higher activity counts at trial 1 compared with trial 2 (F7.0 = 5.22, p<0.001).

### 3.5. Heart Rate

At both trials 1 and 2 there was no significant HR differences (p>0.05). Follow-up one-way ANOVA revealed no significant difference between step1 and 5.2km.h<sup>-1</sup>, step2 and 10.5km.h<sup>-1</sup> (p>0.05). However intensity increased HR values increased (step1-step2, 5.2 km.h<sup>-1</sup>-10.5 km.h<sup>-1</sup>, p<0.001, Table 1).

### 3.6. Placement

In the comparison with paired test exception of Y axis (2%, p>0.05) significantly differences were found between left and right side monitors (12% for VM, 13% for X axes, 33% for Z axes, p<0.001, Table 5).

Table 5. Monitor differences between right and left placement.

	Mean	N	Std. Deviation	Std. Error Mean	%	P
Pair 1 VM right	10970,05	120	9073,62	828,30	12%	.000
VM left	12469,79*	120	10704,95	977,22		
Pair 2 X right	6741,15*	120	5819,67	531,26	12.6%	.000
X left	5892,35	120	4946,61	451,56		
Pair 3 Y right	6023,55	120	4793,20	437,55	2%	.276
Y left	6137,77	120	4934,88	450,49		
Pair 4 Z right	5862,05	120	5055,95	461,54	33%	.000
Z left	8792,15*	120	8282,01	756,04		

\* p<0.001 significantly higher than the other side monitors

### 3.7. Energy Estimated

A comparison of total VM counts step activities were found lower than walking and running activities (step1 activity 502±33.7, 5.2 km walking 3247±74,71, step2 activity 1774.6±138.5, 8.4 km running 6343.8±143, p<0.001).

Table 6. VM cts<sup>-1</sup>, HR, and energy expenditure along the activities

Activity	VM cts <sup>-1</sup>	HR	ACSM Equation (MET)	Powel & Rowlands MET equivalants of RT3 Counts
Step1	502±33.7	99.7±4.64	3	0-2.9
Step2	1774.6±138.5	160.9±7.9	9	3-5.9
5.2 km walking	3247±74,71	101.6±6.2	3	6-9.9
8.4km running	6343.8±143	140.0±4.7	9	>12
10.5km running	6575±278.7	161.2±2.6	11	>12

## 4. Discussion

After the first study revealed by Powell and Rowlands (Powell and Rowlands, 2004) in this study, we observed that individual RT3 monitors were reliable over trials, with the exception of two monitors on the Z axis. Significant differences were found across trial for monitor 5, and 6 in Z axis. These two RT3 monitors administrated at left side. There is no obvious evidence was found for left side monitors. In our study, RT3 monitors largely differentiated between low level activities intensities (step activities, 3 and 9 Mets), however differentiation decreased as activity intensity increased (8.4-10.5 km.h<sup>-1</sup>). Considerable inter monitor differences within activities were apparent on all axes. The X axis of motion revealed the least variability between monitors. Due to high variability on the Z axes, the vector magnitude variability was also high.

The vector magnitude (mean count at trial 1 compared with (cf.) trial 2, 3077 cf. 2782 cts.min<sup>-1</sup>), X (1528 cf. 1630 cts.min<sup>-1</sup>), and Y (1579 cf. 1460 cts.min<sup>-1</sup>) axes of motion were shown to be reliable over trials. The Z axis (2027 cf. 1635 cts.min<sup>-1</sup>) showed no reliability over trials. Fifth and 6th monitors elicited significantly higher activity counts at trial 1 and trial 2 (2220, 3056 cf. 1594, 1907 cts.min<sup>-1</sup>).

When considering the variability of activity monitors, a range of activity intensities should be considered to adequately test the assumption that the monitor can differentiate between important cut-off points of physical activity.

In the comparison with paired test exception of Y axis (2%, p>0.05) significant differences were found between left and right side monitors (12% for VM, 13% for X axes, 33% for Z axes, p<0.001). This supports Fairweather et al. 1999 (Fairweather et al 1999), who found significant differences (3%) between left and right hip placements with the CSA uniaxial accelerometer. The effect of the placement of the RT3 (left vs right hip) tested in some plot studies. According to this study no differences were found in activity counts recorded (Powell and Rowlands, 2004; Trost et al, 1998).

The accelerometer counts classified according to the MET equivalents (Powell and Rowlands, 2004). It is important that the different activity counts obtained from step and treadmill which are similar caloric estimated from ACSM equations. In the study Step 1 activity and 5.2 km walking activities has equal as 3 METs, Step 2 and 8.4 km running activities also have equal METs calculated according to ACSM equations (Lippincott & Wilkins, Baltimore 2000). A comparison of total VM counts step activities were found lower than walking and running activities (step1 activity 502±33.7, 5.2 km walking 3247±74,71, step2 activity 1774.6±138.5, 8.4 km running 6343.8±143, p<0.001, Table.6).

Follow-up tests revealed the association for HR and vectoral activity counts (.723 for VM, .717 for X axes, .706 for Y axes, and .740 for Z axes) significant associations were found (p<0.01). There was no significant difference between trails (F= 0.616, p=0.63). The significant associations between heart rate and accelerometer counts were found in many studies (Janz, 1994, Trost et al. 1998).

In conclusion, the anteroposterior axis of the RT3 accelerometer showed the least variability and was the most reliable in this study. It is recommended that inter-monitor and placement variability and reliability of RT3 on each axis be assessed before use. It is revealed that heart rate measurement has higher sensitive results along the activities than accelerometer in this study. The association between heart rate and accelerometer may take in to consideration depending manner of research.

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# Intersegmental coordination and the performance of junior football players

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## Abstract

The purpose of this study consists of analyzing the existing correlations between the intersegmental coordination and sports performance. The RCMV test, included into the PSISELTEVA battery, developed by RQ Plus, evaluates the intersegmental coordination, expressed through some psychomotor-related parameters. The subjects who took part in this study are 24 junior football players, from Dinamo Bucharest Sports Club. Using the Spearman correlation there have been important relations highlighted between the perceptual-motor learning coefficient, the resistance to time pressure coefficient and the marks obtained by the football players depending on their evolution on the field.

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*Keywords:* intersegmental coordination; perceptual-motor learning; resistance to time pressure; sport; performance capacity; football

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## Introduction

Sport is a competitive activity involving at least two competitors, requiring physical skills, following formal rules and occurring within a formal organizational framework (LeUnes, 2008). Sport is a performance related domain; in the world of sports, performance is among the most important objectives. Performance can be looked as the result obtained in a specific activity, usually in a competition, expressed in absolute marks, based on the system of official ranks or based on the ranking position (Epuran, Holdevici, & Tonița, 2001). Performance capacity represents the sum of the stabilized behaviors (overlearned), which remain efficient in terms of difficult competition (Tüdös, 2000). Achieving the athletic performance may be, to some athletes, the main motivation of training, preparation and involvement in the competing system.

As a component part of the psychomotor domain, coordination is regarded by most of the authors (Mitrache & Tüdös 2004; Hirtz, 2001) as one of the most challenging topics of investigation, relevant to sport psychologists and coaches, as well as a complex quality conditioning motor control capacity, motor learning capacity, adaptation and re-adaptation capacity, vigilance, all these conferring the athlete self-confidence, accuracy and efficiency when performing the specialized skills. Specialized literature (Aniței, 2007) indicates the importance of coordinated movements as an indicator that allows a correct evaluation of instrumental movements (those movements associated with device manipulation, tools, machines, movements that can be done at superior precision indices, dexterity and timing). Coordinated movements represent a distinct category of instrumental movements, which give to the subject the possibility to economize effort, motor action, in predictable situations (stereotypical) and unpredictable (of adjustment). The level of movement coordination is influenced by the level of knowledge of the motor skills, as well as by the disruptive factors or the desultory characteristics of the environment. The quality of the coordination is influenced by the position of the subject – the precision of the manipulation movements is maximum for the objects set in front and under the level of the shoulders. The coordination difficulties manifest through: temporal discrepancies between processing the information and executing the motor act, errors of non-synchronization of individual movements, order errors (inversions or substitutions of movements) or commutative errors (persevering with the anterior movement, interferences between movements). The movements of skilled individuals are characterized by a flowing quality that suggest more efficient control and a smoother coordination of joints and muscles – the movements become less stiff-

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looking after practice (Schmidt & Wrisberg, 2000). In football, a multiple experience of gestures is required, which shortens the learning and makes the training process more efficient (Cojocaru, 2002). Thus, becomes necessary to give a great importance to the development of a large repertory of gestures.

## **Organization of the research**

### *.1. The purpose of the research*

The main purpose of our research was to investigate the intersegmental coordination, expressed through some psychomotor-related parameters (personal optimum rhythm, resistance to time pressure, perceptual-motor learning, mean of the latency time needed for a bi-segmental or multi-segmental response, resistance to disruptive factors) and the sports performance of the junior men's football players.

### *.2. Subjects*

The sample included 24 football players, aged between 14 and 15 years, from Dinamo Bucharest Sports Club. The football players represent the Junior Team II of Dinamo Bucharest.

### *.3. Methods*

To solve the research issues, we used: observation, conversation, test – RCMV Test, within PSISELTEVA tests, elaborated by RQ Plus, statistical processing methods – SPSS and data interpreting.

#### *2.3.1. Description and development*

The RCMV test is included into the PSISELTEVA computerized battery, developed by RQ Plus in 2001. The test consists in displaying a soft made up of different images that present, at variable time intervals and in a randomized order, square-shaped centrally-left/-right, upward/downward positioned relevant stimuli, as well as a green-coloured upward-right positioned circle which becomes red at variable time intervals. The subject must respond through a motor reaction of his upper limbs (button pressing) and lower limbs (pedal pushing), by a homogeneous/heterogeneous bi-segmental or multi-segmental combination, depending on the number and position of the displayed squares. The red circle in the upward-right corner claims the hand one-segmental movement. The test is individually applied and lasts about 10 minutes.

#### *2.3.2. Results of the test*

Among all the coefficients provided by the battery soft, we shall present the following parameters:

- Perceptual-motor learning ability (rapid adaptation of movements at new perceptual conditions);
- The mean of the complex reaction time, measured in milliseconds;
- Resistance to disruptive factors (faces a problem - unpredictable appearance of signal-stimuli, distraction - the subject gives correct answers);
- Personal optimum rhythm (qualitative measure statistically calculated by correlating the number of errors to the total number of stimuli);
- Resistance to time pressure (ability to perform motor tasks under stress conditions expressed by increasing the dynamic of the situations).

The results obtained by the football players at RCMV have been correlated to the marks offered by the coach, considering the evolution of the athletes both in training and in competition.

## **Results**

Preliminary data analysis (box-plot chart) has emphasized that in the case of the results obtained at RCMV (personal optimum rhythm, resistance to time pressure, perceptual-motor learning, mean of the complex reaction time, resistance to disruptive factors) and in the case of the marks given by the coach, there were no excessive values – marginal or extreme. We present, for example, the box-plot for the scores obtained at the perceptual-motor learning ability and for the resistance to time pressure.

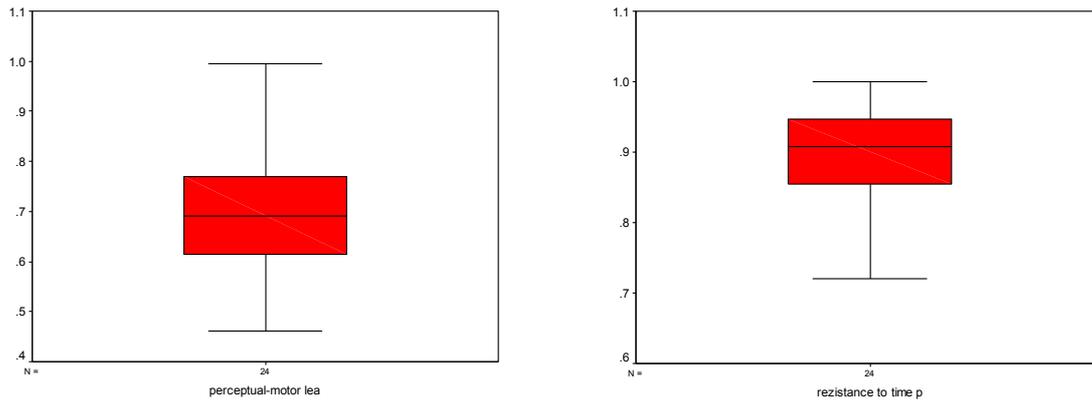


Fig.1. Extreme values (a) perceptual-motor learning; (b) resistance to time pressure

Using the Spearman correlation, we have verified if there were any relations between the intersegmental coordination - expressed through the following psychomotor-related parameters: personal optimum rhythm, resistance to time pressure, perceptual-motor learning, mean of the latency time needed for a bi-segmental or multi-segmental response, resistance to disruptive factors, and sports performance – the scores given by the coach, considering the evolution of the athletes both in training and in competition.

The following conditions for the application of the Spearman correlation are fulfilled:

- Both variables are ordinal or one of them is quantitative and the other ordinal;
- The sample does not have a large volume (24 subjects);
- The scores of a variable are monotonously related to the scores of the other variable, meaning that, once the values of a variable register growth, the values of the other variable will also grow (decrease) – but not necessarily in a linear manner.

Table 1. Results for RCMV and for the scores obtained by the football players, given by the coach depending on their evolution on the field

Variables	N	m	s	sports performance Spearman's rho Correlation Coefficient
sports performance	24	8,04	0,13	1,000
perceptual-motor learning	24	70,19	3,09	0,485*
complex reaction time	24	101,91	3,21	-0,005
resistance to disruptive factor	24	102,93	3,17	-0,070
personal optimum rhythm	24	10,18	1,73	-0,197
resistance to time pressure	24	90,08	1,48	0,540**

\*\* Correlation is significant at the .01 level (2-tailed).

\* Correlation is significant at the .05 level (2-tailed).

The analysis of the results indicated in table number 1 emphasizes:

- There is a positively significant correlation (0,485) between the perceptual-motor learning ability and the marks obtained by the football players, offered by the coach depending on the evolution of the athletes on the field ( $p < 0,05$ );

As for correlation, a proper indicator for the effect size index is the determination coefficient ( $r^2$ ) whose value is 0,24. We can say that 24% of the variation (spread) of one of the two variables is determined by the variation of the other or, in other words, 24% of the variation of the two variables is common, the rest being due to other influences. It means that the relation between the perceptual-motor learning ability and the performance registered on the field is moderate.

- There is no correlation between the complex reaction time (mean of the latency time needed for a bi-

segmental or multi-segmental response) and the scores obtained by the football players, given by the coach depending on the evolution of the athletes on the field ( $p > 0,05$ );

- There is no correlation between the results registered for resistance to disruptive factors (unpredictable appearance of signal-stimuli, distraction) and the marks obtained by the football players depending on their evolution on the field ( $p > 0,05$ );
- Also there is no correlation between personal optimum rhythm (calculated by correlating the number of errors to the total number of stimuli) and the marks obtained by the athletes ( $p > 0,05$ );
- There is a positively significant correlation (0,540) between the results for resistance to time pressure and the scores obtained by the athletes, offered by the coach depending on their evolution on the field ( $p < 0,05$ );

The determination coefficient ( $r^2$ ) has a 0,29 value, meaning that the relation between resistance to time pressure and the performance of the football players is moderate. We can say that 29% of the variation (spread) of one of the two variables is determined by the variation of the other or, 29% of the variation of the two variables is common, the rest being due to other influences.

## Conclusions

This study demonstrates the existence of several significant statistic correlations between the results obtained at RCMV - evaluates the intersegmental coordination (expressed through some psychomotor-related parameters: personal optimum rhythm, resistance to time pressure, perceptual-motor learning, complex reaction time, resistance to disruptive factors) and the football players performance. There is a positively significant correlation between the perceptual-motor learning ability and the marks obtained by the football players, offered by the coach depending on the evolution of the athletes on the field. If, in a testing situation, the athletes show a fast adaptation of movements at new perceptual conditions, this aspect is related to a better performance of the athletes on the field. Through an adequate mental preparation completed by modeling the competition in training, the athletes will develop a large repertory of gestures and will be able to quickly adapt their movements to various perceptual conditions. Consequently, this may positively influence the evolution of the football players on the field. Also, there is a positively significant correlation between the results obtained for resistance to time pressure and the marks registered by the athletes, depending on their evolution on the field. If, in difficult conditions – increasing the dynamic of the situations which requires intersegmental coordination, the athletes manifest a good synchronization of one's own limb movements, this aspect is associated with a better evolution of the football players on the field. Modeling the competition in training and performing an adequate mental preparation, the athletes will acquire a multiple experience of gestures and will develop the ability to perform motor tasks under stress conditions expressed by increasing the dynamic of the situations. When talking about the personal optimum rhythm, the complex reaction time (mean of the latency time needed for a bi-segmental or multi-segmental response) and the results registered for resistance to disruptive factors (unpredictable appearance of signal-stimuli, distraction), no correlations were revealed. Our research has been limited by the physical and mental state of the subject during testing (fatigue, affective-motivational factors) which may cause variations in the answers. Observation and conversation as research methods support the value of our research, which is based on the study of intersegmental coordination. This study results provide information useful to coaches in their training strategy, for scientifically conducting the sports training. The research data will also be used by the sport psychologist, who will conceive stimulation programs for the characteristics (perceptual-motor learning, resistance to time pressure) associated with sports performance. The RCMV may be used as a complementary mean of psychological preparation, may offer data with respect to the intersegmental coordination which may become objective points in specific training and may also represent an element of selection of the football players for the representative team.

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# Intra-party education and its impact on democracy

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## Abstract

This paper scrutinizes the intra-party education of the political parties that hold a parliamentary group in the Turkish Grand National Assembly. These parties are the governing party Justice and Development Party (JDP), the major opposition party Republican Peoples Party (RPP), the ultra-nationalist party Nationalist Action Party (NAP) and the Kurdish Movement-Sympathetic/Corroborator Peoples' Democratic Party (PDP). Drawing on a critical interpretative analysis of regulations, by-Laws and curriculum, it conveys the impact of intra-party education to democracy. By attempting to position the parties within Duverger's political party system, it speculates on whether the political parties attitude in the organization, recruitment and content of the education programs reflect their attitude on democracy. It is argued that ideologically loaded parties may display democratic attitudes within the party whereas this attitude may not be found in the broader spectrum of Turkish political life as ideology curbs the latitude of constituency.

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*Keywords:* Political party; education; democracy; party school

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## 1. Introduction

Political parties inherently aim at mobilizing and getting a grip on people around political ideologies. Party programs, statutes, leaders, administration, parliamentary candidates and candidate mayors are the channels of influence during the election times. The foremost goal is seizure of power. Political parties tend to concentrate on the candidates in the local elections whereas they head for a leader-oriented propaganda in general elections. As it is exemplified in Turkish politics at certain periods, specifically leadership-centered parties lose political influence in case of fall back of the leader. On the contrary, communities based on robust ideological grounds can render long-term devotedness. It is argued that a political formation that can pursue a rational, planned, longitude ideological education free of deductions may increase its advocates and constituent body.

The contribution of providing a well-planned ideological education to democracy is substantial. As the fact that ideological education ought to be planned and rational, the mass that will receive this education and staff that will provide it are significant determinants of the outputs of ideological education. This study evaluates the quality of education provided at party institutes, the background of the instructors and target groups of the political parties which currently hold a parliamentary group in Turkish Grand National Assembly.

### 1.1 Education and planning

Education is generally a process of transforming behaviors of individuals; an individual experiencing a process of education is expected to change his behavior. It is through education that persons' goals, knowledge, behaviors, attitudes and moral criteria are altered (Demirel, 2007:6). Education that plans to transform the behavior of individuals ought to be well-planned and rational. The concept of planning is "to establish how the teaching activities will be operated in the most rational and systematic manner" (Demirel, 2007: 11). Here, plan refers to presetting of which teaching techniques will be chosen, how these techniques will be applied and how primary and secondary sources will be employed. This issue refers to the role of the instructor. The nomination of the instructor is the first stage of planning. One of the significant conditions for an efficient and effective education is the instructor's experience in his field. Along with the instructor, the attribution of the target audience, their age intervals and environment are significant determinants of education planning. The planner is supposed to prepare content that appeal to all, in case the receivers of education come from different occupational group and educational level.

### 1.2. Education at political parties

The word political comes from the "polis" city and party means a part of a group, a group of people and is taken from French (Gökçe, 2013: 15). There are contesting definitions of political parties but they all agree on that political parties seek to come to power. The controversy is around the method they utilize to come to power.

Heywood describes political parties as the organization of a group of people around a political purpose and argues that they may choose elections or any other methods to realize this purpose (Heywood, 2007: 356). Conversely, Tunaya defines political parties as organizations launched by a group of people to realize a particular program that they gather around, through elections. Hence, democratic methods are emphasized as the single way of struggle for power (Tunaya, 1975: 354). For Kapani, political parties are permanent formations gathered around a particular program to come to power or share power (Kapani, 2008: 176). Emphasizing on the organizational structure, Kapani differentiates political parties from other formations in terms of their organizing countrywide and rendering continuity.

In all these definitions, political struggle between parties requires the inclusion of voters, supporters, militants and members (Duverger, 1986: 38, 39). These four elements refer to Duverger's typologies and each has a particular significance within the political struggle. Supporters, members and militants work for political parties by participating their meetings, paying affiliation fees, and spreading their program and ideology in order to recruit more members and expand the party base. Then, what is the level of knowledge of these other components that are to spread the ideology and program of the party among people and drag them to the party. This is the collateral question tackled in this study. As the purpose of this study is to analyze the impact of political party education on democracy, the following questions will be investigated: How inclusive is education at political parties? Is education at political parties competent in terms of planning? What does the level of inclusiveness of education at political parties tell about their position at political party system conceptualized by Duverger? In this regard, a critical interpretative analysis of regulations, by-laws and curriculum of the political parties which currently hold a parliamentary group at Turkish Grand National Assembly will be undertaken. These parties are the governing party Justice and Development Party (JDP), the major opposition party Republican Peoples Party (RPP), the ultra-nationalist party Nationalist Action Party (NAP) and the Kurdish Movement-Sympathetic/Corroborator Peoples' Democratic Party (PDP). According to Duverger's conceptualization of political party system, historically speaking, political parties can be categorized as mass parties or cadre parties. Cadre parties are established internally and they are organized through caucuses. Their constituency organizations disintegrate in between elections. The quality rather than the quantity of party members is taken into account; therefore the members of these parties are "elites." More significantly, these parties are less ideological. Cadre parties historically correspond to liberal and conservative parties. On the contrary, mass parties refer to leftist parties historically and these are more ideological. These parties focus on the quantity of membership; aim at recruiting more and more people to the party base. Unlike cadre parties, they are externally established and they have permanent constituencies that do not disappear in between elections. A third category is added to this classification, namely devotee parties. Although devotee parties may be considered as mass parties, sharing more common grounds with mass parties than cadre parties, they are hybrid for certain reasons. In terms of member recruitment, they aim at mobilizing more and more, so they show the characteristics of mass parties. Nevertheless, the preservation of the purity of the party is sine quo non. Compared to caucuses, their organizational structure is more open, however, they are not as open as mass parties.

Education at political parties of JDP, RPP, NAP and PDP gives particular clues about the organizational structure and recruitment process of these parties. The content of education that they carry out also refers to their ideological preferences. Even the latitude of the topics covered in party trainings reveals to what extent a political party is ideological and hence a mass party. The extent of how much a political party can be considered ideological, yet, does not manifest its impact on democracy. In other words, a political party's being ideological means neither it is a more democratic party, nor vice versa. However, how education at political parties is organized renders their democratic tendency. In other words, the involvement of the grassroots in party education depicts features of participatory democracy. In search for these questions the organization, content and accomplishments of political parties will be scrutinized in this study.

### *1.2.1. Education at the Justice and Development Party (JDP)*

The Justice and Development Party aim at institutionalizing trainings envisaging a coordinated study. The know-how is stated in the Party By-laws on Organization (Teşkilat İç Yönetmeliği, 2012: 180, Md 4.11). Party education is carried out by a unit called "Politics Academy." Initially, the practices of politics academy were conducted by provincial presidencies of Ankara and İstanbul. Since 2008, it is conducted by each demanding province or district coordinated with the headquarters. In this sense, the organization structure is less centralized, which may be interpreted as a step for a more democratic restructuring.

The programs of Politics Academy were conducted in 76 provinces and 35 districts so far, and reached 70.000 people at the end of 15 semesters. These semesters were opened with the titles "Municipal Government, General Politics, Democracy, International Relations and Economy, Law, Democratization, Leader Country: Turkey" (Siyaset Akademisi, 2014). Politics academy intended to increase the quality and credibility of the party cadre, and also develop contact with people with various kinds of opinions and backgrounds (Siyaset Akademisi, 2014). In the course of politics academy, the instructors specialized on their fields are nominated by the

headquarters in order to conduct education activities in provinces and districts. The publications related to the program covered are also prepared by experts (Siyaset Akademisi, 2014). Here is a selection of these publications: Textbook for Municipal Administration (2008, 2009), Textbook for Personal Development (2008, 2009), Lecture Notes on General Politics (Haziran- Kasim 2009), Lecture Notes on Leader Country Turkey (2012). The latest publication Lecture Notes on Leader Country Turkey included topics such as democracy and democratization, global system, localization dynamics and local democracy, local administration, economy, constitution and election manifests.

Within Politics Academy, a program called “Parliamentary Consultants Academy” was set out in order to increase knowledge and experience of the deputy consultants, especially to make up for the shortfall of the beginning consultants for a more professional consultation. The instructions and a brief of local and international agenda that deputy consultants need are provided by ministers, party administration and academicians. The program focused on law, constitution, economy, communication, protocol rules, correspondences and personal development (Siyaset Akademisi, 2014).

The Justice and Development Party identify itself as a conservative democrat party. Although some argue for its continuity with the National Outlook Movement-which claims that it represents truth, has, and calls for a synthesis of the morals of Islam with only technological and material progress of the Western world for a splendid Turkey as opposed to satellite Turkey- the party leader Recep Tayyip Erdogan declared that he took off the National Outlook Movement shirt. Taking into consideration the National Outlook Movement’s stance towards ideologies that is objection to all –isms, the JDP may be regarded as a non-ideological party. However, it depends whether one evaluates political Islam as an ideology or not. So, leaving aside the ideological stance of the JDP, and focusing on the latitude of the subjects covered in education programs and the audience of education programs, it can be concluded that the JDP seems to be extrovert and expansionist, which aims at mobilizing more and more people by embracing a “democratic” discourse. In the light of this identification, the JDP shows the characteristics of mass party. However, from the point of view of those who argue that the JDP adheres to Political Islam tightly even though its recruitment policy is expansionist, it can be regarded as a hybrid party which does not compromise in terms of the purity of the movement for the sake of dissemination to the masses.

#### *1.2.2.. Education at the Republican People’s Party (RPP)*

The purpose of intra party education in the Republican People’s Party is “*to make the party ideology, purpose and principles, politics, political and social goals comprehensible to all party members, to inform them about party action, organizational structure, program and by-laws, and to increase knowledge and sensitivity for social and political issues among the members and executives from all ranks*” (CHP, 2012: 14).

The statutory basis of intra party education is Article 83 of CHP Regulation which was revised on February 26, 2012 through an extraordinary general assembly. Intra-party education was formulated through “Regulation on Intra-Party Education” which was prepared and ratified by the party assembly in a meeting on June 8, 2012 (CHP, 2012: 16). Participation and enjoyment of intra-party education is prerequisite to ascend. Intra-party is programmed at the levels of principal office, province and districts whereas the topics and curriculum are established in the headquarters (CHP, 2012: 17-18). “Party School” is entrusted with training instructors for delivering lectures in the provinces and districts, and prescribing the content of instructions and make plans for these activities (CHP, 2012: 21).

Intra party education is conducted by instructors called “party instructors” who are trained at instructor training program planned by the headquarters. Education is carried out through the programs held at the headquarters party school, programs resumed in the districts, programs carried out by municipal and county commissions, plus distance-learning methods using communication technologies (CHP, 2012: 25-26). 6 types of education program are organized by CHP: training for instructors, basic political education of members, education of candidates, of party administration and local administration, education for returning office and special trainings. (CHP, 2012: 30-34). Basic political education held by instructors involves issues such as “History of CHP,” “CHP By-laws,” “CHP Program,” “Social Democracy,” “Gender Equality,” “Human Rights,” “Communication and Public Relations,” and “Social Project Management.” Candidate trainings and education for party administration and local administration are held at the headquarters (CHP, 2012: 30-34).

Since 2011, 44 education programs are organized in various provinces and centers by Party School and education unit (CHP Eğitim, 2014). The resources used for these program are “To be a Good Politician” (a translated book,” “Organization of Polling Clerk for Elections” and another book prepared by the headquarters “Republic from Foundation to Tomorrow” which covers the speeches made at a seminar organized on October 28, 2011 (CHP Kaynakça, 2014).

As education at the RPP is programmed at principal office, province and districts, the organizational structure seems to provide a democratic form. However, the content of education is prepared at the headquarters and this manifests the relatively strict ideological stance of the party. The organization of education at the RPP is quite rigorously integrated, as it conveys the training for instructors, basic political education of members,

education of candidates, of party administration and local administration, education for returning officers and special trainings. The emphasis on the program of the party and its history indicates that the RPP is more ideologically organized introvert party. Besides, the topics covered in intra-party education such as Social Democracy clearly expresses the social democratic frame of the party. Than mobilizing more and more people, the RPP aims at helping its constituency become inured to its ideology and history. The history of the RPP, as the founding party of the Turkish Republic provides the backbone of party ideology which may evolve at different periods but always encounters the “reminders”, namely the Six Arrow; republicanism, statism, secularism, populism, reformism and nationalism. Besides, founded by the state elite and its historical attachment with them creates a perception that membership at the RPP is based on quality. In this sense, the RPP may be considered as a cadre party.

### *1.2.3. Education at the Nationalist Action Party (NAP)*

Political education in the National Movement Party is conducted through “Politics and Leadership School” opened at the headquarters. The foundation basis and its organizational ties are regulated with the Articles 16 and 48 of the party by-law (MHP Tüzüğü, 2009, Md. 16, 48). The purpose of the politics and leadership school is, within the framework of MHP, to ensure the training of young, honest, and scrupulous politicians internalizing national and moral values, who will shape the future of the country (MHP, 2014).

The education duration at politics and leadership school is 12 weeks. Topics covered are “Organization and Propaganda,” “Turkey-EU Relations,” “Efficient Communication,” “Politics and Media,” “Constitution,” “The Art of Public Speaking,” “History of Turkish Republic,” “Comparative State and Political Systems,” “Political Parties and Election,” “Turkish and Global Economy,” “International Relations and Turkey,” “Turkish Political Life,” “Strategy Method,” “Leadership,” and “State, Society and Citizenship in Turkey.” The courses are held by academics specialized on their field. (MHP, 2014).

The admission requirements for the Nationalist Action Party Politics and Leadership School are to hold a university degree, to be 25-40 year-old and to provide three recommendation letters. The main objective of education at the NAP is to raise future leaders for the party. This may lead us to conclude that the content of education should necessarily be highly ideologically loaded, yet, that is not the case. The subjects covered in education programs are quite volume, ranging from theoretical-intellectual issues to more policy-oriented issues such as Turkey-EU Relations. However, that the admission to education program requires three recommendation letters indicates that organizationally the NAP wills for an introvert structure. Taking into account only the organizational structure of education at the NAP may indicate that it can be regarded as an elite party. Nevertheless, this issue should be assessed with the allies of the party, Ulku Ocakları, the youth organization. In the light of this clarification, it can be concluded that despite the elite organization of the party education, the NAP represents caucuses formation. Including the robustly ideological stance (See., Landau 1982) of the party to the analysis, it can be deduced that the NAP represents the characteristics of cadre party.

### *1.2.4. Education at the Peoples' Democratic Party (PDP)*

The purpose of the Peace and Democracy Party Politics Academy is to train administrators and members within the framework of party ideology and program and to socialize these values in question (Siyaset Okulu Yönetmeliği, 2014: Md.2).

The headquarters education practices are decided, planned and organized collectively with “the headquarters education committee” under the chairmanship of the Vice President responsible for education (Siyaset Okulu Yönetmeliği, 2014: Md.1). The training of the prospective members of party assembly or administration is provided by the headquarters.

Intra party education is compulsory for all members plus every cadre of the administration. The main center of education is set as politics school. In the case of insufficient material and technical conditions, education may be held in provinces and districts as well. Participation in the politics academy opened in the municipalities is free. Besides, recommendation is not considered as prerequisite and university students are regarded as a target audience. Yet, the person who wants attends this school ought to be known by other party members. For education organized by provincial units, instructors are trained in accordance with the party by-laws and ideology. For education held in the headquarters or provinces coordinated by the headquarters, academics specialized on history, Middle East and ecology are invited.

Along with education organized in western cities such as İstanbul, Ankara, Mersin, education in eastern cities such as Diyarbakır, Van, Mardin, Şanlıurfa and Batman is held as well (Siyaset Okulu Yönetmeliği, 2014: Md.4). The works of local and international authors on “Women, Enlightenment, Anarchism, Modernity, Democracy, Confederation, Religion, Quantum, Ideology, Politics and Art” and also lectures edited by academy are used for intra party education.

One striking plank of the PDP is that intra-party education is compulsory for all members and ranks of the party, which shows that the party aims at a tightly knitted organization. Another substantial feature of its organization is that the headquarters education practices are decided, planned and organized *collectively* with “the headquarters education committee” under the chairmanship of the Vice President responsible for education. The emphasis on collectivity refers to the party’s stress on democratic participation. Nevertheless, admission to intra-party education programs requires certain conditions; the person who wants attends this school ought to be known by other party members. This requirement connotes the PDP’s reservation due to the presence of police detectives. This reservation brings along certain deficits to democratization will of the party as it keeps the number and background of the audience limited to party constituency and closed to potential electorates. In terms of ideology, whether the PDP embraces the masses due to its focus on human rights and democracy or it is a highly ideological party has been subject to much debate in Turkish political life. For this reason, when the first group’s argumentation is taken into account and the PDP is regarded as a less ideological party, it can be concluded that it represents partly a cadre party due to its ideological character and also internally organized structure. If the PDP is considered as a vastly ideological party, it can be assessed as a mass due its highly ideological stance.

## 2. Conclusion

Intra party education has a significant influence on the both education of party administration and party members in accordance with party program and ideology. A party base and administrative cadre passing through intra party education would contribute to democratization of political culture as well. Political education acquired on the street will be shaped by ungrounded opinions and nonacademic knowledge and hence would contribute to confrontational political culture. Education provided by political parties will help political culture be shaped by systematic knowledge and render prospective politicians adopt this perspective.

The intra party education systems of political parties that hold a parliamentary group in Turkish Grand National Assembly bear resemblance to a great extent despite some minor differences. Although the Republican People’s Party and the Peace and Democracy Party organize the provincial education through the instructors trained at the headquarters, the Justice and Development Party benefits from academics expertise on their own fields. The Nationalist Action Party organizes intra party education at the headquarters. The lectures at the headquarters are held by academicians. The RPP and PDP benefit from academicians for education held at the headquarters. The intra party education of PDP organized at the municipalities focuses on party by-laws and ideology and also held by academicians specialized on democratic politics, history, Middle Eastern politics.

The Justice and Development Party do not require recommendation for participation to lectures, and do not have a particular target audience. Whoever wishes to participate is allowed in. The target audience of the Republican People’s Party is party administration, members and prospective administrators and functionaries. There is no restriction for participation to lectures. The purpose of the Nationalist Action Party’s intra party education is to raise young politicians and it requires a certain age, education and also recommendation. The target audience of the Peoples’ Democracy Party is university students. Although the party does not require reference, the person who wants to participate need to be known in the locale. All parties have a preparation of resources, some focus on party program and ideology, some benefit from experts on the issues of democracy, public relations and communication, and constitution. Differently, the Republican People’s Party has training programs for polling clerks as well. In this sense, the organization of intra-party trainings at the RPP is thoroughly structured.

In conclusion, whether strictly ideology bounded intra-party education stays outside of the scope of this research. Nevertheless, how the lectures are prepared and how much inclusive intra-party education seeks to be may provide certain patterns of democracy for us to interpret. In the light of these questions, education at the JDP is considerably inclusive, aiming at expanding the party base, embracing masses. In this manner the JDP can be categorized a catch-all mass party, in spite of the fact that there have been a proliferated debate whether the party has preserves its ties with Political Islam tradition or reflects a continuity with center-right tradition of Turkish politics (See., Hale&Ozbudun 2009, Dagi 2008). The RPP has a well-organized education program and as the founding party of the Turkish Republic, its historical baggage- Six Arrows- comes along with the party as the check point over against radical changes. For this reason, it is defined as highly ideological by some scholars. For exactly the same reason, some scholars regard Kemalism as the only ideology of the RPP, if that is an ideology at all (See., Karal 1981, Parla 2004). As to the inclusiveness of intra-party education, what has been found demonstrates that it is not as extrovert, and is rather organized for party members and cadres, yet, in a democratic manner. The NAP does not seek extension of education to its all ranks, leave aside potential party constituencies. The major and single purpose of intra-party education seems to be to lift up equipped future leaders. In this sense, it is difficult to say something on the impact of intra-party education on democracy in the case of the NAP. As to Duverger’s party system, the NAP can be considered as a cadre party, if its focus on leadership leads us to conclude that it is an elite party. Nevertheless, the infamous youth organizations of the party and its radical ideological stance clearly make it a mass party. The PDP organizes the intra-party education

program in a very democratic manner. Its emphasis on participatory democracy is remarkable. Nevertheless, the requirements for the admission to the education programs curb its inclusiveness and curtail the potential constituency of the party. In the broader spectrum, yet, the party can be considered as a mass party of a certain segment, due to its stress on Kurdish identity. In short, it has been found that ideologically loaded parties display democratic attitudes within the party whereas this attitude may not be found in the broader spectrum of Turkish political life.

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# Introducing transcultural nursing education: Implementation of transcultural nursing in the postgraduate nursing curriculum

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## Abstract

Patients are entitled to culturally competent care. Nurses must be prepared to recognize patients' needs that derive from their culture and to develop skills that will facilitate their achievement. Nursing curricula therefore need to include a cultural content and student nurses need to be culturally competent. The aim is to use cultural knowledge to deliver culturally sensitive and congruent care. Transcultural nursing education does not exist as a course in undergraduate or postgraduate nursing programs in Slovenia. In an effort to advance the diversity of elective courses in the postgraduate nursing program at the Faculty of Health Sciences of the University of Primorska, we tried to develop and introduce transcultural nursing into the existing curriculum. The aim of the paper is to outline the development of transcultural nursing content as it was set in the course curriculum and planned teaching and learning approaches.

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*Keywords:* transcultural nursing; cultural competence; curriculum; professional development; higher education.

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## Introduction

European Union statistics are showing an increasing and continuing movement of peoples within and from outside Europe. This very often occurs for social or employment reasons, as well as political ones (Sairanen et al., 2013). In 2012, there were 2,056,262 people registered as living in the Republic of Slovenia. At the beginning of 2013, there were 91,385 residents with foreign citizenship registered. The majority of them had migrated from within Europe, foremost from the ex-Yugoslav countries (Bosnia and Herzegovina, Kosovo, Serbia, Croatia, Macedonia). However, there were also registered residents from Africa, Asia, South, Central and North America, Australia and Oceania (SORS, 2013). There are two official national minorities in the Republic of Slovenia, the Italian and Hungarian national communities, as well as the Roma ethnic community. All three are protected by the Constitution.

Nursing is a profession that is based on a holistic approach to health care delivery. This also includes taking into account patients' cultural needs. Culturally congruent health care is a basic human right, not a privilege, so every human being should be entitled to culturally congruent care (Jeffreys, 2006). Since the cultural diversity of the population is increasing, there are also national concerns in relation to health disparities (Buzeti et al., 2011; Loredan and Prosen, 2013). This has facilitated increased awareness of the importance of delivering culturally sensitive and congruent care and of promoting socially just health care systems. Indeed, an important component of eliminating health disparities among different segments of the population is the incorporation of a deeper understanding of the multicultural context in which care is delivered (Tulman and Watts, 2008, p. 161). Transcultural nursing, an area of study and practice with a human care focus developed by Madeleine M. Leininger, has led to the development of nursing knowledge and skills to improve patient care (Nahas, 2000).

In Slovenia, a large proportion of teaching in nursing education has been carried out by doctors, although their share is now decreasing. The nursing educational system in Slovenia has been reformed several times in the last few decades. Entering nursing is now possible at two levels of education: either by finishing vocational secondary school and becoming a nursing assistant or by taking a diploma level course in nursing at a university and becoming a nurse (Domajnko and Pahor, 2010, p. 306). The first master's program in nursing was opened to

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students in Slovenia in 2007 (Skela Savič, 2009). Nursing education in Slovenia is nowadays conducted in accordance with the EU Directive (2005) for regulated professions, in accordance with the Bologna Process and other guidelines relating to the education of nurses (Skela Savič, 2009). The changes made provide an opportunity to transform the nursing educational environment to reflect diversity and cultural competence in the broadest manner (de Leon Siantz, 2008). Brennan and Cotter (2008) suggest that the need to incorporate cultural competence education in programs of study is a major goal of many nursing curricula. Some would argue that such a task is not an easily achievable goal, since faculty would be challenged to become more informed about the cultural dimensions of health care. Integration of cultural competence into nursing curricula is a daunting challenge, albeit a moral imperative for faculty (Watts, Cuellar and O'Sullivan, 2008, p. 136). In an effort to introduce the concept of transcultural nursing in the nursing curricula at the Faculty of Health Sciences of the University of Primorska, we have developed an elective course entitled "Transcultural nursing" in the postgraduate nursing program. Undergraduate nursing students are meanwhile introduced to some selected topics on transcultural nursing during the course "Sociology of Health and Illness" in the 6<sup>th</sup> semester.

In 1986, the American Nurses Association issued its first guidelines on cultural diversity in nursing curricula (Campinha-Bacote, 2006), although this is still being developed in Slovenia. The aim of the paper is to outline the development of transcultural nursing content as it was set in the course curriculum and planned teaching and learning approaches.

### **The concept of cultural competences**

In order to obtain a comprehensive understanding of the concept, the meaning of the word culture needs to be clarified. Culture can be defined as the learned and shared knowledge and symbols that specific groups use to interpret their experience of reality and to guide their thinking and behaviour. A distinct way of looking at the world, people, relationships and events that make up a culture may be unique to an ethnic group or it may be a worldview that is shared by a nation (Dreachslin, Gilbert and Malone, 2012, p. 109). Competence, on the other hand, is inconsistent in its definition and there is no single agreed method of defining or measuring competence among researchers (O'Connor et al., 2009). However, from a nursing perspective, competence can be defined as the combination of skills, knowledge, attitudes, values and abilities that underpin effective and/or superior performance in a profession/occupational area (ANMC, 2005). Cultural competence involves systems, agencies and providers having the ability to respond to the unique needs of populations whose cultures are different from the "dominant" culture (Cuellar et al., 2008). This requires nurses to see themselves as "becoming" culturally competent, rather than "being" culturally competent (Campinha-Bacote, 2001). This view is consistent with the notion of cultural competence as a process, not an end point or event (Engebretson, Mahoney and Carlson, 2008). Campinha-Bacote (2001) thus describes the development of cultural competence as an ongoing process that includes cultural awareness, cultural knowledge, cultural skills, cultural encounters and cultural desire. Mahoney, Carlson and Engebretson (2006, p. 231) emphasise that cultural competency begins with an increased self-awareness of the practitioner's own attitude towards cultural diversity and an increased awareness of the cultural dynamics inherently associated with any interaction between two individuals. According to Jeffreys (2010, p. 338S), cultural competence is defined as a multidimensional learning process that integrates transcultural skills (cognitive, practical, affective), involves transcultural self-efficacy (confidence) as a major factor and aims to achieve culturally congruent care. The goal of culturally congruent care can only be achieved through the process of developing (learning and teaching) cultural competence.

### *Transcultural nursing*

Transcultural nursing is a theory of nursing concerned with comparing differences and similarities between cultures in relation to caring values and life practices in order to predict the care needs of individuals and promote culturally congruent care. It focuses on the universality of human caring and the comparative study and analysis of the diversity and dynamics of world cultures in relation to human caring values, beliefs and behaviours. In transcultural nursing, cross-cultural care is nurses' understanding and application of the relevant culture's caring actions, health care information and knowledge in order to meet a patient's health care needs effectively (Leininger and McFarland, 2002). Leininger (2002) was the first successfully to implement cultural competences in nursing practice, with the development of the Culture Care Diversity and Universality Theory. Leininger's theory is based on the premise that culturally diverse factors such as religion, politics, economics, worldview, environment, cultural values, history, language, gender and others influence patient care. Consequently, these factors need to be included for culturally competent care.

Research based on transcultural nursing theories has produced a large body of knowledge about various cultural groups' health beliefs and practices. The overall goal of transcultural nursing is to use this accumulated

base of cultural knowledge to develop nursing actions that will promote positive health behaviour among patients and foster culturally sensitive and congruent care (Campesino, 2008).

### **Transcultural nursing education**

In view of the nursing shortage, nursing schools will need to look increasingly to the diversity of underrepresented groups for the next generation of nurse educators, researchers, health care providers and organizational and public policy leaders, even while reaching out to more global and complex markets in the health care arena (de Leon Siantz, 2008). Education of nurses in Slovenia is in accordance with the EU Directive (2005) for regulated professions, which in turn means that our future nurses may seek work abroad, in countries with greater cultural diversity than there is in Slovenia. A need thus exists to transform health educational environments and make diversity in cultural competence a top priority in the strategic plan, budget and leadership infrastructure. It also represents a commitment to excellence (de Leon Siantz, 2008). If we are to deliver culturally sensitive health care, then nurses must be prepared to recognize such a need and develop skills that will facilitate its achievement (Sairanen, et al., 2013). Numerous professional and educational approaches to cultural competences, including several educational strategies and models, are available, especially in nursing (Andrews et al., 2010).

It is indisputable that the principles of transcultural nursing are important to nursing care of patients (Serrant-Green, 2001), wherein education plays an important role. Socially constructed differences that exist between the nurse and patient on the basis of cultural, racial or ethnic identities are capable of being bridged by an increase in nursing knowledge about other cultures (Campesino, 2008, p. 300). Nursing education would appear to be the ideal vehicle by which transcultural competence can be developed within current and future nursing practice, since it plays a major role in the development of the skills, knowledge and attitude of nurses in providing individualized and appropriate care for patients (Serrant-Green, 2001, p. 673).

#### *The development process*

According to Jeffreys (2006), any educational setting can provide numerous, ongoing opportunities for promoting cultural competence; however, the academic setting has the greatest impact. The postgraduate nursing program at the University of Primorska Faculty of Health Sciences provides learning opportunities for master's students to advance their education and, consequently, improve their clinical practice. The master's study program in nursing care takes two years. In an effort to include additional elective courses in the second year, the development of different courses began in 2013. One of them was "Transcultural nursing".

The development process began with the self-assessment proposed by Jeffreys (2006, pp. 77-79), who described it as a process in which the nurse educator systematically appraises the various dimensions that can impact on the educational process and the achievement of educational outcomes. Embedded in this self-assessment is the appraisal of one's understanding of multidimensional factors influencing nursing student learning, achievement, retention, success and cultural competence development. The self-assessment of those involved in the development process also leads to seeking education in other academic fields, e.g., sociology or pedagogy. Appraisal of one's desire for updated knowledge and commitment, as suggested by Jeffreys (2006), should be critically determined. In her opinion, a lack of knowledge or limited knowledge regarding cultural competences indicates a need for self-development; however, one must have the desire to obtain knowledge and be committed to the pursuit of such an endeavour or knowledge quest. Faculty self-assessment as an "active promoter of cultural competence development" is a necessary precursor for successful strategy development (Jeffreys, 2006, p. 80).

#### *Outline of the course content*

The elective course consists of 25 hours (3 ECTS), divided between 15 hours of lectures and 10 hours of laboratory work. The estimated time of individual student work is 45 hours.

The course philosophy is derived from social interactionism. The theoretical knowledge that students need to gain is based on the "Core Curriculum for Transcultural Nursing and Health Care" (2010), which was presented by the Journal of Transcultural Nursing and The Transcultural Nursing Society. However, some modifications were made in order to reflect the Slovenian context of nursing. This "Core Curriculum" aims to establish a core base of knowledge that supports transcultural nursing practice. The body of knowledge is drawn from a broad range of substantive knowledge from the social and behavioural sciences, philosophy and nursing. The aim of the course curriculum is to introduce transcultural nursing concepts from a wider perspective and not to base knowledge only on one model of transcultural nursing. Nevertheless, the main conceptual framework for

implementation of various learning and teaching methods was based on Camphina-Bacote's cultural awareness, cultural knowledge, cultural skills, cultural encounters and cultural desire (2006). Campesino (2008), for instance, put forward the fact that models of transcultural nursing care address contextual variables within an identified cultural group that influence people's world views; these influencing factors are usually regarded as existing and functioning independently of other cultural groups and not being affected by the larger structures of the dominant society. However, in the course, the set structure of theoretical knowledge addresses the issue of structural systems of power within the nurse-patient relationship and health care.

The theoretical framework addresses eight major themes: global health challenges; systems of health care delivery; transcultural theories and models; cross-cultural communication; culturally based health and illness beliefs and practices; culturally based healing and care modalities; cultural health assessment; professional roles and attributes of transcultural nursing. All of the themes also focus on the Slovenian social context and health care organization. In accordance with this, the general learning objectives of the course include the development of understanding of social determinants of health and their impact on health disparities, the influence of the health care system and its ability to deliver health care to a culturally diverse population, the functioning of theories and models of transcultural nursing, the elements of cross-cultural communication and the importance of health literacy, the meaning of health and illness beliefs and practices in delivering culturally congruent care, the role of cultural health assessment and an awareness of a person's own professional roles in cross-cultural nursing care.

Gerrish and Papadopoulos (1999) suggest that nurses need to develop both culturally specific and generic cultural competence. The latter incorporates knowledge and skills acquisition that is applicable across ethnic groups, while culture-specific competence entails the development of knowledge and skills related to a particular ethnic group, as well as insights into the beliefs and values about health, illness and bodily functions that operate within patients' cultures. Jeffreys (2010) describes these as cognitive learning dimensions. Among other learning dimensions, she also highlights the practical learning dimension, which includes motor skills or the practical application of skills and the affective learning dimension, which is concerned with attitudes, values and beliefs crucial for developing professional values and beliefs. The course specific competences that students need to develop include the ability to use concepts and models of transcultural nursing in everyday clinical practice, the ability to perform evidence based nursing to achieve higher patient satisfaction and better outcomes, the ability critically to appraise their own values, beliefs and attitudes regarding their own cultural heritage and to assess the influence of the latter on transcultural nursing performance, the ability to know, understand and acknowledge the practices of other cultures with which we coexist; the ability to plan and perform the promotion of social justice and advocacy in cooperation with patients, families, the local community and other allied health professionals, the ability to use culturally sensitive verbal and non-verbal communication during nursing care delivery, the ability for personal and professional growth and in an altruistic manner to transfer gained knowledge and skills to co-workers.

### *Teaching and learning methods used*

Various teaching and learning methods were planned on the basis of the curriculum learning outcomes and competences that need to be obtained through the course. These methods were developed using literature review and in accordance with the set course objectives. The methods planned are flexible and not rigorously fixed on only one course objective (Table 1). Jeffreys (2010) describes this as "cultural discovery integrated learning activity".

Table 1: Planned learning and teaching methods vs. Course objectives.

<i>Course objectives</i>	<i>Some of the planned learning and teaching methods</i>
Cultural awareness	Lectures Films, videos Internet resources Textbooks and reading assignments without grading Small group activity (case scenarios) Debate
Cultural knowledge	Lectures Face-to face learning Presentations Case studies Paired group activity
Cultural skills	Laboratory work Simulation in a simulator laboratory (case scenarios) Role play Experiential learning methods

Cultural encounters	Debriefing Clinical practice Cultural immersion experience (clinical setting) Reflective writing Mentoring
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The first step in developing cultural competence begins with “cultural desire”, which is reflected in a way in the electiveness of the course. The course needs to be promoted among students and introduced to students in the undergraduate study programs. The goal is that students’ selection of the course is based on their own desire to study transcultural nursing. The aim of developing “cultural knowledge” is to gain knowledge of diverse cultural groups in order to deliver culturally appropriate health care (Law and Muir, 2006). The emphasis will be on the cultural groups that students come into contact with more often in the health care system in Slovenia. The process of developing practical “cultural skills” starts in the simulation laboratory, where teachers and students will perform numerous case scenarios, including a case scenario that students will prepare by themselves. The work in the simulation laboratory will be videotaped and discussed. The emphasis at this stage will be on cultural assessment of the patient and interviewing skills. “Cultural encounters” is by no means the final stage, however, but refers to the point at which students need to transfer the knowledge gained into clinical practice, into nurse-patient interaction. The fact that the majority of students’ enrolled in the master’s programme are already employed in clinical settings, enables them to experience transcultural nursing concepts practically and to build on previously learned clinical experience. In this faze, students will be encouraged to participate in follow-up consultation with the supervising mentor or teacher.

Assessment of the students’ knowledge will consist of a written exam (summative assessment, 80% weighting) and laboratory work assignment (case scenario, role play) with oral defence (formative assessment, 20% weighting). At end of the course, students will evaluate some of the aspects of their cultural growth during this course and complete the overall course evaluation. Systematic curriculum evaluation via quantitative and qualitative methods will help to identify curriculum strengths, weaknesses, inconsistencies and gaps (Jeffreys, 2006, p. 82).

## Conclusion

Integration of cultural content into the nursing curriculum is needed because the population’s diversity is increasing. Theoretical and practical knowledge will help students to link cultural competences with evidence-based practice, which will allow them to become more culturally competent practitioners. As a result, we can expect patients to be approached holistically and culturally congruent care to be delivered. However, from an academic perspective teaching transcultural nursing is a major challenge. Implementing a curriculum that prepares nursing students to become culturally competent requires the commitment of faculty and support of the academic administration (Easterby et al., 2012). Teaching transcultural nursing demands continuous self-assessment. Embedded in this self-assessment is an appraisal of one’s understanding of the multidimensional factors influencing nursing student learning, achievement, retention, success and cultural competence development. In this regard, the flexibility of the curriculum plays a pivotal role because it outlines the future teaching and learning strategy.

According to de Leon Siantz (2008), diverse and culturally competent organizations are becoming prized resources in health care systems and, as such, setting the standards for organizational excellence. It is time for nursing schools to seize the opportunity and become models of excellence for the health care system by embracing diversity and cultural competence in their curriculum. At a time of global migration this appears to be no longer a choice but a requirement.

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## **Study Proposal**

# **Investigating Chickering Theory of Students' Psychosocial Development on Female Saudi College students and its implication on teaching and learning.**

*Abstract: Chickering psychosocial theory of students development has been widely used by administrators, students personals, and faculty members to help them understand the changes students experience throughout their college life. Given the fact that Saudi educational system adopts single sex schooling and that Saudi Arabia is a homogenous society, the present study raises the question of whether or not Chickering theory of students development is applicable for Saudi female students. No research has been done to investigate the application of Chickering theory to female Saudi students. The current study will use Students Development Tasks and Lifestyle Inventory (SDTLI) questionnaire to answer this question. The SDTLI instrument will be used to measure the psychosocial aspects of Chickering theory. The study hypothesizes that Saudi female students may experience the stages of development in a different order.*

### **Significant of the study**

*Women constitute more than half of undergraduate education in Saudi Arabia, yet they are under-representative in research related to Saudi students' development during college. Given the fact that Saudi educational system adopts single sex schooling and that Saudi Arabia is a homogenous society, the present study raises the question of whether or not Chickering theory of students' development is applicable for Saudi female students.*

### **Research Questions:**

1-What is the current stage of psychosocial development prospective female teacher?

2- Is there a culture difference, with respect to female Saudi students' psychosocial development, between Saudi female students and Chickering's original stages of development ?

### ***Review of literature***

*College years provide students with different kinds of experiences as they confront issues, problems, and challenges that promote their growth intellectually, socially, cognitively, and morally. (Chickering & Reisser, 1980). Faculty members and students affairs professionals who are aware of these stages can contribute to better curriculum and better teaching methods (Chickering & Gamson, 1987).*

*Moreover, research has shown that men and women experienced stages of development differently. For example, women develop mature interpersonal relationship prior to autonomy (Fouber, Nixon, Sisson, & Varnes, 2005). Also, in a study done by Karen & Audrey (2012), undergraduate education influence carrier choice for many women as they try to balance carrier responsibility and family obligation.*

*Chickering psychosocial theory of students' development has been widely used by administrators, student personals, and faculty members; It helps them understand the changes students experience throughout their college life. Chickering points out that the stages of students' development are influenced by "individual factors", such as environment, readiness, and personality (Chickering & Reisser, 1980). This fact implies students may experience these stages of development differently. Therefore it becomes necessary to recognize current stages of development to encourage positive growth and to predict where students are headed to proactively design programs in terms of content and experiences the promote their development.*

*Chickering suggests that students develop through the seven vectors in sequences but not necessary in stages, At the same time these stages, he implies, seek an end; at point of human lives students will experience these stages eventually. (Chickering & Reisser, 1980).*

***Chickering Seven Vectors:***

- *Achieving competence: ability to think critically and engage successfully in the intellectual purpose.*
- *Managing Emotions: the ability to manage the feeling of anger, fear or depressions effectively.*
- *Moving from Dependence through Autonomy to Independence*
- *Developing Mature Interpersonal relationship*
- *Establishing Identity: individual realizes who he/she a personal and the acceptance of body appearance.*
- *Developing Purpose: individual able to have clear*

*Developing Integrity: personalizing values*

***Methodology***

*Instrument: A descriptive analyses using Students Development Task and lifestyle Inventory (SDTLI) (Winston, 1987).*

*Participants: prospective teachers at Princess Nora bint Abdull Rhaman University*

# Investigating pedagogical formation students' opinions about ideal teacher, teaching profession, curriculum, responsibility, public personnel selection examination (ppse) and employment: A metaphor study

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## Abstract

The aim of the present study is to investigate the opinions of pedagogical formation students through their metaphors about ideal teacher, teaching profession, curriculum, responsibility, employment and Public Personnel Selection Examination (PPSE). The pedagogical formation students (n=19) participated in the pedagogical formation program in the spring semester of 2013-2014 academic year in one of the universities located in the north-west part of Turkey formed the study group of the present study. In order to collect the qualitative data, a semi - structured interview form prepared and developed by the researchers was used and the data were analyzed through content analysis technique. The findings of the study revealed that the metaphors they developed reflect their current psychological states, future lives, expectations and opinions.

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*Keywords:* Metaphors, pedagogical formation students, ideal teacher, teaching profession, curriculum, responsibility, employment, Public Personnel Selection Examination (PPSE).

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## Introduction

Metaphor is generally defined as describing a phenomenon or a concept by the terms which are more familiar (Arslan and Bayrakçı, 2006). According to Eraslan (2011) metaphor as a sign, meaning or conceptual expression to have formed at individuals which includes viewing and understanding process and as a significant and strong mental production than finding the meaning of a concept through another concept elementarily for individuals in that it expresses the depth and experiments concerning the related concept. Meanwhile Güveli, İpek, Atasoy and Güveli (2011) consider metaphor as a linguistic phenomenon which is in fact widely used by individuals in their daily lives even though metaphor is assumed to be used as a means and a way to express a thought, object or action in literature mostly as a concept. Therefore, it can be said that individuals use metaphors frequently in their professional and social lives in order to increase the power of their expression by being aware or maybe not as metaphors contribute to their communication and expression abilities (Aykaç and Çelik, 2014). In relation to this fact, as Yob (2003) points out, metaphor is employed when one wants to explore and understand something esoteric, abstract, novel, or highly speculative. Also a good metaphor should have certain characteristics. Patton (2002) proposes a set of criteria as to what makes a good metaphor which should be understandable, be connected with their real life experience, be meaningful — makes the desired point, should express appropriate values for the intended audience and should be situationally and contextually appropriate.

Vadeboncoeur and Torres (2003), referring to the literature, regard metaphors not only as an indispensable part of the education system, from elementary level to higher education level but also added that they are widely used in the education system for making the teaching- learning process more effective and more influential. Therefore; as Botha (2009) states there is a widespread recognition of the fact that metaphors play a significant aesthetical, ornamental and pedagogical role not only in literature but also in education. Botha (2009) also added that metaphors are found in all these diverse areas of education and they are also constitutive of the models and theories that form the subject matter of the various disciplines taught in schools and universities. In line with this

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Yazıcı (2013) points out the significance of metaphors in the educational settings, as; “metaphors are used to make teaching and learning of difficult concepts easier and as the consequence of this students learn complex definitions, recognize their interactions among them and organize them in their minds through the implementation of comparison, exemplification, association, visualization and interpretation processes (p. 813)”.

When the training of preservice teachers is concerned, it is recognized that metaphors are widely used in the training of preservice teachers at education faculties. When metaphors are used in the training of preservice teachers not only positive changes and developments are observed in the affective domain characteristics of them (Gültekin, 2013) but also they are effective on the formation and development of their professional attitudes, perceptions and view points towards events / facts as preservice teachers make connections their new perceptions, behavior patterns and attitudes towards events, situations and facts to their past perceptions and experiences on the basis of their observations and experiences (Güveli, İpek, Atasoy and Güveli, 2011). Within this framework the aim of the present study is to investigate the opinions of pedagogical formation students through their metaphors about ideal teacher, teaching profession, curriculum, responsibility, employment and Public Personnel Selection Examination (PPSE). In line with the aim of the present study, during the present study the following questions below were answered:

1. Which metaphors do pedagogical formation students use about ideal teacher?
2. Which metaphors do pedagogical formation students use about teaching profession?
3. Which metaphors do pedagogical formation students use about curriculum?
4. Which metaphors do pedagogical formation students use about responsibility?
5. Which metaphors do pedagogical formation students use about employment?
6. Which metaphors do pedagogical formation students use about Public Personnel Selection Examination (PPSE)?

## Method

In the study descriptive approach was used (Karasar, 1995) as the aim of the present study is to investigate the opinions of pedagogical formation students about ideal teacher, teaching profession, curriculum, responsibility, employment and Public Personnel Selection Examination (PPSE) through their metaphors. The pedagogical formation students (n=19) participated in the pedagogical formation program in the spring semester of 2013-2014 academic year in one of the universities located in the north-west part of Turkey formed the study group of the present study. When they are examined in terms of their genders, it is seen that while 57. 9% (n=11) of them were female, 42.1% (n=8) of them were male. From the view point of whether they are employed or not, it is observed that 63. 6% (n=12) of them were employed; however, 36.8% (n=7) of them were unemployed.

In the study, the qualitative data were collected through a semi-structured interview form prepared and developed by the researchers. During the development and the preparation of the interview form the literature in relation to the subject- area and the criticisms and the recommendations of subject specialists on Educational Sciences (n=8) were taken into account. For the analysis of the qualitative data collected, content-analysis technique was used.

## Findings and Discussion

The findings in relation to the opinions of pedagogical formation students through their metaphors about ideal teacher, teaching profession, curriculum, responsibility, employment and Public Personnel Selection Examination (PPSE) are presented in Tables 1, 2, 3, 4, 5 and 6.

### *1. Which metaphors do pedagogical formation students use about ideal teacher?*

When the findings about the metaphors that pedagogical formation students use about ideal teacher are concerned, it is seen that they developed totally 15 metaphors (Table 1). While the employed female pedagogical formation students developed “understanding”, “model”, “conscientious”, “stable” , “patient”, “knowledgeable”, “beloved teacher” and “idealist” metaphors for ideal teacher, employed male pedagogical formation students developed “examples of human”, “success” and “judge” metaphors for ideal teacher. Meanwhile, even though unemployed female pedagogical formation students developed “understanding ” and “ professionalism ” metaphors for ideal teacher, unemployed male pedagogical formation students developed “subject – area proficiency” metaphor for ideal teacher as seen in Table 1.

Table1. The metaphors of pedagogical formation students about ideal teacher

Category	Gender	Employment Status	Metaphor(s)	Expressions used to explain the metaphors
Ideal Teacher	Female	Employed	<ul style="list-style-type: none"> <li>• Understanding</li> <li>• Model</li> <li>• Conscientious</li> <li>• Stable</li> <li>• Patient</li> <li>• Knowledgeable</li> <li>• Beloved Teacher</li> <li>• Idealist</li> </ul>	<ul style="list-style-type: none"> <li>• An understanding person.</li> <li>• A person who has clear principles.</li> <li>• A person who provides students like the school and the courses.</li> <li>• A subject specialist and / or source of knowledge about his/her subject area.</li> <li>• A person who presents the learning materials according to the levels of his/her students persistently.</li> <li>• A person who endears himself / herself to their students.</li> <li>• A person who refreshes him/herself about his/her subject area continuously.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Understanding</li> <li>• Professionalism</li> </ul>	<ul style="list-style-type: none"> <li>• A person who understands his / her students.</li> <li>• A person who performs his/her profession as it requires under all circumstances.</li> </ul>
	Male	Employed	<ul style="list-style-type: none"> <li>• Examples of Human</li> <li>• Success</li> <li>• Judge</li> </ul>	<ul style="list-style-type: none"> <li>• A person who is model to his/her students through his/her behaviours.</li> <li>• A person who has good relations with his/her students.</li> <li>• A person who has good command of his/her students, subject – area and classroom.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Subject – area proficiency</li> </ul>	<ul style="list-style-type: none"> <li>• A person who refreshes him/herself about his/her subject area continuously.</li> <li>• A person who has his / her subject – area proficiency</li> </ul>

Pedagogical formation students used different expressions to explain the metaphors about ideal teacher category as presented in Table 1. When Table 1 is examined, it is seen that even though the employed female that pedagogical

formation students used the following expressions to explain metaphors, as: “an understanding person, a person who has clear principles, a person who provides students like the school and the courses, a subject specialist and / or source of knowledge about his/her subject area, a person who presents the learning materials according to the levels of his/her students persistently, a person who endears himself / herself to their students , a person who refreshes him/herself about his/her subject area continuously, the employed male that pedagogical formation students used the following expressions to explain metaphors, as :“a person who is model to his/her students through his/her behaviours, a person who has good relations with his/her students, a person who has good command of his/her students, subject – area and classroom”. Meanwhile, it is seen in Table 1 that while the unemployed female that pedagogical formation students used the following expressions to explain metaphors, as: “a person who understands his /her students and a person who performs his/her profession as it requires under all circumstances”, the unemployed male that pedagogical formation students used the following expressions metaphors, as: “a person who refreshes him/herself about his/her subject area continuously, a person who has his / her subject – area proficiency”. In relation to ideal teacher metaphors, Yılmaz, Göçen and Yılmaz (2013) reported guide, light ,reshaping, guiding, information source, not prestigious, model teacher and the teacher who has got a holy profession metaphors as the findings of their study. Meanwhile, it is seen that Yıldırım, Ünal, and Çelik (2011) reported shaper as a metaphor to describe an ideal teacher. Furthermore, the students and teachers in Tellî, den Brok and Çakıroğlu (2008) used the following metaphors to describe the ideal teacher, as:“as a person who has a tendency to build more positive relationship and has earned respect from students”. Based on these, there can be a similarity between the findings of the study and the literature.

### 3.2. Which metaphors do pedagogical formation students use about teaching profession?

As seen in Table 2, the pedagogical formation students developed 11 (eleven) metaphors in total about teaching profession category. Even though the employed female that pedagogical formation students developed “happiness”, “patience”, “future”, “prestige”, and “pedagogy knowledge”, metaphors for teaching profession, the employed male pedagogical formation students developed “holiness” and “valuable” metaphors for ideal teacher. Meanwhile, it is seen that unemployed female pedagogical formation students developed “construction engineer”, “patience” and “liberal education” metaphors for teaching profession while unemployed male pedagogical formation students developed “valuable professional” metaphor for teaching profession (see Table 2).

Table 2. The metaphors of pedagogical formation students about teaching profession

Category	Gender	Employment Status	Metaphor(s)	Expressions used to explain the metaphors
Teaching Profession	Female	Employed	<ul style="list-style-type: none"> <li>• Happiness</li> <li>• Patience</li> <li>• Future</li> <li>• Prestige</li> <li>• Knowledge of Pedagogy</li> </ul>	<ul style="list-style-type: none"> <li>• To be on the side of his/her students side.</li> <li>• A profession requires patience.</li> <li>• A profession shapes the future and provides the training of new generations.</li> <li>• A profession requires consciousness.</li> <li>• To be able reach everyone in the society.</li> <li>• The profession that I mostly wish to be</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Construction Engineer</li> <li>• Patience</li> <li>• Liberal Education</li> </ul>	<ul style="list-style-type: none"> <li>• To construct a human being (an individual).</li> <li>• Transmission of knowledge to students via endless patience and efforts.</li> </ul>
	Male	Employed	<ul style="list-style-type: none"> <li>• Holiness</li> <li>• Valuable</li> </ul>	<ul style="list-style-type: none"> <li>• To raise individual(s) useful for the society.</li> <li>• An invalid but a valuable profession.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Valuable Profession</li> </ul>	<ul style="list-style-type: none"> <li>• Raising an individual.</li> </ul>

Concerning the expressions that pedagogical formation students used in order to explain the metaphors about teaching profession category are presented in Table 2, it is observed that the employed female pedagogical formation students used the following expressions to explain teaching profession metaphors, as : “to be on the side of his/her students side , a profession requires patience, a profession shapes the future and provides the training of new generations, a profession requires consciousness, to be able reach everyone in the society, the profession that I mostly wish to be”; however, the employed male that pedagogical formation students used the following expressions to explain teaching profession metaphors, as : “to raise individual(s) useful for the society, an invalid but a valuable profession”. In the meantime, as it is observed in Table 2 the unemployed female that pedagogical formation students used the following expressions to explain teaching profession metaphors, as: “construction engineer, patience, liberal education” even though the unemployed male that pedagogical formation students used the following expressions to explain teaching profession metaphors, as: “raising an individual”. Concerning the metaphors about teaching profession, Küçüköğlü, Taşgın and Saadine (2014) found the following descriptions and metaphors, as: “A profession that takes over the responsibility for the raising of the students of future generations that are educated, well-behaved, virtuous, conscious and are aware of the cultural values of his/her society, a holy profession, teaching requires patience and raising of students”. In this respect it can be said that there is a similarity between the findings of the present study and the literature.

### 3.3. Which metaphors do pedagogical formation students use about curriculum?

Concerning the metaphors that the pedagogical formation students developed about curriculum category as in Table 3, it is seen that ten metaphors developed by the pedagogical formation students. For the curriculum category as seen in Table 3, the employed female that pedagogical formation students developed “bad”, “pressure”, “lesson” and “teaching program” metaphors for curriculum category while the employed male pedagogical formation students developed “order”, “quality” and “guide” metaphors for curriculum. On one hand, the unemployed female pedagogical formation students developed “material” and “old” metaphors for curriculum; on the other hand, the unemployed male pedagogical formation students developed “teaching program content” metaphor for curriculum (see Table 3).

Table 3. The metaphors of pedagogical formation students about curriculum

Category	Gender	Employment Status	Metaphor(s)	Expressions used to explain the metaphors
Curriculum	Female	Employed	<ul style="list-style-type: none"> <li>• Bad</li> <li>• Pressure</li> <li>• Lesson</li> <li>• Teaching Program</li> </ul>	<ul style="list-style-type: none"> <li>• To complete and cover units in a given time limitations to work</li> <li>• A heap of course units to be covered and studied in an academic year.</li> <li>• A knowledge to be transmitted to the students.</li> <li>• A thing that changes continuously.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Material</li> <li>• Old</li> </ul>	<ul style="list-style-type: none"> <li>• Art of cooking a delicious meal at the correct quantity and the place.</li> <li>• Education program.</li> </ul>
	Male	Employed	<ul style="list-style-type: none"> <li>• Order</li> <li>• Quality</li> <li>• Guide</li> </ul>	<ul style="list-style-type: none"> <li>• The transmission of subjects to students in a given order.</li> <li>• A key of methodical instruction.</li> <li>• Guidance.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Teaching Program Content</li> </ul>	<ul style="list-style-type: none"> <li>• Changes in the quality of instruction.</li> <li>• Education program.</li> </ul>

In relation to the expressions that pedagogical formation students used to explain the metaphors about the curriculum category (see Table 3), it is seen that the employed female that pedagogical formation students used

the following expressions to explain the metaphors about the curriculum category , as: “to complete and cover units in a given time limitations / to work with deadlines and time limitations, a heap of course units to be covered and studied in an academic year, a knowledge to be transmitted to the students, a thing that changes continuously”; on the other hand, the employed male pedagogical formation students used the following expressions to explain the metaphors about the curriculum category, as: “the transmission of subjects to students in a given order, a key of methodical instruction, guidance”. Meanwhile, the unemployed female that pedagogical formation students used the following expressions to explain the metaphors about the curriculum category, as: “art of cooking a delicious meal at the correct quantity and the place, education program” even though the unemployed male that pedagogical formation students used the following expressions to explain the metaphors about the curriculum category, as: “changes in the quality of instruction and education program” (Table 3).

When the literature is examined it can be said that there is a similarity between the findings of the present study and the findings of the literature (Özdemir, 2012). In his study, Özdemir (2012) found similar curriculum metaphors with the present study, as: “MEB (Ministry of National Education), cooking, a pattern to shape individuals, a continuously changing concept and fashion”.

### 3.4. Which metaphors do pedagogical formation students use about responsibility?

In relation to the metaphors that the pedagogical formation students developed about responsibility category (Table 4), it is seen that they expressed their opinions about the responsibility category through nine metaphors. For the responsibility category as in Table 4, even though the employed female that pedagogical formation students developed “success”, “call of duty”, “personality” and “ a good teacher” metaphors for responsibility, the employed male pedagogical formation students developed “requirement”, “authority” and “obligation” metaphors for responsibility. As seen in Table 4, while, the unemployed female pedagogical formation students developed “happiness” and “characters” metaphors for responsibility category, the unemployed male pedagogical formation students developed “requirement” metaphor for responsibility category (see Table 4).

Table 4. The metaphors of pedagogical formation students about responsibility

Category	Gender	Employment Status	Metaphor(s)	Expressions used to explain the metaphors
Responsibility	Female	Employed	<ul style="list-style-type: none"> <li>• Success</li> <li>• Call Of Duty</li> <li>• Personality</li> <li>• A Good Teacher</li> </ul>	<ul style="list-style-type: none"> <li>• If you are a responsible person, you will be successful.</li> <li>• It is our duty in the training of the students.</li> <li>• A person who evaluates the students.</li> <li>• A person who develops himself/herself.</li> <li>• Individuals who have personality are aware of their responsibilities.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Happiness</li> <li>• Character</li> </ul>	<ul style="list-style-type: none"> <li>• A person who is successful is a happy person.</li> <li>• A characteristic that each individuals should have.</li> </ul>
	Male	Employed	<ul style="list-style-type: none"> <li>• Requirement</li> <li>• Authority</li> <li>• Obligation</li> </ul>	<ul style="list-style-type: none"> <li>• When everyone fulfils their obligations and responsibilities, the world becomes a more beautiful place.</li> <li>• It is the objective and responsibility of appropriate education.</li> <li>• Laying the burden on someone else.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Requirement</li> </ul>	<ul style="list-style-type: none"> <li>• The mission of teachers to their students and their societies.</li> <li>• The duties of teachers to their students and their societies.</li> </ul>

When Table 4 is examined from the view point of the expressions that pedagogical formation students used the following expressions in order to explain the metaphors about the responsibility category (see Table 4), it is seen that the employed female pedagogical formation students used the following expressions to explain the metaphors about responsibility category, as : “if you are responsible, you will be successful, it is our duty in the training of the students, a person who evaluates the students, a person who develops himself/herself, individuals who have personality are aware of their responsibilities”; on the other hand, the employed male pedagogical formation students used the following expressions to explain the metaphors about responsibility category, as: “when everyone fulfils their obligations and responsibilities, the world becomes a more beautiful place, it is the objective and responsibility for appropriate education, laying the burden on someone else”. Even though the unemployed female pedagogical formation students used the following expressions to explain the metaphors about the responsibility category, as: “a person who is successful is a happy person, a characteristic that each individuals should have”, the unemployed male pedagogical formation students used the following expressions to explain the metaphors about the responsibility category, as: “the mission of teachers to their students and their societies, the duties of teachers to their students and their societies ” (Table 4) .

### 3.5. Which metaphors do pedagogical formation students use about employment?

When the metaphors that the pedagogical formation students developed about the employment category (Table 5), it is seen that they expressed their opinions about the responsibility category through thirteen metaphors. For the employment category (see Table 5), even though the employed female that pedagogical formation students developed “environmental”, “economy”, “money”, “employment”, “continuity” metaphors for the employment category, for the employment category, the employed male pedagogical formation students developed “economy”, “question mark”, “business” metaphors for the employment category. As seen in Table 5, the unemployed female pedagogical formation students developed “belonging”, “jobs” and “absence” metaphors for the employment category while the unemployed male pedagogical formation students developed “space” and “poverty” metaphors for the employment responsibility category (see Table 5).

As shown in Table 5, the employed female pedagogical formation students used the following expressions in order to explain the metaphors about the employment category through the following expressions, as: “working of current manpower in an appropriate work economically, if you know somebody, you can find a job, during employment, needs are neglected, the required employment for education needs to be provided, in some cases, people can work even if you do not like the job, creating employment opportunities to people is necessary”; however, the employed male pedagogical formation students used the following expressions to explain the metaphors about the employment category through the following expressions, as: “unemployment is increased, the rate of committing a crime increases, creating employment opportunities, the most difficult thing in Turkey”. While, the unemployed female that pedagogical formation students used the following expressions to explain the metaphors about the employment category, as: “it is a feeling of secure and safe, it is a case that being a university graduate is not sufficient and means nothing”, the unemployed male that pedagogical formation students used the following expressions in order to explain the metaphor about the employment category, as: “people should do what they deserve” (Table 5).

Table 5. The metaphors of pedagogical formation students about employment

Category	Gender	Employment Status	Metaphor(s)	Expressions used to explain the metaphors
Employment	Female	Employed	<ul style="list-style-type: none"> <li>• Environmental</li> <li>• Economy</li> <li>• Money</li> <li>• Employment</li> <li>• Continuity</li> </ul>	<ul style="list-style-type: none"> <li>• Working of current manpower in an appropriate work economically.</li> <li>• If you know somebody, you can find a job.</li> <li>• During employment, needs are neglected.</li> <li>• The required employment for education needs to be provided.</li> <li>• In some cases, people work even if they do not like the job.</li> <li>• Creating employment opportunities to people is necessary.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Belonging</li> <li>• Jobs</li> <li>• Absence</li> </ul>	<ul style="list-style-type: none"> <li>• It is a feeling of secure and safe.</li> <li>• It is a case that being a university graduate is not sufficient and means nothing.</li> </ul>
	Male	Employed	<ul style="list-style-type: none"> <li>• Economy</li> <li>• Question</li> <li>• Mark</li> <li>• Business</li> </ul>	<ul style="list-style-type: none"> <li>• As unemployment is increased, the rate of committing a crime increases.</li> <li>• Creating employment opportunities.</li> <li>• The most difficult thing in Turkey.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Space</li> <li>• Poverty</li> </ul>	<ul style="list-style-type: none"> <li>• People should do what they deserve.</li> </ul>

### 3.6. Which metaphors do pedagogical formation students use about Public Personnel Selection Examination (PPSE)?

When the findings about the metaphors that pedagogical formation students use about Public Personnel Selection Examination (PPSE) are concerned, it is seen that they developed totally 12 metaphors (Table 6). While the employed female pedagogical formation students developed “future”, “Government portal”, “nightmare”, “exam” and “failure” metaphors for Public Personnel Selection Examination (PPSE), the employed male pedagogical formation students developed “nonsense”, “inadequate”, “Ministry of National Education” metaphors for (PPSE). Meanwhile, even though the unemployed female pedagogical formation students developed “nightmare” and “exam” metaphors for Public Personnel Selection Examination, the unemployed male pedagogical formation students developed “exam” metaphor for (PPSE) as seen in Table 6.

When Table 6 is examined from the view point of the expressions that pedagogical formation students used about the Public Personnel Selection Examination (PPSE) category, it is seen that the employed female pedagogical formation students used the following expressions to explain the metaphors about the metaphors concerning the (PPSE) category, as: “an imposed examination making heavy the weather of teaching profession, an examination that distinguishes the hard working students from who are not hard working, getting the required grade and assigning to the institution you wish to, a better future, teachers should be well – equipped; however, it should not be used for the selection of teachers, guarantee your future obliges you to take this examination”;

on the other hand, the employed male pedagogical formation students used the following expressions to explain the metaphors about the metaphors concerning the (PPSE) category, as: “a wrong method for the selection of teachers, teaching is not a heap of patterns, a measurement and evaluation tool”. In the meantime, even though the unemployed female pedagogical formation students used the following expressions in order to explain the metaphors about the Public Personnel Selection Examination (PPSE) category, as: “an examination that you feel future anxiety, an examination you have to take in order to have a job, it makes people feel sorry to be a university graduate”, the unemployed male pedagogical formation students used the following expressions to explain the metaphors about the Public Personnel Selection Examination (PPSE) category, as: “an important examination that aims to eliminate people, a discriminating examination” (see Table 6). When the literature about Public Personnel Selection Examination (PPSE) is examined, it is observed that the literature (Gökçe, 2013; Sezgin Nartgün, 2011; Yalçın, Sağırlı, Yalçın and Yalçın, 2012; Yapıcı and Yapıcı, 2013) presents the following metaphors and descriptions about (PPSE), as: “necessity, money, hope, economic freedom, prerequisite, psychology, an exam is not necessary for appointment, it does not measure teacher proficiency and an unnecessary examination”. In this respect, it can be said that there is a similarity between the findings of the present study and the literature.

Table 6. The metaphors of pedagogical formation students about Public Personnel Selection Examination (PPSE)

Category	Gender	Employment Status	Metaphor(s)	Expressions used to explain the metaphors
Public Personnel Selection Examination (PPSE)	Female	Employed	<ul style="list-style-type: none"> <li>• Future</li> <li>• Government Portal</li> <li>• Nightmare</li> <li>• Exam</li> <li>• Failure</li> </ul>	<ul style="list-style-type: none"> <li>• An imposed examination making heavy the weather of teaching profession.</li> <li>• An examination that distinguishes the hard working students from who are not hard working.</li> <li>• Getting the required grade and assigning to the institution you wish to.</li> <li>• A better future.</li> <li>• Teachers should be well-equipped; however, it should not be used for the selection of teachers.</li> <li>• Guarantee your future obliges you to take this examination.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Nightmare</li> <li>• Exam</li> </ul>	<ul style="list-style-type: none"> <li>• An examination that you feel future anxiety.</li> <li>• An examination you have to take in order to have a job.</li> <li>• It makes people feel sorry to be a university graduate.</li> </ul>
	Male	Employed	<ul style="list-style-type: none"> <li>• Nonsense</li> <li>• Inadequate</li> <li>• Ministry of National Education</li> </ul>	<ul style="list-style-type: none"> <li>• A wrong method for the selection of teachers.</li> <li>• Teaching is not a heap of patterns.</li> <li>• A measurement and evaluation tool.</li> </ul>
		Unemployed	<ul style="list-style-type: none"> <li>• Exam</li> </ul>	<ul style="list-style-type: none"> <li>• An important examination that aims to eliminate people.</li> <li>• A discriminating examination.</li> </ul>

## Conclusion and Recommendations

The findings of the study revealed that the metaphors pedagogical formation students developed reflect their current psychological states, future lives, expectations and future related opinions. In this regard, the findings indicated that they are aware of the characteristics of an ideal teacher and differences are observed in their opinions regarding their genders and whether they are employed or not. In this respect, even though females believed that an ideal teacher is a person who is a subject specialists in his/ her subject area, refreshes his/her subject-area knowledge continuously, an understanding and a friendly person, males believed that an ideal teacher is a person who is a model, has good command of his/her students, subject – area and classroom. When their opinions about teaching profession are focus of attention, it is seen that both female and male pedagogical formation students think that teaching is a holly profession that shapes the future of a society through raising individuals. In relation to the curriculum category, the pedagogical formation students generally associate curriculum with knowledge transmission, time limitations and deadlines, continuous changes and art of cooking. According to pedagogical formation students, responsibility in itself includes the fulfilment of certain duties and obligations, evaluation of the students, self- development, happiness and their reflections to the world and as a whole they are considered as the mission of teachers. They emphasized the appropriacy of the work conditions according to the qualifications of the manpower, in order to create appropriate employment opportunities for people to feel secure and safe the needs of the society and the knowledge and skills of the individuals should be considered and employment is a known fact in Turkey and being a university graduate means nothing if you are not employed. According to them, Public Personnel Selection Examination (PPSE) as a measurement and evaluation tool is the only way that they have to take in order to be employed that leads to certain future related problems. Based on these findings, the followings can be recommended:

1. Further studies need to be made with large sample groups implementing both quantitative and qualitative data collection instruments.

2. Psychological support services need to be provided for all university graduates to decrease their future related anxieties.
3. In order to decrease unemployment rate, man power planning needs to be made considering the facts of the countries.

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# Investigating perceptions of pre-service science teachers towards laboratories by using phenomenological pattern

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## Abstract

Abstract scientific concepts are made clear thanks to laboratory practices and skills related to scientific thought are developed. In this regard, laboratories distinguish themselves from classes, which are the most special areas of educational environments, with both their materials and differences in use and management. The research objective is to detect perceptions of pre-service science teachers, who have been receiving education in the Department of Science Education in the Faculty of Education, on laboratory environments used by pre-service science teachers. This research consists of three laboratory environments used by pre-service science teachers in courses of General Physics Laboratory, General Chemistry Laboratory and General Biology Laboratory within the context of Science Education training program in the Faculty of Education. Pre-service science teachers were asked to express their opinions on laboratory in a cause and effect relationship by describing them via metaphor within the context of this study. It was detected at the end of research that pre-service science teachers define their perceptions on laboratory by using various metaphors. In this respect, perceptions of pre-service science teachers on General Physics Laboratory can be interpreted as that science can be measured and absolute outcome is achieved; their perceptions on General Chemistry Laboratory can be interpreted as that science is experimental, practical and synthesis; their perceptions on General Biology Laboratory can be interpreted as that science is real life.

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*Keywords:* Laboratory Environment, Perception on Laboratory, Metaphor.

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## Introduction

Education is a process that influences behaviors and attitudes of students but also in which students are equipped with information literacy. While many courses contribute to this process, elementary scientific courses make their presence felt particularly through coefficient scores that belong to questions in central examinations. In this respect, Science courses hold an important place on students learning with their contents suitable for constructive approach, as well as with their materials and environments.

Sciences (life sciences) are a product of humanity's efforts to understand nature while understanding itself (Collette & Chiapetta, 1989; Güzel, 2003). Scientific methods used for researching sciences are combination of observations, experiments, formulation of laws and hypotheses and theories. New discoveries, applying and developing previous information and researching whether it is costly and suitable for modern conditions are achieved with laboratory studies (Petrucci, Harwood & Herring, 2002; Gulten, 2006). Sciences can be defined as association of disciplines which attempt to reveal relationships between organisms and non-living beings by cause and effect reasoning. Various methods are used for teaching these revealed relationships to students. It is a known fact that laboratory holds a significant place among these methods (Cepni, Akdeniz & Ayas, 1995). According to Lucas (1971), students can understand how scientists work, think and obtain new information by using researches. According to Hofstein & Lunetta (2004), laboratory applications allow students to conduct research, solve problems, use their dexterities and develop their communication skills, thereby making learned concepts and relationships between these concepts more meaningful and permanent. Laboratory practices ensure students to develop positive attitudes towards science and scientist and become effective for choosing a science-related profession (Ayas et al., 2002).

Assessing science classes and laboratories by taking students' opinions is a quite preferred method in numerous studies on how to make effective science teaching (Fraser & Walberg, 1991; Fraser, 1994). The

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context of these studies are based on assumption that a particular learning circle is present in every learning environment, this circle influences both students and teachers and all students in learning environment are more or less affected by this circle. Because, it is stated in conducted researches that there are important relationships between learning circle variable in learning environment and learning products of students, and creating an effective learning circle in a learning environment has a positive impact on learning products of students. Nonetheless, it is also stated that resources other than manpower such as school building, equipment and other instruments need to have an accessory characteristic along with importance of practicability of education programs as much as their design in order to achieve objectives (Fidan & Erden, 1998; Doğan et al., 2002; Chang, Hsiao & Chang, 2011; Türe & Karaküçük, 2011; Partin & Haney, 2012).

Education must be the most dynamic area, which is open to improvement, for social development. Therefore, schools are the most special institutions in educational process. Universities, which are regarded as the highest point of this process, should have the same unique character in this sense. Having researched literature, determination of perceptions of schools in educational process and school role personalities through metaphors has been a subject in many researches (Cerit, 2008; Saban, 2008; Karasolak, 2009; Hacıfazlıoğlu, Karadeniz & Dalgıç, 2011; Uzun & Paliç, 2013).

According to Marlowe & Page (1998), it is argued that learning in constructivist sense, which is related to constructive creation, discovery and developing knowledge, is a) processing of information and also questioning, interpreting and analysis of its outcomes, b) to develop and increase this knowledge and act of thinking, rejuvenation or improvement of meaning with understanding of ideas and thoughts and c) to combine experiences acquired with past experiences (Cited by Yurdakul, 2007). Laboratories are environments which allow for analysis of information and therefore that can provide permanency of learning. Classes, laboratories, extra-class environments and role personalities should be separately investigated. Laboratory studies are quite important in terms of students gaining knowledge in conceptual level and having primary skills necessary for future life. Abstract scientific concepts are made clear thanks to laboratory practices and skills related to scientific thought are developed. In this regard, laboratories distinguish themselves from classes, which are the most special areas of educational environments, with both their materials and differences in use and management. For this reason, perceptions of students on laboratories they use are important to know.

## **The Research Objective**

The research objective is to investigate perceptions of pre-service science teachers, who have been receiving education in the Department of Science Education in the Faculty of Education, on General Physics, General Chemistry and General Biology laboratory environments they use.

The problem sentence is; with which metaphors do pre-service science teachers, who participated in this research, explain their perceptions on General Physics, General Chemistry and General Biology laboratories?

Sub problems;

1. Through which metaphors do pre-service science teachers describe their perceptions towards General Physics laboratory? Under which conceptual categories can these metaphors be grouped?
2. Through which metaphors do pre-service science teachers describe their perceptions towards General Chemistry laboratory? Under which conceptual categories can these metaphors be grouped?
3. Through which metaphors do pre-service science teachers describe their perceptions towards General Biology laboratory? Under which conceptual categories can these metaphors be grouped?

## **Methods of the Research**

Phenomenological pattern, one of qualitative research methods, was used in this research. Understanding life experiences is primary for phenomenological studies. Phenomenological study provides flexibility to make sense of embedded phenomena with its conceptual structure and to select data collection processes (Munhall, 2007). Phenomenological study is an empirical method which investigates a contemporary phenomenon/situation in-depth within its own real life context in a multi-faceted and systemic way (Yaman & Erdoğan, 2007). Phenomenological pattern focuses on phenomena that we are aware of but we do not have an in-depth and detailed understanding of. Use of metaphors in phenomenological pattern applications allows for easily making sense of life perceived and intended to be analyzed. Albeit the origin of the word metaphor comes from the Greek word “Metafora”, it also has a character that can be defined as transfer or shifting. Metaphor helps defining connection between source and target field by using analogy (Soto, 2006). It helps defining original point and explanation as metaphor by providing expressions like “such as” and “because” in a sentence. Metaphor and analogies are a type of simile to be benefited in order to explain the subject under investigation

related to research, and they also ensure conceptualization of ideas. They help abstracting concretely observed things in an investigated situation (Ekiz, 2013). Metaphors are poetic and powerful (Soto, 2006).

This research incorporates three laboratories that pre-service science teachers use including General Physics, General Chemistry and General Biology labs. It was intended in this study to identify perceptions that laboratory environments, in which experiential learning as one of learning methods is achieved, have left on pre-service science teachers through metaphors.

### *3.1. Data Collection Instruments*

Data collection instrument was prepared as a form that consisted of two sections. Some demographic attributes of pre-service science teachers such as gender, age, department, frequency to use laboratories in their high school and university education were provided in the first section of this form.

The following questions are present in the second section:

General Physics Laboratory is like .....; because .....

General Chemistry Laboratory is like .....; because .....

General Biology Laboratory is like .....; because .....

Pre-service science teachers were asked to complete the blanks in these questions. The word “like” was used to determine relationship between the subject and origin of metaphor and the word “because” was used to determine cause and meaning ascribed to a metaphor. All forms were collected from pre-service science teachers however, 36 answers given to General Physics Laboratory, 29 answers given to General Chemistry Laboratory and 23 answers given to General Biology Laboratory were not evaluated because “no metaphor was used in statement”.

#### *1. Sample of the Research*

The research sample consists of 95 senior pre-service science teacher who have received education in the Department of Science Education in the Faculty of Education.

### *3.2. Analyzing Data*

Qualitative research method was used in this research. Content analysis was performed for applying qualitative data analysis. Analysis was realized with steps of data organization (coding and determining categories), data summarizing (gathering all data in the same category under a common heading) and data interpretation (interpreting findings through induction) (Büyüköztürk et al., 2009). It was detected that pre-service science teachers used 44 metaphors for General Physics Laboratory; 42 metaphors for General Chemistry Laboratory and 41 metaphors for General Biology Laboratory. Metaphors used were examined by taking their reasoning and common properties into account and they were collected under 8 conceptual category for General Physics Laboratory; 8 conceptual category for General Chemistry Laboratory and 6 conceptual category for General Biology Laboratory. Opinions of experts were asked for questioning whether conceptual categories that were created for metaphors, which emerged for laboratories, were correctly associated in order to ensure reliability of research. Reliability formula of Miles and Huberman (1994) was separately calculated for three labs; it was found 92% for General Physics Laboratory, 92% for General Chemistry Laboratory and 93% for General Biology Laboratory. These results are indicator that research is valid and reliable.

## **Findings**

### *Demographic findings of research participants*

13 participants are male (13.7%) and 82 are female (86.3%); 92 of them are between 18-23 years old and others are 24 years old and older. laboratory in high school it was determined that 13 students (13.7%) have always used laboratory, 28 students (29.5%) have never used a lab but 54 of them sometimes used a laboratory (56.8%). Also, looking at frequency of students to use laboratory in university, it was determined that 49 students (51.6%) have always used laboratory, 1 student (1%) has never used a lab but 45 of them sometimes used a laboratory (47.4%).

### *Research findings assessed within the framework of sub-problems.*

Problem 1. Through which metaphors do pre-service science teachers describe their perceptions towards

General Physics laboratory? Under which conceptual categories can these metaphors be grouped?

Table 1. Distribution of General Physics Laboratory Metaphors according to Categories

Category (n=8 )	Metaphor (n=44 )	f	(%)
Healthy and concrete learning environment	Simulation, mechanical train concrete (2), order (2), material world, laboratory that makes you love, analytical course, glasses (2), life (5), visual, village, classroom study environment (2), system	14	31,82
Entertaining and fun environment of diversity	Toy store, small atelier, entertainment center (2), play garden (4), movement,	5	11,36
Experiment, proof and problem-solving environment	Energy, potential difference, sea wave, dream, practice (3), solving questions, amperometer, fact, proof	9	20,45
Limited and mediocre environment	Small cave, chicken coop, remote and cold room	3	6,82
Academic and technological environment	Science (2), technology (2), cartoon, car,	4	9,09
Complex and interesting, ambiguous environment	Unknown city streets, riddle human, shopping mall	4	9,09
Tense environment	Electricity (5), dangerous job, amusement park	3	6,82
Environment of team work	Track, game of revealing	2	4,55
Total		44	100

As seen in Table 1, it was determined that pre-service science teachers mostly used “life”, “practice” and “electricity” metaphors for General Physics laboratory.

Problem 2. Through which metaphors do pre-service science teachers describe their perceptions towards General Chemistry laboratory? Under which conceptual categories can these metaphors be grouped?

Table 2. Distribution of General Chemistry Laboratory Metaphors according to Categories

Category (n=8 )	Metaphor (n=42 )	f	(%)
Healthy and concrete learning environment	Factory (3), the place where we live, puzzle, home (2)	4	9,53
Entertaining and fun environment of diversity	Kitchen (6), witch room, cosmetics store, underground, space, rainbow (2), fridge, school, entertainment environment (3), happiness, amusement park, kindergarten, game (3),	13	30,95
Experiment, Proof and Problem-Solving Environment	Observation, room, experiment area, saving the world, laboratory, test tube, titration, pharmacy (3), reflection, water, riddle,	11	26,19
Limited and Mediocre Environment	Hospital, insufficient room, record room, stench, life, old ages	6	14,29
Academic and Technological environment	Equipped place, a new world, scientific environment 2	3	7,14
Complex and interesting, ambiguous environment	Curiosity, Heisenberg	2	4,76
Tense environment	Risk area, acid, bomb	3	7,14
Total		42	100

As seen in Table 2, it was determined that pre-service science teachers mostly used “kitchen”, “factory”, “game”, “pharmacy” and “entertainment” metaphors for General Chemistry Laboratory.

Problem 3. Through which metaphors do pre-service science teachers describe their perceptions towards General Biology laboratory? Under which conceptual categories can these metaphors be grouped?

Table 3. Distribution of General Biology Laboratory Metaphors according to Categories

Category (n=6 )	Metaphor (n=41 )	f	(%)
Environment of Investigation, Analysis and where daily life is explained	Natural environment, room, space, zoo and botanical garden (3), surgery, place of investigation (3), garden (3), nature (3), animals and plants, animal kingdom, life (8), forest (3), world of organisms (5), microscope, botanical park	15	36,59
Environment for discovering the unknown	Microscope (2), spaceport, organism, human body, broad universe of new worlds, place with full of surprises, interesting environment (2), new discovery, different world	9	21,95
Healthy and concrete learning environment	World (2), place of experiment (2), scientific laboratory (3), research, connection, journey, classroom, magical manual	8	19,51
Entertaining and fun environment	Entertainment (3), happy place, my dearest	3	7,32

of diversity				
Experiment and Problem-Solving	Hospital (2)			
Environment			1	2,44
Limited and Mediocre	Box (2), chicken coop, shelter, untidy home, slaughter house			
Environment			5	12,2
Total			41	100

As seen in Table 3, it was determined that pre-service science teachers mostly used “life”, “world of organisms”, “nature”, “forest”, “garden”, “zoo” and “place of investigation” metaphors for General Biology Laboratory.

#### 4.3. Examples from Metaphor Statements of Research Participants towards their Perceptions on Laboratory

Tablo 4. Examples from Metaphor Statements of Research Participants towards their Perceptions on Laboratory

Laboratory	Metaphor	Statement
General Physics	Life	“It is like interesting, thoughtful because experiments conducted make physical explanation of some incidents and phenomena that we see in real life to us” “It is vital and fun. It is like looking at phenomena that we encounter in daily life through the lens of science because it explains aspects that we have always encountered in daily life but we have never been curious about and events that we have been curious about but we haven’t thought that their answers can be found in classroom. It ensures concretization of the course physics that is seemed abstract”
	Application	“It is like a small atelier with full of electrical and mechanical devices and equipment for learning topics in physics with application because there are devices with mechanisms and equipments that operate with certain systems within to conduct experiments” “It is like a field of practice because physics cannot be learned without practice”
	Electricity	“It is like a fun game that reveals things, which we have always seen in fact but never thought about, because we installed electrical circuits and made velocity and mass calculations” “It is like boring but instructive because we see projections and electric waves in lab”
General Chemistry	Kitchen	“It is like a kitchen because you can mix many components in suitable environments” “It is like a kitchen (chemistry kitchen) because there are different and colored materials everywhere inside bottles”
	Factory	“It is like a factory, manufacturing of food because like a factory, new materials are manufactured from certain materials within a safety circle in certain amounts” “It is like a factory, there are many materials within and it is in operation in a certain functioning”
	Game	“It is like a fun game because we can achieve different reactions” “It is like a fun course and game in group study because it is very exciting to mix chemical materials with each other and waiting for the outcome”
	Pharmacy	“It is like a pharmacy because it makes drugs” “It is like a pharmacy because it is a place of producing materials needed for us to continue our life”
General Biology	Entertainment	“It is like a place where entertaining experiments are conducted because we were able to use chemicals that we had not seen before” “It is beautiful, fun and instructive”
	Life	“It is like the meaning of life because all functions of human life are examined with this way” “It is like life because it explains life”
	Living World	“It is like the world of organisms because it is concerned about organisms” “It is like the world of organisms because in this course we dealt with organisms and made examinations with microscope”
	Nature	“It allows us to investigate organisms in nature and their structure” “It is like a place where everything in nature is presented and where I feel happy because I think that I am interested in plants and animals”
	Forest	“It is like a garden with flowers, a forest because it incorporates all organisms inside” “It is like a forest because we can see elegance of nature in forest”
	Garden	“It is like a big garden because it has a botanical garden with plenty of plant varieties” “It is like a garden full of plants because we examined plants that we had to examine on-site”
	Zoo	“It is like wandering in zoo and botanical park because it was interesting to examine organisms which are quite connected to our life” “It is like a zoo because there were animals like fishes and frogs in the lab that I had in high school”

## Results

Having examined perceptions of pre-service science teachers on General Physics, General Chemistry and General Biology laboratories that they have used by means of metaphors and within the context of conceptual categories that represent these metaphors according to obtained findings, it was observed that in general similar conceptual categories formed for three different labs. These conceptual categories are “Healthy and concrete learning environment”; “Entertaining and fun environment of diversity”; “Experiment, proof and problem-solving environment”; “Limited and mediocre environment”; Academic and technological environment”; “Complex and interesting, ambiguous environment” and “tense environment”. The category “environment of team work” differs for General Physics Laboratory. Not having the category “academic and technological environment” for General Biology Laboratory also differs for this Laboratory. Examining metaphors used for General Biology Laboratory, a quite intensive differentiation is observed in conceptual categories compared to General Physics and Chemistry Laboratory. In this regard, the categories “Environment of Investigation, Analysis and where daily life is explained” and “environment for discovering the unknown” appeared intensively in this lab and these categories do not exist in General Physics and Chemistry Laboratory. On the other hand, there are also common categories in lesser ratios with General Physics and Chemistry Laboratory such as “Healthy and concrete learning environment”; “Entertaining and fun environment of diversity”; “Experiment and problem-solving environment” and “Limited and mediocre environment”. The reason why General Biology Laboratory differs from General Physics and Chemistry Laboratory that use of microscope in General Biology Laboratory in general and investigating plant and animal samples collected from gardens on these microscopes might have made pre-service science teachers perceive this lab environment as a reflection and discovery of daily life.

Examining metaphors that contain created conceptual categories, it is observed that pre-service science teachers have been intensively affected by their perceptions toward materials specific to laboratory where they were present. For instance, metaphors such as science, mechanics, concrete, order, life, system, electricity, atelier, practice, potential, amperometer and technology stand out in General Physics Laboratory; metaphors like factory, home, kitchen, cosmetics store, rainbow, entertainment environment, amusement park, game, laboratory, test tube, titration, pharmacy, water, riddle, stench, life, scientific environment, Heisenberg and acid stand out in General Chemistry Laboratory, and metaphors like life, zoo and botanical garden, place of investigation, nature, animals and plants, animal kingdom, forest, living world, microscope, microscopic living, human body, interesting environment, new discovery, different world, science and entertainment stand out in General Biology Laboratory. It was observed that commonly used metaphors in three laboratories generally contained statements of “science, practice and life”. This is an expected outcome; pre-service science teachers used metaphors, which contained these three statements, for three laboratories in different concentrations. It was determined that statements, which contained “science”, were intensively used in metaphors used for General Physics Laboratory (perception for presence of measurable and numerically definite results in this lab); statements, which contained “application”, were intensively used in metaphors used for General Chemistry Laboratory (the perception that new products are obtained by mixing various chemical materials to each other with use of equipments such as conical flasks and beakers as lab materials mostly in this laboratory, and there is synthesis and material diversity); statements that contained “life” were intensively used in metaphors used for General Biology Laboratory (the perception that dynamics of real life are seen in this lab since plant and animal samples extracted from nature are examined by microscope). In this respect, perceptions of pre-service science teachers on General Physics Laboratory can be interpreted as that science is measurable and definitive outcome is achieved; perceptions of teacher candidates on General Chemistry Laboratory can be interpreted as that science is scientific application and synthesis, and perceptions of pre-service science teachers on General Biology Laboratory can be interpreted as that science is real life.

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# Investigating the Educational Leadership of Administrators

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## Abstract

This is a descriptive study which aims to investigate the educational leadership of the administrators working at pre-schools and secondary schools from prospective teachers' observations. The study uses general screening model. The population of the study includes 250 prospective teachers who took school experience course (went to teaching practice) and who are studying at the department providing teacher education within the Faculty of Education, Near East University.

Data of the study was collected using the Educational Leadership Roles Scale developed by Şişman (2004). Mean value (X), standard deviation (SD), independent groups t-test, one-way variance analysis (ANOVA) has been used to analyse the gathered data. The findings suggested that there is no meaningful statistical difference in the educational leadership of the administrators and gender of the prospective teachers. The educational leadership of the administrators showed meaning statistical difference in relation to the departments of the prospective teachers.

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*Keywords:* Leadership; Educational Leadership; Administrator

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## Introduction

Education starts with the humans' willingness to learn. People, since its creation until today, has a need for education; and benefit from education for issues like feeding their instincts, finding easier and sustainable solutions to their. Throughout the history, people first tried to put forward their self and skills. Human beings, whose needs were met by nature, fought with the nature. In order to get benefit from Nature, people work together in a harmony and create Nations. Becoming socialized, actualization her/himself, himself/herself, investigating the environment and claiming the duration was coming to a life (Tıkır,2005). As it was explained, exploring the unknown and discovering, were coming to a life while it was needed during the development and learning instincts.

There has been a process of changing and development since the beginning of human being. The living era, shows a rapid change and improvement, and every part of lifetime is effected from process of the change and development. This process affects its felt from the style of lifetime, thought shape, to the ethos and education system in a wide area. The most important area in peoples life is educating system and the change and development could be seen in this area widely. Education has a great role in every nation's future. Yıldız and Buyrukçu (2005) found, while they were having a search on the effect of education on development of nations, that the development and change on Nations could be seen with the relevant and required improvement of education.

Çetinkanat (1988) had a research on the role of self improvement on nation's improvement. He found that 'The function of education is undertaken by organizations, which is called school in every nation. In order to be effective in Education System, main part is done by the teachers who have the ability of doing regular class exercises. From this point of view, the teachers reaction and the most important point leadership is more important for doing the class facilities effectively.

Bursalıoğlu(1997) had a research about leadership. From this research it can be understood that leadership is not one person's quality, it could be reached by the relation between variables. In this part, in class, the teachers leadership behavior could be effected from her/his self, students and the class conditions.

Gümüşeli (1996) had research and found that there are different leadership approaches. Especially from the second part of 1970's ,the leadership studies shows that , the leadership in education is taken under a topic of training and learning which is done in a center.

The trained leadership is improved properly with the school administration. This shape of leadership, change classical role of the school director and the directing behavior of the director. Çelik (2003) had a research on the topic of educational leadership. It is understood from the explanations that the basic starting point for the leadership is result of the fulfilled education.

Hallinger (1992) found that, the professional standards for school directing is linked to protecting the basic school and the program orientation. Together with training leadership new educational criteria's are created. Moorthy (1992) found that, it is not possible to distinguish educational leadership and management. If the director of the school is not a good director, the director could not be educational leader.

The most important characteristic for educational leadership is the one which is focused on condensation of learning and training. On educational leadership Gümüşeli (1996) found a different perspective which says that the students, teachers and training programs take part together in the program and these are related with the leadership on duration of the education.

The training leadership, in one meaning, the reason of the property 'providing the students successful education' should be reminded by the director of the school. Özden (1998) explained about the system in knowledge society. The basic point which is done here is just 'preparing the students to learn information' perspective. At school 'the director and the teacher affect the students learning' result could be taken.

The educational leadership and the role of educational leadership are very popular in school leadership. But this should be supported by the class teacher which is a unit at school. This is a kind of leadership which should be done at least by the teacher at school. Literature related with the educational worker, shows that the teachers role in education is complicated and multidimensional. Ounpıgıl (2000) and Balay (2003) had researches about the

role of teachers inside and outside of classroom. These roles should be done successfully. They try to show that one of the role which is the most important role here is educational leadership.

Harchar and Hyle (1996) and Balay (2003) had researches before. As it is mentioned, the good teachers are the ones who have effective educational leadership characteristics. At this point, the teachers who are successful, have a good worth center vision and facilities about success, could be evaluated as educational leader.

The educational leadership is done by many behavior dimensions. Recently many kind of behaviors are repeated in literature. From these points certain models are used and the tools for the researches are improved. One of them is the one which has three dimensions and eleven variables. This model was done by Hallinger (1983).

With the help of this research, the main point is getting ideas about the leadership roles on the teachers in general and technical or normal lyses and observations of the stager teachers at primary school, the leadership is questioned in TRNC. But the focus point is getting information about the school directors roles in educational leadership under various variables.

### *1.1. Aim of the research*

The aim of this research is determining the secondary school and primary school directors educational leadership. In this research, for determining the school directors educational leadership some of the demographic specialties of the candidate teachers are taken into consideration. The main point of the research is improving proposals. These improving proposals are aimed to be used by the directors and could be given useful information's about variations on educational leadership and recognition of these variations.

### *1.3. Hypothesis*

Akgün (2001) had a research and found that the most important variation in educational process is the teachers. Teachers from the point of theorem, regulation, fact and event explained the education and organization and direction; aim, structure, period and seasons dimensions are the main points of 'not being whole' on 21. Century. As a model figure for the future, this model could be taken the most active undertaken role.

## *2. Literature Review*

As it was mentioned by Hallinger and Murphy (1985) and Gümüşeli (1996) educational leadership is an approach on education program on academics success and educational process. The leadership is done by the related facilities which are taken centrally at schools.

Educational Leadership was developed by Hallinger (1983), adapted by Gümüşeli (1996) to Turkish Educational System and class teachers leadership role by the researcher. The definition of the school mission, directing the educational program, improving positive learning seasons in facilities with three basic dimensions and related with this dimensions, improving the schools aim, explaining the school aims, checking and evaluation education; coordinating the education program; observing the students success; limiting the learning time, feeling the property, motivating the students on learning; making the occupational development; improving academics standards; practice are the ten duty for a class teacher.

The School director is the one who works as a director or a vice director depend to the Ministry of Education. A leader means the one who has directing ability and force, pioneer, chief. Another meaning is, leader is the one who is on the top pest level in a party or institution. Leadership in a dictionary means the one who is the first person in the first part of the race or a team. As it is understood from the explanations, leadership means leading, guiding or coming in front.

In literature there are many explanations about Leadership. Çelik (1999) mentioned that the facilities in groups effected with the duration on the aim of the group, opinions, action and tendency, affection, guidance and directions, between the leader and observer two dimensional affect, powerful impact, the power of effective personal specialty; affecting the observers thoughts and facilities with the power.

Leadership at the same time, the duration of group exercises for reaching the success; Direction, trend, guiding in work and thoughts. Luenenburg and Ornstein (1996) had an effective research and found that forming strong and effective teams tending to aims, convincing people working as a leader of a group and working in a harmony in a group; for the sake of a group persuading everyone in a group working on a target point and do not thinking

about personal anxiety.

Leaders are working as collecting a group of people for certain aims, having enough knowledge and ability of moving people said Özcan (2006) and giving not daily but critically decisions for improving the organization and taking a first step in an organization. Leaders, introduce the school mission; improve the positive learning area; usually observe the learning time and provides proper feedbacks; direct the educational syllabus and educational time, evaluate educational programs; are some kind of jobs which are undertaken by the leader. As a result of these, the directors at schools should be leaders and should see the other sides of the boundaries in the future.

Firestone (1996) showed that, more important than what some kind of people doing in certain places, following the presence of organization; in order to be improved and active what are compulsory duties and what are the function of the leaders in normal times are more important. Because of this, there are two categories about leadership. The one is leadership functions in normal times and the other one is leadership in changing times.

Sullivan and Harper (1997) had a wide range of personal perspective, the one who has the capacity of combining the scene and learned tools together with a purpose; having a strategic architectural vision of forming the values and visions corner stone's; noticing the patterns which are not seen by the others and have the capacity of making a decision and moving, effecting people by inspiration, being a pioneer in an organization; having enough technological knowledge, having capacity of teaching and improving juniors; taking the humanistic dimensions into a center; are some kind of characteristics of the 21<sup>st</sup> century leaders explanations.

As a result of Tahaoğlu ve Gediklioğlu (2009)'s explanations, in order to live the organization in its aims, people and material sources should be used efficiently, is the personality of a leader that is needed.

The model of leadership, ability and whatever the attentions are some kind of possible personalities of the leaders. Özden (1998) mentioned some kind of common behaviors are;

- 1) Leaders, start with the question of 'What should be done?' instead of 'What I want?'
- 2) Ask 'What should I do as diversity? Or 'What Can I do as diversity?'
- 3) Leaders are engaged with the questions of 'What is the mission and aim of the organization? What are the basic factors that affect evaluation of the workers performance and conclusion?'
- 4) Leaders, evaluate the diversity between people.
- 5) Leaders, do not afraid from the powerful and talented people near them.
- 6) Every time do the one which should be done, not the popular one.
- 7) Do not give a speech about what people should do? They did what they should do? Leaders should be a model for the behaviors that they want to see.

In social science, the specialties cases of the leaders could be changed according to the needed work and audience. Instead of mentioning every case or every job to the audience, it is accepted to have specialty of a leader as changing from the needed job or audience.

### *2.1. The relation between the Leader and Director*

Leader and Director are two different topics. Director, did the jobs correctly; the Leader did the correct jobs. The Director interested in carrying out the rules, the Leader is forming the rules. In this case, the school director as an educational leader, usually use new educational methods and techniques, use strategies in order to make the education successful and learning permanent. Also the director should have a research and improvement responsibility. Leader, While doing leadership, the director is directing the jobs. Because of these, the importance and usefulness of the information about the difference between leadership and director should be known from the organization. Directing is related with periods in an organization, doing these effectively and without any mistake. Leadership is related with the responsibilities of the organization. Sullivan and Harper (1997) explained a director as a person interested in carrying on the procedures correctly. But a leader defined the target points of the organization, integrates the personal effort and energy for organizations common targets. The leader should coordinate the different parts of the organization and try to form an organizational unity.

At the beginning of 1900, there were many theories and models in literature about leadership in USA and Western Countries. In 1911 Frederick Taylor, the vision of scientific directing stream and classical directing facilities. Hanry and Fayol found the principles of psycho social directing ways and directing visions. Max Weber had bureaucracy approach, Elton Mayo and Hawthorne had research and found the importance of organizational and directing psychology. They had leadership on these studies. In these studies, Leaders' personal specialty, leadership styles, situational factors, directing behaviors are some of the important topics which are mainly based on.

Specialty Theorem; under this topic, some of the successful politicians and soldiers are examined and have a search about certain kind of specialties. The starting point of this theorem is summarized as 'People can't be a leader, people born as a leader'. In theorem some of the main specialties which are taken into consideration are;

Behavioral Theorem; Şişman (2002) mentioned the collected leadership perspective and focused on that there aren't certain kinds of specialty of the leadership. He had a search on leadership behaviors and examined the leaders behavioral profile in order to reach correct information.

It is explained that there are two behavioral dimension on Leadership in Ohio University. These are duty orientation and relation orientation leadership behaviors. These are;

- 1) Duty orientated leadership behaviors are related with organizational aims. This Dimension, organizations, making a duty analyze, forming communicational channels, determining the relation between functions, contains some of the behaviors.
- 2) Çelik (1999) mentioned that , behavioral leadership orientation relation, assumed that the leaders show the respect, thrust and sincerity to the audience.

Situational Theorem; the starting point of these approaches are, in every stage there is a relevant leadership specialty and behavior is discussed. Eren (1993) mentioned that there is a continuous change process. There are differences on people and environment conditions and the leadership kind which was relevant before is not taking its preserved validity any more. There are new concepts of new kinds of leadership. These are applied with new changed leadership theorems. Özden (2000) mentioned these concepts and the main approaches are, taking part instead of obedience, choices instead of plans, distributing authority instead of collecting authority, acquired authority not the transmitted one, and synergy formed leadership. Leadership, is one of the topic which is talked about in directing science and educational science in literature. At the beginning of recent century, starting from directing leadership many explanations are made and some of the similar and different points are defined. Erdoğan (2000) had a research on 'transmission the organizations to its target' as an administration and mentioned that leadership is using science and art with every source and possibility in a best way. Eren (1993) had a research about changing blended atmosphere and time. From the approaches, older people assigned for taking people and material factors together. This older people are named as Directors in organizations. Erdoğan (2000) mentioned that when people are affected for changing their opinions, feelings, wert, effecting beliefs and behaviors, negotiating habitual applications and certain authority sources, show the leadership especially. The concept of leadership and management in organizations management, exhibit the difference of behaviors. The directors, who works in Secondary schools should direct their school as a leader beside being a director. From the researches which were done with schools, it is observed and found that for the success of the school the directors leadership role has more importance.

### *2.2 The concept of Teaching Leadership*

In 1980's, the teaching leadership had seen as a basic management role, and relay on teaching and control of the program and coordinating it. But, for leadership at school focused on reforming the school configuration. The efficient directors are the efficient teaching leaders as it can be supported and understood from these;

The teaching leadership in leadership area is related with the students, teachers, teaching program and teaching process directly connection to leadership field. There are three important power which forms and defined the school. These are students, teachers and society. In order to be effective at school, these three powers should interact in the syllabus program. Findley (1992) mentioned teaching leadership, Işık and Aksoy (2008) showed that the basic duty for the school director should be working coordinately for the sake of improving the schools quality using these powers together for the school's purpose.

### *2.3 Teaching Leadership and Teaching Programs*

Affected school director, shows the simple teaching standard system to the teachers. The school director, has the coordination duty for evaluating teaching and improving the programs topics at the same time. Teaching program has the flexibility and general content. The teaching programs should be equal to the time, and should provide student active participation; should show clearly the truth, incentive and feedback. Çelik (2000) showed in the teachers lesson plan, there should be a season that shows every students high expectation, and these expectations should be done with the students. As a teaching leader the school directors have that kind of duties; teaching leader; take care of the targets of the program and the students' expectation together. The personal differences in classroom, students, are aware of preparing learning-teaching strategies and improving them; also, learning-teaching periods and methods of the lessons, the proper method and techniques should be chosen. According to Can (2007) directing, bureaucratic duty and process for supporting teaching facilities. They are aware of the performance of the students, and reliable and relevant evaluating tools should be chosen. Also the classrooms problems and their solutions at departments are used for forming the improvement at school and changes at classroom and directing which helps for making effective learning-teaching atmosphere.

Teaching Leadership Concept, means making the school study environment satisfied and it can be turned into a creative atmosphere. Teaching leadership should be improved according to the school administration. Gümüşeli (1996) mentioned about teaching leadership subject that there should be improvements between the teacher group's relations, and providing the proper sources for learning and making them used in a better way for making effective teaching which includes evaluating the teacher's and supervising them.

Schneider (1991) had a research about teaching leadership ,and these were transferred to Cerit (2001) perfection and fertility provided thoughts which are done by teaching leadership as a school director and her/his activity roles. Hallinger and Murphy (1986) had a research about teaching leadership subject, and for this topic the explanation of the school's mission, directing the teaching programs and learning should be improved by the three basic dimensions for the positive learning seasons which should be defended.

According to Doresh and ChingJen (1985) the teaching leadership, the school directors students teaching cases, by doing this students' teaching stages, are affected by important stages about behaviors directly or indirectly. Burnett and Pankake (1990) explained that in order to make teaching objectives the teaching staff's hidden power should be discovered and this should be identified and prosecuted during the school periods.

For the application of teaching leadership for solving the problems Krug (1992), mentioned that the school's objectives should be provided with the help of other people. According to De Bevoise and Çelik (2007), as a teaching leader school director, improves the lines between teacher's group relations, improves the teaching and schools targets, provide the needed sources for the teachers and supervising and evaluating the teachers.

At the completed researches, Yılmaz (2010) mentioned and determined that the school directors, the directors who are not effective school directors, can have some kind of different team leadership specialty and behavior.

#### *2.4. Teaching Leadership Behavioral Dimensions*

Teaching leadership behavior and duties become the subject point of many evaluations. Up to 1980, teaching leadership behaviors showed an untidy view and summarized under three cognitive topics by Hallinger for the space of improving a scale. It was improved by Gümüşeli (1996) and Hallinger (1983) and modified to Turkish Education System. The first teaching leadership research with its three basic dimensions and eleven duty sizes and its related behaviors in Turkey could be summarized like that.

#### *2.5. Related Researches*

In this part, the researches about teaching leadership behaviors are given below. Hallinger (1983) had a research for determining primary school director's behaviors and the effect of these behaviors on personal and organizational variables are aimed in California San Jones suburbs. In order to covering this, the abbreviation of PIMRS (Principal Instructional Management Rating Scale) improved a device which was used in many researches; the school directors, teachers and district school directors were applied.

Bursalıoğlu (1975) did the research about 'The Educational Directors Adequacy'. The aim of the research was; determining to find the showed or the needed adequacy of the primary school directors. The research data's were made by the Inspector from The Ministry of Education, Directors of the Ministry of Educations, Primary Schools' Directors and The teachers from these schools to a 2688 experimental group. They did this by adapting n questionnaire form. The most important findings are; adequacy of the school directors which needed to be showed in high levels and because of this the pre-service education adequacy; authority and responsibility, the schools material maintenance and leadership behaviours are found.

In Turkey, in education directing scanning in literature, the first research about direct teaching leadership was done by Gümüşeli (1996). The aim of this research was defining the teaching behaviors 'In Istanbul at Primary School Directors Teaching Leadership Behaviors'. The aim was defining the primary school directors teaching duties in which degree and while doing this , getting idea about whether the directors personal specialty are affected by the school's organizational specialty or not . The universe of the research was 602 formal primary schools. Many examples were taken between these 110 primary schools. The research statistics; was made with school directors and teachers totally 299 experimental and had the result. For improving the experiment form,

Hallinger (1985) found the forms which were improved by the researcher and teaching leadership researches used widely the model which was called PIRMS. This questionnaire, was translated into Turkish by Gümüşeli (1996), some kind of arrangements were done according to The Turkish Educational System. On the other hand, directors; improves the aims, supervising the teaching and evaluating, coordinates educational program, observes the students improvement, protects the learning time, provide the teachers professional improvement, improve the academics standards and perform the duties which are not mainly arranged are their views.

Şişman did a research in 1996 about 'Effective School Management'; He focused to get idea about the directors directing behaviors in which levels in primary schools in Eskişehir. The unity of the research was to determine the primary schools' in Eskişehir. In Eskişehir there are 28 primary school directors and they are used in the research. The directors should be worked in the same school at least one year, should observe the teachers at an enough level, were reminded as some kind of pre-conditions, 18 schools were at this level which had the specialty and under the research content.

Gümüşeli 1996 and Şişman (1996) had researches which had some similarities. Both two research findings are used by the researchers for growing the school directors and having an improvement for the prepared educational programs which proves contribution is thought.

On the other hand, the schools socio-economical structures, statue of using special programs and changes in organizational school-region relations, do not affect the school directors behaviors.

Related with this topic, another research was done by Supovits and Poglinco (2001). The research was done for the students' web security and prepared by particularity standards which rely on syllabus program. That was used for American Choice Proposal. At this study, in order to have efficient educational visions that kind of questions answers were investigated: The basic part of this research was made by eight successful school directors who share their times, stories and their experiences. The desired directors are the ones who works in American's chosen leaders at schools which had efficient teaching leaders and determined to find them. Between 200 school directors only 19 directors were chosen. Between 19 personal group nine school directors were chosen casually and asked to come to the study. Beside these interactive meetings which were made by the directors, two important data were discovered. The one is the research was done by the Consortium for Policy Research in Education (CPRE) in 2001 Spring semester and used by the 200 American chosen school director and the proposal was evaluated as part of a questionnaire for them. Four main issues have emerged in this study which investigated the priority organizing of school administrators for improving their educational development and academic performances: Educational leaders spend more time in classrooms to observe the education provided and its outcomes. Educational leaders manage their time more effectively around the concept of education. Another study carried out in this field was by Krug in 1992. The foundation of the research was formed in order to answer questions like: testing the correlation between leadership, educational climate and student learning; how accurately can educational leadership and educational climate predict the outcomes on student learning; and to what extent do these effects stay constant on the classrooms. The study was very comprehensive working with 81 schools around the Chicago area focusing on educational leadership behaviour of schools administrators; the correlation between the educational leadership evaluations of the school administrator and teachers; the correlation between the importance of educational climate given by teachers and students. Data was not collected from four schools at high school level. The sample of the study consisted of 1523 teachers and 9415 students. The questionnaire used in the study was implemented to find out the self-perceptions of school administrators and teachers' perceptions of the educational climate. The findings of the study, in general, proved that there is a positive correlation between the self-perceptions of school administrators and student success. Meyer and Macmillan's (2001) study was conducted through a series of interviews with 13 school administrators between May and August 2000 in Nova Scotia. The findings of this study suggested that "Educational leadership", includes curriculum development and pedagogical activities such as delivering and evaluation; while "administrative duties" include activities that do not belong to educational leadership. Bursalıoğlu's (1975) study used a questionnaire as data collection tool and revealed that the proficiency of the school administrators include rights and responsibilities, school's financial maintenance and leadership attitudes. Gümüşeli (1996) also used questionnaire as data collection tool and collected his data at 11 dimensions: describing the educational leadership behaviours of the primary school administrators and school's mission; improving school's missions; evaluating and assessing the education; cooperating the education programme; monitor student improvement; maintaining education time; providing teachers with professional development; improving and implementing academic standards; making feel the existence. Supovitz and Poglinco's (2001) study used both interviews and questionnaires as data collection tools. Meyer and MacMillan's (2001) study that used interviews as data collection tool, the school administrators were specifically asked to provide their list of priorities of daily activities.

### 3. Methodology

#### 3.1. Developing Measuring Tools

This study aims to determine the educational leadership of the school administrators working in secondary and pre-school education institutions in Turkish Republic of Northern Cyprus. A 46-item questionnaire was implemented to prospective teachers studying at university and who took teaching practice courses. The “Educational Leadership Roles Scale” has been used in this study to explore the educational leadership of the administrators.

Educational Leadership Scale was used with the aim of exploring the educational leadership of school administrators working at secondary and pre-school education institutions based on prospective teachers’ observations; and Şişman’s (2004) “Educational Leadership Roles Scale” has been used as the data collection tool.

Students taking school experience course and will go to schools for internship has been called for a meeting before the survey and asked to observe the school administrators. The teachers who participated in the study were asked to choose their levels of agreement on the statement in the questionnaire.

### 4. Findings and Discussions

This section includes the findings and discussions related to the sub-problems of the study. Findings in relation to the frequency and percentage of the prospective teachers based on demographic variables; and their observations on the educational proficiency of the administrators working at secondary schools have been analysed and presented as tables

#### 4.1. Frequency and Percentages of the Prospective Teachers based on Demographic Variables

Tablo 4.1.  
Sample Group Distribution

		N	%
Gender	Female	153	61,2
	Male	97	38,8
Departments	CITE	96	36,0
	Classroom Teaching	50	20,0
	Turkish Teaching	35	14,0
	Guidance	20	8,0
	ELT	20	8,0
	Pre-School Teaching	35	14,0

The frequency and percentage distribution related to the prospective teachers’ demographic information is presented in Table 4.1. 61.2% (153) of the prospective teachers is female and 38.8% (97) is male. The distribution of the sample based on their departments is as follows: 36.0% (90) CEIT, 20.0 % (50) Classroom Teaching, 14.0% (35) Turkish Language Teaching, 8.0% (35) Guidance Department, 8.0% (20) English Language Teaching (ELT), 14.0% (20) Pre-School Teaching.

Aksoy and Işık’s (2008), Can’s (2007), Çalık and Şehitoğlu’s (2006), Şişman’s (2004) and Celep’s (2004) studies, like the current study, has found that the supporting teachers, organizing activities for their development behaviors of the school administrators in insufficient. However, school administrators should discuss problems with the teachers and encourage them to participate in activities like panels, conferences (Blase and Blase, 2000). School’s climate is very important in affecting students’ learning because a positive school climate with its supportive staff and commitment makes it easier to achieve goals. Administrations should foresee potential problems and conflicts; and implement the appropriate solution techniques (Çalık, 2003). One of the main duty areas of an effective administrator is to pay attention to strengthen school-environment relations (Saritaş, 2005) because school administrator, individually, must be in formal or informal interaction and communication within

or outside the school.

#### 4.2 Findings and Discussion in Relation to the Comparison of Prospective Teachers' Perceptions of the Educational Leadership of School Administrators based on Gender Variable

One of the sub-problems of the study is: 'Is there a meaningful difference in the Educational Leadership of the administrators based on gender at 0,05 level according to prospective teachers' observations?'. An independent group's t-test was implemented in an effort to answer the problem but no difference between groups has been determined.

Table 4.2.

*Findings in Relation to the Comparison of Prospective Teachers' Perceptions of the Educational Leadership of School Administrators based on Gender Variable*

	N	X	SS	t	df	P	Comment
Female	153	203.16	7.32				
Male	97	203.35	6.98	.196	248	.847	
						P>.05	<b>Insignificant Difference</b>

As can be seen in Table 4.2, the mean value of female prospective teachers is (X=203.16, SS=7.32); and the mean value of male prospective teachers is (X=203.35, SS=6.98). As it can be understood from above, there is no meaningful statistical difference between the gender of prospective teachers and their perceptions of the educational leadership of school administrators (t=.847, p>.05).

#### 4.3. Findings and Discussion in Relation to the Comparison of Prospective Teachers' Perceptions of the Educational Leadership of School Administrators based on Department

The third sub-problem of the study is: 'Is there a meaningful difference in the Educational Leadership of the administrators based on departments of prospective teachers 0,05 level according to prospective teachers' observations?'. F-test ANOVA has been implemented to find an answer to the question and it was found that there is a meaningful statistical different between the departments of prospective teachers and the educational leadership of the administrators.

The statistical analysis revealed a statistical difference (F=5.716, p<0.05) was found between the groups in the prospective teachers' perceptions on the educational leadership of school administrators based on their departments. LSD test was implemented to find out wrong which groups the difference is.

### 5. Conclusions and Suggestions

#### 5.1. Findings

61.2% (153) of the prospective teachers is female and 38.8% (97) is male. The percentage distribution of the sample taking school experience course based on their departments is as follows: 36.0% (90) CEIT, 20.0 % (50) Classroom Teaching, 14.0% (35) Turkish Language Teaching, 8.0% (35) Guidance Department, 8.0% (20) English Language Teaching (ELT), 14.0% (20) Pre-School Teaching.

Prospective teachers' perceptions in regards to the educational leadership of the administrators are as follows: The attitudes the administrators show at the highest level, opening the school missions to discussion at council meetings under the "Determining and Sharing the School Missions" dimension; ensuring punctuality of the lessons under the "Management of Education Programme and Teaching Process" dimension; reviewing students' works while evaluating in-class education under the "Evaluating the Education Process and the Students" dimension; encouraging teachers to show their highest performance and informing them about the opportunities of professional development under the "Supporting Teachers and their Development" dimension; and maintaining the appropriate regulations and discipline for an effective teaching and learning under the "Creating an Organized Teaching-Learning Environment and Climate" dimension.

The attitudes the administrators show at the lowest level, encouraging teachers to work toward the same goal under the "Determining and Sharing School's Missions" dimension; reviewing the relevant materials and actively participating in their choices under the "Management of Education Programme and Teaching Process" dimension; determining the students who need special attention and care based on exam results under the "Evaluating the Education Process and the Students" dimension; calling for speakers outside the school for

organizing conferences for teachers under the “Supporting Teachers and their Development” dimension; and supporting teachers who provide new and different views on teaching-learning under the “Creating an Organized Teaching-Learning Environment and Climate” dimension.

No meaningful difference was found in the perceptions of the prospective teachers based on their gender. A statistical difference at 0,05 level has been found on the perceptions of prospective teachers on the Educational Leadership of School Administrators. A meaningful statistical difference was found between the students from CITE department and classroom teaching and Turkish language teaching; between classroom teaching and English language teaching and pre-school teaching students; between Turkish language teaching and English language teaching students and pre-school teaching students; guidance department and English language teaching and pre-school teaching students based on their departments.

## 5.2. Suggestions

This section provides some suggestions as a model for future studies based on the findings.

- 1) The regulation for assigning school administrators can be reviewed and the proficiency areas and minimal standards can be defined. The requirements for school administrators may also look for training in “educational leadership and management” area.
- 2) Teachers and school administrators can be subject to in-service training on “effective leadership in school administration”.
- 3) Similar studies can be conducted with a consideration of the administrators’ demographic features, location of schools and academic success of schools.
- 4) The mutual characteristics of future leaders should be being learning-focused and taking the responsibility of educational leadership.
- 5) A similar study can be conducting comparing the school administrators of state and private secondary education institutions.

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# Investigating the relationships between pre-service science teachers' self-efficacy in laboratory and anxiety towards chemistry laboratory

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## Abstract

The purpose of this study is to explore the relationship between pre-service teachers' self-efficacy in laboratory and their anxiety towards chemistry laboratory. Relational screening model was used in the study. "Laboratory Self-Efficacy Scale (LSES)" developed by Ekici (2009) was modified to be used on pre-service science teachers and "Chemistry Laboratory Anxiety Scale (CLAS)" developed by Bowen (1999) and adapted to Turkish by Azizoğlu&Uzuntiryaki (2006) were used as data collecting instruments. 363 Pre-service science teachers were sampling in the study. As a result, all relations between LSES and CLAS are found to be negative and meaningful. Within the scores of LSES, there is significant relationship in the gender and secondary school type, however there is no significant relationship in the frequency of laboratory usage in secondary and university education. In the CLAS scores, there are no significant results in gender, grade, the type of secondary school and the frequency of laboratory usage in secondary education, but there are significant results on the frequency of laboratory usage in university education.

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*Keywords:* Self-efficacy in laboratory, Anxiety towards Chemistry Laboratory, Pre-service science teachers

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## Introduction

Pre-service science teachers' self beliefs in their capabilities to fulfill their profession have a great importance on developing their teaching abilities, domain knowledge, etc. and on using these skills effectively during the teaching. Self-efficacy belief has an important place within these beliefs (Bal, 2010). Atıcı (2000) and Aston (1984) defined teacher self-efficacy as teachers' beliefs in their behavioral performances and attitudes for a successful teaching and in their capacities of increasing the performances of the students. Self-efficacy in science teaching is described as teachers' judgments and beliefs in teaching science efficiently and in their capabilities of improving student achievement (Özkan, Tekkaya&Çakıroğlu, 2002; Akbaş&Çelikkaleli, 2006). Laboratory, especially in science and chemistry education is an indispensable part of. In addition to researches on self-efficacy in science and chemistry, research on laboratory self-efficacy is also extremely important because measurements of teachers' and teacher candidates' self-efficacy in a specific domain allow their behaviors to be predicted more accurately (Morgil, Seçken&Yücel, 2004). According to Turk (2010), even if the laboratory settings are well-organized, successful teaching cannot be provided unless the teacher is competent in this area. Science teachers should be well-educated in this domain, follow up the contemporary developments, use the laboratory equipments consciously, be able to relate science domain with the other domains, and have compatible laboratory skills (Turk, 2010).

Anxiety towards chemistry has been defined in different ways by various researchers. While Breslow (1993 cited in, Azizoğlu&Uzuntiryaki, 2006) defines chemistry anxiety as the fear of chemical substances, Eddy (2000) identifies three components for anxiety towards chemistry as learning chemistry, being evaluated in chemistry, and handling chemicals. Additionally, student interview results show that the use of mathematics, to answer questions, inability to relate to everyday life, students' anxiety about learning chemistry. The types of the chemistry test and chemistry test itself lead to anxiety among the students. The researchers also addressed that chemistry anxiety results from Bunsen burner, fire, unstructured labs, acid burns, explosions, getting chemicals

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on skin, collecting data and time management in laboratory as factors to provide anxiety towards chemistry, which also effect students' performances in the laboratory (Eddy, 2000; Azizoğlu&Uzuntiryaki, 2006).

### **Purpose of the Study**

The main aim of this study is to investigate the relationship between self-efficacy in laboratory and anxiety towards chemistry laboratory of pre-service teachers who have taken the general chemistry and general chemistry laboratory courses. The following primary research question formed the basis of this study: Is there any significant relationship between self-efficacy in laboratory and anxiety towards chemistry laboratory of pre-service science teachers enrolled in Faculty of Education, Department of Primary Education, Science Education Program?

Relating to pre-service science teachers' anxiety towards chemistry and self-efficacy in chemistry laboratory, this study addressed three research questions:

1. What are the levels of pre-service science teachers' self-efficacy in the laboratory and anxiety towards chemistry laboratory?
2. Is there a significant difference between the anxiety and self-efficacy towards chemistry laboratory of pre-service science teachers in terms of gender, grade levels, high school type, the frequency of using laboratory in high school and the frequency of using laboratory in university?
3. Is there a significant relationship between pre-service science teachers' levels of self-efficacy in laboratory and their anxiety towards chemistry laboratory?

### **Methods of the Study**

In this study, quantitative research design and a correlation scanning model were used.

#### *3.1. Instruments*

Laboratory Self-Efficacy Scale (LSES): In order to determine the level of pre-service science teachers' self-efficacy in laboratory, Laboratory Self-Efficacy Scale (LSES) was used as a first data collection instrument. This instrument has been developed by Ekici (2009) to be applied to Biology teachers. It is a 5-point Likert-type scale of 18 statements and 2 factors. The alpha reliability of the scale was calculated as 0.90 by Ekici (2009). In this research, this instrument has been modified to use on Science Education pre-service teachers.

Since some of the items in the original scale were not convenient to be applied to pre-service science teachers, these items have been modified through a scale-adaptation process. The scale adaptation process was performed with the following procedure: Adaptation of the Items, Expert Opinion, Pre-trial, Reliability and Validity (Karasar, 2008). In order to test item validity, the item-total and item-reminder correlations were examined first. In the scope of the validity study, the construct-validity was examined by exploratory factor analysis through the rotational basic components analysis method. Prior to the factor analysis, the compatibility of the data with factor analysis was tested through Kaiser-Meyer-Olkin and Bartlett tests. The KMO value for the factor analysis was found as 0.936 whereas the result of Barlett test was significant ( $\chi^2=2944.063$ )  $p<0.01$ . It is suggested that the KMO value should be a minimum of 0.60 so that factor analysis could be done with the data (Pullant, 2001). In our case, the KMO value was found as 0.936, which is higher than the recommended value, and results indicated our data satisfied the psychometric criteria for factor analysis to be performed. The factor analysis was carried out in order to have a meaningful construct and compose a set of interrelated variables which assess the same feature as a result of assessment of the relation by identifying basic variables or factors that are classified among many variables observed. Varimax rotational method, which is convenient for more than two factors, was used to reveal the factor loadings. Three factors with eigenvalues greater than 1 emerged from the analysis. In order to interpret the factors more easily and relate them with their corresponding items, varimax rotational method was used. All the 17 items in the reduced Laboratory Self Efficacy Scale matched to the structure of the scale and each item loaded only one factor. As a result of the adaptation process, LSES has been structured with 3 factors, eigenvalues of which are greater than 1.

In this study, total variance of LSES explained was found as 59.475 %. It can be claimed that this variance, which is greatly above the acceptable 41% variance level, enables LSES to have 3-factored structure. Eventually, the reliability of LSES was calculated through internal consistency (Cronbach Alpha). The internal reliability coefficient of the LSES was calculated as  $\alpha=0,920$ . Additionally, the internal reliability of three factors were calculated, respectively, as  $\alpha=0.882$ ,  $\alpha=0.831$  and  $\alpha=0.748$ . All these findings prove that LSES has a satisfying reliability level. According to the results of the analysis to prove the item validity, construct validity and

reliability, LSES has been obtained with 17 items and 3 factors. The lowest and the highest scores that can be taken from LSES were defined as 17 and 85.

Chemistry Laboratory Anxiety Scale (CLAS): In this study “Chemistry Laboratory Anxiety Scale (CLAS)” which has been developed by Bowen (1999) and adapted to Turkish by Azizoğlu&Uzuntiryaki (2006) was used as the second data collection instrument. The instrument, originally in English, is composed of 5 factors. However, after the reliability and validity analyses, the reliability coefficient of the new instrument with 20 items and 4 factors is determined as cronbach  $\alpha=.88$ . The highest and the lowest scores of this instrument are 100 and 20, respectively.

### 3.2. Samples

The sample of the study was 363 pre-service science teachers from 1<sup>st</sup> through 4<sup>th</sup> grades who have taken the General Chemistry and General Chemistry Laboratory courses at the Faculty of Education, Department of Primary Education, Science Education Program.

### 3.2. Analyzing Data

Quantitative data was analyzed by using SPSS 16.0 program at the .05 significance level. ANOVA, independent sample t-test and post-hoc test methods were used to evaluate the scores derived from the scales in terms of the socio-demographic variables of the participants. Pearson correlation coefficient was utilized to determine the relationships between the scales.

## Findings

The research findings were evaluated in accordance with research problems.

Problem 1. What are the levels of pre-service science teachers’ self efficacy in the laboratory and anxiety towards chemistry laboratory?

The scores can be taken from LSES are ranging between 17 and 85. In this study, pre-service science teachers’ total score of LSES was measured as 64.0083. The scores taken from CLAS ranged from 20 to 100, and pre-service science teachers’ total score of CLAS was measured as 47.6887 (Table 1). Please do not change the margins of the template as this can result in the footnote falling outside printing range.

Table 1. Pre-service science teachers’ total scores of LSES and CLAS

Scales Score	X	SD	SE
LSES Total Score	64.0083	9.67239	0.50767
CLAS Total Score	47.6887	11.9154	0.6254

Problem 2. Is there a statistically significant difference between the laboratory anxiety and chemistry laboratory self-efficacy levels of pre-service science teachers in terms of gender, grade level, high school type, the frequency of laboratory usage in high school and the frequency of laboratory usage in university?

In order to determine whether total scores of LSES differed between genders of pre-service science teachers, an independent-sample t-test was conducted. As seen in Table 2, the independent-sample t-test scores showed significantly higher scores of girls than the scores of males. Conversely, the results of the independent-sample t-test which was conducted to determine whether total scores of CLAS differed between genders of pre-service science teachers showed that there is no statistically significant difference between CLAS scores in terms of gender variable ( $p>.05$ ).

Table 2. The results of independent-sample t-test conducted to define LSES and CLAS total scores in terms of gender

Score	Group	N	X	SD	SE	T test		
						t	df	p
LSES Total Score	Female	282	65.0284	9.18838	0.54716	3.819	361	.000
	Male	81	60.4568	10.5048	1.1672			
CLAS Total Score	Female	282	47.209	11.5192	0.68596	-1.433	361	0.153
	Male	81	49.358	13.1428	1.46031			

In order to determine whether LSES and CLAS scores differed between grade levels of pre-service science

teachers, ANOVA was conducted. As seen in Table 3, the results showed no statistically significant difference in the total scores of LSES and CLAS in terms of grade levels ( $p > .05$ ).

In order to determine whether total scores of LSES and CLAS differed in terms of high school type of pre-service science teachers, ANOVA was conducted. The results showed that there is statistically significant difference between LSES scores in terms of high school type variable.

After ANOVA, Levene's test was conducted to decide on the homogeneity of the group variances. Since the equal variances are assumed ( $L=0.638$ ,  $L=0.528$ ,  $p > .05$ ) LSD test was used as a post-hoc analysis in order to determine source of the differences on means in ANOVA. As seen in Table 4, the results showed that LSES total scores of pre-service science teachers that graduated from Anatolian High Schools have significantly higher scores than other pre-service science teachers that graduated from public high schools and teacher training high schools. Conversely, the results showed no statistically significant difference in the total scores of CLAS in terms of high school type variable.

Table 3. The results of ANOVA conducted to define the difference in LSES and CLAS total scores in terms of grade level.

Score	N, X and SD Values				ANOVA Results					
	Group	N	X	SD	Var. K.	SS	df	MS	F	p
LSES Total Score	1. Grade	123	63.2602	8.91751	Between	350.25	3	116.75	1.251	0.291
	2. Grade	77	65.5714	9.36318	Within	33516.73	359	93.361		
	3. Grade	74	63.027	10.2141	Total	33866.98	362			
	4. Grade	89	64.5056	10.4099						
	Total	363	64.0083	9.67239						
CLAS Total Score	1. Grade	123	48.959	11.8283	Between	595.315	3	198.4	1.402	0.242
	2. Grade	77	45.935	11.974	Within	50800.51	359	141.5		
	3. Grade	74	48.635	12.1831	Total	51395.82	362			
	4. Grade	89	46.663	11.6774						
	Total	363	47.689	11.9154						

Table 4. The results of ANOVA conducted to define the difference in LSES and CLAS total scores in terms of high school type.

Score	N, X and SD Values				ANOVA Results					
	Group	N	X	SD	Var. K.	SS	df	MS	F	p
LSES Total Score	Public	146	62.59	9.6624	Between	1048.18	2	524.09	5.749	.003
	Anatolian	160	65.92	9.1073	Within	32818.8	360	91.163		
	Teacher training	57	62.28	10.431	Total	33866.98	362			
	Total	363	64.01	9.6724						
CLAS Total Score	Public	146	48.9247	10.8774	Between	745.71	2	372.9	2.65	0.072
	Anatolian	160	46.0750	12.1041	Within	50650.11	360	140.7		
	Teacher training	57	49.0526	13.4953	Total	51395.82	362			
	Total	363	47.6887	11.9154						

As seen in Table 5, no statistically significant difference in the scores of LSES and CLAS were found in terms of frequency of laboratory usage in high school education.

Table 5. The results of ANOVA conducted to define the difference in LSES and CLAS total scores in terms of frequency of laboratory usage in high school education.

Score	N, X and SD Values				ANOVA Results					
	Group	N	X	SD	Var. K.	SS	df	MS	F	p
LSES Total Score	Never	207	63.6039	9.49438	Between	78.945	2	39.473	0.421	0.657
	Sometimes	117	64.5641	9.39496	Within	33788.03	360	93.856		
	Often	39	64.4872	11.4475	Total	33866.98	362			
	Total	363	64.0083	9.67239						
CLAS Total Score	Never	207	48.2126	11.6978	Between	690.134	2	345.07	2.45	0.088
	Sometimes	117	48.0855	12.1681	Within	50705.69	360	140.85		
	Often	39	43.7179	11.8565	Total	51395.82	362			
	Total	363	47.6887	11.9154						

In order to determine whether LSES scores differed with respect to frequency of laboratory usage in university education of pre-service science teachers, ANOVA was conducted and no statistically significant difference in total scores of LSES was found ( $p > .05$ ).

However, statistically significant difference was found in total scores of CLAS with respect to frequency of laboratory usage in university education of pre-service science teachers ( $p < .05$ ). Levene's test was conducted to

decide on the homogeneity of the group variances. Since the equal variances are assumed ( $L=1.509$ ,  $L=0.363$ ,  $L=1.806$ ,  $p>.05$ ) LSD test was used as a post-hoc analysis in order to determine source of the differences on means in ANOVA.

As seen in Table 6, the results revealed that the students who ‘always’ used the laboratory in university education have significantly lowest scores of CLAS compared to other students who used the laboratory ‘sometimes’ or ‘often’.

Table 6. The results of ANOVA conducted to define the difference in LSES and CLAS total scores in terms of frequency of laboratory usage in university education.

Score	N, X and SD Values				ANOVA Results					
	Group	N	X	SD	Var. K.	SS	df	MS	F	p
LSES Total Score	Sometimes	38	63.0789	11.3599	Between	49.41	2	24.705	0.263	0.769
	Often	103	64.4078	8.87433	Within	33817.57	360	93.938		
	Always	222	63.9820	9.75026	Total	33866.98	362			
	Total	363	64.0083	9.67239						
CLAS Total Score	Sometimes	38	50.7105	13.88156	Between	1084.618	2	542.31	3.88	0.022
	Often	103	49.4854	11.1846	Within	50311.21	360	139.75		
	Always	222	46.3378	11.73263	Total	51395.82	362			
	Total	363	47.6887	11.91543						

Problem 3. Is there a significant relationship between pre-service science teachers’ levels of self-efficacy in laboratory and their anxiety towards chemistry laboratory?

As seen in Table 7, according to the Pearson Correlation analysis results, significantly negative correlations were found between total scores of LSES and CLAS.

Table 7. Pearson Multiplication Momentum Correlation Analysis Results conducted to define relations of the scales.

	LSES Total Score	CLAS Total Score
LSES Total Score	X=64.008 SD=9.672 N=363	r= -.547(**)
CLAS Total Score	r= -.547(**)	X=47.6887 SD=11.9154 N=363

\*\*Correlation is significant at the 0.01 level (2-tailed)

## Results

The scores that can be taken from the laboratory self-efficacy scale (LSES) range from 17 to 85. In this study, pre-service science teachers’ total score of LSES was found as 64.0083. Considering this result, it can be suggested that pre-service science teachers have high level of self-efficacy in the laboratory. This result is consistent with the results of some other studies conducted by Savran, Çakıroğlu&Çakıroğlu (2004); Sarıkaya (2004); Altunçekiç, Yaman&Koray (2005);Denizoğlu (2008); Bal (2010); Turk (2010); Kaya &Böyük (2011).

In this study, according to pre-service science teachers’ total scores of LSES, female students’ self-efficacy levels in laboratory are significantly higher in terms of gender variable. While this result is consistent with the results of some other studies conducted by Shahid&Thompson (2001), Üredi&Üredi (2006), Özdemir (2008), Yalçın (2011).

Another finding of this study shows that grade level doesn’t have a significant effect on pre-service science teachers’ self- efficacy levels in the laboratory. Consistent with this result, in various studies, it has been found that there is no significant relationship between self-efficacy and grade level (Karaduman&Emrahoğlu, 2011).

In this study, pre-service science teachers’ total scores of LSES showed significant difference in terms of high school type variable. This result indicates that pre-service science teachers who graduated from Anatolian High School have significantly higher self-efficacy levels in laboratory usage as opposed to other students who graduated from public high schools and teacher training high schools. No significant difference is found between the LSES scores of pre-service teachers who graduated from public high schools and teacher training high schools. These results are consistent with the results of another study conducted by Karaduman&Emrahoğlu (2011).

The analysis along frequency of laboratory usage in high school and university education revealed no statistically significant difference in total scores of LSES of pre-service science teachers.

The scores that can be taken from the chemistry laboratory anxiety scale (CLAS) range from 20 to 100. In this study pre-service science teachers’ total score of CLAS was measured as 47.6887. Considering this result, it can be suggested that pre-service science teachers have low level of anxiety towards chemistry laboratory.

The results show that there is no significant difference in total scores of CLAS in terms of gender variable. These results suggest that pre-service chemistry teachers' anxiety levels are not affected by their gender. While this result is consistent with the results of a related study indicating no significant relationships between pre-service teachers' gender and their anxiety towards chemistry laboratory (Kaya & Çetin, 2012), another study conducted by Jegede (2007) shows higher anxiety levels of female students towards learning chemistry.

Another finding of this study shows that grade level doesn't have a significant effect on pre-service science teachers' anxiety towards chemistry laboratory. In another study, consistent results were found (Kaya & Çetin (2012).

The analysis along high school type, frequency of laboratory usage in high school and university education revealed no statistically significant difference in total scores of CLAS of pre-service science teachers.

The findings in the present study have demonstrated that there is a significant negative relationship between pre-service science teachers self-efficacy in laboratory and their anxiety towards chemistry laboratory. Thus, self-efficacy could be a negative predictor of chemistry laboratory anxiety, and higher anxiety in chemistry laboratory is related to lower level of self-efficacy.

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# Investigation into the academic procrastination of teacher candidates' social studies with regard to their personality traits<sup>13</sup>

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## Abstract

The aim of this study is to investigate the relationship between the academic procrastination of the prospective teachers of Social Studies and the multidimensional perfectionist personality traits. The study group of this research is comprised of 571 prospective teachers who are undergraduate students at the Department of Social Sciences Teaching of Afyon Kocatepe University and Çukurova University in the fall semester of 2013-2014 academic year. "Academic Procrastination Scale" and "Multidimensional Perfectionism Scale" have been used as instruments for data collection. The analyses conducted have revealed that there are significant relationships between academic procrastination of the teacher candidates and perfectionist personality traits. Findings have been discussed in the light of the relevant body of literature.

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- **Keywords:** Procrastination, Academic Procrastination, Multidimensional Perfectionism

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## 1. Introduction

With an origin which is nearly as old as the humankind itself, procrastination behavior continues to exist today on a widespread scale. Knaus (2000) argues that procrastination behavior might have emerged when people that lived in clans 2,5 million years ago did not carry out the works to be done on time and delayed them instead. Although procrastination behavior dates from such an early time, it has only been intensively studied over the last 30 to 35 years (Milgram, Mey-Tal & Levison, 1998).

Procrastination is defined as "postponement of tasks and adjourning" (Stevenson, 2013). However, the concept of procrastination is treated differently in scientific studies in a more comprehensive way than its definition in dictionaries. Procrastination behavior can be defined as delaying the tasks to be done to a later time due to various reasons. Solomon & Rothblum (1984: 503) highlight the affective aspect of the procrastination behavior, defining it as "the circumstances in which one delays carrying out the tasks that need to be done unnecessarily until a point where they disturb him/her". Senecal, Koestner & Vallerand (1995) address the relationship between procrastination and motivation by defining procrastination as the inability of people to carry out given tasks on time due to poor motivation as well as poor time management and idleness.

When we consider the studies conducted on procrastination, it is recognized that procrastination is classified in various ways. One of such classifications is "chronic (as a personality trait) and situational procrastination". While chronic procrastination is defined as the tendency of an individual towards constant postponement in a large number of aspects of their lives, situational procrastination is defined as the tendency of an individual towards constant postponement in a specific aspect of life (Vestervelt, 2000). In this study, "academic

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procrastination” as a subtype of situational procrastination (Ferrari & Pcyhyl, 2000; Vestervelt, 2000) is examined as it adversely affects the academic success of students (Eerde, 2003; Hannok, 2011; Rothblum, Solomon & Murakami 1986; Steel, Brothen & Wambach, 2001), prevents them from pursuing an academic career and it is observed commonly among students.

Academic procrastination behavior is defined as “delaying the initiation or completion of academic tasks on non-rational grounds” (Senecal, Julien & Guay, 2003:135). In the studied conducted so far, it has been found out that academic procrastination behavior is prevalent among students. For instance Ellis & Kanus (1977) state that procrastination behavior is seen among students with a percentage of 70% to 95% (Quotation: Klassen, Krawchuk & Rajani, 2008:916). In another study, it has been discovered that 77,4% of students are procrastinators and nearly half of students often or always postpone their academic duties (Sokolowska, 2009).

According to the studies conducted, the frequency of procrastination varies in relation to the type of the academic duty. For example, Beswick, Rothblum & Mann (1988) identified that 46% of the students exhibit procrastination behavior while they are preparing their term papers, 31% of them do so while preparing for the exams and 47% of them delay their tasks while they are doing their weekly reading assignments. Solomon & Rothblum (1984) asserted that 46% of the students manifest procrastination behavior while they are writing their term papers, approximately 27% of them display procrastination behavior while preparing for the exams and 30,1% of them exhibit such behavior while doing their weekly assignments. In a similar study, it has been found out that nearly 42% of college students delay writing term papers, 39,3% of them delay preparing for the exams and 60% of them delay doing their weekly reading assignments (Onwuegbuzie, 2004).

It is known that there is a relationship between academic procrastination behavior which is common among students and certain factors. Studies carried out have demonstrated that there is positive correlation between poor time management and academic procrastination (Balkis, E. Duru, Buluş & S. Duru, 2006). Another factor that has a correlation with academic procrastination is motivation. Bronlow & Reasinger (2000) have demonstrated with their studies that students with a higher level of inner drive is less likely to exhibit academic procrastination behavior than those with a lower level of inner drive. As well as ability to manage time effectively and motivation, procrastination behavior is in relation with such factors as responsibility (Lee, Kelly & Edwards, 2006; Lay, Kovacs & Danto, 1998; Johnson & Bloom, 1995), avoidance coping (Bridges & Roig, 1997) and fear of failure (Rothblum, Solomon & Murakami, 1986; Solomon & Rothblum, 1984; Özer & Altun, 2011).

Apart from the abovementioned studies, it is now known that academic procrastination behavior is linked with perfectionist personality traits (Çakıcı, 2003; Frost, Marten, Lahart & Rosenblate, 1990; Kandemir, 2010). Perfectionism is the desire to attain high standards and the inclination to find oneself unsatisfactory and criticize oneself after assessment with respect to such standards (Frost et al., 1990). Perfectionism is an energy source that can be utilized in a positive or negative manner and it improves an individual’s personal, professional and academic success (Roedell, 1984; quotation: Kırdök, 2004).

Hewitt and Flett (1991a) classify perfectionism into three dimensions, which are self-oriented perfectionism, other-oriented perfectionism and socially prescribed perfectionism. While self-oriented perfectionism involves the high standards that the individual sets for himself and the strict assessment of oneself against these standards, in other-oriented perfectionism the expectation of perfectionism is oriented to others. In other words, this dimension involves an individual’s setting unrealistic standards for others and the strict assessment of their performances against these standards. Finally, socially prescribed perfectionism involves believing that others have high expectations that the individual will attain unrealistically high standards (Hewitt & Flett, 1991a; Hewitt & Flett, 1991b). As opposed to Hewitt & Flett (1991a), Frost et al. (1990) classified perfectionism in six different sub-dimensions:

- 1) Concern Over Mistakes: This dimension involves overreacting to even trivial mistakes and regarding them equal to complete failure. Individuals with such a trait are oversensitive to mistakes.
- 2) Personal Standards: This dimension involves individuals’ setting high standards for themselves.
- 3) Parental Expectations: In this dimension, an individual believes that his/her parents have set high standards for him/her.
- 4) Doubts about Action: Individuals within this dimension are in doubt whether they will accomplish what they do or not.
- 5) Parental Criticism: These are the criticisms by parents directed at the performance of the individual.
- 6) Organization: This dimension indicates how much importance the individual attaches to organization, planning and cleanliness (Frost et al., 1990).

Studies which are concerned with the relationship between procrastination and perfectionist personality traits have been carried out, taking the classification for perfectionism made by Hewitt & Flett (1991a) into account

(Kandemir, 2010). However, in this study, we aim to examine academic procrastination behavior with regard to the six dimensional structures which Frost et al. (1990) identified pertaining to the structure of perfectionism.

### *1.1. Problem*

The problem sentence of this study has been determined as “Is there a significant relationship between the academic procrastination of prospective teachers of Social Sciences and their perfectionist personality traits?” Sub-problems have been examined so that we can find solutions to the main problem.

### *1.2. Sub-problems*

Is there a significant relationship between the academic procrastination of the prospective teachers of Social Sciences and the

- Organization,
- Concern over mistakes,
- Doubts about action,
- Parental expectations,
- Perception of parental criticism,
- High personal standards dimensions of perfectionism?

### *1.3. Purpose*

The main purpose of this study is to examine the relationship between the academic procrastination of prospective teachers of Social Sciences and the multidimensional perfectionist personality traits.

## **2. Method**

### *2.1. Study model*

Relational screening model has been used in this study, which aims to investigate the relationship between the academic procrastination of the teacher candidates' Social Studies and perfectionist personality traits. Relational screening model is a study model that seeks to identify “the existence and/or the degree of covariance of two or more variables” (Karasar, 2013:81).

### *2.2. Study Group*

The study group of this study is comprised of prospective teachers who are undergraduate students at the Department of Social Sciences Teaching of Afyon Kocatepe University and Çukurova University in the fall semester of 2013-2014 academic year. In total there are 517 prospective teachers in this study, 236 (45,6) of whom are female and 281 (%54,4) of whom are male students.

### *2.3. Instruments for Data Collection*

In this study, an “Academic Procrastination Tendency” scale to identify their academic procrastination behavior and a “Multidimensional Perfectionism Scale” to identify the students' perfectionist personality traits has been used.

#### *2.3.1. Academic Procrastination Scale (APS)*

Academic procrastination scale was developed by Çakıcı (2003) with the aim of identifying the study habits of students. The scale is comprised of items that aim to measure students' attitude towards academic tasks such as doing assignments and preparing for exams which they are responsible for in their academic pursuits. The scale is a five point likert scale in which the responses of students varies from “This is absolutely true for me” and “This is definitely not the case for me”. There are 19 items in the measuring instrument, 7 of which are positive and 12 of which are negative. Ascending scores on the scale indicate that the tendency to procrastinate is higher (Çakıcı, 2003).

#### *2.3.2. Multidimensional Perfectionism Scale (MPS)*

“Multidimensional Perfectionism Scale” developed by Frost et al. (1990) with the aim of measuring the perfectionist personality traits in individuals has been adapted to Turkish by Özbay & Mısırlı-Taşdemir (2003). The Turkish version is comprised of six factors as is the original analysis of the scale. The scale which is a five point likert type scale has 35 items. There aren't any items that are graded reversely in the scale. The responses given to the questions vary from “I definitely agree” to “I definitely disagree”. The lowest score one can get on the scale is 35 and the highest score is 175. Ascending scores indicate that the trait of perfectionism gets more intense (Özbay & Mısırlı-Taşdemir, 2003).

### 3. Finding

Correlation is used to determine to answer the question: “Is there a significant relationship between the academic procrastination of prospective teachers of Social Studies and their perfectionist personality traits?”. Table 1 shows the Pearson Product-Moment Correlation analysis results of the relationship between the academic procrastination of the prospective teachers and the trait of perfectionism.

Table1. The relationship between Academic Procrastination (AP) and Perfectionism

Variables	N	R	P
AP Organization	503	-.299**	,000
AP Doubts about actions	498	,154**	,001
AP Concerns over mistakes	494	,076	,093
AP Parental expectation	496	-.042	,345
AP Parental criticism	500	,223**	,000
AP Personal standards	498	-.156**	,000

\*\*p<0.01

According to the results of the correlation analysis on the sub-dimensions of perfectionism and academic procrastination in Table-1, there is a significant negative correlation between academic procrastination and organization ( $r=-.299$ ,  $p<0.01$ ) and personal standards ( $r= -.156$ ,  $p<0.01$ ). There is a significant positive correlation between academic procrastination and doubts about actions ( $r=.154$ ,  $p<0.01$ ) and perception of parental criticism ( $r=.223$ ,  $p<0.01$ ). According to the same table, there isn't any significant correlation between academic procrastination behavior and concern over mistakes and parental expectations.

### 4. Discussion

In this study, academic procrastination of prospective teachers of Social Studies has been examined with regard to their perfectionist personality traits. In this section, we have discussed the hypotheses tested during this study in the light of scientific literature.

According to the correlation analysis carried out on the academic procrastination of the prospective teachers of Social Studies and the organization sub-dimension of perfectionism, as perfectionist organization increases, the frequency of academic procrastination decreases. These findings are also supported by other studies (Frost et al., 1990; Kağan, Çakır, İlhan & Kandemir, 2010; Kandemir, 2010; Sarioğlu, 2011). Judging by the results of the studies conducted so far, students who tend to live in a more orderly, clean and planned manner and endeavor to apply these standards to their daily lives can be said to exhibit behavior of academic procrastination less frequently.

It has been discovered that there is a significant positive correlation between sub-dimension of doubts over actions as one of the perfectionist behavior patterns and behavior of academic procrastination. In accordance with such findings, academic procrastination behavior increases in frequency in parallel with an increase in the tendency towards doubt over actions on the part of the student (Frost et al., 1990; Sarioğlu, 2011). An individual desires to attain perfect results, fulfilling a task with as few mistakes as possible in the dimension of doubt over

actions. Due to the desire to attain perfect results, the individual has extreme doubt over the accuracy of his/her work and as to whether his/her performance attains standards or not. This doubt impels the individual to check what s/he has done over and over. Wasting a great deal of time due to the need for frequent checking, the individual has difficulty in time management and this, in turn, leads to the individual's displaying academic procrastination behavior. When relevant body of literature is examined, one can see that poor time management triggers academic procrastination behavior (Balkıs et al., 2006; Kağan, 2009, 2010; Solomon & Rothblum, 1984).

There is an insignificant and weak correlation between academic procrastination behavior of students and the sub-dimension of concern over mistakes as one of the perfectionist behavior patterns. There aren't any conclusions supporting such a correlation in the relevant literature. As opposed to this, studies conducted by Frost et al. (1990) and Sarıoğlu (2011) revealed a significant positive correlation between concern over mistakes dimension of perfectionism and academic procrastination behavior. Individuals that have extreme concern over mistakes have zero tolerance towards mistakes and such individuals may consider making mistakes equal to complete failure as they attach too much importance to avoiding mistakes. According to Hamachek (1978), ordinary perfectionists readily accept trivial mistakes and they might still find their overall performances successful despite some negligible mistakes. However, neurotically perfectionist individuals overstate their mistakes and believe that their performance cannot attain the desirable level of success due to the few negligible mistakes they have made (quotation: Özbay & Mısırlı-Taşdemir, 2003). The fact that there has emerged a weak and insignificant correlation between the dimension of concern over mistakes and academic procrastination behavior can be explained by the lack of perfectionism on a neurotic level in the students that have taken part in this study when they showed concern over mistakes.

It has been found out that there is a weak insignificant correlation between the students' academic procrastination and parental expectations sub-dimension of perfectionism. Similar results have been obtained by Sarıoğlu (2011) as well. Parental expectations sub-dimension involves unrealistically high standards set by parents for the individual (Frost et al., 1990). This study has not revealed any significant relationship between academic procrastination behavior and parental expectations. The fact that college students that have reached adulthood act in accordance with the targets that they themselves have set rather those set by their parents might lead them to push parental expectations to the background. Therefore, targets set by parents do not have a significant effect on the academic procrastination behavior of students.

This study has revealed a significant positive correlation between perception of parental criticism sub-dimension of perfectionism and academic procrastination behavior. This finding of the study is consistent with other studies (Frost et al., 1990; Kağan et al., 2010; Kandemir, 2010; Sarıoğlu, 2011). In the perception of parental criticism, an individual believes that low performance or mistakes are harshly criticized by his/her parents. From this point of view, individuals who believe that his/her mistakes or performance is criticized too harshly are more likely to display behavior of academic procrastination. According to Hewitt & Flett (1991, quotation: Özbay & Mısırlı-Taşdemir, 2003), unrealistic high standards, the value of which is determined by others and expectation of perfect performance might cause anxiety and frustration for individuals as they are perceived as extreme and uncontrollable. When parents make harsh criticisms, expecting perfect performances and when the criteria for the assessment of such performances are determined by those apart from the individual himself/herself, this can be considered as an external pressure. This perception of external pressure might manifest itself as academic procrastination behavior in the form of defiance against authority or rebellion.

A significant negative correlation has been revealed between the academic procrastination behavior of the students and high personal standards sub-dimension of perfectionism. In the study she has carried out, Sarıoğlu (2011) also identified a negative correlation between academic procrastination behavior and high personal standards sub-dimension. Frost et al., (1990) found out a negative correlation between high personal standards and the frequency of procrastination. According to these findings, when students set their own high standards, the frequency of academic procrastination decreases. Personal standards which are set by oneself in accordance with one's needs and interests rather than those determined by others allows an individual to have inner-drive; that is, to be motivated. These personal standards set by the students are a source of motivation for the students to take action. Motivated by the desire to attain the standards they have set, students display more perseverance to study and less academic procrastination behavior. According to Slade & Owens (1998), the ambition to attain high standards is a positive aspect of perfectionism. They are of the opinion that the ambition to attain superordinate goals in positive perfectionism helps the individual consolidate his/her performance and increases his/her ambition to succeed. Flett, Hewitt & Martin (1995) have stated that when individuals face situations that require achievement, those who make effort to attain superordinate goals tend to confront rather than avoid such a situation (quotation: Çakıcı, 2003:117).

Personal standards set by individuals may have a positive or negative impact on the motivation to study. For instance, if the personal standards set by the students are too low and easy to attain, this might lead to a decrease

in motivation. On the other hand, when the personal standards are high yet realistic and attainable, they will allow individuals to have a high performance, increasing motivation. Within this context, it can be said that the high personal standards set by the students taking part in this study result in the students' displaying fewer academic procrastination behaviors by providing motivation. If the personal standards that the students have set are too high to be attained, they can cause the students to display academic procrastination behaviors because the high personal standards which are beyond their capabilities results in fear of failure, causing a lower self-confidence level. Hannok (2011) explains that students that assume that they are devoid of the capability that will help them fulfill academic tasks successfully procrastinate their academic tasks due to the fear of failure. In addition, he also states that students with low self-esteem may avoid fulfilling the tasks they are given. The fact that individuals with low self-esteem and self-efficacy or fear of failure display academic procrastination behavior is supported by various studies (Aydoğan, 2008; Haycoch, 1993; Haycoch, McCarthy & Skay, 1998; Kandemir, 2010; Klassen, Krawchuk & Rajani, 2008; Rothblum, Solomon & Murakami, 1986; Senecal, Koestner & Vallerand, 1995; Solomon & Rothblum, 1984; Özer & Altun, 2011; Uzun-Özer, 2010).

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# Investigation of pre-service science teachers' attitudes towards laboratory safety

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## Abstract

The purpose of the current study is to investigate the pre-service science teachers' attitudes towards laboratory safety in relation to variables such as gender, the state of participating in laboratory applications during their high school education, grade level and the type of graduated high school. The sampling of the study conducted by using survey method consists of 135 first-year and fourth-year students attending Science Teaching Department of Education Faculty at Mugla Sıtkı Kocman University in 2012-2013 academic year. Based on the scales presented in the literature, the researchers developed the Scale of Attitudes towards Laboratory Safety. At the end of the study it was concluded that the variables of gender, state of participating in laboratory applications in high school, grade level and graduated high school do not have significant effects on pre-service science teachers' attitudes towards laboratory safety.

*Keywords:* Science, pre-service teacher, laboratory safety, attitude scala, laboratory

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## Introduction

The most important step to be taken for the formation of information society is to educate new generations so that they can adapt to changes and developments. This can only be achieved by generating student-centered learning environments where the main focus is on learning by doing. One of the environments where learning by doing occurs is Science and Technology laboratories. One of the objectives of science laboratories is to make permanent and effective learning possible, create environments where theoretical information can be turned into practice and teach the importance of systematic, regular and planned working so that students can plan new works (Kirbaşlar et al., 2006). As in any field of natural sciences, the most effective method used to instill scientific attitudes and skills in students, to turn theoretical information into practice, to help students to develop their hand-eye coordination and to improve their creativity and reasoning skills is laboratory method. This method is also of great importance to make permanent learning possible and to provide students with opportunities to work individually and in groups (Sarı, 2011).

There is a lot of research showing that laboratory applications have significant effects on students' academic achievement and their developing positive attitudes towards science (Renner, Abraham, Birnie, 1985). Yet, for laboratory applications to result in positive outcomes there are some requirements to be met. In order to be able to achieve the objectives set for laboratory applications within the course of science, both students and teachers working in the laboratory should be knowledgeable about laboratory safety and they should be able to put their knowledge into practice.

Laboratory safety is defined as determining the potential threats posed by the use of tools and equipments, machines and devices while conducting experiments and doing preparatory works, taking necessary precautions, adopting scientific approaches to the problems to improve the existing conditions (Bayrak and Ağaoğlu, 1999). The main objective of laboratory safety is to protect the individual himself/herself, his/her colleagues, environment, working materials from accidents and their potential harms. In terms of elementary school science teaching program, the issues of safety and health are as important as the other science subjects. Laboratory safety measures are taken to protect teachers and students from risks such as accidents, diseases etc. The main idea lying on the ground of these measures is elimination or minimization of risks before they pose a threat.

Teacher can assume important roles in the provision of laboratory safety. They should know how to work with chemical matters carefully and safely, they should be able to protect themselves and their students, they should be sensitive to environmental issues, they should be knowledgeable about the laws regulating the use of chemical matters. A science teacher should be informed about the dangers involved in their profession (Bayrak and

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Ağaoğlu, 1999; Cited. Taşkın, 2008).

The research has revealed that there is a positive correlation between the science and technology teacher's subject knowledge, experience and perception of laboratory and laboratory safety (Çepni et al., 1994). Erol, Demir and Büyük (2010) reported that science and technology teachers think that they are inadequate at a level that cannot be neglected or partially adequate in these items "having all the information and skills needed to create a secure working environment in laboratory" and "knowing and using all devices and equipments in science and technology laboratory". Yılmaz and Morgil (1999) conducted a study to investigate the present state of the laboratories used by pre-service chemistry teachers in their laboratory applications and students' opinions about secure working". For this purpose, the pre-service chemistry teachers were asked questions to elicit their opinions about the present state of the laboratories they are using and students' opinions about secure working were elicited. And they reported that the students do not have enough information about conducting secure experiments. Hamurcu (1998) conducted a study entitled "Safety in Science Classes" and pointed out that laboratory works are applications that should be carefully planned in relation to dangers they may include. Teachers should be equipped with the necessary laboratory safety information and skills during their pre-service training.

Though the issue of laboratory applications is attached great importance, there is a paucity of research on laboratory safety particularly in our country. Hence, this study is believed to be a contribution to the literature. In this respect, the purpose of the present study is to determine the pre-service science teachers' attitudes towards laboratory safety in relation to variables such as gender, the state of participating in laboratory works during high school education, grade level and type of graduated high school.

For this purpose, answers to the following sub-problems were sought:

1. What is the level of the pre-service science teachers' attitudes towards laboratory safety?
2. Are there significant differences among the pre-service science teachers' attitudes towards laboratory safety based on their gender, state of participating in laboratory works in high school, grade level and type of graduated high school?

## Method

The current study designed as a survey study was conducted on 135 first-year and fourth-year students from the department of Science Teacher Training of the Education Faculty at Muğla Sıtkı Kocman University in the spring term of 2012-2013 academic year.

### 2.1. Data collection instruments

In the study, two different types of data collection instruments were employed. The first one is the information form developed by the researchers to elicit the demographics of the participants and the other one is "The Scale of Attitudes towards Laboratory Safety" developed by the researchers based on the scales of laboratory safety presented in the literature. This scale is designed in the form of 5-point Likert and there are totally 12 items, 3 of which are negative and 9 are positive. The items are scored as 5 "Strongly Agree", 4 "Agree", 3 "Undecided", 2 "Disagree" and 1 "Strongly Disagree" for the positive items and reverse order is followed for the negative items. The Cronbach-alpha reliability of the scale was calculated to be .66. This value shows that the scale is a reliable scale according to alpha coefficient evaluation criteria (Kalaycı, 2005: 405).

### 2.2. Data analysis

In the analysis of the data, SPSS 14 program package was used. Percentages of the students' opinions elicited with the Scale of Attitudes towards Laboratory Safety were analyzed through descriptive statistics. Whether there are significant differences among the students' attitudes towards laboratory safety based on gender, grade level and state of participating in laboratory applications during high school education was tested with t-test, and whether there is a significant difference among the attitudes based on the type of graduated high school was tested with One-Way Anova.

## Findings and discussion

### *The pre-service science teachers' opinions about the scale of attitudes towards laboratory safety*

Frequencies and percentages of the students' opinions about the scale of attitudes towards laboratory safety are presented in Table 1. In Table 1, the options of "Strongly Agree" and "Agree" are classified as positive and the options of "Strongly Disagree" and "Disagree" are classified as negative and the option of "Undecided" is classified as neutral.

In Table 1, it is seen that in general students have positive attitudes towards laboratory safety. The item for which the students have the most positive attitude (85.9%) is the 6<sup>th</sup> item “When I enter the science and technology laboratory, I wonder what types of experiments are made with which tools and equipments.” This shows that pre-service science teachers are interested in laboratory applications. Curiosity and desire are among the basic factors facilitating learning. Moreover, they increase motivation and motivation can make learning more effective. If the interest and desire in these applications are increased, then the students can be more eager to conduct laboratory works so that they can find opportunities to apply theoretical information into practice and to develop their problem solving skills. Yeşilyurt, Kurt and Temur (2005) conducted a study to develop and administer attitude scale for elementary school science laboratory. For this purpose, they investigated the attitudes of elementary school eighth graders towards laboratory experiments conducted in science classes. In light of the findings, they concluded that elementary school students have positive attitudes towards laboratory applications. This finding concurs with the findings of the present study.

The item for which the negative attitude is the highest (44.4%) is the 2<sup>nd</sup> item “Ventilation system is adequate” and it is followed by the 8<sup>th</sup> item “There are enough equipments to conduct experiment”. So, it can be argued that the pre-service teachers think that ventilation and equipments in the laboratory are not enough. The item for which the pre-service science teachers are “undecided” is the 9<sup>th</sup> item (60.7%) “Electric system in the laboratory is checked at the beginning of each school year by electricians”. This may be because the pre-service science teachers are not informed enough about the tools and equipments in the laboratory or they are not sure of the taken safety precautions. İlhan et al. (2009) investigated the pre-service chemistry teachers’ opinions about laboratory applications and found that most of the students are undecided about this item “Precautions taken against the potential accidents in the laboratory are sufficient”. This finding is similar to our finding.

Table 1. Distribution of the pre-service science teachers’ attitudes towards laboratory safety

Items	Positive		Undecided		Negative	
	n	%	n	%	n	%
1. Laboratory environment frightens me.	110	81.5	2	1.5	23	17
2. Ventilation system in the laboratory is adequate.	34	25.2	41	30.4	60	<b>44.4</b>
3. I am afraid of giving harm to laboratory equipments.	56	41.5	9	6.7	70	51.9
4. There are first-aid materials in the laboratory.	80	59.3	30	22.2	25	18.5
5. There is a fire extinguisher in the laboratory.	100	74.1	22	16.3	13	9.6
6. When I enter science and technology laboratory, I wonder what types of experiments are made with which tools and equipments.	116	<b>85.9</b>	4	3	15	11.1
7. Conducting science and technology experiments is a very complex process.	84	62.2	22	16.3	29	21.5
8. There are enough materials to conduct experiments.	49	36.3	26	19.3	60	<b>44.4</b>
9. Electric system in the laboratory is checked by electricians at the beginning of each school year.	20	14.8	82	<b>60.7</b>	33	24.4
10. The cupboards where dangerous materials are stocked are locked.	74	54.8	29	21.5	32	23.7
11. The cupboards where chemical materials are stored are fixed securely.	76	56.3	30	22.2	29	21.5
12. The cupboards where experiment equipments are stored are fixed securely.	84	62.2	27	20	24	17.8

*The effects of the variables of gender, the state of participating in laboratory applications during high school education, grade level and the type of graduated high school on the pre-service science teachers’ attitudes towards laboratory*

Independent samples t-test was used to test whether there is a significant difference among the students’ attitudes towards laboratory safety based on gender variable and the findings are presented in Table 2.

Table 2. T-test results concerning the effects of gender on the pre-service science teachers’ attitudes towards laboratory safety

Gender	N	$\bar{X}$	S	sd	t	p
Female	89	40.35	6.23	133	1.44	.151
Male	46	41.95	5.28			

As can be seen in Table 2, out of the pre-service science teachers, 89 are females and 46 are males. The students' attitude scores for laboratory safety do not significantly change depending on gender [ $t_{(133)} = 1.44, p > .05$ ]. This can be interpreted as gender does not have a significant effect on pre-service science teachers' attitudes towards laboratory safety. Though there is no statistically significant difference between the mean attitude scores of male and female students, it is seen that the male pre-service teachers have more positive attitude towards laboratory safety ( $\bar{X} = 41.95$ ) than the female students ( $\bar{X} = 40.35$ ). In the study conducted by Çakmak (2008) to evaluate the correlation between pre-service science teachers' laboratory attitudes and their attitudes towards science it was found that there is no significant difference based on gender. This finding is parallel to our finding.

Independent samples t-test was run to test whether there is a significant difference among the students' attitudes towards laboratory safety based on their state of participating in laboratory applications during their high school education and the findings are presented in Table 3.

Table 3. T-test results concerning the effects of the state of participating in laboratory applications during high school education on the pre-service science teachers' attitudes towards laboratory safety

State of participating in laboratory applications	N	$\bar{X}$	S	sd	t	p
Yes	82	41.69	5.26	133	1.88	.061
No	53	39.67	7.11			

As can be seen in Table 3, 82 of the pre-service science teachers participated in laboratory works during their high school education and 53 of them did not participate. The pre-service science teachers' mean scores for the attitudes towards laboratory safety do not significantly change depending on whether they participated or not in laboratory applications during their high school education [ $t_{(133)} = 1.88, p > .05$ ]. So, it can be argued that participating in laboratory applications during their high school education does not have a significant effect on pre-service science teachers' attitudes towards laboratory safety. Yet, it is seen that, though not significant, the pre-service teachers participating in laboratory works during their high school education have more positive attitudes ( $\bar{X} = 41.69$ ) towards laboratory safety than the pre-service teachers not participating ( $\bar{X} = 39.67$ ).

T-test was run to see whether there is a significant difference among the students' attitudes towards laboratory safety based on their grade level and the findings are presented in Table 4.

Table 4. T-test results concerning the effects of grade level on students' attitudes towards laboratory safety

Grade level	N	$\bar{X}$	S	sd	t	p
1 <sup>st</sup> year	64	41.31	5.58	133	.736	.463
4 <sup>th</sup> year	71	40.53	6.57			

As can be seen in Table 4, out of the participants, 64 are first-year students and 71 are fourth-year students. The grade level does not have a significant effect on the students' attitudes towards laboratory safety [ $t_{(133)} = .736, p > .05$ ]. There is no significant difference between the mean attitude scores of first-year students and that of the fourth-year students. This indicates that the attitudes of the pre-service teachers do not vary throughout their undergraduate training. The findings of Çakmak (2008) support this finding of the present study.

T-test was run to see whether there is a significant difference among the students' attitudes towards laboratory safety based on the type of graduated high school and the findings are presented in Table 5 and Table 6.

Table 5. Arithmetic means and standard deviations of the pre-service science teachers' scores of attitudes towards laboratory safety in relation to the type of graduated school

Type of Graduated School	N	$\bar{X}$	S
Anatolian High School	57	3.38	.507
Vocational High School	2	3.37	.530
High School	70	3.44	.528
Others	6	3.27	.304
<b>Total</b>	<b>135</b>	<b>3.40</b>	<b>.509</b>

As can be seen in Table 5, out of the participants, 57 are the graduates of Anatolian High School; 2 are graduates of Vocational School, 70 are graduates of high school and 6 are graduates of others (Super High School etc.). The results of variance analysis conducted to test whether the difference between the arithmetic means is statistically significant or not are presented in Table 6.

Table 6. ANOVA results concerning the pre-service science teachers' attitudes towards laboratory safety in relation to the type of graduated high school

Source of the Variance	Sum of Squares	sd	Mean of Squares	F	P
Between-groups	.239	3	.080	.302	.824
Within-groups	34.537	131	.264		
<b>Total</b>	<b>34.776</b>	<b>134</b>			

The results presented in Table 6 show that there is no significant difference among the attitudes of the participants based on the type of graduated school [ $F_{(3-131)} = .302, p > .05$ ]. Thus, it can be argued that the type of graduated high school does not have significant effects on students' attitudes towards laboratory safety.

### Results and suggestions

The findings of the study can be summarized as follows:

- In general, the pre-service science teachers' attitudes towards laboratory safety are positive.
- The pre-service science teachers' attitudes towards laboratory safety are not significantly affected by variables such as gender, the state of participating in laboratory applications during high school education, grade level and the type of graduated high school.

Pre-service teachers can make use of the experience and skills they gain in the laboratory in their daily lives. The positive attitudes they have developed towards laboratory safety are believed to contribute to more effective use of laboratory during their professional career.

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# Investigation of the relationship between study approaches and self-regulated learning skills of teacher candidates

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## Abstract

This study aims the investigating the relationship between study process and their self-regulated learning skills of teacher candidates. This research is designed as relational scanning model. In the study, 2 scales are used as tool of data collection: Self-regulating Learning skills (SRLS) Scale, developed by Turan (2009), Study Process Questionnaire (SPQ) revised by Biggs, Kember & Leung (2001), adapted in Turkish by Yılmaz & Orhan (2011a). 272 Teacher candidates from Turkish, Science, social studies, elementary school, mathematics, psychological counseling-guidance education forms the sample of the study. In order to analyze the data, SPSS 16.00, ANOVA, independent t-test, Pearson correlation coefficient techniques are used. At the end of the study, between SRLS scale with profound approach factor of SPQ has a positive relation and with superficial approach factor of SPQ has a negative relation. The significant differences weren't found between the graduated secondary schools with scales; but according to gender and to the department, significant differences were found between SRLS scale with superficial approach factor of SPQ.

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- *Keywords:* Learning skills, study approach, profoundly learning, superficial learning.

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## Introduction

In today's society, one of the most important goals of education is to raise individuals, who take responsibility of their own learning with an approach taking individual differences into account, who are able to think fast and creatively, have the control of their learning processes and actively take part in these processes, trust their capabilities and use them in a positive way. In this training process, self-regulation capability which one can lead and transfer his mental capabilities and abilities to learning experience is of great importance. In literature, many different definitions have been made. With its most common form, it can be defined as the process of individual's acquiring, improving and transforming knowledge, skills and values. Different definitions about self-regulated learning have also been made and various models have been developed (Yüksel, 2013). According to Zimmerman (1989; cited in Gömleksiz & Demiralp, 2012), "self-regulating is the degree to which students actively participate in their own learning process in terms of metacognition, motive and behavior". Pintrich (2000; cited in McDonough, 2001) defined self-regulated learning as "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment".

Self-regulated learning can be defined as one's knowing himself and all the techniques, tactics and strategies he uses to learn on his own. This means that it's the task of one's setting his own goals and motivating himself cognitively in accordance with their own principles (Çiltaş, 2011). Self-regulation is a deep and intrinsic mechanism which holds careful, deliberate and considerate student behaviors on the basis. It is an individual's capacity to control his motives whether to do something or not Bodrova and Leong, (2005; cited in Gömleksiz & Demiralp, 2012). Cole and Chan (1994; cited in Gündoğdu, 2006) see teaching self-monitoring in relation to self-

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regulated learning as very important. They assert that the teacher and students should have close partnership on defining criteria, establishing monitoring, assessment and recording procedures. They also claim that self-regulation must be supported if students are to gain a useful repertoire of learning strategies for selection and implementation according to the demand of the tasks. So, students constantly monitor their use of strategies and take relevant action accordingly.

When it is taken into account that self-regulation can be developed, a teacher should keep these teaching principles in mind: Students should be guided for an effective learning environment, Education program should be designed in a way which promotes cognitive learning, Students should be provided with educational goals and feedbacks so that they can observe their progress, Students should consistently be provided with the information needed for self-assessment Ley & Young (2001; cited in Gömleksiz & Demiralp, 2012). In this aspect, it is important that candidate teachers are aware of these issues. A variety of studies done in recent years show that there is a great amount of teachers' strategies which help students improve their self-regulated learning skills. In general, strategy is the implementation of a plan which is built to achieve a goal or a way which is taken to gain something. That is, learning strategies are the ways to learn (Açıköz, 2003). According to Zimmerman (1989; cited in Üredi & Üredi, 2007), learning strategies are the processes which learners use to gain target information and skills which they think are useful. These strategies are also defined as self-regulated strategies or self-regulated skills as they help them organize their learning processes. Modern learning and teaching theories also including Structural Learning Theory which argues that students should have a more active role in the learning process, points out that students' being active in the learning process is mostly related to their learning styles and strategies (Kutlu & Korkmaz, 2013). The fact that students do not have enough information about how to study or what to do in terms of study skills affects their academic success negatively (Açıköz, 2005).

Individuals may not use learning strategies at a suitable level for their individual differences and objectives of their own from time to time. This lack of use leads to different levels of learning outcomes at the end of the learning process. Students are prone to prefer a strategy which is fully indexed to the exams especially in an environment where there is a competitive education system. At this point, one of the topics studied is the question of what the students' objectives are during learning process; while some students set off in order to fully understand a subject, some others are just involved in the learning process so as to achieve their goals and meet their expectations in the soonest time. In the literature, strategies which students have adopted during learning process and activities which they use in terms of those strategies are found out to be deep and superficial (Beydoğan, 2007, Yılmaz & Orhan, 2011b). Learning approaches mean the aim to learn a specific point and the varieties of the activities to be chosen; and they include the strategies that learners use during studying and the reasons why they choose these strategies. In this sense, individuals choose either "sophisticated learning" or "superficial learning". If they understand the subjects at higher level, it means that they adopt sophisticated learning; if their understanding is at lower level, it means that they have superficial learning style (Ozan, Köse & Gündoğdu, 2012, cited in Batdal Karaduman, 2013).

Studies show that student-centered teaching is related to deep learning approach, and vice versa, teacher-centered teaching is related to superficial learning approach. In-depth learning approach increases student learning outcomes, helps him gain the skill to do in-depth analysis, increase his creativity, gives opportunity to organize the information efficiently and shape the information so that it is suitable for the theme. During superficial learning, learner cannot relate current information area to other information areas. What students can usually remember are small pieces of information in presentations which are based on superficial learning. Students who prefer this approach just want to meet the needs of the task, memorize the information for evaluating, fail to differentiate principles from samples, thinks that learning is an external force (Beydoğan, 2007; Yılmaz & Orhan, 2011b; Özgür & Tosun, 2012; Batdal Karaduman, 2013).

### **Aim of the Research**

This study aims the investigating the relationship between study process and their self-regulated learning skills of teacher candidates.

The Problem Statement: Is there a connection between study process and their self-regulated learning skills of teacher candidates?

Sub Problems:

1. What are teacher candidates' study approaches? How do teacher candidates' study approaches vary according to the varieties of gender, department, and graduated secondary school?
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?
3. Is there a connection between study process 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.

### *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.

### *Data Collection Instruments*

Study Process Questionnaire (SPQ) Scale: It is developed in 1987 by Biggs, the pioneer of Study Process Questionnaire Scale which is adapted to Turkish language by Yılmaz & Orhan (2011a). After that this scale was revised in 2001 and a new scale with 20 items was developed. For each item, the options of ‘very untrue of me or somewhat true of me (1)’, ‘somewhat true of me (2)’, ‘true of me in 50 per cent (3)’, ‘usually true of me (4)’, ‘true of me every time or almost every time (5)’ were provided by using a 5 level Likert type scale for answering the questions in the scale (Biggs, Kemmer & Leung, 2001, quoted by Yılmaz & Orhan, 2011a). In this sense, the score interval for deep and superficial approaches changes between 10 and 50. The student’s learning approach changes according to which approach he gets higher point.

Self-regulating Learning Skills (SRLS) Scale: In the study; Self-regulating Learning Skills (SRLS) Scale, 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 action to 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. 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’ study approaches? 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 SPQ scale are between 10-50 for the first factor profound approach and the second superficial approach. In this study, Students’ average score for the first factor which is profound approach is found as 31.6029; and average score for the second factor which is superficial approach is found as 28.3125 (Table 1).

Table 1. Distribution of scores of students taken from SPQ Scale according to the factors.

SPQ Scale Factors	X	SD	SE
Profound Approach	31.6029	.40655	6.70494
Superficial Approach	28.3125	.47057	7.76082

As in Table 2, as a result of independent group t-test applied to define whether the scores taken from the SPQ

factors differentiate according to the gender variable; for the second factor superficial approach score the difference between the arithmetic average of the groups have been found statistically significant. Male students' score average is significantly higher than the Female students ( $p < .05$ ).

Table 2. The results of Independent group t-test of the scores taken from SPQ Scale factors according to the gender variable of students.

SPQ Scale Factors	Group	N	X	SD	SE	T test		
						t	df	p
Profound Approach	Female	169	31.4911	6.61358	.50874	-3.52	270	.725
	Male	103	31.7864	6.88085	.67799			
Superficial Approach	Female	169	26.8935	7.40820	.56986	-3.966	270	.000
	Male	103	30.6408	7.79876	.76843			

As seen in Table 3 as a result of ANOVA which is done in order to determine whether the scores taken from the Profound Approach and Superficial Approach factors show a significant difference according to the department variable; for the superficial approach factor scores the difference between the arithmetic average of the group has been found statistically significant but the difference has been found to be insignificant for the profound approach factor. Following this process Post-Hoc analysis techniques are started to be applied.

Table 3. The results of ANOVA applied to define whether the scores taken from SPQ Scale factors differentiate according to the department variable of students.

SPQ Scale Factors	N, X and SD Values				ANOVA Results					
	Group	N	X	SD	Var. K.	SS	df	MS	F	p
Profound Approach	Turkish	38	30.2895	6.06232	Between	220.484	5	44.097	.981	.430
	Science	47	32.5957	7.28506	Within	11962.633	266	44.972		
	Elementary School	50	31.9800	7.36093	Total	12183.118	271			
	Social Studies	47	32.3191	6.71503						
	Mathematics	36	30.1389	6.15585						
	Psychological Counseling-Guidance	54	31.6667	6.30364						
	Total	272	31.6029	6.70494						
Superficial Approach	Turkish	38	27.5000	7.58288	Between	1053.360	5	210.672	3.67	.003
	Science	47	28.5957	8.02350	Within	15269.078	266	57.403		
	Elementary School	50	31.1200	8.16073	Total	16322.438	271			
	Social Studies	47	28.9787	7.12463						
	Mathematics	36	29.0000	6.57702						
	Psychological Counseling-Guidance	54	25.0000	7.60834						
	Total	272	28.3125	7.76082						

After analysis ANOVA; to determine how changed in superficial approach factor score among sub-groups, considering the department variable, LSD test has been chosen from among the post-hoc analysis techniques; because of group variance are homogen according to the Levene's test ( $L = .811, p > .05$ ). As a result of this test it has been stated that, Science, Social Studies, Elementary School, Mathematics educations students' scores are significantly higher than Psychological Counseling-Guidance education students, Elementary School education students' scores is significantly higher than Turkish education students for the superficial approach factor.

As a result of ANOVA which is done in order to determine whether the scores taken from the SPQ first and second factors show a significant difference according to the graduated secondary school variable; for both 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 SRLS scale are between 41-205. In this study, the taken total SRLS scale score was calculated as 157.7206 (Table 4).

Table 4. Distribution of scores of students taken from SRLS scale and factors.

SRLS scale 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 SRLS scale and factors differentiate according to the gender variable; for the SRLS scale 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 SRLS scale and factors according to the gender variable of students.

SRLS scale 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			

Result of ANOVA which is done in order to determine whether the SRLS scale and factors show a significant difference according to the department variable; for the SRLS scale 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 analysis of ANOVA; to determine how changed in SRLS scale 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 SRLS scale and Strategy using and assessment factor group variance are not homogen 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 homogen 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 SRLS scale. 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 SRLS scale 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 study process and their self-regulated learning skills of teacher candidates?

As a result of Pearson Multiplication Momentum Correlation Analysis, conducted to define the relations between the SPQ scale factors and SRLS scale and factors; SPQ scale Profound Approach factor score and SRLS scale score, Motivation and action to learning factor, Planning and determining aims factor, Strategy using and assessment factor scores have a significant positive relation while SPQ scale Superficial Approach factor score and SRLS scale and factors have a significant negative relation (Table 6).

Table 6. Pearson Multiplication Momentum Correlation Analysis Results conducted to define relations of the SPQ Scale factors and SRLS scale and factors.

SRLS scale and Factors	SPQ	
	Profound Approach	Superficial Approach
Motivation and action to learning	$r=.319(**)$	$r=-.195(**)$
Planning and determining aims	$r=.366(**)$	$r=-.244(**)$
Strategy using and assessment	$r=.461(**)$	$r=-.151(*)$
Lack of self-directedness	$r=-.065$	$r=-.455(**)$
SRLS scale Total	$r=.391(**)$	$r=-.320(**)$

## Results

In this study, it has been found out that, students' averages of deep approaches as approaches to studying overweigh the averages of superficial approaches. The results of some studies done with teacher trainees support these findings (Sezgin Selçuk, Çalışkan & Erol, 2007; Ekinci, 2009; Senemoğlu, 2011; Özgür & Tosun, 2012; Batdal Karaduman, 2013).

It has been observed that the averages of male students' superficial approach are notably higher than the averages of female students' superficial approach. According to this, it can be said that male students prefer superficial learning approaches more than female students. Through literature, different results have been found in the studies which research the relationship between gender and learning approaches: the results of Ozan, Köse, & Gündoğdu's (2012) and Özgür & Tosun's (2012) studies are in parallel with our findings. However, Senemoğlu (2011) have found out that the averages of female students' superficial approach are notably higher than the averages of male students' superficial approach. On the other hand, Sezgin et al. (2007) and Batdal Karaduman (2013) has not found any meaningful differences in terms of gender.

According to the departments, it has been identified for superficial learning approach that, teacher trainees at science, mathematics, primary education, social studies departments got notably higher grades than teacher trainees at PCG department; and, teacher trainees at primary education department got notably higher grades than teacher trainees at Turkish language teaching department. This finding, as Özgür & Tosun (2012) also stated in their studies, may be a result of the characteristics of the department, students' own personality traits and the differences of the features of teaching-learning environment.

No meaningful results have been found in terms of the relation between the type of high school graduated and deep and superficial learning approaches. On the other hand, in Özgür & Tosun's study (2012), the type of teacher trainees' high school graduates has an influence on their choice of learning approaches. Anatolian High School graduates prefer deep learning approaches more than the ones who graduated from other types of high school.

For the sub-dimensions of the scale of teacher trainees' self-regulated learning skills as "Motivation and taking action for learning", "Planning and Setting the goal", "Strategy use and evaluation" and "Dependency in learning", the students got the highest score in Strategy use and evaluation and lowest score in Dependency in learning. It has been found out that total average points of female students' scale are notably higher than male students. This result is in parallel with Yüksel's (2013) study. However, in the study done by Gömleksiz & Demiralp (2012), it was stated that the teacher trainees' views on the overall issue and the sub-dimensions of self-regulated learning skills scale do not differ statistically according to the gender parameter.

It has been found out that the averages of teacher trainees' total scale of self-regulated learning skills and the points of their sub-dimensions do not differ according to the type of High School they have graduated.

A meaningful positive correlation between the in-depth learning studying approaches and the scale of self-regulated learning skills, motivation and taking action for learning, planning and setting goals, strategy use and evaluation factors; A meaningful negative correlation between the superficial learning studying approaches and the scale of self-regulated learning skills and related factors.

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# Kant's view on education

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## Abstract

The purpose of this writing is to examine Kant's approach to education and moral education based on his moral philosophy. In this writing, it's going to take into consideration especially Kant's moral education about ideas and in general it will take up an educational issues. Kant see human being as a unique existence who needs education and think that human being can be a person only with education, thanks to education it's not according to person's natural tendency and material requests, set forth raising in appropriate way to moral laws. In this context, thinking to support Kant's education regarding opinions moral philosophy, it's going to take up about education and moral education opinions.

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• *Keywords:* Education, moral education, ethics.

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## Main text

From the ethical history point it has got an important place set forth ideas about Kant's ethical. One of the reason of this, he brings up different ethical comprehension as he has own period of the time comprehensions. From the ethical history Kant has an important location and it could be say that Kant's education especially moral education relating to original opinions.

Education's topic is not raise a person according to this or that nation, on the contrary a human being, Kant claims to train with the direction of mankind purpose and defends being insufficient to convey a person's instincts weak and human ideal aim. In this matter he gives an important role to educators. According to Kant, the duty of educators, give a free direction for people's natural tendency what is left over, having to provide humanity deserving of an ideal. According to him, educator could reconcile a person's own freedom with nation's forcing and pressure (Yayla, 2005; 77).

Kant's thoughts concerning education is related closely with person nature. He thinks that there isn't wickedness at the person nature. At a person there is only goodness seeds and this goodness can improve with education. For him, all the kindness source at the World is education. Whole talents and seeds always have to improve in a good way that at a person has potential. There is no badness at a person's nature. The only reason of badness is not taking under control and not giving a direction with the nature's good education principles (Kant, 1992; 15). At this time it needs to do provide being at the person potential goodness by means of education. Because Kant thinks that person susceptible to goodness from innate and improve this, it needs top up some of the rules.

The reason of giving a big importance to education of Kant, the most important reason causing badness is not directing according to a good education of a person nature and thinking of sending a person in a good way with the education. To him, a person only can be a person with education. By means of education Kant believes person could carry out oneself and attracts attention gaining the most addition to perfection of person nature for education (Kant, 1992; 7).

Making clear about Kant's moral philosophy thoughts, he comes to a conclusion that person's nature neither good nor bad. When person improves only moral law and task conscious and has a mind, he becomes an moral existence. According to Kant, to be a good from the point of view moral it is only possible with virtue. Virtue is not submit to natural tendency as possible as, and only try to be in action obeying the free moral law. In another way according to Kant, becoming ripe with moral view, it's not to natural tendency, it means trying to be in an action for the moral law. Consequently an ideal education gives a chance to raise appropriate style as a will's natural tendency, pbstructing material desires and in stead of volitions mind principles that's to say moral law (Kant, 1992; 108).

Kant sees a person as an existence who needs education. Kant defends that between the existence only person needs education to develop gradually for perfection and he others person separates from animate and lifeless existence in a different ways. For him there are differences between person and animal. When animals behave with instinct, people behave with their mind. The most important essential peculiarity differentiate person from

another existence is being a wise existence and being product technical information. If we compare a person with an animal, we see that person needs more care and help according to an animal. Because when a person comes in to the world, person needs more protection, help and helplessness existence comparing an animal. Person needs others to survive and to direct their actions. However when animals come in to the world, they have a potential being successful at struggling life as instinctly. Animals needs to be nourished but they don't needs care and they carry on lives as moving instinctly. Whereas person needs mind to determine direction of actions, draw a map before which ways he will use and has to make his own action plan. At the same time person develops some talents not immediately which comes from birth as a mechanical, on the contrary they can develop bit by passing from some processes and conclusion of their own efforts (Yayla, 2005; 78-79). In this respect Kant think that education should need to take under discipline person's nature and needs to be developed person's national and ethical side by way of education.

According to Kant person should submit the discipline. Taking under discipline of a person, weither at individual or national life it means that obstructing bestial peculiarities at person comes out on top to human peculiarity. Because discipline hinders person if he doesn't obey the rules. At the same time education should provide a person cultural things. Culture includes education and instruction and also express person's talent. Talent is a force to reach different goals to product needy information and materials and could use them and it is not an aim of ownself. Education also should gain a person to distinguish yalent and understanding. That way person can manage ownself in a nation, be loved ownself, and can win influence and population. And also moral education should form a part of education. It's not enough if the person has many aims. And he needs principles that could reach that aims himself. Good aims approve of everyone as compulsory and at the same time they should being in target by everyone (Kant, 2007; 40-41).

Kant tells that person needs an order, a system and needs a discipline not going away from mankind purpose, conform natural tendency to own target. To him discipline is the most important part of person education. Discipline change person from bestial compulsion. At this context discipline could accept a negative education style. Because discipline obstruct person to conform natural tendencies and destroy primitiveness which is being at nature at first. Separately education has a positive way to approach a person for his humanity ideals. Kant says this instruction. Wildness is to see humanity compeletely independent in front of the laws. Not obeying the rules are express being independent from law. Namely wildness never recognize any law. However according to Kant, discipline trains to obey individual humanity laws and makes feel him power of laws. So, it obstructs to feel humanity unconfined himself opposite of laws (Yayla, 2005; 80). That's why person should bring to habit mind's commands from the very early ages and give discipline on time at education. Because Kant defends providing discipline is more important than giving information. Kant says lack of information is possible to compensate for any time of his life but he gives importance to discipline, and think that you can't correct bad habits causing undiscipline reasons and changing to character.

Kant seperates education in two as moral and physical education. For him, physical education is only common way with feed and care comparing human with animals. Physical and moral education teach us how a person lives as independent existence. Instruction makes a person worthy as an individual. By means of instruction getting information helps to develop person's talent. Moral education makes a citizen value for a state and a nation. Moral education makes a person value as a person existence (Churton, 1992; 30). Consequently person thanks to education get used to live in hormony with nation.

According to Kant when a person educate and enlightened in a good way, he gains to think mental power as logical. Whereas there is no an education which is develop thinking of animals mental power and they just can raise. Kant doesn't see adequate to teach a person only good manners. That's why the most important thing is to teach people how to think. To Kant, the person who he is developing his thinking abilities, he can be in an action according to ethical laws. At the same time, Kant emphasize person that action is not lefting in coincidence, defends one of the most elements of education is moral education. Merely Kant set forth moral education neglect which has a big importance for human education. To him, needy information is teaching but moral education is neglecting. However Kant says teaching people means getting away from badness, hating badness and we musn't do badness that is the badness not because of God forbid the badness. Exactly like this accepts to appropriate the virtue as being virtue and to get aproprate as virtuousness and put this pirinciple basic of moral education. To Kant an moral action makes neither afraidng of nor desiring prize. In opposition to an moral action makes for an moral law. To him the basic target of moral education is a person carry out appropriate actions to moral education and grow autonomous individuals who has reached task coincidence (Yayla, 2005; 82).

In conclusion, the basic aim of education to Kant has to be provide fulfilling person ownself being committed tp moral law. Person should effort being an antonomous individual acting to moral law. That's why Kant defends that person should needs to get used to discipline and task in an aproprate time. An moral action is only being a good and virtuous when moral action being in an appropriate style to moral law. The important thing is making goodness is that being a goodness, not making badness is that being badness. When a person gains an moral

education based on understanding, comprehension and expressing, person can carry out coincidence and moral actions and he counts to be educated in a real mean.

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# Kant's conception of moral education assessment

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## Abstract

In this study, Kant's pedagogical training taught in the period have made the observations and have gained the experience and results reached in the education of understanding how it should be, and that moral education for the ideas of what happened will be discussed. In this context, training of human childhood initiation and subsequent moral education to sustain on the basis of progress envisioning Kant, in this process the slope of the individual this or that society, by train, but rather individuals on behalf of humanity a universal approach is to train claimed that. To do this, affirming the relationship between education and moral education should be the attitude of how it will be emphasized.

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- *Keywords:* Education, Ethics, Education ethics, moral education.

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## 1. Introduction

As can be inferred from the text of the main topics of Kant's conception of moral education in the light of the evaluation of the maximum of the strongest pillar of a good education will focus on what it should be. A very famous moral philosopher Kant, moral education in the context of education, expressed can be based. So a nation of education, culture or ideology, not in the light, in the context of universal moral law argued that it should be. Therefore, every individual should be grown here we understand this or not according to society should be educated according to the purpose of humanity.

The natural tendency is to give direction to a child's upbringing can't, first and foremost, especially educators have an ideal worthy of humanity and duty to educate children according to this ideal should adopt says. In this context, Kant, to a certain extent the child's own with freedom, society recognizes as legitimate coercion and pressure to reconcile the educator considers it a duty (Yayla, 2005; 77). Here a little force or coercion with the conciliatory approach, in fact, education moral relationship affirmation standards for education is the attitude. Because moral philosopher Kant, one of the most important proponents of freedom and people see it as an autonomous entity and acts of anonymity possibility of autonomy to injury.

This movement for moral education free but adults who need to be trained instructors for non-members or moral teachings aims vaccination efforts have to be given by the appropriate behaviour is integrity. Training specific to the individual stages do is efficient. Education with the needs of each generation and the next generation is a structure that can be left as the most valuable heritage. Here we understand that further improve education from generation to generation, the dynamics of age were found to be helpful or harmful to the individual everything at maximum level considering the preparation and implementation of the program is the most essential.

Man is the only creature in need of training. Because we were training with the nurturing of moral decency (to saturate the lens of the child), the public should understand teaching and education. Accordingly, the people one after the other in infancy (being in need care and nutrition) childhood (not in need of teaching and education) and student (to be charged in need) in stages (Kant, 2013; 31).

Human only through education can't be human. Education itself from specific (creator) whatever If she just is. Human but by people so they trained people are trained is remarkable. (Kant, 2013; 35). Here a very important role for educators is. Educators in the context of universal morality that humanity needs an idealistic perspective, they must be grasped. These trainers are not based on the natural tendency of individuals to humanity, and to contribute to the future on behalf of each generation must educate and instill in them the awareness that education should.

Every person starting from the early childhood education to be useful to future generations with humanity and could rise to an expected level? In the same education and the same in every individual moral ideal conditions does lead one to conclude? Can be thought-provoking questions like. To educate and train is to be expected from humanity. In this context, the contemporary understanding and moral education perceive at

maximum level is required. But for Kant, what is important though the goodness of human potential through education is to develop more and more. Because of that person's innate goodness that prone and has the potential to do good, but this potential has not been issued to us in a way that was born ready, unlike a resource to be developed, is believed to be a possibility. According to him, the cause of evil, the potential inherent goodness of people with their ability be supported rules, is due to give free rein. To leave to leave unregulated feral human nature that performs actions based on the natural human tendency is the main cause of evil. (Yayla, 2005; 77).

For this reason should not be left to their own inclinations of human nature, intrinsically good education and moral values should flourish with each passing day more and more. Human nature is hungry, his desire is something educational. The main reason for giving birth to the evil of human nature is to not spend a good education. Therefore, education, evil, anarchy is the breed. This situation naturally prone to irregularities and movements of individuals takes over. However, Kant, people can be perfected through education, training, would be one human.

Man's natural tendency to give good results of the study does not reveal the accuracy. Because of the natural tendency is subjective and variable. Since then tailor training as an individual to be not arbitrary, objective perspective, should not constitute applications on behalf of humanity. Moral virtues are the cornerstones of the areas where the presence of the presence of the natural tendency to have lost or are about to lose on the field. Because of the natural tendency of people is against the law revealed aspects of free will may refer to behave. Worse as a result of these actions, if not eliminate the moral law in the name of freedom of the familiar contains a hazard.

Moral goodness, but it is possible to be virtuous. As mentioned above, the existence of virtue of the absence of the natural tendency or can it be possible by reducing the possible. So who is really the freedom to obey the laws of morality, we're in it tend to adopt. In this case, the human being will require a disciplined. This disciplined state, based on the moral understanding of people's homework will help to capture the target.

According to Kant discipline people in the most important elements is one. Additionally, training of the human ideal of humanity closer to a positive direction are also available. Kant, this teaching says. Received education with the knowledge of people before the law itself adrift will not feel it. (Yayla, 2005; 80). Besides these moral education a different side should also be addressed.

Moral education disciplines, not on maxima and build on, one of the bad habits keeps the other one mind educates and thinking prepare. So here we need to understand is this: the child itself ever changing behavior of the motives movement but also "maxim" telephone calls in harmony to act should familiarize. Decreasing the power of education and discipline over the years certain habits we create. Children reasonableness (and accuracy) can be understood by itself "maxim" should learn to act appropriately. (Kant, 2013; 101).

Maximum of people should be rooted in the self. Moral education in children at an early age what is right and wrong considerations should try to place the ideas. If you want to establish morality, we must eliminate the penalty. (Kant, 2013; 101-102).

Suppose that a child's lie, in this case the child should not be punished immediately, but with contempt by giving money, if you lie to him again in the future so that no one would believe him must be told. If a child gets punished when you have made evil, goodness, if awarded, in this case we make it just for the sake of reward would realize. Absence will not favor the award, it will undermine morality. So wrong in your life and the right of the child will associate with their natural tendencies.

In conclusion, under a common denominator of humanity illuminated by the light of education to experience living a virtuous life may be inevitable. Train strings that the universe and humanity perfected the process of moving toward completion, in fact, the essence of the individual who trained individuals is the correct way to complete. This is the essence of human kindness, moral education effort to avoid evil a whole is in the part.

The existence of moral education, the natural tendency to abandon a universal moral ethics, and therefore free from the virtuous action in the field of education is possible with attitude. Otherwise, the continuity of selfishness gains will deal with individual freedom. Illuminated people with a good education, which most sensible people will be able to think and suggest. According to Kant, which can improve the ability to think a person has to act according to moral law. So that can not be left to chance education is moral education.

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# Key trends, issues and solution offers of international relations education in Turkey

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## Abstract

International relations is a cross-disciplinary science that examines the relationships of states which are considered as the main actors of international relations with other actors of the international system such as other states, international organizations and multinational companies. International Relations Science of which importance has grown after the Second World War in the World began to be evaluated as an independent science. Until international relations became a systematic discipline, studies in this area were made in the context of disciplines such as political science, law, diplomacy history. The Department of International Relations, which was established at Ankara University Faculty of Political Sciences for the first time in Turkey, is present in many universities today and provides training to thousands of students. International Relations is sometimes perceived as a side branch of some sciences because of its close relationship with many sciences and not having a long history since the adoption of it as an independent science. However, lack of academicians in the present departments in Turkey impedes conceptual and systematic training related to International Relations and increases the number of courses including political history and regional analysis. In this study, problems will be put forward by giving information about the present departments of International Relations after examining the historical development of International Relations science in Turkey.

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## What is International Relations

The concept of International Relations was first used to refer to relations among the sovereign states. With this point of view, International Relations is accepted to begin with the 1648 Westphalia Treaty through which sovereign states became the main actors of the international system and the principles such as state sovereignty, legal equality and inviolability of borders were accepted. The emergence of sovereign states began with Europe's entering a process called interstate relations by leaving to be a (absolute) mosaic of states towards the end of the 17th century (Keyman, 2006). The centralization of authority and sovereignty brought by enlightenment and modernization, meaning collected by the king, the separation of church and state, and recognizing of these absolutist monarchies each other resulted in the emergence of "sovereign and independent states" (Kurubaş, 2012). During this period, a more secular network of relationships among European countries emerged with the reduction of the church's authority, and a European structure consisting of sovereign states standing out from the imperial conception emerged as a result of the absence of a significant difference among the states recognizing the existence of each other basically. In this structure, relationships have become anarchic and horizontal, not hierarchical and vertical, due to the absence of a superior authority.

Another view is that International Relations contains not only interstate relations but also the political, economic and commercial relations among governments, people and even individuals in parallel with the developments of our age in communication and transportation technologies. Today, an individual, for example General Secretary of the UN, may affect the fate of International Relations more than one state. Similarly, the owners of multinational companies (e.g. General Motors) can become a more effective international actor than many states. In this regard, it is seen that International Relations today is conducted in a manner different from the time when the nation-states were considered as the main actors. In conclusion, International Relations, in the broadest definition, contains all the formal or informal relations at the political, economic and social level taking place between the individuals and social groups of a state and the ones of another state as well as expressing the relations of a state with the other states (Arı, 2011). According to the understanding accepting International Relations as a part of political science, it is defined as "the branch of political science dealing with the relations between the national-level political units and also dealing with the factors such as geography and economics determining especially foreign policy, the organization and functioning of government and foreign policy"

(Aydın, 1996). In addition to this, making predictions about the future is also within the definition of International Relations according to the behavior of the international actors.

At this point, it can be said that International Relations is a vague, fuzzy and very widely used term with two basic meanings. The first meaning is about previously-defined one related to interstate relations. In this sense, the term can be disturbed with 'International Politics'. But International Relations is wider than International Politics, and it covers International Policy (Knutsen, www.eolss.net). International policy in this respect is considered as subunits of International Relations. The term of International Relations with this first meaning was created and used by Jeremy Bentham in his book "Principles of Morals and Legislations" written in 1789 (Knutsen, www.eolss.net). The second meaning of the term International Relations refers to an academic discipline the same as law, economics, and sociology. This second meaning of the term International Relations begins with the establishment of the first chair of the field at the University of Wales in 1919. Thus, the term International Relations was opened to scientific inspection and verification for the first time (Knutsen, www.eolss.net). International Relations has developed different theories to identify and to explain recurring patterns of International Relations from the outbreak of World War I until the present day. Today, in addition to the departments such as Political Science and Public Administration, International Relations departments sharing close areas with these departments have been opened.

### **Development of International Relations Science in the World**

We know that International Relations science was considered as a part of many science branches many years before its adoption as an independent discipline of science. The concept of "International" was first used by Jeremy Bentham in the 18th century. When it was used for the first time, the concept corresponded to the concept *intergentes* with the same meaning in Latin (Ari, 2011). Authors using the concept have used it to express international law which is referred to *jus gentium* in Latin and includes the rules regulating the relations between sovereign states as a branch of law. In this respect, the concept has been used to express political and legal relations between sovereign states for long years (Ari, 2011).

Experts of the related subject have different opinions about the beginning of International Relations. According to Hostie, the beginning of International Relations can be carried back to the period when the first social groups started communication with each other (Ayhan, 2007). Kauppi and Viotti, who revealed a similar opinion with Hostie, have argued that International Relations need to be addressed to the date when the history started to be recorded (Knutsen, 1997). However, the scientists with other views like Dougherty and Pfalzgraff have argued that International Relations as a discipline which began with the First World War (Knutsen, 1997). At this point, we can say that International Relations progressed from the most primitive social groups to the period when the phenomenon of state in the modern sense settled due to the fact that social groups underwent an evolutionary transformation in the historical process. However, since the theoretical studies on International Relations started to be done in the aftermath of the First World War, especially after the Second World War, the tendency to accept this date as the milestone as a discipline has increased. In addition, the investigation of the subjects related to International Relations, which were initially analyzed in the context of the sciences such as Diplomatic History, Political Science, Law, Economics, in the the context of International Relations as an independent science with more theoretical and systematic perspective by Western countries, mainly the USA, in the aftermath of the First World War supports the views of thinkers like Dougherty and Pfalzgraff.

### **Development of International Relations Science in Turkey**

Mekteb-i Mülkiye forming the basis of the Faculty of Political Sciences, in which International Relations education was given for the first time, has a long history.<sup>18</sup> Mekteb-i Mülkiye was opened in Istanbul on 12 February 1859 for bringing up the officers and administrators the Ottoman Empire needed within the framework of the reforms of Tanzimat Period (Ata, www.academia.edu). After a number of changes in the period of Sultan Abdulhamid II, it was named Mekteb-i Mülkiye-i Şahane with a refence to the Sultan. At this school, which may be considered as the public administration school of the Ottoman Empire, courses such as international law, political history as well as subjects such as history, geography, law, economics, foreign languages were taught, and education to inform bureaucratic trainees about international system was also given (Erhan, www.turkiyegazetesi.com.tr).

The school, which was thought negatively by the Young Turks during the Second Constitutional Era because it was under the auspices of Abdulhamid II, was closed in 1915 during World War I, and continued to education again towards the end of the war in 1918.<sup>19</sup> Mülkiye, which was moved to its current building in Ankara in 1936, was named School of Political Sciences. In 1950, it was connected to Ankara University with the name Faculty

<sup>18</sup> Chronological details related to the Faculty of Political Sciences has been taken from the book "Mekteb-i Mülkiye'den Siyasal Bilgiler Fakültesine: 150 Yıllın Kronolojisi" by M. Murat Baskıcı. See (<http://www.politics.ankara.edu.tr/MM-Kronoloji.pdf>), (10.04.2014).

<sup>19</sup> Young Turks demonstrated their reaction to Mülkiye Mektebi with Interior Statute released in 1915. This statute eliminated preferences for Mülkiye graduates unlike during Aldulhamid II, and the collection allocated from the general budget to Mülkiye Mektebi was removed in 1915. The school was connected to the Faculty of Law with the name "Darülfünun Ulum-u Siyasiye Şubesi" by removing the legal personality of it. The school was re-opened in 1918 with the help of the teachers and the graduates effective in the government.

of Political Sciences (Ata, www.academia.edu). Until the Department of International Relations was constructed as a discipline in the Faculty of Political Sciences, issues related to this subject were tried to be taught with various names in various departments or to be covered in the courses such as diplomatic history and political history.

According to Mustafa Aydin, the first course for International Relations in Turkey was given with the name “Hukuk-i Düvel ve Diplomatik Muhabere” in Political Branch in Mekteb-i Mülkiye in 1926 (Uluslararası İlişkiler, 2005). When it is thought that the studies in the field of International Relations began after the First World War and the first chair was opened in 1919, we can say that studies in this field began in Turkey soon after the World. After 1950, studies in the field of International Relations in the Faculty of Political Sciences started to be given with scientific techniques and more comprehensively. According to Duygu Bazoğlu Sezer quoting from Türkkiye Ataöv, International Relations studies began in Turkey by taking the course ‘Milletlerarası Münasebetler’ in the curriculum in Political Branch in the Faculty of Political Sciences (Uluslararası İlişkiler, 2005). In this period, three sub-themes were organized as ‘chair’ in Political Department. These were Interstate General Law, Interstate Private Law and Political History. International Relations course began to be taught by Prof. Dr. Suat Bilge without determining exactly what chair it belonged to, and it was organized as ‘chair’ in the second half of the 1960s. These four chairs began working with an organic relationship under the umbrella of the Institute of Foreign Relations in the Faculty of Political Sciences (Uluslararası İlişkiler, 2005). The department with the name of “Diplomacy and Foreign Relations Department” (Political Branch) between the years 1955-1982 was named “ Department of International Relations” with the regulation made in the Law on Higher Education in 1982 (www.politics.ankara.edu.tr).

Studies in the field of International Relations mostly took place in the Faculty of Political Sciences for many years. The Faculty of Political Sciences lost its monopoly in this field through the establishment of the department with the name of International Relations in the framework of amendments in the Law on Higher Education by the Constitution of 1982 (Koçer, 2007). International Relations courses began to be given in various departments and programs at Middle East Technical University, Bogaziçi University and Istanbul University. In this process, chairs related to International Relations (such as Istanbul University, Faculty of Economics, and Political Science Chair), relevant branches (such as the Political Branch of Ankara University Faculty of Political Sciences) and so on were constructed, and new departments with the same name were established. Istanbul University Faculty of Economics, Uludag University Faculty of Economics and Administrative Sciences, Middle East Technical University Faculty of Economics and Administrative Sciences are among the first universities to open the Department of International Relations beside the Faculty of Political Sciences (Koçer, 2007).

Nowadays, International Relations education provides education at the undergraduate level with different names at many universities.<sup>20</sup> These programs have been organized under the names “International Relations”, “Political Science and International Relations”, “The European Union and International Relations” and “Global and International Relations”. According to November 2013 data, International Relations is taught by various names in 93 out of 165 existing universities in Turkey. While the departments with the name International Relations are present in the majority of these universities, the name ‘Political Science and International Relations’ has been preferred in especially recently established private universities. Some universities (such as Maltepe University) provide education with the name ‘International Relations and the European Union’. The most important issue striking at this point is ‘Political Science’s being a field which literally cannot be shared by neither the Department of International Relations nor the Department of Public Administration. While the departments with the name ‘Political Science and Public Administration’ have been established at some universities (such as Adnan Menderes University), ‘Political Science and International Relations’ is used as the department name at some other universities (such as Marmara University and Bahçeşehir University). In some universities (for example TOBB Economics and Technology University, Galatasaray University), only ‘Political Science’ is used as a department name. The absence of the department of Public Administration at the universities initiating ‘Political Science’ as the department is another point drawing attention. While some universities (such as Maltepe University) have established departments with the name ‘the European Union and International Relations’, some universities (such as Bilgi University and Bahçeşehir University) have preferred only the name ‘the European Union’ for the European Union as a field of International Relations. In three universities (Middle East Technical University, Boğaziçi University and Bilkent University), departments with the name ‘Global and International Relations’ have been opened beside the Department of International Relations. As of November 2013, 113.959 students study International Relations at the universities in Turkey.<sup>21</sup>

<sup>20</sup> Data in this section have been taken from the official site of ÖSYM. Since the study contains the universities in Turkey, universities outside Turkey which are present in ÖSYM guide have been ignored. ([http://dokuman.osym.gov.tr/pdfdokuman/2013/OSYS/2013%20%C3%96SYS%20KONT%20KILAVUZU%20BASKI%20\(Tablo%204\)\\_K.B.pdf](http://dokuman.osym.gov.tr/pdfdokuman/2013/OSYS/2013%20%C3%96SYS%20KONT%20KILAVUZU%20BASKI%20(Tablo%204)_K.B.pdf)), (10.05.2014).

<sup>21</sup> These data have been obtained from the center of information of the Council of Higher Education

Considering these data, the department of International Relations has lost its being a feminine department in the last ten years. Department of International Relations, which used to be preferred by mostly girls in 2000s, became a department which male students study more according to 2013 data. In 2013, 64.940 male and 49.019 female students continue to study International Relations.

### **General Situation and Problems of the Department of International Relations**

International Relations sciences showing significant development since the beginning of the 20th century was discussed as a field of various sciences for many years and started activity as an independent department in the Faculty of Political Sciences in 1982 for the first time. Therefore, the Department of International Relations in Turkey does not have a long history for the development of a department. This situation also brings some problems and shortcomings. First, a significant number of the instructors, especially professors, working in the Department of International Relations in Turkey are not the graduates of the department. Besides, the small number of theoretical courses results in perceiving International Relations as a part of political history. This situation increases the number of the studies on current events examination instead of theory at the academic level. In that respect, the evaluation of Suat Bilge from the Faculty of Political Sciences in 1961 still remains valid. Bilge uttered in a speech: "Everyone is studying current issues, doing events examination. In recent years, studies on the conceptual framework and theoretical approach have also highly reduced. This hinders the development of a systematic, conceptual discipline of work in our field, and leads us to a chronological narrative of political events. We must avoid this, and we must establish a discipline having a more conceptual framework" (Uluslararası İlişkiler, 2005). Another problem faced with in recent years is the tendency of the explanation of the issues related to International Relations to the society by those who are not experts of the issue but have a high popularity along with the increase of private television channels. This situation results in the increase of the superficial studies in order to meet the expectations as to the rising conjuncture in parallel with strengthening of consumer society coming from the society, the market and the media (www.uik.org.tr).

Due to the opening of many universities in recent years, there is a lack of instructors in the departments of International Relations at the new universities. This situation causes the increase of the courses including topics for regional analysis and the reduction of the theoretical courses. In addition, the absence of adequate textbooks and the lack of the quality of some of the current textbooks is another factor making the education in the field difficult (www.uik.org.tr). As major instructors of the field of International Relations stated in the International Relations Workshop in 2005, International Relations' having almost no interdisciplinary studies with other disciplines in contrast with the other countries beside not having a relationship with its sub-disciplines at an adequate level appears as an important lack (www.uik.org.tr). Knowledge of foreign languages of the graduates of the Department of International Relations is one of the most important requirements. However, in universities where courses are taught with only foreign language, such a situation that the quality of education is lower than expected is faced (Uluslararası İlişkiler, 2005).

### **Conclusion**

The science of International Relations showing the rapid development in the world during World War I has increasingly become an area of interest only after 1950. Courses related to this field were taught as a subject in several departments for many years, and the "Department of International Relations" was established with the regulations of the Council of Higher Education in 1982. The Department of International Relations existing in many of the universities in Turkey is faced with the problems such as the scarcity of textbooks at the theoretical level, shortages of teaching staff who has grown in the field (especially in newly established universities). While universities have the problem of skilled faculty shortage, that those who are not the experts of the subject express the issues and developments related to international relations especially on private television channels almost every day also minimizes the reputation of the science of International Relations. One of the reasons of the shortage of qualified faculty members is department students' problem of foreign language learning during their undergraduate education. Lack of resources in Turkish obliges academicians to head to foreign resources. The studies of the academicians having difficulties in foreign language remain weak. Foreign language learning should be given utmost importance for a qualified education of International Relations in Turkey. This is not a problem that can be overcome by teaching in foreign language. This problem can only be overcome through universities teaching in Turkish as well as providing the opportunity of the education of English and other foreign language.



# Kinect Kullanılarak Vücut Beden Ölçülerinin Tespiti

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## Abstract

Kinect sensors provide important facilities about the determining the biomechanical body motion. Therefore Kinect sensor are used in different areas such as medicine, education and virtual cabin applications. In this study, an application was implemented to determine the size of the human body for virtual cabin, using instead of fitting room. The developed system obtains 20 of human joints's x, y, z values in three-dimensional cartesian coordinate system by using Microsoft Kinect SDK. Software of the system carried out using object-oriented programming technology with C # programming language. Besides this user body measurements are calculated by using the joints of the human which plays an important role in determining body size. Standard body ruler was used for male and female to classification of body size. The result of this study performed with Kinect was applied on many sample person. Our experiments have resulted with 82.5% overall performance.

**Keywords:** Augmented Reality, Human-Computer Interaction, Kinect sensor

## Özet

Kinect algılayıcısı, biyomekanik vücut hareketinin belirlenmesinde önemli kolaylıklar sağlar. Bu nedenle Kinect algılayıcısı tıp, eğitim gibi çeşitli alanlarda ve sanal kabin uygulamalarında kullanılmaktadır. Bu çalışmada, mağazalardaki giysi deneme kabinlerinin yerine kullanılacak bir sanal kabin için insan beden boyutunu belirleyen bir uygulama gerçekleştirilmiştir. Geliştirilen sistem, Microsoft Kinect SDK'sını kullanarak üç boyutlu Kartezyen koordinat sisteminde 20 insan eklemine ait x,y,z değerlerini elde etmektedir. Sistem yazılımı, c# programlama dili ile nesneye yönelik programlama teknolojisi kullanılarak gerçekleştirilmiştir. İnsan bedeninin belirlenmesinde önemli rol oynayan eklemler kullanılarak kullanıcı beden ölçüleri hesaplanmıştır. Beden ölçülerini sınıflandırmada, bay ve bayanlar için belirlenmiş standart beden cetveli kullanılmıştır. Kinect ile yapılan bu çalışmanın sonucu çok sayıda kişi üzerinde uygulanmıştır. Yapılan test sonuçlarında, sistemin başarısı %82.5 olarak hesaplanmıştır.

**Anahtar Kelimeler:** Zenginleştirilmiş Gerçeklik, İnsan-Bilgisayar Etkileşimi, Kinect algılayıcı

## 1.GİRİŞ

Dış dünya veya madde olmadan, algıların çok gerçekçi olarak yaşanabileceğini, günümüz yazılım ve donanım teknolojisi ortaya koymaktadır. Genellikle, sanal gerçeklik olarak adlandırdığımız bu teknoloji; bir konunun fiziksel olarak taşınmadan, bilgisayarda canlandırılan üç boyutlu görüntülerin, sanal gerçeklik aygıtları yardımıyla insanlara "gerçek bir dünya" gibi gösterilmesidir. Yani, ilgili duyu organları bir şekilde işlenerek, sanal ortamın, fiziksel ortam olduğuna dair yanılının oluşturulmasıdır.[1]

Oyun programlarında ve simülasyonlarda benzer bir durum bulunmakla birlikte, bu programlar genel kullanım amacı ile tasarlanıp üretildiği için klavye, fare, bilgisayar ekranı gibi yaygın donanım teknolojilerini kullanmaktadır. Sanal gerçeklik, kullanıcı yanılmasını artırmak için başa takılan ekran, veri eldiveni, konum ve oryantasyon vb. özel donanımlar, bu donanımları yöneten, kullanan yazılım teknolojilerini kullanır.[2]

İnsan hareketlerini algılamak, eklem konum ve oryantasyonlarını belirlemek sanal gerçeklik,

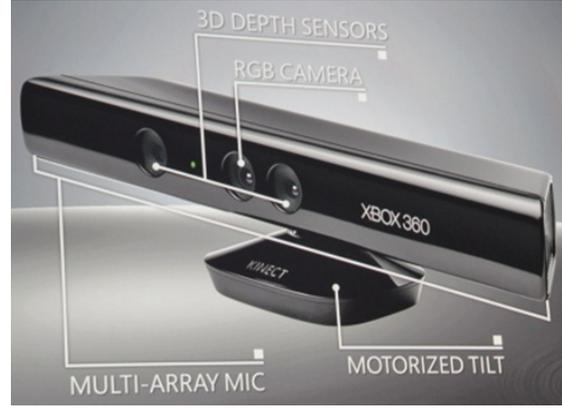
simülasyon ve oyun teknolojisi için önemlidir. Bu konuda çok sayıda çalışmalar yürütülmüştür. Bu çalışmalar üç gruba ayrılabilir:birinci grup çalışmalar, bilgisayar görmesi ile gerçekleştirilen çalışmalar.İkinci grup çalışmalar, özel veri yakalama aygıtları ve mekanik giyilebilir sistemler. Üçüncü grup çalışmalar ise, bilgisayar görmesi ve özel veri cihazlarının kullanıldığı karma sistemlerdir.

Literatürdeki çalışmaların çoğunda çok sayıda kameraların kullanıldığı pahalı görme sistemleri veya pahalı özel giysiler gerektiren aygıtlar iledir.Kinect cihazının gelişimi ile birlikte, insan hareketlerinin analizi üzerine, kinect kullanılarak yapılan çok sayıda çalışma yapılmıştır. Kinect fiyat olarak çok ucuz cihaz olup, performansı oldukça iyidir.

Bu çalışmada, sanal bir kıyafet deneme kabini için insan beden ölçüsü belirleme çalışması yapılmıştır. Çalışmada giriş algılayıcısı olarak kinect cihazı başarıları %83 tür.

## 2. Sistem donanımı

Kinect Teknolojisi sensörler aracılığıyla belirsiz vücut hareketlerinin izlenerek görüntülenmesi sistemidir(BHİS).[3-4]Microsoft Xbox 360 ve Windows uyumlu Kinect sensörü son derece gelişmiş algılama sensor donanımları içermektedir.Derinlik kamera sensörü, RGB kamera sensörü, dörtlü mikروفon grubu ile üç boyutlu şekilde hareketleri belirtilen aralıklarla yakalama, yüz tanıma ve ses algılama imkanı sunmaktadır [5]



Şekil1.Mikrosoft kinect cihazının görünüşü

Kinect cihazının solunda göz bir IR(kızıl ötesi lazer) led dir, lazer taraması yapar. Sağdaki göz ise lazerlerin objeye çarpıp geri dönme hızını hesaplayarak mesafe bilgisi verir. Ortadaki göz RGB fotoğraf makinesidir. Çözünürlüğe bağlı olarak saniyede 12 ile 30 arasında görüntü yakalar.

Kinect'in alt kısmındaki ızgaralı bölüme yere bakan 4 mikrofon yerleştirilmiş. Bu mikrofonlar en iyi ses kalitesini yakalamak ve sesin geldiği açıyı belirlemek için Kinect'in altına mesafeli olarak dizilmiştir.Sensöre dikey hareket yeteneği kazandıran mekanizma, basit bir DC motordan oluşur. Yazılım aracılığıyla Kinect'i +/- 27 derece hareket ettirebilir.

Kinect yazılım geliştirme kiti (SDK) insan vücudunun iskeleti ile birlikte konum sıralı numaralandırılmış 20 adet eklemenden oluşur.Kinect sensorler tarafından bu 20 adet eklemnin durumu ve sensörden olan uzaklıkları izlenerek beden hareketleri olarak görüntüye çevrilir.Kinect'in çalışması bir oyun/komut denetleyicisine ihtiyaç duymaksızın sadece ; vücut hareketleri ve sesli komutlarla yazılım veya oyun üzerinde kontrol ve etkileşim yapmak suretiyle gerçekleşir.

Ayrıca Kinect teknolojisinin zihinsel engelli öğrencilerde kullanımı ile ilgili yapılan araştırma, bu teknolojinin zihinsel engelli öğrencilerin öğrenme hızına uygun olduğunu ve öğrenciler istediği zaman onların çalışmasını desteklediğini göstermektedir. Öğrencilere eğlenerek öğrenme imkânı sunan Kinect teknolojisi, motivasyonu artırarak kalıcı öğrenmeye yardımcı olmaktadır.

Belirsiz bir vucut hareketlerinin izlenmesi sistemi (BVHİS) olan Kinect teknolojisi fizik tedavi ve rehabilitasyon merkezlerinde potansiyel kullanım olanağına sahiptir.Bu bakımdan BVHİS tedavi amaçlı analiz merkezlerinde de kullanılmaktadır. Vücudun eklem noktaları ve ona bağlı segmentlerin yönelimlerinin belirlenmesinin uzun sürmesi nedeniyle hastaların tedavilerinde olumsuzluklar oluşturduğu bilinmekle birlikte BVHİS vücut hareketinin izlenmesinde önemli bir referans sistemi olarak kabul edilmektedir.[6]

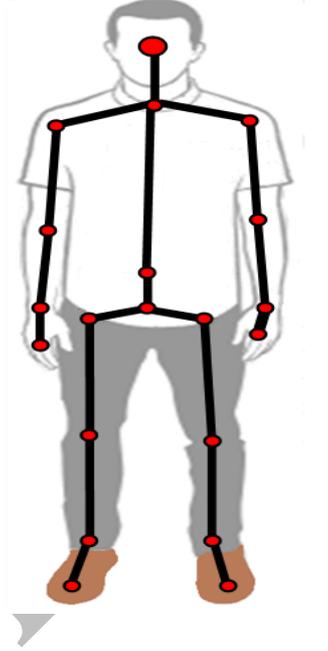
### 3. Beden ölçülerinin hesaplanması (Metot)

Günümüz hazır giyim sanayi , çocuk, genç, yetişkin vb olmak üzere çeşitli kategorilerde üretim yapmaktadır. İnsanlar giysi ihtiyaçlarını ya mağazalarda kendi bedenlerine uygun giysileri deneyerek, yada internet mağazalarından kendilerine uygun beden ve renklerde ürünler almaktalar. Özellikle ülkemizdeki mağazaların ürün geri iadesindeki ve değişimindeki ortaya koymuş oldukları zorluklardan dolayı insanların kıyafet alımlarında mutlaka uygunluk ve uyum denemeleri yapmalarını gerektiriyor. Kabinlerdeki yoğunluk giyip çıkarma zorlukları, vakit yetersizliği denemelerden tam verim alınmasını engellemektedir. Geliştirilecek bir sanal giysi deneme kabini ile bu işi hızlı ve pratik olarak gerçekleştirilebilir. Kullanıcı sanal olarak denediği giysilerden sadece

beğendiklerini gerçek kabinde denemesi sağlanabilir. Sanal kabin uygulamasındaki önemli aşama kullanıcının beden ölçüsünü belirleme ve giysinin bedene uygun olanının seçilmesidir. Yapılan çalışmada kinect cihazından elde edilen eklem bilgileri kullanılarak kullanıcı beden bilgilerini hesaplanmaktadır.

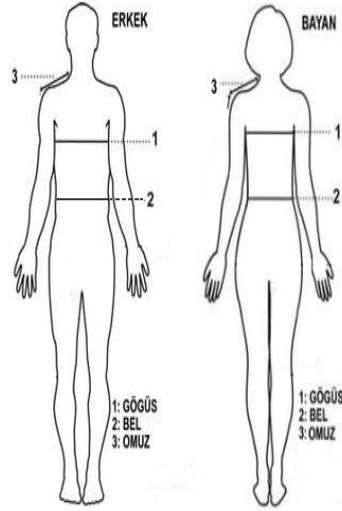
Bu çalışma, beden ölçülerinin belirlenmesi üzerine yoğunlaşmıştır. Microsoft Kinect sensör ve Kinect SDK sı kullanılarak elde edilen 20 eklemden sağ ve sol omuz eklem noktaları arası mesafeler ile sağ ve sol el eklem noktaları arası mesafeler denklem1 de verilen geometrik bağıntılar kullanılarak elde edilmiştir. [7]

Elde edilen değerler kadın ve erkek için belirlenmiş standart beden ölçüsü tablosuna uygun yazılan kurallar ile belirlenmiştir. Şekil.2 de görüldüğü üzere kullandığımız Joint Class içerisinde bulunan eklem pozisyonları verilmiştir. Bu değerlerin hepsi bir enumeration olarak tanımlanmıştır.[8]



Şekil.2 İskelet yapısı ve tüm eklemeler

Bu çalışmada, şekil 2 de görülen eklemelerden omuz eklemeleri(shoulder left-shoulder right) ve el eklemeleri (hand right ve hand left) kullanılmıştır. Vücut Beden Ölçülerinin Tespiti için öncelikle bel ve göğüs ölçüleri hesaplanmıştır. Şekil 3 de erkek ve bayan için beden hesaplanmasında kullanılan bölgeler verilmiştir. Hesaplamalar için gerekli eklemelerin elde edilmesi ile ilgili kod parçası şekil 4 de verilmiştir. Şekil 5 de verilen kod parçası kullanılarak beden için gerekli hesaplama yapılmıştır.



Şekil.3 Beden ölçüsü tayininde kullanılan referans alınan eklem noktaları.

```
private void eklemEkle(Skeleton iskelet)
{
    dizi[0, 0] = iskelet.Joints[JointType.ShoulderLeft];
    dizi[0, 1] = iskelet.Joints[JointType.ShoulderRight];
    dizi[1, 0] = iskelet.Joints[JointType.HandLeft];
    dizi[1, 1] = iskelet.Joints[JointType.HandRight];
}
```

Şekil.4

Göğüs ölçüleri için omuz kemiklerin kullanılmıştır. Kinect cihazından alınan omuz kemiği, göğüs mesafemizle aynı doğrultudadır. Omuz mesafesini shoulder-left'in x koordinatı ile shoulder-right'in x koordinatını ve shoulder-left'in y koordinatı ile shoulder-right'in y koordinatı arasındaki uzunluğu denklem.1 kullanılarak hesaplanmıştır. Denklem 1 iki nokta arasındaki mesafeyi bulma bağıntısı olup kişinin x-y koordinat sistemindeki kemik uzunluğunu vermektedir.

$$|AB| = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

**Denklem.1** İki nokta arasındaki uzaklık bulma formülü

Her uzunluk bulma işleminde sonuc 100 ile çarpılmaktadır. Çünkü, kinectin ürettiği değer m cinsindedir. Bu işlem sonucunda cm cinsinden değer bulunmaktadır. Şekil 6 da bu hesaplama ile ilgili kod parçası verilmiştir.

```
x1 = Convert.ToDouble((dizi[0, 0].Position.X));
```

```
x2 = Convert.ToDouble((dizi[0, 1].Position.X));
```

```
y1 = Convert.ToDouble((dizi[0, 0].Position.Y));
```

```
y2 = Convert.ToDouble((dizi[0, 1].Position.Y));
```

```
gogus = (Convert.ToInt32(Math.Abs(Math.Sqrt(((y2 - y1) * (y2 - y1)) + ((x2 - x1) *  
(x2 - x1)))) * 100));
```

#### Şekil.5

Göğüs çevresi şekil.5 deki sonuçların elips çevre hesaplama denkleminde kullanılması ile hesaplanmıştır. Beden ölçüsünü belirlemedeki diğer parametre bel hesabı içinde benzer işlemler yapılmıştır. Göğüs hesabına benzer olarak x-y koordinatları bulunmakta ve ilave olarak el eklemleri kullanılmaktadır. hand-left'in x koordinatı ile hand-right'in x koordinatını ve hand-left'in y koordinatı ile hand-right'in y koordinatını arasındaki uzunluğu bulmak için denklem1 kullanılmıştır. Elde edilen değer kişinin x-y koordinat sistemindeki kemik uzunluğu olarak kabul edilmiştir. Bu işlem şekil.6 da gösterilmiştir.

```
x1 = Convert.ToDouble((dizi[1, 0].Position.X));
```

```
x2 = Convert.ToDouble((dizi[1, 1].Position.X));
```

```
y1 = Convert.ToDouble((dizi[1, 0].Position.Y));
```

```
y2 = Convert.ToDouble((dizi[1, 1].Position.Y));
```

```
bel = (Convert.ToInt32(Math.Abs(Math.Sqrt(((y2 - y1) * (y2 - y1)) + ((x2 - x1) * (x2 -  
x1)))) * 100));
```

#### Şekil.6

Belin çevresini bulama işleminde elips hesabına ilave olarak düzeltme terimi eklenmiştir. Örnek beden ölçüsü elde edilecek modeller kabin fiziksel özellikleri dikkate alınarak, Kinect cihazından 100 cm uzaklıkta durdurulmuş ve uzaklık hesabında hip center ekleminden yararlanılmıştır. Kinect cihazının hip centera olan uzaklığı hesaplandıktan sonra 100 cm den çıkarılarak kişinin bel kısa yarıçapı elde edilmiştir. Şekil 7 de bu hesaplamayı gerçekleştiren kod parçası verilmiştir.

genislik = (Convert.ToInt32(((iskelet.Joints[JointType.HipCenter]).Position.Z) \* 100)) -  
100;

bu elde ettiğimiz sonuçları elipsin çevre hesabı formülüne yerleştirdik:

double bel\_cvre = Convert.ToInt32(Math.PI \* 2 \* Math.Sqrt(0.5 \* ((bel / 2) \* (bel / 2))  
+ (genislik \* genislik))));

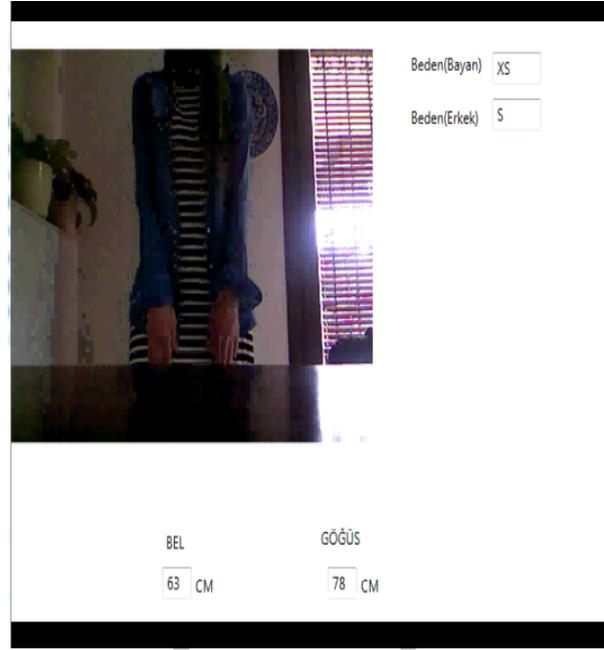
Şekil.7

Elde edilen sonuçlar. Tablo1 de ki standart beden ölçülerine uygun olarak kural tabanlı bir uzman sistem modülü kullanılarak sınıflandırılmıştır.

ERKEK BEDEN CETVELİ			BAYAN BEDEN CETVELİ		
Beden	Göğüs Ölçüsü	Bel Ölçüsü	Beden	Göğüs Ölçüsü	Bel Ölçüsü
	Ölçü (Santimetre)	Ölçü (Santimetre)		Ölçü (Santimetre)	Ölçü (Santimetre)
XXS	-	-	XXS	-	-
XS	-	-	XS	81	61
S	86	71	S	84	64
	91	76		86	66
M	97	81	M	89	69
	102	86		91	71
L	107	91	L	94	74
	112	97		98	77
XL	117	102	XL	102	81
	122	107		105	85
XXL	127	112	XXL	109	89
	132	117			

Tablo1. Bay ve Bayanlara ait standart beden değerleri

Şekil 8 de Beden ölçülerinin hesaplanması için geliştirilen programın grafik arayüzü verilmiştir. Kullanıcının pozisyonunu ayarlamasına klavuzluk eden görüntü ve hesaplama sonucunda elde edilen beden ölçüleri bu ara yüzde görülmektedir.



Şekil 8. Kinect Karşısında duran model için ekran çıktısı

#### 4. Sonuç ve Değerlendirme

Tasarlanan ve gerçekleştirilen program bayan ve erkek modeller için test edilmiştir. Test çalışmasındaki bulgular bayanlar ve erkekler için tablo3 ve tablo 4 de sunulmuştur. Örnek olarak 5 bayan ve 5 erkek model değerleri verilmiştir.

BAYAN	Gerçek Değerler			Çıkan Değerler			Sapma	
	Bel	Göğüs	Beden	Bel	Göğüs	Beden		
1	72	87	S	70	85	S	-2	-2
2	100	110	XL	100	82	XL	0	-28
3	65	85	S	66	85	S	1	0
4	75	90	S	78	92	M	3	2
5	80	95	M	84	96	M	4	1

Tablo 2. Bayanlara ait Kinect değerleri için karşılaştırma tablosu

Hata payı olarak 5 ve üzeri değerler kabul edilmiştir. Çünkü tam değer alırken 5 e kadar oynamaların olduğu görülmüştür.hesaplanan 10 değerden 1'inde 5 kadar bir sapma olduğu, kalan 9 değer de ise sapmanın 5' den küçük değerler olduğu görülmüştür. Bayanlar üzerinde yapılan testler sonucunda elde edilen sistem doğruluk oranını %90 dır.Erkek beden tespitinde 5 test sonucundan birinde farklı bir beden ölçüsü verdiği görülmüştür. Sistemin erkek beden ölçüsü başarımı %80 dir.

BAY	Gerçek Değerler			Çıkan Değerler			Sapma	
	Bel	Göğüs	Beden	Bel	Göğüs	Beden		
1	85	94	M	88	89	L	3	-5
2	97	105	L	98	102	L	1	-3
3	105	110	XL	108	103	XL	3	-7
4	117	110	XXL	117	115	XXL	0	5
5	91	110	L	95	111	L	4	1

**Tablo3.**Baylara ait Kinect değerleri için karşılaştırma tablosu

Bu deneyimizde de 5'e kadar olan sapma sayısı 2 tane,8 tane de doğru, yani doğruluk oranı %80 olmuştur. Beden hesabında ise 1 yanlışla %80 lik doğruluk oranı elde edilmiştir.

Kinect kullanılarak yapılan beden ölçü belirleme çalışmasından yararlanılarak değişik uygulamalar yapılabilir.Örneğin online alışveriş sitelerinde kinect kullanılarak satışta olan elbiseleri,kişi kendi bedenine uygun olup olmadığını kolaylıkla anlayabilir.

Gerçekleştirilen sistem ile kişiler, vücut ölçülerini ve ölçülerinin beden karşılığını öğrenebilir. İnternet mağazalarındaki kıyafet başta olmak üzere sanal kabinlerde kendine uygun kıyafetleri deneyebilir. Proje sonuçları oyun karakterlerinin oyun oynayan kişiye benzetilmesi çalışmaları gibi çalışmalarda kullanılabilir. Genel olarak baktığımızda ise projenin doğruluk yüzdesi %82.5 çıkıyor.

## **Teşekkür**

Çalışmamıza vermiş olduğu değerli katkıları dolayısıyla Doç.Dr. Cemil Öz'e teşekkür ederiz.

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# Kinematics of change in the use value of commodities for the training of expert appraisers at universities: the correspondence principle

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## Abstract

Assuming that the market value of a commodity at time  $t$  is fully determined exclusively by the value of the instantaneous commodity price  $n(t)$ , methodological procedures taken from theoretical physics are used to construct motion equations for a commodity's instantaneous price  $n(t)$  and instantaneous relative depreciation  $RD(t)$ . Motion equations for the convex and concave increase of instantaneous commodity price are linear differential equations of the second order with constant coefficients assuming convergent market structures with perfect competition. The motion equation of instantaneous relative depreciation for the growth of relative depreciation with inflexion as well as the motion equation for the growth of commodity price with inflexion are non-linear differential equations of the second order with constant coefficients. These motion equations were also derived for a sequence of markets with perfect competition. The conclusion of the work presents the first step for constructing a principle of correspondence between economic variables and kinematic variables of classical non-relativistic mechanics.

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- *Keywords:* Depreciation; differential equation; econophysics; equation of motion; training appraisers.

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## Introduction

The results of applying statistical mechanics in microeconomics suggest that the time is ripe for using the experimental, theoretical and mathematical methodologies of physics to model economic systems beyond the framework of traditional economic modeling. The question remains whether the import of concepts from physics to economics is merely an applied metaphor, or actually a modification of the analytical structure of economics. There are persuasive arguments that this involves more than applied metaphors (Mirowski, 1991; Wilson, 1998; Salzano & Kirman, 2005; Arécchi, 2005; Brock & Colander, 2005). If we are to find at least a partial answer to this question, we must compare the linear and non-linear analytical structure of physics with the analytical structure of economics. To enable such a comparison, work has begun on a principle of correspondence between economic variables and the physical variables used in one of the most highly developed disciplines of classical physics, classical non-relativistic mechanics. The final form of this principle of correspondence will to a certain degree be reflected in the methodological foundations used to teach economics itself, for example, in the training of appraisers at the university level.

The late nineteenth century is a period in which there was a synthesis of economic laws formulated by the previous generation of economists, and increased attempts to describe these laws using the language of physics and mathematics. Economic phenomena and processes at that time were described and analyzed using analogies between the evolution of physical systems and the evolution of economic systems. Biographical research has shown that one of the reasons for the successful application of theoretical physics in economics is that many economists

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had initially studied physical and mathematical sciences, or fields related to the physical or mathematical sciences (Zeithamer, 2012 a, 2012 b, 2013). The first half of the twentieth century witnessed a deepening integration of economics, mathematics and physics. The gradual spread of methods taken from experimental and theoretical physics and applied to economics during the 19<sup>th</sup> and especially the 20<sup>th</sup> century eventually led to the beginning of basic research, which in the 21<sup>st</sup> century consists of the systematically targeted application of experimental, theoretical and mathematical physics to economics (Zeithamer, 2012 a, 2013). A part of this basic research in economics has become known as econophysics.

At the Czech School of Economics during the 19<sup>th</sup> century, no reliable sources have yet been found indicating such an interdisciplinary approach or related original work. In the second half of the twentieth century however, we do find economists at the Czech School of Economics whose works represent applications of physics in economics, i.e. in econophysics in broader sense. Einstein's special theory of relativity was applied by professor Pavel Hrubý (\*5. 5. 1914 - †25. 6. 1994) in order to use economic spacetime for more precise economic analysis and prognosis (Hrubý & Kálal, 1974). Another Czech economist, who represents the Czech School of Economics in econophysics in broader sense, is professor František Drožen (\*30. 5. 1949), whose results were inspired by the work of German railway engineer August Wöhler (\*22. 6. 1819 – †21. 3. 1914). František Drožen constructed an analogy between the process of fatigue crack growth in axles of railway wagons and the process of price reduction for goods. This approach to modeling the process of falling prices for goods can be found in its final form in several of Drožen's works (Drožen, 2003, 2008).

The methodology of qualitative and quantitative physical research of any system strives to achieve one basic goal, namely that the signal to noise ratio be much greater than one. If it is possible to deliberately increase the output signal from an inanimate system above the background noise, this brings to the forefront the natural relations which are common to different systems investigated (Roehner, 2002, 2007; Štroner & Pospíšil, 2011). Of course there are other systems which do not permit the researcher to amplify the level of output. In such case, there is another way to increase the signal to noise ratio. Here, it is necessary to continually decrease the background noise to the lowest possible level. A classic current example requiring such noise reduction is the detection of gravitational waves, the existence of which was predicted by prof. A. Einstein in his work from 1916 (Einstein, 1916). Outside the solar system, the theory predicts a number of "stellar" sources of gravitational waves, which could be detected in the event they reached Earth. For the Sun, a typical class G main-spectrum star, it has not yet been possible to theoretically determine such mechanisms which would be responsible for detectable levels of gravitational radiation (Weinberg, 1972; Papini & Valluri, 1976; Křivský & Zeithamer, 1982; Karmakar & Borah, 2013). A situation similar to the physical research of inanimate systems arises in the physical research of economic systems. Efforts similar to the detection of gravitational waves can be seen in numerous other multi-disciplinary fields, explored in publications such as: Physics of the Earth's Magnetosphere (Zeithamer, 1986 a, b, 1987 a, b, c, 1988, 1989, 1990; Vörös, 1991; Kan, Potemra, Kokubun, & Iijima, 1991; Otto, 2005; Vasylunas, 2012), Heliometeorology and Helioclimatology (Sulman, 1982 a, b; Baker, 2005; Pérez – Peraza & Libin, 2012), Biophysics of the Sun – Earth Relations (Tromp, 1980; Sulman 1982 a, b; Kiefer, 2005).

In economic systems, one of the main reasons that the signal to noise ratio is close to one is the high degree of self-organization and self-improvement.

Finding causal mechanisms which explain observed socio-physical phenomena on a gravitational, electromagnetic or nuclear level is a very difficult, long and costly task. The same applies to the behavior of experts in commodity price theory, thoroughly based on the knowledge of basic physical force interactions. The theoretical constructions presented in this work are intended to facilitate solving both tasks mentioned in a future modern commodity price theory. Specifically, there are linear and non-linear elementary kinematic equations which do not explain the phenomena observed in the socio-physical system with interactions of force, but merely describe the developing state of the socio-physical system. While not easy to solve, these kinematic equations lead to quantifiable mechanisms which explain observed developments in the state of the socio-physical system using analytical dynamics, i.e. force interactions. The analytical dynamics of socio-physical systems is not the subject of this work, however, it is one of the subjects of basic and applied economic and physical research conducted by the author of this article.

### Linear motion equation of commodity state without inflexion

In this paper it is assumed that the market value of a commodity is quantifiably determined only by the market price  $n$  of the commodity. We now make the generalizing assumption that the instantaneous acceleration of reduction of the market value is directly proportional to the instantaneous rate of reduction of the market value (Zeithamer, 2010). Then the deterministic differential equation of price which expresses this model is

$$\frac{d^2n}{dt^2}(t) = -A \frac{dn}{dt}(t), \quad (1)$$

where  $A > 0$  is the proportionality constant, and a negative sign is used to indicate that  $n$ , the market value of goods, i.e. a price, is decreasing and the acceleration of reduction of the market value increases over time. The initial conditions now are that over time  $t = 0$  the market value is  $n(0) = n_0$  and  $\frac{dn}{dt}(0) = r_0 < 0$ .

### Non-linear motion equation of commodity state with inflexion and jerk of price

In this section of our work, we again presume the following conditions to be met: (1) the commodity is on one of the markets of a model of market structure with perfect competition at initial time  $t_0$ ; (2) at time  $t_0$  the commodity is found in its initial state, which is uniquely determined by the magnitude of instantaneous commodity depreciation  $w(t_0) = w_0$ .

Let the acceleration of  $\frac{d^2n}{dt^2}$  of the instantaneous commodity price be the sum of two components, i.e.

$$\frac{d^2n}{dt^2} = \left( \frac{d^2n}{dt^2} \right)_1 + \left( \frac{d^2n}{dt^2} \right)_2. \quad (2)$$

The first component of acceleration is a consequence of physical and chemical processes, which cause the first component of the instantaneous acceleration to increase in direct proportion to the magnitudes of rate of change of the instantaneous commodity price  $n$ , i.e.

$$\left( \frac{d^2n}{dt^2}(t) \right)_1 = B \frac{dn}{dt}(t), \quad (3)$$

where  $B$  is the proportionality constant,  $B > 0$  and  $t \in (t_0, +\infty)$ . The second component of acceleration results from socio-psychological processes, which cause the second component of the instantaneous price acceleration to be directly proportional to the product of the magnitude of rate of change of the instantaneous price  $\frac{dn}{dt}(t)$  and the magnitude of instantaneous price  $n(t)$ , while the proportionality constant is negative, thus

$$\left( \frac{d^2n}{dt^2}(t) \right)_2 = -A \frac{dn}{dt}(t) \cdot n(t), \quad (4)$$

where  $(-A)$  is the proportionality constant,  $A > 0, t \in \langle t_0, +\infty \rangle$ .

By substituting relations (3) and (4) into equation (2), we obtain the following motion equation for the acceleration of instantaneous commodity price  $n$

$$\frac{d^2 n}{dt^2}(t) = B \frac{dn}{dt}(t) - A \frac{dn}{dt}(t) \cdot n(t), \quad (5)$$

where  $A > 0, B > 0, t \in \langle t_0, +\infty \rangle$ . A similar equation holds for commodity relative depreciation  $RD$  (Zeithamer, 2012 b, 2013)

$$\frac{d^2 RD}{dt^2}(t) = B \frac{dRD}{dt}(t) - A \frac{dRD}{dt}(t) \cdot RD(t), \quad (6)$$

where  $A > 0, B > 0, t \in \langle t_0, +\infty \rangle$ .

For the motion of a solid body through space in which the magnitude of the force  $F$  of resistance in that space against the movement of the body is directly proportional to the velocity  $v$  of the body, i.e.  $F = -kv$  ( $k > 0$  is the constant of proportionality), the magnitude of jerk  $j$  is expressed by the following equation (Pospíšil, 2013),

$$j = \frac{d^3 s}{dt^3}(t) = -\frac{k}{m} \frac{d^2 s}{dt^2}(t), \quad (7)$$

where  $s$  is the path traveled by the body,  $m$  is the mass of the body,  $t$  is time, and  $j$  is the magnitude of jerk in units  $m/s^3$ . From the equation of motion for instantaneous price (Eq. 1) we get the following equation for the magnitude of jerk of price  $j_p$ , e.g. in units of  $USD/s^3$ ,

$$j_p = \frac{d^3 n}{dt^3}(t) = -A \frac{d^2 n}{dt^2}(t), \quad (8)$$

where  $n(t)$  is the instantaneous price of the commodity and  $t$  is the physical time. Equations (7) and (8) are the first step in constructing a principle of correspondence between economic variables and physical variables of classical non-relativistic mechanics: the path  $s$  traveled by a solid body through space with a force of resistance against this movement is directly proportional to the velocity, which corresponds ( $\leftrightarrow$ ) to the instantaneous price  $n$  of a commodity in a market structure with perfect competition i.e.  $s \leftrightarrow n$ . Equations (7) and (8) are also a second step in deriving a complete principle of correspondence between economic variables and physical variables: for the motion of a solid body through space, where the force of resistance against this movement is directly proportional to the velocity  $v$ , jerk  $j$  corresponds ( $\leftrightarrow$ ) to jerk of price  $j_p$  for a commodity in a market structure with perfect competition i.e.  $j \leftrightarrow j_p$ .

## Conclusion

Assuming that the market value of the commodity at time  $t$  is fully determined exclusively by the value of the instantaneous commodity price  $n(t)$ , methodological procedures taken from theoretical physics are used to construct motion equations for a commodity's instantaneous price  $n(t)$  and instantaneous relative depreciation  $RD(t)$ . Motion equation (5) for instantaneous commodity price with inflexion is a non-linear differential equation of the second order with constant coefficients. This motion equation was derived for a sequence of markets with perfect

competition. The conclusion of the work presents the first step for constructing a principle of correspondence between economic variables and kinematic variables of classical non-relativistic mechanics.

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# Knowledge management capability level assessment of the higher education institutions: Case study from Mongolia

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## Abstract

Main purpose of this study is to conduct an assessment of knowledge management (KM) capability and to determine the current position of the knowledge management maturity of one of the higher education institutions of Mongolia. This study utilizes the Kulkarni and Freeze's (2004) organizational knowledge capability areas and Knowledge Management Capability Assessment (KMCA) model for the assessment. The findings and context of this study indicates that, as a whole, the university's current knowledge management capability maturity falls on the Level 1 of the KM Maturity. The study shows that both organizational knowledge capability areas and KMCA model suggested by Kulkarni and Freeze (2004) are applicable to the higher education context.

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• *Keywords:* Organizational knowledge areas; Knowledge Management; Knowledge Management Maturity; Knowledge Management Capability Assessment model; Higher education institutions.

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## Introduction

As nowadays knowledge is considered as one of the key resource of production, a source of sustainable competitive advantage, value and wealth creation for organizations, scholars believe that it should be efficiently managed. Enkhbaigali (2004) defines knowledge management as "deliberate activities taken to handle organization's resources more efficiently in order to improve its performance." Knowledge management helps companies to stimulate innovation, improve customer services, and achieve business excellence through the accumulation, improvement of availability and accessibility, and effective use of knowledge. Knowledge management is especially important to higher educational institutions in these hard times, when pressures and expectations of stakeholders such as government, foreign or local employers, and students are increasing.

If "higher education institutions are in the knowledge business since they are involved in knowledge creation, dissemination and learning" as stated Rowley (2000), they must be full of successful examples and best practices of advancing their learning and teaching, research and consultancy services by knowledge creation and application. However, in reality, there is a different picture, and higher education institutions are drawn fire for their poor education outcomes and quality from society. We believe that it is indicating that higher educational institutions are working more diligently on knowledge at the individual level, but not so diligently when it comes to the organizational level.

As organizational knowledge management is just emerging discipline, some educational researchers argue that applying it in education is a new concept and practice rather than routine discipline. Therefore, there are limited studies and discussions about how to use knowledge management strategically in education institutions and

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universities to improve organizational practice, curriculum implementation and the teaching and learning process (Fullan, 2001). The situation is just the same in Mongolian educational sector.

Higher education institutions always have to do their business with limited resources of financial and knowledgeable, experienced teachers. Researcher believes that in such internal and external constraints one of the best ways to provide “clients” or students with the lowest cost, but the best quality educational services and continuously improve training and research methods is improving of organizational knowledge management.

In order to improve knowledge management, the first of all, universities must understand what constitutes knowledge in other word what they should manage. Then they should evaluate the current situation of knowledge management and should be considered it a starting point. As Kulkarni & St. Louis (2003) highlighted “Assessment is the first step towards improvement; one can’t improve what one can’t measure – formally or informally”.

In this study, the researcher aim to assess the current knowledge sharing culture and knowledge management maturity level in various knowledge areas in higher education institutions for the first time and provide school administrators, teachers, and staff who are planning to improve or officially introduce knowledge management with the proper understanding and perception of where and what level expected to start up. In addition, to determine whether the assessment tool for this study selected by researcher is suitable for higher education institutions.

In this case study one of the top Mongolian universities has been selected. The university offers a choice of over 20 programs in business administration, business economics, finance, accounting and management information systems leading to a bachelor, master and PhD in. At the PhD program the course of innovation and knowledge management course is taught. The university and its bachelor and master programs are accredited by domestic and international education accreditation organizations. Teaching staff currently consists of 91 experienced full-time lecturers.

At the moment, although any knowledge management programs did not implemented yet officially at this university, some management and teaching staff recognize the importance of improvement or implementation of knowledge management.

### **Theoretical foundation**

Knowledge management theory has evolved on practical interest in managing the knowledge to the organization’s benefit rather than on universal understanding of knowledge (Alavi & Leidner, 2000) However, as Cook and Brown (1999) noted much “work on organizational knowledge, intellectual capital, knowledge-creating organizations, and knowledge work were based on a single, traditional understanding of the nature of knowledge” usually defined at the level of individual. Many researchers, including Cook and Brown (1999), highlighted that those traditional and common approaches to knowledge have created many challenges to management in their understanding, accepting and undertaking of organizational knowledge management.

Therefore, in order to manage knowledge purposely, improve knowledge management capability, the first of all, it is important to understand and recognize what is organizational knowledge. According to Bhatt (2002) “individual knowledge and organizational knowledge are distinct yet interdependent”. Bhatt’s this clarification enables managers to understand the need to manage this different knowledge using different set of management strategies.

In order to more effectively manage knowledge creation and application organizations need to determine categories of knowledge assets (Nonaka et al., 2000). Because the success or failure of the organization depends very much on knowing which of these types of knowledge organization need, which organization is accumulating now, and what organizations can or cannot do with them.

To obtain appropriate organizational knowledge management strategies, researchers are attempting to categorize organizational knowledge assets and develop their definitions (for example, Spender, 1996; Nonaka et al., 2000; Kulkarni & St. Louis, 2003; Kulkarni & Freeze, 2004; Bakker et.al., 2006), and various evaluation models and tools for measuring knowledge management capabilities (such as Siemens AG (2000); APQC (2012); Kulkarni & Freeze, 2004; Kruger, 2008).

The most understandable and practical categories/themes and definitions for organizational knowledge, which best encompass the nature and characteristics of organizational knowledge defined by above mentioned researches, and can represent knowledge in most organizations, have been defined by Kulkarni and St. Louis (2003); Kulkarni and Freeze (2004). They are 1) expertise, 2) lessons learned, 3) knowledge documents, and 4) data and the definitions of each are below:

**Expertise:** “Knowledge that is available in people’s heads. This knowledge may be gained through experience or formal education. This knowledge is not easily expressed in words or pictures, but can be shared with another person through working together, observation, or mentoring.” (Kulkarni & St. Louis, 2003). As cited Kulkarni & Freeze (2004), "Alavi and Leidner (2001) identify corporate directories and systems to capture knowledge about experts (metaknowledge) as ways to facilitate knowledge sharing in this area.

**Lessons Learned:** They are “successes and failures from similar past projects and are sometimes referred to as best-known-methods.” (Kulkarni & Freeze, 2004) “The value of a lesson learned comes when it is documented, shared, applied and reused. BKMs (Best Known Methods) are Lessons Learned that have been accepted as the best way to do something.” (Kulkarni & St. Louis, 2003).

**Knowledge Documents:** They are “explicit knowledge codified for future use” (Kulkarni & Freeze, 2004), including “text based documents such as project reports, technical reports, policies and procedures, research reports, publications, pictures, drawings, diagrams, audio and video clips.” (Kulkarni & St. Louis, 2003).

**Data:** “Facts or figures obtained from operations, experiments or surveys, stored in databases and data warehouses. Data is used as a basis for making decisions (performing calculations and drawing conclusions). Data can be queried and analyzed. Decision support tools for forecasting, planning, etc., also use data (Kulkarni & St. Louis, 2003).

Kulkarni and St. Louis (2003) named these knowledge categories/themes as knowledge capability areas (KCA). These KCAs are representative of the knowledge found in most organizations, including in higher education institutions. However, organizations have very limited practice in discovering, storing, using them in routine work and decision making. According to Kulkarni and Freeze (2004) every organization possesses different levels of capability or maturity in accumulation and use of the four KMAs. This differentiation leads to different organizational performance and quality.

In addition KCAs, Kulkarni and Freeze (2004) have developed knowledge management capability/maturity assessment (KMCA) model which is empirically tested for validity. The model based on Capability Maturity Model (CMM) of software development industry. According to knowledge management maturity theory, organizations in higher level of maturity able to do activities related to knowledge management better than others. Researchers worked on knowledge management capability/maturity assessment models generally accept the perceptions that “when organizations are below level 3 on the maturity scale, their knowledge processes are primarily ad hoc and localized”(APQC, 2012).

Kulkarni and Freeze’s maturity assessment instrument, which consists of 102 questions grouped by knowledge-sharing culture, expertise, lessons learned, knowledge documents, and data, measures an organization’s five-level KM capabilities of 1) Possible (Not discouraged), 2) Encouraged, 3) Enabled / Practiced, 4) Managed, 5)

Continuously Improved. Each question on the instrument is designed to measure the level of maturity associated with the specific practice of knowledge management.

**Research methodology, data collection and analysis**

To reveal the maturity level of KM in the higher education institution, a survey is conducted adopting Kulkarni and Freeze’s KMCA questionnaire. At first, questionnaire was translated into Mongolian because the original KMCA is in English. Then accuracy and clearness of translation was tested in focus group of 10 lecturers and heads of departments through interview questionnaire. Respondents were asked to evaluate the level of importance they placed on each question using a five-point Likert scale (5-Strongly Agree, 4-Agree, 3-Disagree 2-Strongly Disagree, 1-Do not know/No response) and to write their comment on relevant group of questions. In the distributed questionnaire, the maturity level was not disclosed to the respondent.

The survey sample consisted of 112 lectures and 4 deputy directors. In this case, a total 61 questionnaires (54%) were returned. However, 44 (38% from total) of them were usable for analysis. All usable data was prepared for tabular and graphical presentation, analysis and interpretation. The analysis consists of the descriptive statistics used for each question. Results presented in percentage of respondents that replied with an 5-Strongly Agree and 4-Agree to each question, and the percent of respondents that replied with a 3-Disagree and 2-Strongly Disagree, and 1-Do not know/No response to each question shown in tables. Due to space of this paper, in this paper the researcher summarized responses of all group questions and results for each level of maturity. Then from the data of positive responds “5-Strongly Agree and 4-Agree” of the maturity level, a radar chart was generated.

**Findings**

The survey instrument was able to provide an assessment of the current perceived state and context of the focus university with respect to the management of the following all KMAs.

**Knowledge Sharing Culture.** KMCA model (Kulkarni & Freeze, 2004) determines the level of knowledge sharing culture in organizations through 14 questions. Organizational members’ attitude on understanding and recognition of knowledge management, consequently, a starting point of knowledge management maturity depends on their consideration of knowledge as an asset. The statement of knowledge as an asset was affirmed positively by 45%, negatively by 39%, and “Do not know” by 19% of respondents respectively (Figure 1).

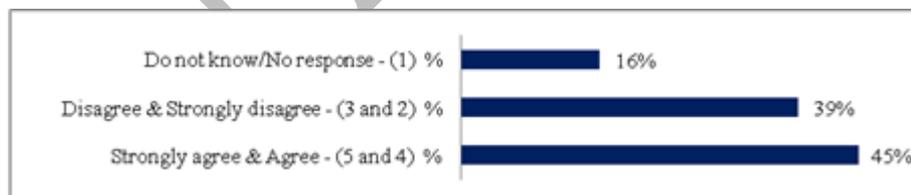


Figure 1. Result of employees’ consideration of knowledge as an asset

Table 1 shows the maturity level that is associated with the group of questions for the Organizational Knowledge Sharing Culture and the average scores received. The table shows the average percent of respondents that replied with a 5-strongly agree and 4-agree to each question, and the average percent of respondents that replied with a 3-disagree and 2-strongly disagree to each question, and finally, the average percent of respondents that replied with an 1-do not know/no response. In addition to this, a radar chart of the maturity levels generated from “Agree” (5 & 4) responses is shown in the Table. A similar process was followed for each of the KMA’s throughout the analysis (See Table 2-5).

Table 2. Results of organizational knowledge sharing culture assessment

<b>LEVEL</b>	<b>ORGANIZATIONAL KNOWLEDGE SHARING CULTURE</b>	<b>% of (5&amp;4)</b>	<b>% of (3&amp;2)</b>	<b>% of (1)</b>	<b>LEVEL OF ORGANIZATIONAL KNOWLEDGE SHARING CULTURE</b>
L1	Willingness of employees to share knowledge within own group/department/university	33%	30%	37%	
L2	Leadership: Commitment to knowledge sharing (KS); Encouragement w.r.t. KS Communication about the value of KS, Recognition/rewarding of activities associated with KS	40%	24%	36%	
L3	Leadership: Setting strategy and KS Goals, Practice of KS within own group/department/university	20%	49%	30%	
L4	New technologies accompanied by Training; Availability of appropriate amount training	24%	55%	22%	

Table 3. Result of Lessons Learned Capability Assessment

<b>LEVEL</b>	<b>LESSONS LEARNED</b>	<b>% of (5&amp;4)</b>	<b>% of (3&amp;2)</b>	<b>% of (1)</b>	<b>LEVEL OF LESSONS LEARNED CAPABILITY</b>
L1	Acknowledgement of previously Lessons Learned	36%	20%	43%	
L2	Importance of looking for and referring to Lessons Learned (LL)	39%	19%	42%	
L3	Successful application of LL; Availability and Accessibility of LL repository(ies); Usefulness of LL repository content; Search and retrieval capabilities of Repository; Existence of taxonomy; Practice of capturing LL; Capture of LL as individual/group Responsibilities; Application/use of LL; Embedding of looking for LL in normal work practices	16%	62%	22%	

L4	Ease of searching the repository; Multiple search criteria for repository; Clarity, standardization and Comprehensiveness of taxonomy; Consolidation and management of LL; Existence of a systematic processes for capturing LL; Ease of finding relevant LL.	10%	73%	16%
L5	Evaluation/updating of accuracy/currency of LL; Periodic review of capture/reuse processes	13%	73%	15%

Table 4. Result of Expertise Capability Assessment

LEVEL	EXPERTISE	% of (5&4)	% of (3&2)	% of (1)	LEVEL OF EXPERTISE CAPABILITY
L1	Acknowledgment of existence of experts/expertise	39%	30%	32%	
L2	Importance of Experts and expertise; Encouragement for SIG participation	47%	28%	25%	
L3	Availability and Accessibility of expertise repository(ies); Usefulness of repository content; Information in repository about internal and external experts; Repository search capabilities; Existence of taxonomy; Existence of a registering and profiling	14%	57%	28%	
L4	Process; Practice of looking for available expertise; Accessing experts as part of normal work practices; Access to internal/external experts with collaboration tools; Participate in Special Interest Groups; Availability of relevant SIGs	14%	60%	27%	
L5	Ease of searching repository; Multiple search criteria for repository; Clarity, standardization and comprehensiveness of taxonomy; Ease of use of registering and profiling, and updating of own profile; Consistency/management of profiles; Ease of locating relevant experts; Easy of use of collaboration tools; Multiple tool sets for collaboration; Financial support/work time for SIG participation;	17%	54%	29%	
L5	Extensibility of taxonomy; Collaboration tools are widely accepted/routinely used; Periodic review/improvement of profiling/search tools; Periodic review of expertise sharing processes	17%	54%	29%	

Table 5. Result of Knowledge Documents Capability Assessment

LEVEL	KNOWLEDGE DOCUMENTS	% of (5&4)	% of (3&2)	% of (1)	LEVEL OF KNOWLEDGE DOCUMENTS CAPABILITY
L2	Importance of Knowledge Documents (KD); Important of referring to KD's	59%	14%	27%	
L3	Availability and Accessibility of repository(ies); Usefulness of repository content; Access to internal and external documents in the repository; Existence of taxonomy; Existence of a	35%	26%	39%	

	categorization process; Practice of referring to and using KD's.				
L4	Repository support for rich formats, Clarity of meta-data, Clarity, standardization and comprehensiveness of taxonomy; Ease to use of categorization process; Categorization process as part of normal work practice; Categorization process managed to ensure adherence; Ease of finding documents; Easy to use of tools for finding KD's; Tools retrieving relevant KD's; Tools to support multiple search criteria.	28%	24%	48%	
L5	Periodic review/improvement of search/retrieval tools; Periodic review of KD classification schemes	16%	33%	51%	

Table 6. Result of Data Capability Assessment

LEVEL	DATA	% of (5&4)	% of (3&2)	% of (1)	LEVEL OF DATA CAPABILITY
L2	Importance of Data-driven decisionmaking	43%	9%	48%	
L3	Data driven decision-making as part of one's job; Availability and Accessibility of repository(ies); Timeliness/time period; Completeness; Sufficiency of support tools	31%	33%	36%	
L4	Currency; Appropriateness of level of Summarization; Clarity of meta-data; Usefulness of presentation format; Accuracy; Ease of use of decision support tools	27%	36%	37%	
L5	Periodic review/improvement of access/analysis tools	18%	41%	41%	

## Discussion and Conclusion

In this study the researcher attempted measure levels of knowledge management capability maturity in higher education institution and reveal the current level for each KMA's using Kulkarni and Freeze's (2004) KMCA model. Results of survey allow make some subjective or qualitative statements about higher education institution's knowledge management maturity level.

Answer to consideration of knowledge as an asset related questions, divided almost equally between agree and disagree affirmations, and plus, "Do not know" answers, demonstrates that consideration of knowledge as an asset is not shaped well among teaching staff and managers, they did not achieve to collective understanding about it yet. In terms of the rest of knowledge sharing culture related questions, almost no level had a percent higher than 50, it may be concluded that the overall level of maturity is at best a Level 1.

Results of evaluation of each KMA's demonstrate that current level of organizational knowledge management capability maturity of the higher education institution surveyed in this study is Level-2. However, there is a considerable high percent of 3-Disagree and 2-Strongly Disagree (49%), and 1-Do not know/No response (30%) to each KMAs. If this result is taken into account, it may be concluded that the overall level of maturity of each KMA's is at best a Level 1 too, which defines the perception of behavior of employees and the availability of knowledge and the infrastructure to share it across the organization, described as "Knowledge sharing is not discouraged. There is a

general willingness to share. Some people, who understand the value of knowledge sharing, do it" (Kulkarni & Freeze, 2004)

The survey provides managers and teaching staff of higher education institutions with following main benefits: 1) to help to better understand what is organizational knowledge, knowledge management, and knowledge management capability maturity; 2) to provide set of characteristics and results expected for each maturity level when knowledge management officially introduced in organization; 3) to provide suggestion on how it can advance to the next level; and 4) to reveal that the KM awareness needs significant improvement.

The researcher notes that there were three main constraints while conducting and analyzing this survey: 1) the concept of knowledge management may seem like common sense to teaching staff and managers, however, according to a survey, the concept is actually quite new insight to them; 2) due to the length of the survey many respondents simply did not respond or submitted incomplete forms; and 3) lack of benchmarking or historical data because this kind of survey related to knowledge management was conducted first time in education sector.

Finally, the research shows that both organizational knowledge capability areas and KMCA model suggested by Kulkarni and Freeze (2004) are applicable to the higher education environment.

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# Konaklama İşletmeleri Yöneticilerinin Mesleki Turizm Eğitimi Almış Çalışanlara Yönelik Tutumları

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## Özet

Gerek orta öğretim gerekse de yükseköğretimde sayıları hızla artan turizm eğitimi kurumlarına rağmen, nitelikli çalışan sıkıntısı ülkemiz turizm işletmelerinin önemli sorunlarından birini oluşturmaktadır. Turizm öğrencileri üzerine gerçekleştirilen çalışmalardan elde edilen sonuçlara göre de mezunların belli bir süre sonra turizm sektörü dışındaki sektörlerde çalıştıkları anlaşılmaktadır. Bu araştırma, turizm eğitimi almış çalışanların sektör için ne kadar önemli olduğu ortaya koymak amacıyla gerçekleştirilmiştir. Bu amaçla araştırmada konaklama işletmeleri yöneticilerinin turizm eğitimi almış çalışanlara yönelik tutumları belirlenmiştir. Nicel yöntem uygulanarak hazırlanan çalışmada veriler, anket aracılığıyla toplanmıştır. Araştırma sonucunda elde edilen bulgulara göre, konaklama işletmeleri yöneticileri mesleki turizm eğitimi almış çalışanların işletme performansını, karlılığını, verimliliğini ve müşteri tatminini artırarak işletmelere olumlu yönde katkılar sağladıklarını belirtmişlerdir. Fakat elde edilen bu sonuca karşın konaklama işletmeleri yöneticilerinin, mesleki turizm eğitimi almış çalışanların aldıkları mesleki eğitimleri yeterli bulmadıkları da tespit edilmiştir.

## 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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*Anahtar Kelimeler:* Turizm Eğitimi, Mesleki Turizm Eğitimi, Turizm, Alanya

*Keywords:* Tourism Education, Vocational Tourism Education, Tourism, Alanya

## 1.Giriş

Yoğun rekabet ortamında turizm pazarından daha fazla pay almak isteyen destinasyon ve işletmelerin modern turizm anlayışının gerektirdiği hizmet kalitesini sağlaması, müşteri beklenti ve memnuniyetini gerçekleştirme, iş verimini ve performansını artırabilmesi büyük ölçüde sektörde istihdam edilen işgücünün mesleki ve teknik eğitimlerinin yüksek olmasına bağlıdır (Kızılırmak, 2000; Ünlüöner vd., 2010; Kuslivan ve Kuslivan, 2000; Ünlüöner, 2000). Diğer bir ifadeyle turizm sektörünün temel üst yapı dinamiklerini oluşturan turizm işletmeleri, ürettiği ve satışı sunduğu ürünlerin emek-yoğun olması, bu süreçte görev alan bireylerin işlerinin uzmanı olmasını,

diğer bir anlatımla kalifiye nitelik taşımalarını gerektirmektedir. İşletmelerin müşteri devamlılığını ya da sadakatini sağlaması ve sonucunda da hedeflenen karlılığa ulaşmasında, söz konusu işletmelerde çalışan tüm çalışanların payı oldukça büyüktür. Çalışanların bu süreçteki katkıları ise şüphesiz ki, alanıyla ilgili gördüğü eğitimle doğru orantılıdır (Avcıkurt vd., 2012). Bu bağlamda turizm sektöründe nitelikli iş gücünün karşılanabilmesi için mesleki turizm eğitimi hayati önem taşımaktadır. Mesleki turizm eğitimi, turizm sektörünün ihtiyaç duyduğu nitelikte iş gücünün yetiştirilmesi olarak tanımlanmaktadır (Güneş, 1997). Mesleki turizm eğitim programları; turizm endüstrisindeki güncel teknoloji ve trendleri takip edebilecek, artan hizmet talebini karşılayabilecek ve müşterilerle sağlıklı iletişim kurabilecek çalışan yetiştirme ihtiyacını sürdürülebilir şekilde gidermek için ortaya çıkmıştır (Amoah & Baum,1997). Kısaca mesleki turizm eğitiminin temel amacı, turizmin ihtiyaç duyduğu mesleki temel bilgi ve becerileri kazandırmaktır (Hacıoğlu vd., 2008).

Turizm işletmelerinin verimli çalışabilmeleri bu işletmelerin hizmet kalitesi ile doğru orantılıdır (Amoah & Baum, 1997). Hizmetin kalitesi, verimliliği olumlu yönde etkilediği gibi müşteri memnuniyetini de olumlu yönde etkilemektedir (Richardson, 2009; Kusluvan & Kusluvan, 2000). Turizm işletmelerinin kaliteli hizmet verebilmesi ve müşterilerini memnun edebilmeleri için hizmet veren çalışanların turizm endüstrisini iyi yorumlayan eğitim kuruluşlarında eğitim almış olmaları gerekmektedir (Christou, 1999). Böylece, alınan eğitim sonucunda kalifiye ve nitelikli iş gücü turizm işletmelerinde istihdam edilecek olup bu işletmelerdeki hizmet kalitesi ve müşteri memnuniyeti artacaktır (Christou; 1999; Baltacı vd. 2012). Bu bakımdan mesleki turizm eğitimi almış çalışan istihdamı hem müşteri memnuniyetini hem de hizmet kalitesini sağlayacaktır (Kusluvan & Kusluvan, 2000). Mesleki eğitim almış çalışan sayısının fazla olması gerek işletmelere gerekse destinasyonlara rekabet üstünlüğü sağlamaktadır (Kusluvan & Kusluvan, 2000; Pfeffer, 2005; Chang ve Hsu, 2010; Ünlüönen vd., 2010).

Turizm sektörü emek yoğun hizmet endüstrisi olduğu için işletmelerin başarılı olması kaliteli, iyi yetişmiş ve yetenekli çalışanın istihdam edilmesine bağlı olmasına rağmen (Amoah ve Baum, 1997; Avcıkurt vd., 2012) turizm sektörünün gerek kalifiye çalışan bulma gerekse mevcut kalifiye çalışanı ellerinde tutma konusunda sıkıntı çektikleri görülmektedir (Richardson, 2009). Türkiye’de yapılan çalışmalar incelendiğinde mesleki turizm eğitimi almış öğrencilerin turizm sektöründe çalışma eğilimlerinin olumsuz yönde olduğunu gösteren çalışmalar olduğu gibi olumlu yönde olduğunu gösteren çalışmaların da olduğu görülmektedir.

Aksu ve Köksal’ın (2005) yapmış oldukları çalışmada turizm bölümünü seçen öğrencilerin turizm sektörüne yönelik bakış açılarının olumsuz yönde olduğu saptanmıştır. Kusluvan ve Kusluvan’ın (2000) yapmış olduğu çalışmada mesleki turizm eğitimi almış öğrencilerin sadece %42,5’inin turizm sektöründe kalmak istedikleri belirlenmiştir. Benzeri bir sonuçta Çatı ve Bilgin’in (2013) yılında yapmış olduğu çalışmada karşımıza çıkmaktadır. Çalışmaya göre mesleki turizm eğitimi almış öğrencilerin %49,5’i turizm sektöründe çalışmak istemektedir. Ayrıca mesleki turizm eğitimi almış öğrenciler sektörde yeterli istihdam olanaklarının olmadığını da belirtmişlerdir. Avcıkurt ve arkadaşlarının (2012) yapmış olduğu çalışmada ise Balıkesir Üniversitesi Turizm İşletmeciliği ve Otelcilik Yüksekokulundan son 10 senede mezun olan öğrencilerin görüşlerine ve durumlarına yer verilmiştir. Buna göre, bölümden mezun olan öğrencilerin sadece %30,6’sı turizm sektöründe çalışmaktadır. Bu çalışmalardan farklı olarak Duman ve arkadaşlarının (2006) Mersin’de yapmış olduğu çalışmada öğrencilerin %68,5’inin geleceklelerini turizm sektöründe gördükleri belirlenmiştir. Roney ve Öztin’in (2007) yapmış olduğu çalışmada öğrencilerin %65,6’sının turizm sektöründe çalışmak istedikleri saptanmıştır. Avcı’nın (2011) Çeşme’de yapmış olduğu çalışmaya göre mesleki turizm eğitimi almış öğrencilerin %77,9’u turizm sektöründe çalışmak istemektedir. Kişioğlu ve Çakırlı’nın (2012) yapmış olduğu çalışmada ise öğrencilerin turizm sektöründe kariyer yapma düşüncesinde oldukları ortaya çıkmıştır. Yabancı ülkelerde yapılan çalışmalar incelendiğinde ise mesleki turizm eğitimi almış öğrencilerin turizm sektöründe çalışma eğilimlerinin Türkiye’ye göre daha yüksek olduğu görülmektedir. Chen ve arkadaşlarının (2000) Tayvan’da yapmış olduğu çalışmada mesleki turizm eğitimi almış öğrencilerin %70,1’inin turizm sektörüne olumlu baktıkları ve sektörde kalmak istedikleri belirlenmiştir. Hjalager’in (2002) İsveç’te yapmış olduğu çalışmaya katılan mesleki turizm eğitimi alan öğrencilerin %71’i 10 yıl sonra kendilerini halen turizm sektöründe görmektedir. Richardson’ın (2009) Avusturalya’da yapmış olduğu çalışmaya

göre ise diğer çalışmalardan farklı olarak çalışmaya katılan mesleki turizm eğitimi almakta olan öğrencilerin %50'den fazlası turizm sektörü dışında diğer sektörlerde çalışmak istemektedir. Çalışmanın bir diğer bulgusu ise çalışmaya katılan öğrencilerden sektör tecrübesi olanların %43,6'sının ise mezuniyet sonrasında turizm'de çalışmak istemediği görülmüştür.

## 2. Araştırmanın Yönetimi ve Amacı

Turizm literatürü incelendiğinde, turizm öğrencilerinin turizm sektörüne, turizm eğitimine, staj uygulamalarına yönelik algı ve tutumlarını belirlemek amacıyla çalışılan gerek yurt içinde gerekse de yurt dışında yapılmış çok sayıda çalışmanın olduğu görülmektedir. Fakat turizm işletmeleri yöneticilerin mesleki turizm eğitimine ve mesleki turizm eğitimi almış çalışanlara yönelik algı ve tutumlarının belirlenmesine yönelik çalışmaların diğer çalışmalar kadar yaygın olmadığı anlaşılmaktadır. Bu çerçevede araştırmanın temel amacını, konaklama işletmeleri yöneticilerinin mesleki turizm eğitimi almış çalışanlara yönelik tutumlarının belirlenmesi oluşturmaktadır. Araştırmanın evrenini Alanya bölgesinde faaliyet göstermekte olan Turizm Bakanlığı Belgeli konaklama işletmelerinde çalışan departman yöneticileri oluşturmaktadır. Alanya bölgesinde Turizm Bakanlığı Belgeli 285 konaklama işletmesi (ALTSO, 2013) faaliyet göstermektedir. Fakat bölgedeki konaklama işletmelerinde çalışan yönetici sayısı ile ilgili herhangi istatistiksel bir veriye rastlanmamıştır. Bu nedenle evrenin belirlenemediği durumlarda genel bir kural olarak minimum gözlem sayısının değişken sayısının 5 katından fazla olması kuralı uygulanmıştır. Genel kabul gören değişken/gözlem oranının en az 1/3 veya 1/4 olduğu ve 1/5 değişken/gözlem oranının ideal ölçüleri temsil ettiği belirtilmektedir (Nakip, 2003). Bu kuraldan hareketle araştırmanın örneklem büyüklüğü "5 x 31 = 155" olarak belirlenmiştir. Araştırmada olasılığa dayalı olmayan kolayda örnekleme yöntemi kullanılmıştır. Araştırma sonucunda 8 beş yıldızlı, 18 dört yıldızlı ve 6 müstakil apart otelde çalışan 203 yöneticiden veri elde edilmiş ve elde edilen bu veri sayısının tespit edilen örneklem büyüklüğünün üzerinde olduğu görülmektedir. Anket uygulaması Nisan 2014 tarihinde gerçekleştirilmiştir.

Ölçeğin geliştirilmesinde konu ile ilgili literatür taraması yapılmış (Amoah ve Baum, 1997; Christou, 1999; Chen vd., 2000; Kusluvan & Kusluvan, 2000; Duman vd., 2006; Roney ve Öztin, 2007; Richardson, 2008; Richardson, 2009; Avcı, 2011; Baltacı vd. 2012; Çatı ve Bilgin, 2013), literatür taraması sonucu 45 önermeden oluşan soru havuzu oluşturulmuştur. Oluşturulan önermeler alanında uzman akademisyenlerin görüşlerine sunulmuştur. Uzman akademisyenlerin incelemesi sonucunda, bazı soruların tam olarak anlaşılmadığı, bazı soruların ise konu ile doğrudan ilişkisi olmadığı yönünde sonuca ulaşılmış ve 14 önerme ölçekten çıkarılmıştır. Uzman akademisyenlerin incelenmesinden sonra 31 önermeden oluşan nihai ölçeğe ulaşılmıştır.

Anket formu aracılığı ile toplanan veriler istatistik paket programı ile analiz edilmiştir. Demografik değişkenlere ilişkin verilerin yorumlanmasında frekans ve yüzde analizinden yararlanılmıştır. Konaklama işletmeleri yöneticilerinin, mesleki turizm eğitimine yönelik tutumlarının hangi boyutlardan oluştuğunu belirleyebilmek amacı ile ölçekte yer alan önermeler faktör analizine tabi tutulmuştur. Konaklama işletmeleri yöneticilerinin demografik özellikleri itibarı ile mesleki turizm eğitimine yönelik tutumlarının farklılık gösterip göstermediğini belirlemek amacı ile t testi ve ANOVA analizleri uygulanmıştır.

## 3. Araştırma Analizleri ve Bulgular

İstatistiksel analizler sonucu elde edilen bulgular üç başlık altında incelenmiştir. İlk olarak araştırmaya katılan konaklama işletmeleri yöneticilerinin demografik bulgularına yer verilmiştir. Daha sonra konaklama işletmeleri yöneticilerinin mesleki turizm eğitimine yönelik tutumlarını oluşturan boyutlar açıklanmıştır. Son olarak konaklama işletmeleri yöneticilerinin mesleki turizm eğitimine yönelik tutumlarının demografik değişkenlere göre değişimi incelenmiştir.

### 3.1. Demografik Bulgular

Demografik değişkenlere ilişkin bulgular aşağıda Tablo 1'de yüzde ve frekans dağılımları şeklinde sunulmuştur.

Tablo 1: Demografik Bulgular

Cinsiyet	n	%	Departman	n	%
Kadın	68	33,5	Yiyecek-İçecek	47	23,2
Erkek	135	66,5	Önbüro	40	19,7
Eğitim	n	%	Kat Hizmetleri	35	17,2
İlköğretim	37	18,2	Genel Müdür	33	16,3
Lise	67	33,0	Muhasebe	13	6,4
Önlisans	38	18,7	Diğer*	35	17,2
Lisans	61	30,0			
Yaş	n	%	Çalışılan Otel Türü	n	%
18-25 yaş	15	7,4	5 Yıldız Otel	83	40,9
26-32 yaş	55	27,1	4 Yıldız Otel	86	42,4
33-40 yaş	69	34,0	Apart Otel	34	16,7
41-48 yaş	46	22,7	Bulunduğu Otelde Çalışma Süresi	n	%
49-55 yaş	16	7,9	0-1 yıl	43	21,2
56 yaş ve üzeri	2	1,0	2-5 yıl	72	35,5
Turizm Eğitimi Alma Durumu	n	%	6-9 yıl	49	24,1
Evet	112	55,2	10 yıl ve üzeri	38	18,7
Hayır	91	44,8	Boş	1	,5

\* İşletme Sahibi, İşletme ortağı, İnsan Kaynakları, Satış ve Pazarlama, Satın Alma, Animasyon, Halkla İlişkiler

Araştırma kapsamında yer alan konaklama işletmeleri yöneticilerinin % 33,5'ni (68 kişi) kadın yöneticiler, % 66,5'ni (135 kişi) erkek yöneticiler oluşturmaktadır. Konaklama işletmeleri yöneticileri yaşlarına göre incelendiğinde katılımcıların çoğunluğunu genç ve orta yaş grubu yöneticilerin oluşturduğu görülmektedir. Yöneticilerin % 7,4'ü (15 kişi) 18-25 yaş grubu, % 27,1'ni (55 kişi) 26-32 yaş grubu, %34'nü (69 kişi) 33-40 yaş grubu, % 22,7'ni (46 kişi) 41-48 yaş grubu ve %8,9'nu (18 kişi) 49 ve üzeri yaş grubu yöneticiler oluşturmaktadır. Araştırma kapsamında yöneticilerin %68,5'ni 18-40 yaş grubu yöneticilerden oluştuğu görülmektedir. Eğitim durumlarına göre incelendiğinde ise yöneticilerin %48,7'sinin üniversite mezunu olduğu anlaşılmaktadır. İlköğretim mezunu yöneticilerin oranı % 18,2, lise mezunu yöneticilerin oranı ise %33'tür. Araştırma kapsamında yer alan yöneticilerin % 76,4'nü (yiyecek ve içecek, önbüro departmanı, kat hizmetleri departmanı ile genel müdür) dört bölümün oluşturduğu görülmektedir. Sırasıyla yöneticilerin % 23,2'ni yiyecek içecek departmanı yöneticileri, % 19,7'ni önbüro departmanı yöneticileri, % 17,2'ni kat hizmetleri departmanı yöneticileri, % 16,3'nü genel müdür pozisyonundaki yöneticiler, % 6,4'nü muhasebe departmanı yöneticileri ve % 17,2'ni diğer departman müdürleri (insan kaynakları, satış ve pazarlama, satın alma, animasyon, halkla ilişkiler) ile işletme sahibi ve ortakları oluşturmaktadır. Yöneticilerin çalıştıkları otel türü açısından ele alındığında ise % 42,4'nün dört yıldızlı, % 40,9'nun beş yıldızlı ve %16,7'sinin apart türü otellerde yöneticilik yaptığı anlaşılmaktadır. Yöneticilerin bulunduğu işletmelerdeki çalışma süreleri açısından değerlendirildiğinde %56,7'sinin beş yıldan daha az süredir çalıştıkları görülmektedir. Bulunduğu kurumda 0-1 yıldır çalışan yöneticilerin oranı % 22,2, on yıl ve üzeri buldukları işletmede çalışan yöneticilerin oranının ise 18,7 olduğu görülmektedir. Literatür taraması sonuçlarına göre de (Tuna, 2007; Tütüncü ve Demir 2002; Ehtiyar ve Üngüren, 2008; Yanardağ ve Avcı, 2012; Tüzün, 2013) turizmin önemli sorunlarından birisinin personel devir hızının yüksek olduğu görülmektedir. Konaklama işletmeleri yöneticileri turizm eğitimi açısından ele alındığında, %55,2'nin gerek lise gerekse de üniversite mesleki turizm eğitimi aldıkları, % 44,8'nin ise her hangi bir turizm eğitimi almadıkları görülmektedir.

### 3.2. Konaklama İşletmeleri Yöneticilerinin Mesleki Turizm Eğitime Yönelik Tutum Boyutları

Araştırmaya katılan konaklama işletmeleri yöneticilerinin mesleki turizm eğitime yönelik tutumlarını oluşturan boyutları belirleyebilmek için ölçekte bulunan 31 önerme faktör analizine tabi tutulmuştur. Ölçekte yer alan 31 önermeye uygulanan faktör analizi sonucu 5 faktör (boyut) belirlenmiştir. Tablo 2’de faktör analizi sonucu elde edilen 5 faktör ve bunlara ilişkin özdeğerler ve varyansı açıklama oranları ile birlikte ölçekte yer alan her bir maddenin hangi faktörle ilişkili olduğunu belirten faktör yük değerleri gösterilmiştir. Ayrıca ölçeğin genel güvenilirlik katsayıları ile birlikte her bir faktörün de güvenilirlik kat sayılarında verilmiştir.

Tablo 2. Faktör Analizi

Faktörler	1	2	3	4	5
Özdeğerler	9,169	2,013	1,603	1,531	1,333
Varyansı Açıklama Oranı %	36,675	8,051	6,413	6,125	5,331
Faktörlerin Güvenirlik katsayısı (Cronbach's Alpha)	,898	,699	,842	,796	,535
Faktör 1: Performans ve Verimlilik					
• Mesleki turizm eğitimi almış çalışanlar takım çalışmasına daha yatkındır.	,740				
• Mesleki turizm eğitimi almış çalışanların iletişim becerileri yüksektir.	,700				
• Mesleki turizm eğitimi almış çalışanlarla çalışmak karlılığı yükseltmektedir.	,693				
• Mesleki turizm eğitimi almış çalışanlarla çalışmak iş verimini arttırmaktadır.	,692				
• Mesleki turizm eğitimi almış çalışanlar işlerine daha bağlıdır.	,685				
• Mesleki turizm eğitimi almış çalışanlar ile çalışmak iş yükümü hafifletmektedir.	,677				
• Mesleki turizm eğitimi almış çalışanlar ile çalışmak işleri daha çok kolaylaştırmaktadır.	,666				
• Mesleki turizm eğitimi almış çalışanlar diğer çalışanlara göre işlerinde fark meydana getirmektedir.	,641				
• Mesleki turizm eğitimi almış çalışanlarla çalışmak müşteri şikayetlerini azaltmaktadır.	,638				
• Mesleki turizm eğitimi almış çalışanlar işlerinde daha düzenlidir.	,620				
• Mesleki turizm eğitimi almış çalışanlar sorunları daha kolay çözmektedir.	,620				
Faktör 2: Müşteri İlişkileri					
• Mesleki turizm eğitimi almış çalışanlar müşterilerin beklentilerini daha etkili şekilde yerine getirmektedir.		,772			
• Mesleki turizm eğitimi almış çalışanların müşteri ilişkileri daha kuvvetlidir.		,754			
• Mesleki turizm eğitimi almış çalışanlar daha kaliteli hizmet sunmaktadır.		,743			
• Mesleki turizm eğitimi almış çalışanlar müşteriler ile daha iyi iletişim kurmaktadır.		,643			
• Mesleki turizm eğitimi almış çalışanlar müşteri memnuniyetini arttırmaktadır.		,431			
Faktör 3: İstihdamda Tercih ve Öncelik					
• Mesleki turizm eğitimi almış çalışanları diğer çalışanlara göre daha çok tercih ederim.			,808		
• Mesleki turizm eğitimi almış çalışanları daha çok istihdam etmek isterim.			,774		
• Mesleki turizm eğitimi almış çalışanlar personel alımlarında önceliğe sahiptir.			,741		
• Çalışanların mesleki eğitim almış olmaları kariyerlerini olumlu yönde etkilemektedir.			,711		
Faktör 4: Mesleki Bilgi ve Beceri					
• Mesleki turizm eğitimi almış çalışanların mesleki bilgileri yeterlidir.				,803	
• Mesleki turizm eğitimi almış çalışanların eğitimleri sektörün ihtiyaç duyduğu kalitededir.				,797	
• Mesleki turizm eğitimi almış çalışanların mesleki becerileri yeterlidir.				,778	
Faktör 5: Ücret					
• Mesleki turizm eğitimi almış çalışanlar daha yüksek ücret talep etmektedir.					,896
• Mesleki turizm eğitimi almış çalışanlar daha farklı ücret almalıdır.					,562
Kaiser-Meyer-Olkin Measure of Sampling Adequacy					,892
Bartlett's Test of Sphericity			2215,583	p=0,000	
Toplam varyansı açıklama oranı %					%62,59
Ölçeğin Genel Güvenirlik katsayısı (Cronbach's Alpha)					,905

Faktör analizi, Varimax eksen döndürmesi uygulanarak gerçekleştirilmiştir. Faktörlerin hesaplanmasında özdeğer (Eigenvalues) istatistiğinden yararlanılmıştır. Araştırmada faktörler belirlenirken madde (değişken) yüklerinin en az 0.35 olması ve diğer faktörlere oranla en yüksek değerde olması esas alınmıştır. İlk uygulanan faktör analizi sonucuna göre 5 önermenin ortak varyans (*communality*) değerlerinin 0,50 altında olduğu görülmüş ve bu beş önerme ölçekten çıkarılarak 26 önermeye yeniden faktör analizi uygulanmıştır. Yirmialtı önermeye uygulanan faktör analizi sonucunda 5 faktör (boyut) saptanmıştır. Ayrıca edilen verilerin faktör çözümlemesine uygun olup olmadığını belirlemek amacıyla KMO (Kaiser-Meyer-Olkin) testi uygulanmıştır. KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) değeri araştırma verilerine faktör analizi uygulayabilme koşulunu gösteren

değerdir. Bartlett's Test of Sphericity değeri araştırma verilerinden anlamlı faktörler veya değişkenler çıkarılabileceğini gösteren değerdir.

Uygulanan faktör analizi sonucunda KMO (Kaiser-Meyer- Olkin Measure of Sampling Adequacy) değeri 0,892 düzeylerinde tatmin edici bir değer olarak hesaplanmıştır. Araştırma verilerinden anlamlı faktörler veya değişkenler çıkarılabileceğini gösteren küresellik derecesi de (Bartlett's Test of Sphericity) 2215,583 olarak hesaplanmış ve elde edilen bu değer 0,000 düzeyinde istatistiksel olarak anlamlı olduğu görülmüştür. Bu iki test sonucundan elde edilen bulgu faktör analizi yapabilmek için üzerinde çalışılan örneklem büyüklüğünün yeterli ve verilerin ise faktör analizi yapabilmek için uygun olduğunu göstermektedir.

Ölçeğin güvenirlik çalışması için "Cronbach Alpha" iç tutarlık katsayıları hesaplanmıştır. 26 maddeye düşürülen ölçeğinin iç tutarlılık/güvenirlik katsayısı  $\alpha=0.905$  olarak bulunmuştur. Ayrıca her bir faktörün de iç tutarlılık/güvenirlik katsayısı alpha değerleri de bulunmuştur. Ankette yer alan ifadeler için elde edilen Cronbach Alpha güvenirlik katsayısının istatistiksel anlamda yeterli düzeyde olduğu anlaşılmakta ve ölçeğinin tutarlı ve güvenilir bir ölçek olduğunu göstermektedir.

Tablo 2'de faktör analizi sonucu elde edilen 5 faktör ve bunlara ilişkin özdeğerler ve varyansı açıklama oranları ile birlikte ölçekte yer alan her bir maddenin hangi faktörle ilişkili olduğunu belirten faktör yük değerleri gösterilmiştir. Faktör analizi sonucu elde edilen 5 faktörün toplam varyansı açıklama oranı da % 62,59 olduğu saptanmıştır.

### 3.3. Konaklama İşletmeleri Yöneticilerinin Mesleki Turizm Eğitime Yönelik Tutumları

Konaklama işletmeleri yöneticilerinin mesleki turizm eğitime yönelik tutumlarını ayrıntılarıyla inceleyebilmek için faktör bazında önermelere verilen cevaplar ayrıntılı bir şekilde irdelenmiştir. Bunun için tablo 3'de otel yöneticilerinin her bir soruya verdikleri cevaplar yüzde analizi ile belirlenmeye çalışılmıştır. Bu amaçla yöneticilerin önermelere verdikleri cevaplar dikkate alınarak, önermelere "katılanlar", "kararsızlar" ve "katılmayanlar" şeklinde üç ana grup altında toplanmıştır. Bunu sağlayabilmek için önermelere "tamamen katıldığımı" ifade edenler ile "katıldığımı" belirtenler birleştirilmiş ve önermelere katılanlar grubu oluşturulmuştur. Aynı şekilde önermelere "katılmayanlar" grubunu oluşturmak için de "hiç katılmayanlar" ile katılmayanlar birleştirilmiştir.

Tablo 3. Konaklama İşletmeleri Yöneticilerinin Mesleki Turizm Eğitime Yönelik Tutumları

	Katılmıyorum		Kararsızım		Katılıyorum	
	n	%	n	%	n	%
<b>Faktör 1: Performans ve Verimlilik</b>						
• Mesleki turizm eğitimi almış çalışanlar takım çalışmasına daha yatkındır.	29	14,5	28	14,0	143	71,5
• Mesleki turizm eğitimi almış çalışanların iletişim becerileri yüksektir.	24	11,9	45	22,3	133	65,8
• Mesleki turizm eğitimi almış çalışanlarla çalışmak karlılığı yükseltmektedir.	38	19,1	51	25,6	110	55,3
• Mesleki turizm eğitimi almış çalışanlarla çalışmak iş verimini arttırmaktadır.	22	10,9	25	12,4	154	76,6
• Mesleki turizm eğitimi almış çalışanlar işlerine daha bağlıdır.	54	27,1	63	31,7	82	41,2
• Mesleki turizm eğitimi almış çalışanlar ile çalışmak iş yükümü hafifletmektedir.	36	18,2	39	19,7	123	62,1
• Mesleki turizm eğitimi almış çalışanlar ile çalışmak işleri daha çok kolaylaştırmaktadır.	34	16,8	32	15,8	136	67,3
• Mesleki turizm eğitimi almış çalışanlar diğer çalışanlara göre işlerinde fark meydana getirmektedir.	27	13,4	43	21,4	131	65,2
• Mesleki turizm eğitimi almış çalışanlarla çalışmak müşteri şikayetlerini azaltmaktadır.	30	14,9	36	17,9	135	67,2
• Mesleki turizm eğitimi almış çalışanlar işlerinde daha düzenlidir.	29	14,4	52	25,9	120	59,7
• Mesleki turizm eğitimi almış çalışanlar sorunları daha kolay çözmektedir.	32	15,8	45	22,3	125	61,9
<b>Faktör 2: Müşteri İlişkileri</b>						
• Mesleki turizm eğitimi almış çalışanlar müşterilerin beklentilerini daha etkili şekilde yerine getirmektedir.	31	15,6	45	22,6	123	61,8
• Mesleki turizm eğitimi almış çalışanların müşteri ilişkileri daha kuvvetlidir.	25	12,4	45	22,4	131	65,2

• Mesleki turizm eğitimi almış çalışanlar daha kaliteli hizmet sunmaktadır.	29	14,4	34	16,8	139	68,8
• Mesleki turizm eğitimi almış çalışanlar müşteriler ile daha iyi iletişim kurmaktadır.	25	12,4	41	20,4	135	67,2
• Mesleki turizm eğitimi almış çalışanlar müşteri memnuniyetini arttırmaktadır.	25	12,3	46	22,7	131	64,5
<b>Faktör 3: İstihdamda Tercih ve Öncelik</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>
• Mesleki turizm eğitimi almış çalışanları diğer çalışanlara göre daha çok tercih ederim.	23	11,4	26	12,9	153	75,7
• Mesleki turizm eğitimi almış çalışanları daha çok istihdam etmek isterim.	14	6,9	32	15,8	156	77,2
• Mesleki turizm eğitimi almış çalışanlar personel alımlarında önceliğe sahiptir.	24	11,9	29	14,4	148	73,6
• Çalışanların mesleki eğitim almış olmaları kariyerlerini olumlu yönde etkilemektedir.	13	6,4	26	12,8	164	80,8
<b>Faktör 4: Mesleki Bilgi ve Beceri</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>
• Mesleki turizm eğitimi almış çalışanların mesleki bilgileri yeterlidir.	76	38,2	55	27,6	68	34,2
• Mesleki turizm eğitimi almış çalışanların eğitimleri sektörün ihtiyaç duyduğu kalitededir.	64	31,7	55	27,2	83	41,1
• Mesleki turizm eğitimi almış çalışanların mesleki becerileri yeterlidir.	83	41,1	64	31,7	55	27,2
<b>Faktör 5: Ücret</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>
• Mesleki turizm eğitimi almış çalışanlar daha yüksek ücret talep etmektedir.	38	18,8	40	19,8	124	61,4
• Mesleki turizm eğitimi almış çalışanlar daha farklı ücret almalıdır.	55	27,1	33	16,3	115	56,7

Tablo 3’de yer alan sonuçlara göre, konaklama işletmeleri yöneticilerinin yarısından fazlasının, mesleki turizm eğitimi almış çalışanların işletmeye olumlu katkı sağladıkları, işletme performansı ve verimini arttırdıkları yönünde görüşleri olduğu görülmektedir. Genel olarak konaklama işletmeleri yöneticileri, mesleki turizm eğitimi almış çalışanların iş verimini arttırdığını, takım çalışmasına yatkın olduğunu, müşteri şikâyetlerini ciddi oranda düşürdüklerini, rahatlıkla hem müşteriler ile hem de çalışanlar ile iletişim kurdukları, işletme karlılığını arttırdıkları yönünde bir tutuma sahip oldukları saptanmıştır. Konaklama işletmeleri yöneticilerinin çalışanların müşteri ilişkilerine ait görüşleri incelendiğinde yöneticilerin yarısından fazlasının, mesleki turizm eğitimi almış çalışanların müşteri ilişkilerinin daha kuvvetli olduğu ve daha kaliteli hizmet verdiği, müşteri beklentilerini daha etkili şekilde yerine getirdiği, daha iyi iletişim kurduğu ve mesleki turizm eğitimi almış çalışanlarla çalışıldığında müşteri memnuniyetinin arttığı yönünde tutuma sahip olduğu saptanmıştır. Tablo 3’de yer alan sonuçlara göre, konaklama işletmeleri yöneticilerinin yarısından fazlasının mesleki turizm eğitimi almış çalışanları daha çok istihdam etmek istedikleri, bu çalışanların personel alımlarında önceliğe sahip olduğunu ve çalışanların mesleki turizm eğitimi almış olmalarının kariyerlerini olumlu yönde etkilediği düşüncesinde oldukları saptanmıştır. Konaklama işletmeleri yöneticilerinin ücret boyutuna ilişkin vermiş oldukları sonuçlar incelendiğinde yöneticilerin yarısından fazlasının mesleki turizm eğitimi almış çalışanların daha yüksek ücret talep ettiklerini ve daha farklı ücret almaları gerektiğini düşündükleri saptanmıştır. Konaklama işletmelerini yöneticilerinin mesleki turizm eğitimi almış çalışanlara ait mesleki bilgi ve becerilerine ilişkin sonuçlar incelendiğinde bu boyuta verilen cevapların diğer boyutlara göre farklılık gösterdiği görülmektedir. Buna göre; konaklama işletmeleri yöneticilerinin yarısından fazlasının mesleki turizm eğitimi almış çalışanların mesleki bilgi ve becerilerini yeterli bulmadığı veya bu konuda kararsız kaldıkları ve mesleki turizm eğitimi almış çalışanların eğitimlerinin sektörün ihtiyaç duyduğu kalitede olmadığı yönünde bir tutuma sahip oldukları görülmüştür.

#### 3.4. Konaklama İşletmeler Yöneticilerinin Mesleki Turizm Eğitimine Yönelik Tutumlarının Demografik Değişkenlere Göre Değişimi

Konaklama işletmeleri yöneticilerin demografik özelliklerine göre mesleki turizm eğitimine yönelik tutumlarının değişiklik gösterip göstermediğini ortaya koyabilmek için t testi ve anova analizleri gerçekleştirilmiştir.

Tablo 4. T-Testi ve Anova Analizi Sonuçları

Tanıttıcı Özellikler		Performans ve Verimlilik	Müşteri İlişkileri	İstihdamda Tercih ve Öncelik	Mesleki Bilgi ve Beceri	Ücret
Cinsiyet	n	x± ss	x± ss	x± ss	x± ss	x± ss
Kadın	68	3,54±,789	3,64±,727	3,92±,715	3,01±,807	3,52±,921
Erkek	135	3,69±,648	3,66±,957	3,91±,793	2,98±,849	3,50±,953
t testi		p=,164 (t=1,396)	p=,870 (t=,163)	p=,966(t=0,43)	p=,810(t=0,240)	p=,834(t=,209)
Yaş	n	x± ss	x± ss	x± ss	x± ss	x± ss
18-25 yaş	15	3,81±,806	3,97±,636	3,87±,989	3,24±,683	3,73±,961
26-32 yaş	55	3,62±,745	3,58±,883	3,89±,771	3,04±,929	3,60±,919
33-40 yaş	69	3,63±,716	3,62±,774	3,86±,803	3,02±,849	3,40±,1,04
41-48 yaş	46	3,58±,688	3,64±,1,19	3,98±,715	2,86±,768	3,47±,816
49-55 yaş	16	3,74±,437	3,80±,432	4,01±,530	2,79±,697	3,46±,921
56 yaş ve üzeri	2	3,63±,771	3,80±,848	4,50±,707	3,16±,1,17	4,00±,707
Anova Analizi		p=,925 (F=,278)	p=,758(F=,524)	p=,826(F=,432)	p=,587(F=,750)	p=,731(F=,560)
Departman	n	x± ss	x± ss	x± ss	x± ss	x± ss
Genel Müdür	33	3,70±,764	3,81±1,41	4,12±,800	2,71±,829	3,83±,657
Önbüro	40	3,81±,576	3,66±,686	3,98±,712	3,16±,776	3,72±,706
Muhasebe	13	3,94±,623	4,01±,528	4,26±,553	3,17±,908	3,69±,830
Kat Hizmetleri	35	3,46±,799	3,46±,775	3,80±,745	2,84±,772	3,30±1,17
Yiyecek-İçecek	47	3,55±,726	3,50±,795	3,80±,850	2,94±,857	3,22±1,00
Diğer	35	3,60±,603	3,78±,677	3,78±,722	3,21±,836	3,47±,977
Anova Analizi		p=,197 (F=1,485)	p=,250 (F=1,337)	p=,135 (F=1,706)	p=,087 (F=1,959)	p=,028* (F=2,577)
Eğitim	n	x± ss	x± ss	x± ss	x± ss	x± ss
İlköğretim	37	3,48±,699	3,37±,846	3,69±,735	2,90±,715	3,08±1,13
Lise	67	3,58±,731	3,54±,797	3,84±,868	2,96±,848	3,34±1,02
Önlisans	38	3,66±,572	3,87±1,35	3,90±,648	3,32±,749	3,82±,680
Lisans	61	3,78±,731	3,83±,769	4,13±,695	2,87±,895	3,74±,716
Anova Analizi		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)
Otel Türü	n	x± ss	x± ss	x± ss	x± ss	x± ss
5 Yıldız Otel	83	3,55±,729	3,61±,742	3,88±,719	2,90±,832	3,45±,957
4 Yıldız Otel	86	3,71±,696	3,62±1,06	3,94±,810	3,15±,807	3,54±,961
Apart Otel	34	3,66±,641	3,85±,675	3,94±,785	2,81±,854	3,55±,868
Anova Analizi		p=,354 (F=1,045)	p=,388 (F=,952)	p=,849 (F=,164)	p=,060 (F=2,849)	p=,804 (F=,218)
Çalışma Süresi	n	x± ss	x± ss	x± ss	x± ss	x± ss
0-1 yıl	43	3,62±,732	3,61±,794	3,85±,728	2,97±,804	3,36±1,04
2-5 yıl	72	3,77±,771	3,82±,711	4,00±,841	3,10±,905	3,64±,834
6-9 yıl	49	3,44±,673	3,49±,832	3,75±,784	2,81±,749	3,37±,997
10 yıl ve üzeri	38	3,68±,520	3,60±1,25	4,03±,618	3,00±,806	3,57±,926
Anova Analizi		p=,108 (F=2,052)	p=,241 (F=1,102)	p=,254 (F=1,369)	p=,306 (F=1,212)	p=,306 (F=1,212)
Turizm Eğitimi	n	x± ss	x± ss	x± ss	x± ss	x± ss
Evet	112	3,77±,629	3,84±,971	4,10±,672	3,00±,868	3,60±,952
Hayır	91	3,49±,752	3,44±,718	3,69±,817	2,97±,792	3,38±,917
t testi		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 ± ss : ortalama±standart sapma; \*p<0,05;

1: Tamamen katılıyorum .....5: Hiç Katılmıyorum

Tablo 4'te yer alan t testi sonuçlarına göre konaklama işletmeleri yöneticilerinin cinsiyet değişkenine göre mesleki turizm eğitimine yönelik tutumlarının istatistiksel anlamda farklılaşmadığı saptanmıştır. Fakat yöneticilerin mesleki turizm eğitimine yönelik tutumları, yöneticilerin turizm eğitimi alıp almamalarına göre üç boyutta istatistiksel anlamda farklılaşmaktadır. Mesleki turizm eğitimi almış yöneticilerin, turizm eğitimi almamış çalışanların işletme performansı ve verimliliğini arttıracasına yönelik tutumları, turizm eğitimi almamış yöneticilere göre daha yüksek olduğu görülmüş ve bu farkın istatistiksel anlamda anlamlı (p=,006; t=2,778) olduğu saptanmıştır. Benzer şekilde turizm eğitimi almış yöneticilerin, turizm eğitimi almış çalışanların müşteri memnuniyeti sağlayacağına yönelik tutumları, turizm eğitimi almamış yöneticilere göre daha yüksek olduğu görülmüş ve bu farkın istatistiksel anlamda anlamlı (p=,001; t=3,235) olduğu sonucuna ulaşılmıştır. Turizm eğitimi almış yöneticilerin, insan kaynakları seçim tercih ve önceliklerinde mesleki turizm eğitimi almış çalışanları, turizm eğitimi almamış yöneticilerden daha fazla tercih ettikleri ve bu tercihin istatistiksel anlamda anlamlı (p=,000; t=3,822) olduğu belirlenmiştir.

Tablo 4'te yer alan Anova testi sonuçlarına göre konaklama işletmeleri yöneticilerinin yaş, otel türü ve çalışma süresi değişkenlerine göre mesleki turizm eğitime yönelik tutumlarının istatistiksel anlamda farklılaşmadığı saptanmıştır. Fakat yöneticilerin turizm eğitime yönelik tutumlarının çalıştıkları departman ve eğitim düzeyi değişkenlere göre istatistikî anlamda farklılaştığı tespit edilmiştir. Departman değişkeni incelendiğinde, yöneticilerin çalıştıkları departmana göre mesleki turizm eğitimi almış çalışanların daha fazla ücret talep ettikleri ve daha fazla ücret almaları gerektiği konusuna yönelik tutumlarında farklılık olduğu saptanmış ve bu farklılaşmanın istatistiksel anlamda anlamlı ( $p=,028$ ;  $t=2,577$ ) olduğu görülmüştür. Eğitim değişkeni incelendiğinde ise 3 farklı boyutta farklılaşma görülmektedir. Konaklama işletmeleri yöneticilerinin, mesleki turizm eğitimi almış çalışanların müşteri memnuniyeti sağlayacağına yönelik tutumlarının, yöneticilerin eğitim düzeyine göre farklılaştığı görülmüş, ve bu farkın istatistiksel anlamda anlamlı ( $p=,022$ ;  $t=3,282$ ) olduğu sonucuna ulaşılmıştır. Benzer şekilde konaklama işletmesi yöneticilerinin, mesleki turizm eğitimi almış çalışanların işe alımlarda tercih edilmesi ve bu çalışanlara öncelik verilmesine yönelik tutumlarının da, yöneticilerin eğitim düzeyine göre farklılaştığı görülmüş, ve bu farkın istatistiksel anlamda anlamlı ( $p=,039$ ;  $t=2,845$ ) olduğu tespit edilmiştir. Son olarak konaklama işletmeleri yöneticilerinin mesleki turizm eğitimi almış çalışanların daha fazla ücret talep ettikleri ve daha fazla ücret almaları gerektiği konusuna yönelik tutumlarında da yöneticilerin eğitim düzeyine göre farklılaştığı görülmüş ve bu farkın istatistiksel anlamda anlamlı ( $p=,000$ ,  $t=6,375$ ) olduğu saptanmıştır.

### Sonuç

Alanya'da konaklama işletmeleri yöneticilerinin mesleki turizm eğitimi almış çalışanlara yönelik tutumlarının belirlenmesi amacıyla gerçekleştirilen araştırmada; konaklama işletmeleri yöneticilerinin mesleki turizm eğitimi almış çalışanların işletme performans ve verimliliklerini artırdığı yönünde tutuma sahip oldukları görülmüştür. Buna göre, mesleki turizm eğitimi almış çalışanların istihdamının işletme performansı ve verimliliğini artacağı söylenebilir. Aynı şekilde araştırmada konaklama işletmeleri departman yöneticilerinin, mesleki turizm eğitimi almış çalışanların müşteri ilişkileri üzerinde olumlu sonuçlar oluşturduğuna dair tutumlarının olduğu saptanmıştır. Elde edilen bu sonuca göre mesleki turizm eğitimi almış çalışanlarla çalışıldığı takdirde müşterilere daha kaliteli hizmet verilebileceği ve müşteri memnuniyetinin artabileceği görülmektedir. Araştırmada elde edilen bir diğer sonuç ise istihdam ve ücret ile ilgilidir. Araştırmada konaklama işletmeleri yöneticilerinin mesleki turizm eğitimi almış çalışanları daha çok tercih ettikleri, personel alımlarında öncelikli olarak mesleki turizm eğitimi almış çalışanları tercih ettikleri belirlenmiştir. Yöneticilerin mesleki turizm eğitimi almış çalışanların almış olduğu mesleki eğitimin kariyerlerine olumlu yönde katkı sağlayacağı inancını taşıdıkları görülmüştür. Departman yöneticilerinin %57'sinin mesleki turizm eğitimi almış çalışanlara uygulanan ücretin politikasının, mesleki turizm eğitimi almamış çalışanlardan farklılaşması gerektiği yönünde tutuma sahip oldukları saptanmıştır.

Çalışmada konaklama işletmeleri yöneticilerinin mesleki turizm eğitime yönelik tutumlarında cinsiyete göre bir farklılığın olmadığı görülmüştür. Fakat yöneticilerin mesleki turizm eğitimi alıp almama durumlarının mesleki turizm eğitime yönelik tutumlarında farklılığa neden olduğu belirlenmiştir. Bu sonuca göre mesleki turizm eğitimi almış yöneticilerin mesleki eğitim almış çalışanların işletme performansı ve verimliliğini, müşteri memnuniyetini olumlu yönde artırdıkları yönünde tutumlarının olduğu görülmektedir. Bu sonuca paralel nitelikte, mesleki turizm eğitimi almış yöneticilerin mesleki turizm eğitimi almamış yöneticilere göre mesleki eğitim almış çalışanları istihdamda daha fazla tercih ettikleri ve öncelik verdikleri saptanmıştır. Araştırmada yaş grubu, otel türü ve işletmede çalışma süresi açısından yöneticilerin mesleki turizm eğitime yönelik tutumlarında bir farklılık görülmemiştir.

Mesleki turizm eğitimi almış konaklama işletmeleri yöneticilerinin, mesleki turizm eğitimi almış çalışanlara daha farklı ücret politikası uygulanması gerektiğini ve mesleki turizm eğitimi almış çalışanların da kendilerinden daha yüksek ücret talep ettikleri belirlenmiştir. Yapılan araştırmalarda mesleki turizm eğitimi almış öğrencilerin, turizm sektöründeki ücretlerin düşük olduğunu belirttikleri ve eğitim durumlarının ücrette farklılık oluşturmadığını belirttikleri görülmektedir (Duman vd.,2006). Buna karşın bazı çalışmalarda mesleki turizm eğitimi almış öğrencilerin turizm sektöründe iyi ücret alabileceği beklentisi içerisinde oldukları görülmüştür (Roney ve Öztin, 2007; Çatı ve Bilgin, 2013). Araştırma sonucunda konaklama işletmeleri yöneticilerinin mesleki turizm eğitimi

almış çalışanlara yönelik tutumlarının ücret boyutunda görev yaptıkları departmana göre farklılaştığı belirlenmiştir. Benzer şekilde konaklama işletmeleri yöneticilerinin mesleki turizm eğitimi almış çalışanlara yönelik tutumları müşteri ilişkileri, işe alımda tercih ve öncelik verme ile ücret boyutlarında da yöneticilerin eğitim seviyelerine bağlı olarak farklılaştığı saptanmıştır.

Gerek orta öğretim gerekse de yükseköğretimde sayıları hızla artan turizm eğitimi kurumlarına rağmen, Türk turizminin yaşadığı en önemli sorunlar arasında nitelikli çalışan sıkıntısının yer aldığı görülmektedir. Araştırmalar turizm eğitimi almış mezunların sayısının, aynı oranda sektöre yansımadağını göstermektedir. Bu araştırma sonucunda mesleki turizm eğitimi almış çalışanların sektör için ne kadar önemli olduğunu anlaşılmıştır. Araştırma sonucunda elde edilen bulgulara göre, konaklama işletmeleri yöneticileri mesleki turizm eğitimi almış çalışanların işletme performansını, karlılığını, verimliliğini ve müşteri tatminini arttırarak işletmelere olumlu yönde katkılar sağladıklarını belirtmişlerdir. Fakat elde edilen bu sonuçta karşın konaklama işletmeleri yöneticilerinin mesleki turizm eğitimi almış çalışanların bulmadıkları yeterli bulmadıkları tespit edilmiştir. Bu durum mesleki turizm eğitimi veren kurumların vermiş oldukları eğitim kalitesinin sektörün ihtiyaç duyduğu nitelikte ve yeterlilikte olmadığı izlenimi doğurmaktadır. Mesleki turizm eğitimi veren kurumların eğitim kalitelerini yükseltmeleri, işletmelerin verimlilik ve karlılıklarına olumlu etki ederek işletmelere rekabet avantajı sağlayacağı öngörülebilir. Eğitim kurumlarının devamlı olarak sektörle işbirliği içerisinde olmaları, ders müfredatlarının oluşturulmasında sektörün görüşlerinin alınması, işletmelerin ihtiyaç duyduğu konu ve derslerin müfredata eklenmesi mesleki turizm eğitim kalitesine önemli yararlar sağlayacaktır.

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# Kurulduğu Günden Bugüne Anadolu Üniversitesi Açık ve Uzaktan Eğitim Programları

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## Özet:

Biz bu çalışmamızda, 1982'den bugüne Anadolu Üniversitesi'nin, Açık ve Uzaktan eğitim konusunda toplumun daha geniş tabanına yayılma ve taleplerine daha fazla cevap verebilme politikasını değerlendirmeye çalıştık. Bunun için 1982-2014 yılları arasında açık ve uzaktan eğitim programlarının sayısını dikkate aldık. Program sayısının zaman ile ilişkisini lineer modeller perspektifinde inceledik. Zaman içindeki yapısal değişimleri modelde belirtebilmek için özel kukla değişkenler kullandık. Anadolu Üniversitesi, Açık ve Uzaktan Eğitimde dünyadaki teknolojik ve uzaktan eğitimle ilgili gelişmeleri takip ederek, toplumun taleplerine daha geniş bir açıdan cevap vermeye çalışmıştır. Ancak son yıllarda program sayısı göz önüne alındığında toplumun daha geniş tabanına yayılma politikasından biraz uzaklaştığı söylenebilir.

Anahtar Kelimeler: Anadolu Üniversitesi, Açık ve Uzaktan Eğitim, Zaman Serisi, Kukla Değişken, Yapısal Değişim

## Open and Distance Education Programs of Anadolu University Since The Establishment

### Abstract:

In our study we evaluated the policy of Anadolu University in reaching to the community in wider sense. We examined the relationship of time with the number of programs by using linear models for 1982-2014 period. We used some specific dummy variables in the model to express the structural changes over time. According to our significant model, we made predictions for the next few years. In conclusion we realized that since the establishment, Anadolu University tried to answer to the demands of society from a broader perspective by monitoring the technologic developments in the world related to open and distance education.

Keywords: Anadolu University, Open and Distance Education, Time Series, Dummy Variable, Structural Changes

### 1. Giriş

Yükseköğretime yönelik talebin büyüklüğü ister örgün eğitim, isterse açık ve uzaktan eğitim kurumları açısından ele alınsın, bu kurumların isim ve imajlarından daha çok, arz edilen eğitim programlarının mezunlara sağlayacağı kazanımlara ve bu mezunların istihdam olanaklarına bağlı olmaktadır. Tüm programların bu kazanımlar ve istihdam olanakları dikkate alınarak açıldığını varsayarsak -ki böyle olması gerekiyor- Anadolu Üniversitesi'ndeki Açık ve Uzaktan Eğitim Programı sayılarının çok büyük önem taşıdığını söyleyebiliriz. Bu nedenle bu çalışmamızda, 1982 - 2014 yılları arasında Anadolu Üniversitesi'nde Açık ve Uzaktan Eğitim Program sayılarının zaman değişkeni ile lineer ilişkisini, yapısal değişimleri de göz önünde bulundurarak en doğru şekilde açıklamaya çalıştık.

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Pek çok zaman serisinde olduğu gibi, Açık ve Uzaktan Eğitimin de tarihsel gelişiminde yapısal kırılmalar, sıçramalar, trendde değişimler olabilir. Burada zaman bağımsız değişken ve program sayısı bağımlı değişkendir. Bu yapısal kırılmalar ülke bazında olabileceği gibi üniversite bazında da gözlemlenebilir. Çalışmamızda program sayısında gözlemlediğimiz bu yapısal değişimleri, lineer regresyon modellerinde kukla değişkenler kapsamında tartışıyoruz. Konuyu Anadolu Üniversitesi Açık Öğretim Fakültesi'nin programları bazında ele alıyoruz. Bunun için, yıllara göre açılan ve kapanan program sayısını 33 yıllık zaman dilimi içinde incelemeye alıyoruz. Çünkü bir üniversitenin özellikle açık ve uzaktan öğretimde yeni programlar açması, sadece kendisinin sahip olduğu kaynaklara, ekonomik gücüne, teknolojisine, alt yapısına, eğitim-öğretim kadrosuna bağlı değildir. Bu karar aynı zamanda, ülkedeki genç nüfusun beklentilerine, toplumun eğitim talebine, kamusal eğitim taleplerine ve daha birçok unsura bağlı olarak alınması gereken politik bir karar olmaktadır. Bu yüzden program sayısının çok önemli düzeyde bir değişken olduğu kabul edilmelidir.

## 2. Düünden Bugüne Anadolu Üniversitesi'nde Açık ve Uzaktan Eğitim Programları

Türkiye'de açık ve uzaktan eğitim uygulamasının ilk önemli örneği sayılabilecek YAY-KUR bilindiği gibi, 2. Beş Yıllık Kalkınma Planı'nda kitlesel eğitim ilkesini yaygınlaştırma kararı alınması sonucunda başlatılmış ve 1974 ile 1975 yıllarında 50'ye yakın YAY-KUR okulu (meslek yüksekokulu) kurulmuştur. Oysa yine 1970'li yıllarda, Eskişehir İktisadi ve Ticari İlimler Akademisi kapalı devre televizyon sistemi kurarak Türkiye'de ilk kez bir eğitim kurumunda kitlesel öğretim yapılması amacıyla, açık ve uzaktan eğitimin alt yapısını kurmuş bulunuyordu. Çünkü bu sistemde televizyon stüdyosunda verilen dersler çok sayıda sınıf ve amfilerde bulunan büyük bir öğrenci kitlesine ulaştırılabiliyordu.

Akademinin bu başarılı uygulamaları kamu yönetimi tarafından öğrenilerek incelenmiş ve yakından takip edilir olmuştu. Nitekim 1982 yılında Türkiye'de yükseköğrenimi yeniden yapılandırma amacını öngören 2547 sayılı kanun çıkarılmıştır. Bu kanun hazırlanırken, Eskişehir Akademisinin bu başarısı dikkate alınmış ve Türk Eğitim Sisteminde bir ilk olarak Açıköğretim Fakültesi Eskişehir'de Anadolu Üniversitesi bünyesinde kurulmuştur.

Aslında bu fakültenin kurulması ile burada sözünü etmemiz gereken çok ciddi bir olgu ortaya çıkmıştır. Türk yükseköğretimini yeniden yapılandırma ihtiyacı nedeniyle hazırlanan 2547 sayılı kanunun muhtemelen en önemli amaçlarının arasında yer alan yükseköğrenimde okullaşma oranını yükseltme hedefi, Anadolu Üniversitesi ve Açıköğretim Fakültesi o tarihte kurulmasa veya başarılı olamasa idi, bugün bile uzak bir hayal olarak kalabilecekti.

Türkiye'de Anadolu Üniversitesi, İktisat ve İş İdaresi programları ile açık ve uzaktan eğitime başlayan ilk üniversite olmuştur. Anadolu Üniversitesi Açıköğretim Fakültesi kurulduğu ilk yıl olan 1982 yılı dâhil olmak üzere hiç zaman kaybetmemiştir. İlk günden itibaren açılan programların ders kitaplarının uzaktan öğretim tekniğine uygun olarak yazımına başlanmıştır. Üniversitenin yetişmiş kadroları, o güne kadar elde ettikleri birikim ile öğrencilerine hazırlayıp ulaştırdıkları uzaktan eğitim tekniğine uygun ders kitaplarını desteklemek amacıyla televizyonu etkin bir eğitim aracı olarak kullanmışlardır.

Anadolu Üniversitesi o tarihte hem amaçlarını hem de ulaşmak istediği noktayı çok açık bir biçimde vurgulayan bir sloganla yola çıkmıştı. Bu slogan, ülkenin her şehrine Anadolu Üniversitesi'nin bayrağını dikmek ve tüm ülkeye yükseköğretim imkânı götürmek idi. Bu heyecan verici slogana karşın 80'li yılların başlarında İktisat ve İş İdaresi programlarının kapasiteleri sınırlı kaldı. Bununla birlikte talep kitlesel niteliğini bir süre korudu. Ancak zaman içerisinde toplumsal talep doyum noktasına ulaştı. Özellikle 90'ların ikinci yarısında 'başvuru ve kayıt' ile karşılanan talep önemli ölçüde arttırılan kapasitenin önce %40 ve %50'lerine, daha sonraki yıllarda da %25'ine düştü. Bu dönemde öğrenim görmek isteyenlerin bireysel talepleri öncelik ve ağırlık kazanmakta idi. Bu nedenle söz konusu yıllarda bireysel ilgi ve beklentilerin yoğunlaştığı alanlar dikkate alınarak, farklı öğretim programlarına yönelen farklı taleplerin karşılanması doğrultusunda öğrenim programlarının açılması gerekli oldu (Barkan, 1998, pp. 288-310). Bu gereklilik sonucu yeni programlar açıldı.

1993-1994 yılında yapılan yasal değişiklik sırasında Anadolu Üniversitesinde, İktisat ve İşletme programlarını yürütmek üzere, İktisat ve İşletme Fakülteleri isimleri ile iki fakülte kuruldu. Bu kuruluşla birlikte verilen diplomalardaki Açıköğretim ifadesi ortadan kaldırıldı. Zaten örgün eğitimle bire bir eşit haklara sahip olan mezunların yanlış bir algı ile karşılaşması büyük ölçüde önlendi.

1990 ile 1997 arasını kapsayan yedi yıllık dönemde Açıköğretim Fakültesi lisans tamamlama programlarını (LTP) açarak oldukça hareketli bir seyir izledi. Bu Lisans tamamlama programları kamunun sunduğu fırsat sonucu kamu talebine bağlı olarak açılmışlardı. Böylece her geçen gün daha büyük bir kitleyi kapsama ana hedefine giden yolda geçici yükselmeler ve durağanlıklar görüldü. Ancak bu dönemde Anadolu Üniversitesi, Dünya ve Ülkemiz düzeyinde gelişen ve yaygınlaşan açık ve uzaktan eğitim teknolojilerini izlemekten vazgeçmediği gibi, Dünyadaki birçok benzer açık ve uzaktan eğitim kurumunun başaramadığı yüz-yüze öğretim desteği uygulamasını Ülke düzeyinde kurduğu bürolar eliyle yaygınlaştırıp toplumun kendisine yönelen eğitim ve öğretim talebini uyardı. Bu uygulama hiç kuşkusuz Anadolu Üniversitesi'nin tanınırlığını ve saygınlığını arttırdığı gibi, Kurumumuzun kaynaklarının arttırılabilmesi ve bugüne kadar rakipsiz kalabilmesi konularına da ciddi katkılar sağladı.

1993 ve 2008 yılları arasında Anadolu Üniversitesi çağdaş iletişim teknolojilerinin çok daha yoğun olarak kullanmak ve uzaktan eğitimi klasik işlevlerinin ötesine taşıyabilmek adına bazı yeni yapılanmaları gerçekleştirdi.

Bunların başında, Anadolu Üniversitesi ilk Video-konferans denemesini 1997 yılında gerçekleştirmesi gelmektedir. 1999'da Kazakistan'daki Ahmet Yesevi Uluslararası Türk Kazak Üniversitesi'nin Ekonomi bölümünde öğrenim gören öğrencilere pazarlama dersleri video-konferans tekniği ile verildi.

2001 yılında ilk Uzaktan Eğitim Programı olarak Bilgi Yönetimi Programı açıldı. Daha çok İnternete ve Bilgisayar teknolojisine dayalı olarak öğretim yapan bu bölümde eş-zamanlı dersler verilmeye başlandı. Öğrenciler sanal sınıf ortamında ilgili dersin öğretim elemanıya canlı derslere katıldılar. 2001-2002 öğretim yılında "İkinci Üniversite" uygulaması başlatıldı.

2008 yılına gelindiğinde Rektörlük, üniversite üst yönetimine ve yetmişmiş kadrolara açık ve uzaktan eğitim ile hangi derslerin verilebileceği, hangi yeni programların açılacağı konusunda hazırlanmış önerileri sunarak tartışmaya açtı. Sonuçta bu önerilerin olumlu bulunarak yapılan katkılarla geliştirilmesi sonucu yeni programlar açıldı. Ancak bu programların açılabilmesinin nedeni sadece rektörlüğün talep etmesi değil, aynı zamanda üniversitenin teknolojik alt yapısının bu değişime hazır hale gelmiş olması idi. Bu dönemde Bilgisayar Araştırma ve Uygulama Merkezi'nin (BAUM) de yıllar içinde kazandığı tecrübe ve donanım ile farklı birçok sınavı yaparak değerlendirebilecek olanaklara sahip hale gelmişti.

Son yıllarda ise, öğrenenlere video, ses ve animasyonlar ile zenginleştirilmiş interaktif bir öğrenme ortamı sunan etkileşimli e-kitaplar yapılmaya başlandı. Bu sayede "Bilgi", alışılmışın dışına çıkan farklı merkezi açıköğretim teknikleriyle öğrenenlere aktarılmaktadır. Bunun dışında öğrencileri uzman akademisyenlerle yüz yüze ve çevrimiçi olarak buluşturmayı amaçlayan e-seminerler devam etmektedir.

Açıköğretim sınavlarına daha etkili ve verimli bir biçimde hazırlanabilmesi için e-sınav hizmeti verilmektedir. Bugün ders kapsamında özelleştirilmiş tartışma gruplarını kullanarak hem dersin sorumlusu olan öğretim elemanlarıyla hem de ilgili dersi alan diğer açıköğretim öğrencileri ile bilgi alış-verişinde bulunularak, sohbet ortamı oluşturulabiliyor. Böylece Anadolu Üniversitesi, daha esnek öğrenme modelleri oluşturarak dijital bir devrim yaratmaya çalışıyor.

Ayrıca son yıllarda Anadolu Üniversitesi, Batı Avrupa'nın yanısıra, Makedonya, Kosova, Bulgaristan'da bürolar açarak ve Azerbaycan'daki açıköğretime ağırlık vererek globalleşme eğilimleri de göstermiştir.

### 3. Yöntem

Zaman değişkeni, bağımlı değişkeni iki farklı şekilde etkileyebilir. Birincisi incelenen zaman serisinde genellikle bağımlı değişken zamanın etkisiyle belli bir trende sahip olabilir. İkincisi ise zaman değişkeni incelenen zaman serisi verileri üzerinde belirli bir aralıkta belirli bir etki, izleyen bir diğer aralıkta da başka bir etki yapabilir (Draper & Smith, 1981, Ağaoğlu, 1989). Bir takım nedenlerle seride yapısal değişimler ve sıçramalar olabilir. Bu durumda birden fazla farklı trendler oluşabilir. İşte böyle durumlarda olayın trendine kukla (dummy) değişkenli çoklu

regresyon modellerinin daha uygun olabileceği söylenebilir (Ağaoğlu, 1989). Yapısal değişimlerin matrisi aşağıdaki gibidir:

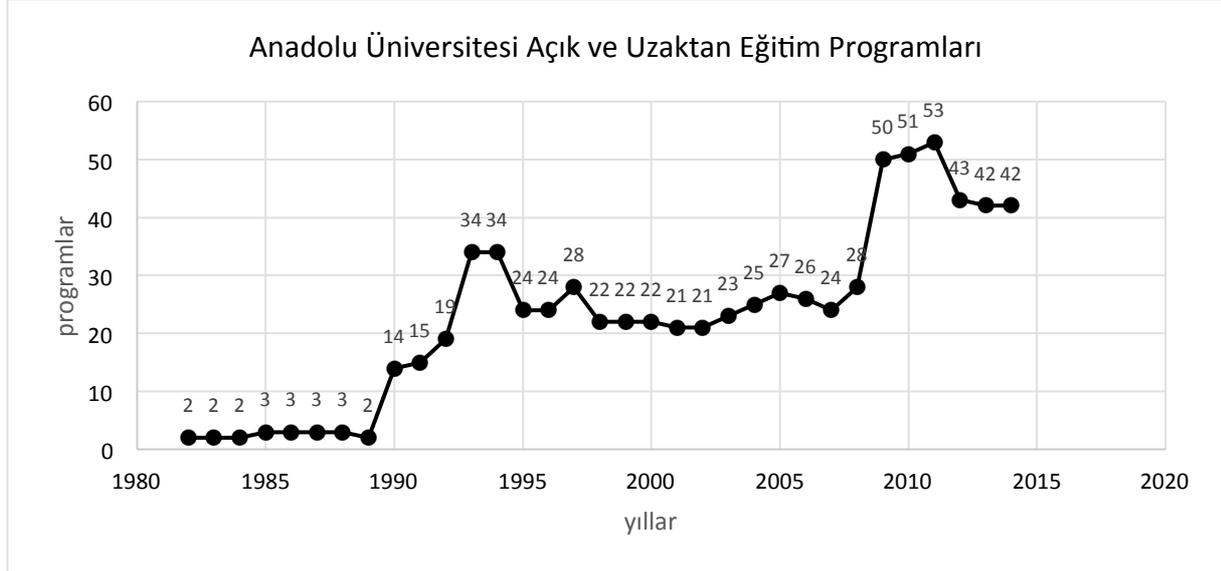
1	1	0	0	0	0
1	2	0	0	0	0
1	3	0	0	0	0
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
1	12	0	1	0	0
1	12	1	1	0	0
1	12	2	1	0	0
.	.	.	.	.	.
.	.	.	.	.	.
1	12	16	1	0	1
1	12	16	1	1	1
1	12	16	1	2	1
1	12	16	1	3	1
1	12	16	1	4	1

Yukarıdaki ki matrisin ilk kolonu sabit (constant) terim için oluşturulmuştur. İkinci, üçüncü ve beşinci kolonları üç farklı trendi belirtmek içindir ve bu kukla değişkenler sırasıyla  $X_1$ ,  $X_2$  ve  $X_4$  olarak ifade edilirler.  $X_3$  ise birinci parçadan ikinci parçaya sıçramayı,  $X_5$  ise ikinci parçadan üçüncü parçaya sıçramayı sağlayan kukla değişkenlerdir. Buna göre modelimiz şöyledir:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 \quad (1)$$

#### 4. Uygulama

Anadolu Üniversitesi'nin açık ve uzaktan lisans ve ön-lisans programları yer almaktadır ve veri setimizde program dağılımımız şöyledir:



Grafik 1: Anadolu Üniversitesi'nin açık ve uzaktan lisans ve ön-lisans programları

#### 4.1. Analizimizdeki Yapısal Değişimler:

Yukarıda da sözünü ettiğimiz üzere çalışmamızda iki önemli yapısal değişim noktası bulunmaktadır:

1. 1993-1994 yıllarında İktisat ve İşletme Fakültelerinin kurulması. Ayrıca Açıköğretim Fakültesi'nde birçok programın açılması.
  2. 2008 yılında Rektörlüğün girişimiyle yeni birçok programın açılması.
- Dolayısıyla çalışmamızda konuyu program sayısı olarak ele aldığımızda, oluşturduğumuz zaman serilerinde, 2 önemli yapısal değişimin olduğunu söyleyebiliriz. Bu 2 yapısal değişim bir sıçrama olarak görülmüş ve veri setimizi 1982-1992, 1993-2008, 2009-2014 olmak üzere 3 döneme ayırmıştır.

#### 4.2. Analizimizde Ürettiğimiz Modeller:

Yapısal değişimler göz önünde bulundurularak 4 adet model üretilmiştir. Modeller üretilirken program sayılarının serpilme diagramındaki dağılımı göz önüne alınmış ve buna göre bazı varsayımlar türetilerek bu 4 adet model üretilmiştir:

**Model I:** 3 Dönemde de trendin var olduğu yapısal değişimli (sıçramalı) model

**Model II:** 3 Dönemde de trendin olmadığı yapısal değişimli (sıçramalı) model

**Model III:** 1. Dönemde trendin olmadığı 2. ve 3. Dönemde de trendin var olduğu yapısal değişimli (sıçramalı) model

**Model IV:** 1. ve 2. Dönemde trendin olmadığı, 3. Dönemde trendin var olduğu yapısal değişimli (sıçramalı) model

#### Model I

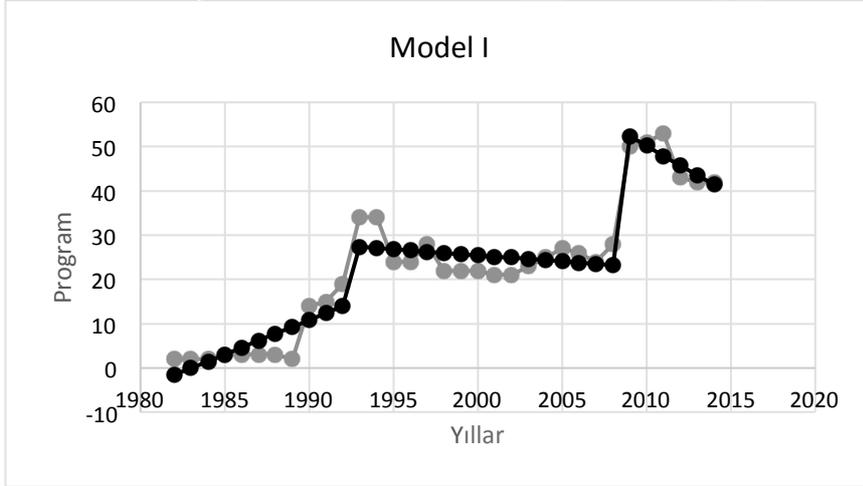
$$Y = -3.145 + 1.555X_1 - 0.281X_2 + 11.910X_3 - 2.200X_4 + 29.408X_5$$

$$\text{s.e.: } (2.528) \quad (0.373) \quad (0.212) \quad (3.142) \quad (0.934) \quad (3.494)$$

$$t : -1.244 \quad 4.171 \quad -1.325 \quad 3.790 \quad -2.354 \quad 8.418$$

$$F = 91.384 \text{ and } S_y = 3.91$$

$$R^2 = 0.944 \text{ and } \text{Adj } R^2 = 0.934$$



Grafik 2: Model I

F değerine göre 0.05 anlam düzeyinde Model I anlamlıdır. Ancak  $\beta_0$  ve  $\beta_2$  katsayıları 0.05 anlam düzeyinde istatistiksel olarak anlamsızdırlar.

Model I'deki katsayıların anlamsızlığı üzerine Model II'yi oluşturduk. Bu modelde ise sadece sıçramaları göz önünde bulundurduk ve her bir parçada trend olmadığını varsaydık.

#### Model II

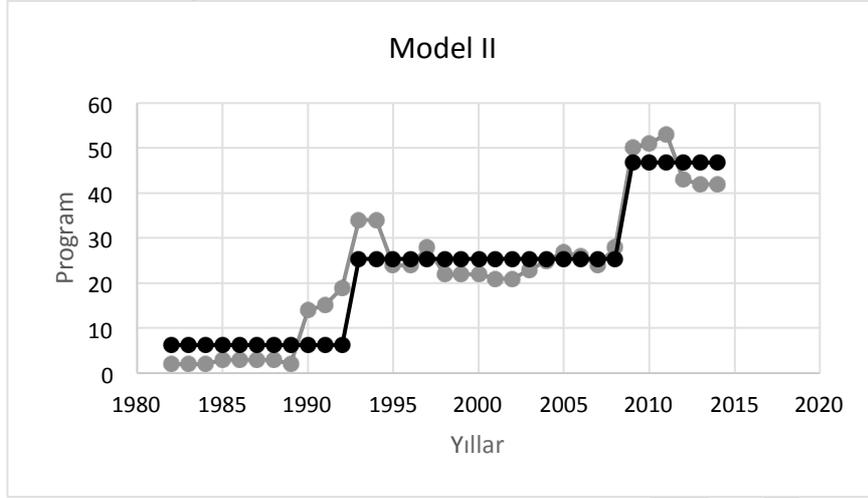
$$Y = 6.182 + 19.131X_3 + 21.521X_5$$

$$\text{s.e.: (1.547) (2.010) (2.456)}$$

$$t : 3.996 \quad 9.519 \quad 8.761$$

$$F=125.414 \text{ and } S_y=5.13$$

$$R^2=0.893 \text{ and Adj } R^2=0.886$$



Grafik 3: Model II

Model II’de model ve tüm katsayılar 0.05 anlam düzeyinde istatistiksel olarak anlamlıdır. Böylece Model II ile anlamlı bir modele ulaştık. Ancak 1982 ile 1989 yılları arasında çok belirgin bir trend olduğu söylenemez. Buna bağlı olarak 1. zaman diliminde trend unsurunu modelimize katmadan ele alırsak daha anlamlı bir modele ulaşırız diye Model III’ü ürettik.

### Model III

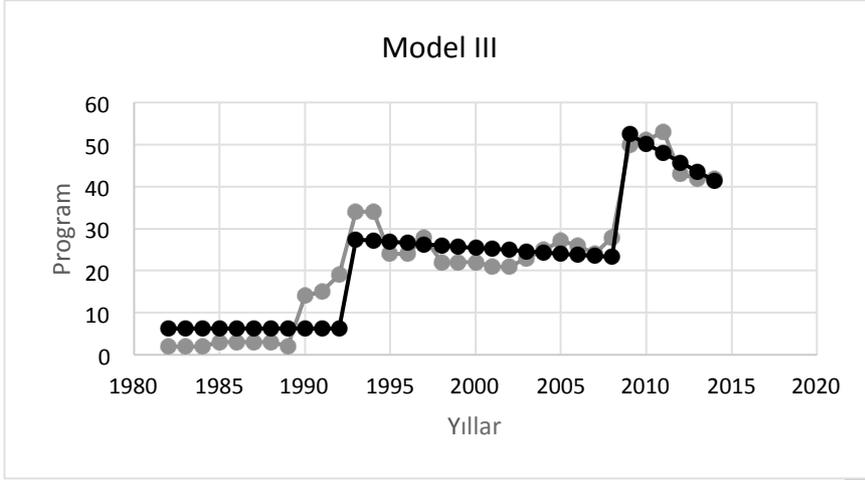
$$Y = 6.182 - 0.281X_2 + 21.237X_3 - 2.200X_4 + 29.408X_5$$

$$\text{s.e.: (1.484) (0.267) (2.779) (1.177) (4.399)}$$

$$t : 4.165 \quad -1.052 \quad 7.641 \quad -1.870 \quad 6.685$$

$$F= 69.299 \text{ and } S_y=4.92$$

$$R^2=0.908 \text{ and Adj } R^2=0.895$$



Grafik 4: Model III

F değerine göre 0.05 anlam düzeyinde Model III anlamlıdır. Ancak  $\beta_2$  katsayısı istatistiksel olarak anlamsız ve  $\beta_4$  katsayısı da 0.10 anlam düzeyinde anlamlıdır. Diğer tüm katsayılar ise 0.05 anlam düzeyinde anlamlıdır. Burada  $\beta_2$  katsayısının anlamsız çıkması bizi 1993-2008 zaman diliminde de trend olamayacağını düşündürdü. Bunun üzerine sadece 2009-2014 yılları arasındaki dönemde bir trendin olabileceği varsayımıyla Model IV'ü ürettik.

**Model IV**

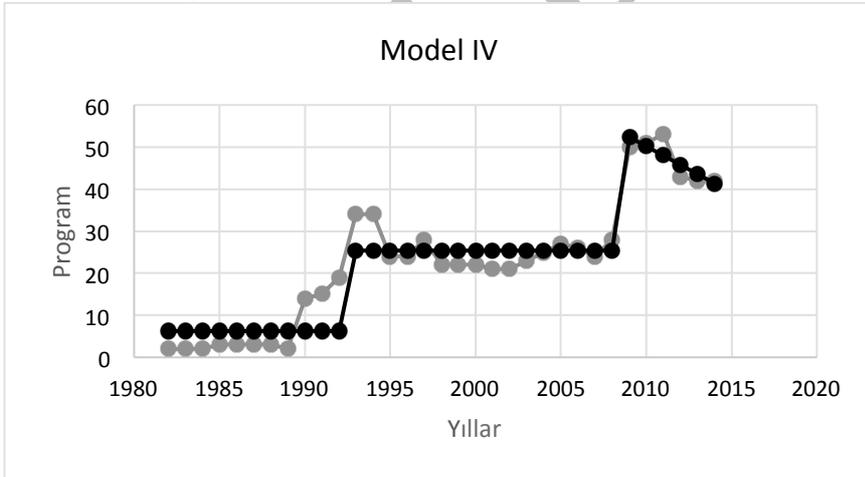
$$Y = 6.182 + 19.131X_3 - 2.200X_4 + 27.021X_5$$

s.e.: (1.487) (1.931) (1.179) (3.776)

t : 4.158 9.905 -1.866 7.156

F= 91.69 and  $S_y=4.93$

$R^2=0.905$  and  $Adj R^2 = 0.895$



Grafik 5: Model IV

F değerine göre 0.05 anlam düzeyinde Model IV anlamlıdır. Ancak  $\beta_4$  katsayısı 0.10 anlam düzeyinde istatistiksel anlamlıdır. Diğer tüm katsayılar ise 0.05 anlam düzeyinde anlamlıdır. Sosyal konularda yapılan bazı çalışmalarda

anlam düzeyi 0.10 olarak kabul edilebilmektedir. Buradaki  $\beta_4$  katsayısı 0,072 olasılık değerine sahip olduğu için 0,05 anlam düzeyinde ret edilmektedir.

#### 4.3. Modellere Ait Öngörüler:

Model II diğerlerinden büyük standart hataya sahiptir. Model IV'ün de 3. Dönemdeki eğimi veren  $\beta_4$  katsayısı 0,10 anlam düzeyinde anlamlı çıkmıştır. Eğitim gibi sosyal alanlarda 0,10 anlam düzeyi de geçerli bulunabilmektedir. Dolayısıyla bu aşamada en iyi modeli kesin olarak belirtmek zordur. Ancak şunu söylemek mümkündür. Model IV bir erken uyarı sinyali veren bir modeldir ve son yıllarda program sayısında bir azalma olduğu uyarısını belirtmesi dikkat çekicidir. Model II ise dengede bir gidişatı gösteren modeldir. Dolayısıyla her iki modelin de belirttiklerine yoğunlaşmak gerekir. Model II ve Model IV'e göre gelecek yıllara ait öngörü değerleri ve program sayıları birbirinden farklı çıkmıştır. Model II ve Model IV'de program sayıları aşağıdaki Tablo 4.1'dedir:

Tablo 4.1: Gelecek Yıllara ait Öngörüler

Model II s.h.= 5.13			Model IV s.h.= 4.93		
Gelecek Yıllara ait Öngörüler	Beklenen Değer	Beklenen Program Sayısı	Gelecek Yıllara ait Öngörüler	Beklenen Değer	Beklenen Program Sayısı
2015	46.834	47	2015	41.334	41
2016	46.834	47	2016	39.134	39
2017	46.834	47	2017	36.934	37

## 5. Sonuç ve Değerlendirmeler

Burada Model IV'ün standart hatası 4.93 değerine sahiptir ve sadece bir katsayısı 0,10 anlam düzeyinde kabul edilmiştir. İstatistiksel açıdan gerek model gerekse katsayılar olarak 0.05 anlam düzeyinde anlamlı bulunan model, Model II olmuştur ve standart hatası 5.13 değerine sahiptir. Bu modele göre 1993 ve 2009 yıllarında Anadolu Üniversitesi Açık ve Uzaktan Program sayılarında ani artışlar olmuş ve bunlar grafiğe sıçrama biçiminde yansımıştır. Bu üç farklı dönemde de trend yoktur. Model II'ye göre 2015 ve daha sonraki yıllar için öngörümüz 46.833 olmaktadır. Bu da yaklaşık olarak gelecek yıllardaki program sayımızın 47 olacağını bize göstermektedir.

2009-2014 yıllarında bir düşüşün 0,10 düzeyinde anlamlı olması bizi analizimizde Model IV'ün de kabul edilebilirliği konusunda zorluyor. Çünkü eğitim gibi sosyal konularda bazı çalışmalarda 0.10 anlam düzeyi de kullanılabilir. Bu model erken uyarı sinyali de vermektedir ve Model IV'e göre 1993 ve 2009 yıllarında Anadolu Üniversitesi Açık ve Uzaktan Program sayılarında ani artışlar olmuş ve bunlar grafiğe sıçrama biçiminde yansımıştır. Ancak son dönemdeki düşme trendi Anadolu Üniversitesi'nin her ne kadar teknolojiyi açık ve uzaktan eğitimde kullanma çabası gösterse de, program sayısı göz önüne alındığında toplumun daha geniş tabanına yayılma politikasından biraz uzaklaştığının işaretidir.

Program açılmasında iki önemli talep etkili olmaktadır. Bunlardan birincisi toplumsal taleptir. Üniversitemiz toplumdaki dönüşümü, değişimi iyi takip ederek, toplumun değişen hedeflerini iyi analiz etmeli ve toplumun önceliklerini iyi tespit etmelidir. Buna göre açık öğretim ve uzaktan eğitim politikaları düzenlenmelidir. Geçmişten buna bir örnek vermek gerekirse; Açıköğretim Fakültesi'nden İktisat ve İşletme Fakülteleri'nin oluşturulması ve diplomalardaki 'açıköğretim' ifadelerinin kaldırılmasıdır.

Geleceğe yönelik olarak, üniversite, kamu yönetimi ve toplumla sıcak ilişkiler kurmalı ve buna uygun olarak alt yapısını da geliştirmeye devam etmelidir. Bunun için de üniversitemizin her açıdan gücünü koruması gerekir.

## Teşekkür

Anadolu Üniversitesi Açık ve Uzaktan Program Sayısı verilerinin derlenmesinde Anadolu Üniversitesi Açıköğretim Fakültesi Dekanlığı'na, değerli memurumuz Aylin Taşlak'a, Açıköğretim Fakültesi'nin geçmişi konusunda bana

bilgi veren Prof. Dr. Nazmi Ulutak'a ve pek çok çalışmamda yanımda olduğu için Prof. Dr. Necat Berberoğlu'na teşekkür ederim.

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## L'ADAPTATION DES FABLES CHEZ MEVLÂNÂ DJALALEDDIN RUMÎ (1207-1273)

### Résumé :

Le poète mystique Mevlana Djalladdin Rumi qui connassit bien les fables d'Esopé et de Pilpay dans sa jeunesse en fait une adaptation originale dans son livre *Mesnevi*, oeuvre monumentale de 25630 distiques. Quand on étudie plus de 65 fables qu'on y trouve, on constate une caractéristique différente de celles des autres fabulistes tels que Lafontaine, Esopé et Pilpay. Dans l'adaptation des fables Rûmi présente des changements de signification symbolique différente. Par exemple dans un conte le perroquet désigne le chercheur mystique et le maître spirituel alors que, dans un autre, il représente l'homme naïf et imitateur. Le lion représente « le nafs », l'ame charnelle mais parfois aussi les saints et les amis de Dieu. Le renard incarne la ruse, la malice gagnant en apparence mais perdant toujours à la fin car ni dans ce monde d'ici-bas ni dans l'au-de là la fourberie ne servira jamais à rien. Ce sont les gens simples et sincères qui réussiront.

En bref Rumi donne des caractéristiques et des symboles différents aux animaux en fonction du message à passer.

Mots-clé : Fable, Mystique, Rumi, Lafontaine, Esopé.

### Introduction

La fable qui est un genre littéraire est un court récit écrit généralement en vers. Elle donne un enseignement de façon indirecte. L'aventure relatée contient une moralité qui permet aux lecteurs de tirer une leçon ou réflexion critique. Les personnages sont souvent représentés par des animaux, végétaux ou objets qui parlent, qui agissent comme des hommes. Le but est d'instruire les hommes en faisant réfléchir sur une situation sociale, morale ou politique. La fable donne ainsi à l'auteur d'éveiller le public sur les sujets abordés en émettant son opinion critique sur son temps et sur son univers. La fable est un genre commun à toutes les cultures et ses origines se perdent dans l'antiquité la plus reculée. Les Grecs citaient Esopé (VI<sup>e</sup> siècle av. J.C.) comme le créateur de la fable. Mais la recherche historique nous montre qu'un recueil de fable

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existait déjà en Inde avant Ezope sous le nom de “pañchatantra” qui conte 70 fables en prose. (Çağdaş Kemal 1962). La version la plus ancienne de “pañchatantra” porte le titre “Kalila Wadimneh” rédigée en Sanscrit par un brahmane indien nommé Pilpay dans la région du Cachemire. ( Alpay Selahattin ). Ce recueil de fables racontées par deux chacals, “karataka et damanaka” avaient pour but d’enseigner la sagesse aux princes. Ce livre de Pilpay avait une influence de l’Inde en Occident.(İslam Ansiklopedisi) Il est traduit d’abord en persan, ensuite en arabe au VII<sup>e</sup> siècle.

Notre poète mystique Mevlana Djalladdin Rûmî qui a fait l’adaptation des fables de “*Kelile et Dimne*” dans son oeuvre monumentale, *Mathnawî*, connaissait bien les fables d’Esopé et de Pilpay dans sa jeunesse. Par crainte de l’invasion mongole menaçante, il a dû quitter précipitamment Balkh, ville natale en Afghanistan, avec sa famille, en 1219. Un an après, la ville natale de Rûmî a été en effet détruite. Son père Bahâ-od-Dîn Walad conduisit d’abord sa famille "à La Mecque pour y accomplir le pèlerinage. A Nishâpûr, ils ont rencontré le grand poète mystique Farîd-od-Dîn 'Attâr ; celui-ci a offert au jeune Djalâl-od-Dîn son *Livre des Secrets* ( Le Langage des Oiseaux) et lui a prédit, à ce qu'on rapporte, que bientôt il mettrait le feu dans le cœur de tous les amants mystiques. Djalâl-od-Dîn a conservé toujours une grande admiration pour 'Attâr : « Il a, disait-il, parcouru les sept cités de l'Amour, tandis que j'en suis toujours au tournant d'une ruelle. » ( Meyerovitch 1977 )

Son père, maître soufi et théologien éminent, était aussi un prédicateur éloquent, entouré de nombreux disciples. Connu sous le nom de Bahâ-od-Dîn Walad, et surnommé le « Sultan des savants », il était né vers 1148 et mourut en 1231, à Konya, ancienne capitale romaine “ iconium” capitale de L’Empire seldjoukide d’Anatolie. Après la mort de son père, Mevlana Djalladdin l’a remplacé à l’âge de vingt-quatre ans et a commencé à enseigner la jurisprudence et la loi canonique et s’est occupé de direction spirituelle.

Son oeuvre *Mathnawî* n’est sûrement pas un livre de fable. S’il faut le définir, on peut dire qu’ il s’agit d’un livre de poésie, d’un système philosophique, d’un commentaire général de la théologie islamique, d’une doctrine métaphysique, d’un exposé de la pensée et de la vision mystiques. On peut dire aussi que dans le même livre composé de six tomes, il s’agit de plus de soixante cinq fables traitées avec une

utilisation de noms d'animal plus riche que celle des autres fabulistes. Il est donc question d'une œuvre monumentale qui contient cinquante et un mille vers (25 630 distiques). ( Meyerovtch et Djamchid

### **Attitude caractéristique de Mevlâna .**

La majorité des fables du *Mathnawî* illustrent une méthode dialectique, La dialectique exposée dans les contes est très étendue et présente une idée semblable au principe de la triade hégélienne :thèse, antithèse, synthèse. Il recourt à la dialectique en tant que maïeutique de l'esprit dans des intentions didactiques et éducatives. Il avance des arguments en faveur des deux côtés, des différentes idées, et défend les deux thèses représentées avec la même ardeur.

Mawlânâ ne présente pas de jugements catégoriques et absolus à propos des principes dont il parle ; il évite de se poser en arbitre et laisse à ses lecteurs la liberté du choix entre diverses solutions. Mais, bien entendu, il les guide pour en arriver à la conclusion qui lui semble juste. Ou bien il fournit des preuves et des arguments d'égale valeur concernant deux idées contradictoires : il propose alors une synthèse entre la thèse et l'antithèse.

### **Ce qui différencie Mevlana des autres fabulistes**

Chez Rûmi , on constate une caractéristique différente de celles des autres fabulistes tels que Lafontaine, Esopé et Pilpay. Dans l'adaptation des fables Rûmi présente des changements de signification symbolique différente. Par exemple dans un conte le perroquet désigne le chercheur mystique et le maître spirituel alors que, dans un autre, il représente l'homme naïf et imitateur. Le lion représente « le nafs », l'âme charnelle mais parfois aussi les saints et les amis de Dieu. Le renard incarne la ruse, la malice gagnant en apparence mais perdant toujours à la fin car ni dans ce monde d'ici-bas ni dans l'au-de là la fourberie ne servira jamais à rien. Ce sont les gens simples et sincères qui réussiront. Rumi donne des caractéristiques et des symboles différents aux animaux en fonction du message à passer.

Dans l'adaptation des autres fabulistes comme chez Lafontaine, Esopé, Pilpay, le loup représente toujours la bêtise et la grossièreté; le renard, la ruse et la flatterie; le lion, représente la force, la puissance, fier d'un monarque; le porc, la lâcheté, la grossièreté et représente la solitude. La Fontaine donne aux animaux des significations symboliques en fonction de leurs

caractéristiques physiques, mais dans l'ensemble il imite les fabulistes prédécesseurs des animaux et il a conservé le caractère traditionnel des fables

L'un des termes symboliques fréquemment utilisés dans le *Math-nawî* est le nom du perroquet. Selon le contexte, il va revêtir des sens différents. Par exemple, dans un conte, le perroquet désigne le chercheur mystique et le maître spirituel, alors que dans un autre il représente l'homme naïf et imitateur. Le lion représente parfois le *nafs*, l'âme charnelle, mais parfois aussi les saints et les amis de Dieu". Le renard incarne la ruse, la malice, gagnant en apparence, mais perdant toujours à la fin, car, ni dans ce monde d'ici-bas, ni dans l'au-delà, la fourberie ne servira jamais à rien ; ce sont les gens simples et sincères qui réussiront.

Le faucon, c'est l'esprit de l'homme, exilé dans ce monde de ténèbres, prisonnier loin de son roi.

#### **Histoire du perroquet et du marchand ( Mathnawî I / 1547 )**

Il y avait un marchand qui avait un perroquet emprisonné dans une cage, un joli perroquet. Quand le marchand s'apprêta à voyager et fut sur le point de se rendre en Inde, Par générosité, il dit à chaque esclave mâle et à chaque servante;

> Que te rapporterai-je ? dis-le-moi vite >

Chacun lui demanda un objet désiré; ce brave homme promit à tous.

Il dit au perroquet; > Quel présent aimerais-tu que je te rapporte du pays de l'Inde? >

Le perroquet répondit : > Quand tu verras les perroquets là-bas, Explique-leur mon malheur et dis-leur:

“ Tel et tel perroquet, qui se languit de vous, est dans ma prison par la destinée céleste.

“ Il vous salue, réclame la justice, et désire apprendre de vous les moyens et la manière d'être bien guidé. “

<” Il dit: Convient-il qu'en me languissant de vous, je rende l'esprit et meure dans la séparation?

“ Est-il juste que j'eme toruve dans une cruelle captivité, alors que vous êtes tantôt sur des plantes vertes, tantôt sur des arbres?

“ La fidélité gardée par des amis est-elle de la sorte? Moi dans cette prison, et vous dans la roseaire?

“ Souvenez-vous ô nobles créatures, de cet osieau pitoyable et buvez une gorgée matinale au sein des priaries !

“ Quelle joie pour un ami si ses amis se souviennent de lui, surtout quand l’une est Leylâ et l’autre Madjnûn !

### **Comment le marchand vit dans la plaine les perroquets de l’Inde et leur transmet le message du perroquet ( Mathnawi I / 1587 )**

Lorsqu’il atteignit les limites les plus éloignées de l’Inde, il aperçut un certain nombre de perroquets dans la plaine.

Il fit faire halte à monture, puis il parla, transmit le salut et remplit son mandat.

L’un des perroquets se mit à trembler violemment, tomba, mourut, son souffle s’arrêta.

Le marchand regretta d’avoir donné ces nouvelles, et dit; Je doivent avoir été deux corps, et un seul esprit.

“ Pourquoi ai-je fait cela ? Pourquoi ai-je apporté ce message? J’ai détruit cette pauvre créature avec une parole stupide. “

Cette langue est comme la pierre, et elle est aussi pareille au feu, et ce qui jaillit de la langue est pareil à la flamme.

### **Comment le marchand raconta au perroquet ce qu’il avait vu chez les perroquets de l’Inde ( Mathnawi I / 1587 )**

Le marchand termina ses affaires et revint chez lui le coeur joyeux .

Il apporta un présent à chaque esclave mâle, il donna un cadeau à chaque servante.

« Où est mon cadeau ? » demanda le perroquet. « Racente-moi ce qui tu a dit et ce qui tu a vu. »

« Non, dit-il en vérité, je m’en repens, me tordant les mains et me mordant les doigts. »

« Pourquoi, par ignorance et par la folie, ai-je apporté un message aussi stupide ? »

« Ô maître, dit le perroquet, de quoi te repens-tu ? Qu’est-ce qui te cause de la colère ou du chagrin ? »

« J’ai dit tes plaintes, répondit-il, à un groupe de perroquets qui te ressemblaient. »

« Un des perroquets sentit ta douleur ; son coeur se brisa, il trembla et mourut. »

« Je devins affligé, pensant : ‘Pourquoi ai-je dit cela ?’ Mais à quoi bon me repentir après l’avoir dit ? »

Sache qu’un mot qui jaillit soudain de la langue est semblable à un flèche lancée par un arc.

**Comment le perroquet entendit ce qu’avaient fait ces perroquets et mourut dans la cage, et comment le marchand se lamenta sur lui. ( Mathnawi. I / 1699 )**

Quand l’oiseau entendit ce que perroquet avait fait, il trembla violemment, tomba et devint froid.

Le marchand, le voyant ainsi tomber, bondit et lança son bonnet par terre.

Le voyant dans cet état et cette situation, le marchand s’élança et déchira son vêtement.

Il s’écriait : « Ô beau perroquet à la voix suave ! que t’est-il arrivé ? Pourquoi es-tu devenu ainsi ? »

**Comment le marchand jeta le perroquet hors de la cage, et comment le perroquet mort s’envola ( Mathnawi I / 1825 )**

Après cela, il le jeta hors de la cage. Le petit perroquet s’envola jusqu’à une branche élevée.

Le perroquet mort pris son essor comme lorsque le soleil de l’orient bondit en avant

Le marchand fut stupéfait par l’action de l’oiseau : sans comprendre , il aperçut soudain les secrets de l’oiseau.

Il leva son visage et dit : « Ô rossignol, donne-nous le bénéfice d’expliquer cette affaire.

« Qu’a fait le perroquet là-bas (dans l’Inde) que tu apprennes, prépares une ruse, et nour brûles(de chagrin) ? »

Le perroquet dit : « Par son action, il m’a conseillé : ‘Reconce au charme de ta voix et à ton affection,

‘Parce que ta voix t’a conduit à la servitude ; il a feint d’être mort, afin de me donner ce conseil.’

Dans une autre fable, le perroquet représente l’homme naïf et imitateur :

**Histoire de l’épicier et du perroquet, et comment le perroquet répandit l’huile dans la boutique. ( Mathnawi. I / 247 )**

Il y avait un épicier qui possédait un perroquet, un perroquet vert qui parlait d'une douce voix.

Perché sur le banc, il gardait la boutique, et parlait élégamment avec tous les clients.

Quand il parlait à des êtres humains, il parlait comme eux ; il était également habile à chanter à la manière des perroquets.

Un jour, il bondit du banc et s'envola et renversa les bouteilles d'huile de roses.

Son maître revint de sa maison et s'assit sur le banc, tout à son aise, comme le font les marchands.

Il s'aperçut que le banc était plein d'huile, et ses habits tachés de graisse ; il frappa le perroquet sur la tête : cela le rendit chauve. Pendant quelques jours, le perroquet cessa de parler ; l'épicier, de repentir, poussait de profonds soupirs.

S'arrachant la barbe et disant : « hélas ! Le soleil de ma prospérité est caché sous les nuages.

« Que ma main ne s'est-elle brisée à ce moment ? Comment ai-je ainsi pu frapper la tête de cet oiseau à la voix douce ? »

Il faisait des présent à tous les derviches, afin de retrouver la parole de son oiseau.

Au bout de trois jours et trois nuits , il était assis sur le banc , bouleversé, triste, tel un homme au désespoir,

Montrant à l'oiseau toutes sortes de merveilles, afin que peut-être il se mette à parler.

Entre-temps, un derviche tête nue, vêtu d'un jawlaq(habit de laine grossière) passait par là ; sa tête était aussi chauve que l'extérieur d'un bol ou d'un bassin.

Là- dessus, le perroquet se mit à parler, appela le derviche en criant : « Hé , camarade,  
« Comment t'es-tu trouvé parmi kes chauves, ô crâne chauve ? Aurais-tu, par hasard,  
renversé l'huile de la bouteille ? »

Les assistants se mirent à rire de la déduction du perroquet, qui croyait que le porteur de  
froc était semblable à lui.

Ne juge pas les actions de saints par analogie avec toi-même , bien qu'on écrive de façon  
semblable, shîr, le lion et le lait.

Pour cette raison, le monde entier est égaré ; presque personne n'est conscient de  
l'existence de Abdâl (saints d'un très haut rang).

Les gens se sont crus égaux aux prophètes ; ils on supposé que les saints étaient  
semblables à eux-mêmes.

Ils on dit : « Voyez, nous sommes de hommes et ils sont des hommes : eux comme nous  
sont asservis au sommeil et à la nourriture. »

Dans leur eveuglement, ils n'ont pas vu qu'il existe une différence infinie entre eux.

Deux espèces de zanbûr ont butiné au même endroit, mais de l'une (la guêpe) est venu le  
dard, de l'autre (l'abeille) le miel.

Deux espèces de daims ont mangé de l'herbe et bu de l'eau, des uns sont venus des  
excréments, des autres du musc.

Ces deux roseaux ont bu de l'eau à la même source ; celui-ci est vide ; celui-là rempli de  
sucre.

Considère des centaines de milliers de telles similitudes, et vois que la distance entre les deux est comme celle d'un voyage de soixante-dix-ans.

L'un mange, et il sort de lui de l'ordure : l'autre mange et il devient tout entier la lumière de Dieu.

Celui-ci mange et de lui ne naissent que l'avarice et l'envie ; celui-là mange et de lui ne naît que l'amour de l'Uniqueç

L'un est une bonne terre, l'autre un sol salé et aride ; l'un est un ange pur l'autre un démon et un animal féroce.

Que tous deux se ressemblent, c'est bien possible : l'eau amère et l'eau douce sont (également) limpides.

Comme on vient de constater, après avoir adapté l'histoire de la fable, Mevlana Djalladdin Rûmi intervient et interprète les thèmes cachés dans l'anecdote, en se référant aux versets du Cor'an et aux Hâdis, paroles du prophète. Tout maître spirituel cherche à éveiller les âmes endormies à la Réalité ultime qu'elles possèdent, sans le savoir, au plus profond d'elles-mêmes. Les grands Soufis, notamment, ont mis en oeuvre tous les moyens dont ils disposaient pour faire accéder leurs disciples à cette prise de conscience. Leur rôle est dès lors comparable à celui du guide qui vous prend par la main pour vous conduire le long du Chemin.

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# La evaluación de profesores de educación superior en México: situación actual, tendencias y recomendaciones

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## Abstract

In a context of increasing demands for accountability of universities related to the quality of the educational services provided, the issue of faculty evaluation has gained special significance and has become part of the pending educational agenda. This paper aims to contribute to address that agenda, by analyzing the current situation and trends in the evaluation of teachers in Mexico in the Latin American and international context. Based on such analysis and on the ideas of the most relevant thinkers in the field, the authors elaborate some recommendations for those interested in the creation of approaches and methodologies for faculty evaluation.

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*Keywords:* evaluation; faculty; university teachers; trends; Mexico

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## Introducción

En un contexto de creciente demandas por el rendimiento de cuentas por parte de las universidades, relacionadas con la calidad de la educación que se brinda y debe brindarse en dichas instituciones, el asunto de la evaluación de profesores ha cobrado una especial relevancia y es parte de la agenda educativa pendiente.

Este trabajo pretende contribuir a la atención a dicha agenda, mediante el análisis de la situación actual y tendencias de la evaluación de profesores en México y con base en ello y en las propuestas de los autores más relevantes del campo, proponer algunas recomendaciones. Para el logro de lo anterior, se inicia con una breve caracterización de la situación de la evaluación de profesores universitarios en varios países de habla hispana y de las similitudes y diferencias detectadas que servirá como marco para una mejor comprensión de la situación mexicana, para en los siguientes apartados abordar las tendencias que se vislumbran y algunas posibles recomendaciones para quienes estén interesados en la formulación de políticas y programas para la evaluación de docentes universitarios.

## La evaluación del profesorado universitario en varios países de habla hispana

Desde finales del siglo pasado y con mayor énfasis desde la primera década del siglo XXI dentro del contexto de rendimiento de cuentas arriba mencionado, una cantidad importante de países ha impulsado políticas y programas para evaluar a sus profesores. En este apartado se presentan, de manera resumida y a guisa de ejemplo, las realizadas en algunos países de habla hispana.

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## *Argentina*

De acuerdo a Walker y Barquín (2014) la evaluación de la docencia universitaria en Argentina puede dividirse en dos grandes periodos: “el de la década de 1990 en el que la evaluación de la docencia queda subsumida a la evaluación de la investigación y el de 2003-2013 en el que la evaluación del trabajo docente emerge como tema de agenda en el marco de discusiones por las condiciones laborales del profesorado universitario. En ambos periodos, los procesos de evaluación están íntimamente ligados a otras cuestiones del campo universitario como el financiamiento, la distribución de recursos -materiales y simbólicos- y las condiciones laborales” (p.105).

En la actualidad, según los mismos autores, el tema de la evaluación de los profesores ocupa un lugar destacado en la agenda universitaria argentina aunque con algunos matices en comparación con los debates de las décadas anteriores, entre los que destacan el posicionamiento de los gremios como agentes centrales en la discusión de las políticas de evaluación; el interés por evaluar no únicamente las actividades de investigación de los profesores sino también incluir el resto de tareas que realizan los docentes, entre ellas la propia docencia; y el posicionar el asunto de la evaluación dentro de la discusión por la estabilidad laboral de los docentes universitarios.

Por su parte Coppola (2012), desde una perspectiva más centrada en las prácticas evaluativas, considera que la evaluación de la función docente universitaria constituye un área vacante tanto en las investigaciones como en la aplicación de modelos de evaluación. Según la autora, en el marco de la autonomía universitaria, cada universidad tiene un estatuto, normas y reglamentos propios para los concursos docentes, promoción y formación permanente, así como normas internas que atañen a la evaluación de sus profesores. Las evaluaciones parecen reducirse a evaluaciones de cátedras y a facultades generalmente encuestando a los alumnos.

Finalmente, y en el mismo sentido que la autora anterior, Fernández y Coppola (2008a) plantean que entre los principales problemas que enfrenta la evaluación de profesores universitarios en Argentina, destacan la indefinición de las funciones asociadas a la docencia universitaria, la falta de claridad sobre el objeto de evaluación, las múltiples formas de entender lo que significa ser “buen profesor” en contextos y situaciones heterogéneas, la falta de consenso en la definición de calidad y en los modelos de evaluación, y la priorización de la investigación sobre la docencia.

## *Chile*

Según Salazar (2008), con la creación de la Comisión Nacional de Acreditación en el año 2000, la evaluación docente en Chile se instala en la agenda de todas las instituciones universitarias y comienza a desarrollarse como una práctica sistemática, centrada principalmente en el uso de encuestas de opinión a alumnos. Posteriormente, de acuerdo a la antigüedad, tamaño y oferta académica de cada institución, se incorporan otros instrumentos evaluativos tales como informes de jefes directos, autoevaluaciones y evaluación de pares, aunque en general la evaluación de la docencia queda a cargo de la Vicerrectoría Académica de cada institución. La mayoría de los problemas identificados se corresponden con la visión y actitud con respecto a la evaluación. Así, según los responsables de los procesos evaluativos, los docentes sienten que se le da un peso excesivo a las encuestas de opinión de los estudiantes, mientras que los alumnos consideran que sus puntos de vista no son tomados en cuenta.

## *Colombia*

Rodríguez (2008) sostiene que en Colombia existen distintos organismos que regulan la educación superior e inciden en la evaluación del profesorado, entre los cuales destacan el Ministerio de Educación y COLCIENCIAS (Organismo Nacional de Ciencia y Tecnología). El primero ejerce sus funciones de regulación a través de decretos y el segundo a través de la reglamentación de la producción académica. Entre los aspectos que se les critican a dichos organismos están el énfasis que ponen en la producción científica, centrada en las publicaciones y asociada casi exclusivamente con aspectos económicos y laborales de los profesores, así como el carácter individual y poco participativo de los procesos de evaluación al centrarse de manera prioritaria en aspectos económicos y laborales de cada profesor.

“Desde las instituciones, el abordaje que se realiza en materia de evaluación de la docencia aparece como un proceso permanente y sistemático, parte de la evaluación institucional. En líneas generales, se pone énfasis en

finalidades relacionadas a la institución y al individuo, poniendo mayor peso en esta última a través del desarrollo profesional, mejora de la actividad, inclusión, permanencia y promoción dentro de la carrera docente; y otorgamiento de distinciones, estímulos y sanciones” (Fernández & Coppola, 2008a, p.154).

Sin embargo, si bien son los Consejos de Facultad los responsables de las evaluaciones, según Rodríguez (2008) hay una notoria desarticulación y falta de comunicación entre los estamentos de las instituciones que intervienen en el proceso. Adicionalmente, según el autor anterior y Rizo (2014), los instrumentos utilizados para el levantamiento de datos son esencialmente las encuestas de opinión de corte cuantitativo a los estudiantes.

### *España*

Según Murillo (2008), debido a la configuración política actual en la que comparten competencias en educación superior, el estado, las comunidades autónomas y las universidades, la evaluación de los profesores universitarios en España presenta variaciones dependiendo de su finalidad, repercusiones, e instancias evaluadoras: por una parte está la evaluación para el acceso y la promoción en función de la relación contractual del profesorado y la fase de evaluación, a cargo del estado a través de la Agencia Nacional de Evaluación de la Calidad y Acreditación (ANECA), las comunidades y las universidades; la de la actividad investigadora, que depende del estado, pero cuyos resultados son utilizados por las universidades y por las comunidades autónomas; las evaluaciones para otorgar los complementos económicos que realizan algunas comunidades autónomas; y la evaluación del desempeño docente, a cargo de las universidades, con ciertos intentos de coordinación estatal, cuyos resultados son utilizados por las comunidades.

Respecto a esta última, el autor sostiene que si bien todas las universidades españolas evalúan el desempeño de sus profesores, existen importantes diferencias entre ellas en relación a diversos aspectos tales como el grado de obligatoriedad, la periodicidad, las repercusiones, el manejo de la información y su grado de difusión, los instrumentos de evaluación, y la entidad evaluadora.

Entre las principales problemáticas que la evaluación de profesores universitarios enfrenta en España, el autor destaca la falta de una aceptación mínima por parte de la comunidad universitaria, debido a la ausencia de un consenso que determine los criterios de lo que es un buen docente universitario aunado a la inexistencia de un modelo claro de evaluación.

### **La evaluación del profesorado en México**

Para una mejor comprensión de la problemática en torno a la evaluación de docentes universitarios en México, es importante entender el contexto más amplio, especialmente en materia de políticas públicas, en que se gestan y desarrollan las prácticas evaluativas particulares. Por ello, hemos dividido este apartado en dos secciones: una donde se describe a grandes rasgos las políticas públicas que anteceden y en algunos casos enmarcan las prácticas evaluativas y otra donde se abordan de manera más específica dichas prácticas y los mecanismos e instrumentos empleados en ellas.

#### *3.1. Políticas públicas en materia de educación superior*

A fines de la década de los ochenta el Estado Mexicano, dentro de un contexto de exigencias de rendición de cuentas por parte de diversos organismos internacionales, impulsa varias políticas y programas en materia de educación superior, entre las que destacan las siguientes:

- El Fondo para la Modernización de la Educación Superior (FOMES), el cual fue creado en 1990 como una opción de financiamiento público para apoyar el cambio “cualitativo” de las instituciones de educación superior (IES), y como una vía para avanzar en el abatimiento del rezago financiero producido por la crisis y los gastos crecientes.
- El Programa para la Superación del Personal Académico (SUPERA), iniciado en 1994, buscaba elevar la formación del personal académico, especialmente de carrera, mediante su incorporación a programas de posgrado.
- El Programa de Mejoramiento del Profesorado de las Instituciones de Educación Superior (PROMEP), surgido

en 1996 y aún vigente, busca consolidar los cuerpos académicos; el establecimiento de perfiles deseables para el personal académico basados en criterios internacionales; el diseño de programas de formación a mediano plazo; el equipamiento adecuado para la realización de las tareas de los cuerpos académicos; y, la contratación de nuevos profesores con base en los perfiles y programas elaborados.

- El Programa Integral de Fortalecimiento Institucional (PIFI), implementado a partir de 2001 y también actualmente en vigencia, integra en un solo proceso los diversos programas existentes y obliga a las universidades públicas, con énfasis en sus facultades o departamentos, a elaborar planes a mediano plazo con sus respectivos indicadores de desempeño.

De manera general, estas son los principales instrumentos de política educativa que el gobierno federal ha implementado en casi cinco lustros, privilegiando la aplicación de estrategias que atienden a elementos “formalistas” como respuestas a la demanda de “calidad” y “modernización” de las IES.

En relación con la evaluación de los profesores universitarios más específicamente, a partir de los noventa, se empezó a implementar en las universidades públicas mexicanas el “Programa de Estímulos al Desempeño Académico (PEDPA)”, el cual consiste en otorgar un pago adicional al salario del profesor universitario con base en una evaluación de la calidad de su desempeño o productividad. Aun cuando cada institución aplicó sus propias reglas para la instrumentación del programa, la mayoría optó por indicadores cuantitativos de evaluación coincidentes con el perfil de investigación. Como consecuencia la evaluación de la actividad docente quedó confinada a registros administrativos de cumplimiento: número de horas de clase, cantidad de alumnos, cumplimiento del programa, puntualidad y horarios, por mencionar algunos.

### *3.2. Mecanismos e instrumentos de evaluación de la docencia empleados en México*

Si bien ya desde los años sesenta un par de universidades privadas empezaron a evaluar a sus profesores mediante cuestionarios de opiniones aplicados a estudiantes, seguidas a inicios de los setentas por dos facultades de la universidad pública más grande del país, la Universidad Nacional Autónoma de México, la evaluación de profesores universitarios no fue un asunto de gran relevancia en la agenda de las universidades, a grado tal que para inicios de los noventa, según Rueda y otros (2010), únicamente un 5% de las instituciones de educación superior mexicanas (IES) evaluaban a sus docentes y no fue sino hasta inicios del 2000 que la evaluación de los profesores universitarios fue implementada de manera más o menos masiva en la mayoría de las IES públicas del país.

Para el 2010, según un diagnóstico de Rueda y otros (2010) sobre la evaluación de la docencia universitaria en 74 IES públicas mexicanas, los procesos de evaluación obedecían fundamentalmente a fines administrativos sobre todo relacionados con compensaciones salariales; los cuestionarios de apreciación estudiantil seguían siendo el instrumento de evaluación más empleado; existía poca difusión de los resultados de la evaluación; y se carecía de suficiente evidencia para corroborar su efecto positivo en la docencia.

Adicionalmente, entre algunas conclusiones provisionales relativas a la incorporación de la evaluación del profesorado después de más de dos décadas de políticas públicas en México, cabrían destacar las siguientes (Canales, 2008; Carpio y otros, 2005):

- Existe una mayor institucionalización de mecanismos para la evaluación y reconocimiento del personal académico;
- Los criterios para la evaluación del personal académico empleados por diversas instancias y programas gubernamentales están no solamente insuficiente o nulamente articulados, sino en algunos casos entran en franca contradicción.
- En las evaluaciones se tiende a privilegiar los aspectos formales y cuantitativos en demérito de aspectos cualitativos y se ha distorsionado el sentido de la evaluación, al asociarse directa y exclusivamente a estímulos económicos.
- La cuantificación excesiva ha llevado a la simulación.
- Existen graves deficiencias en los sistemas de información institucional y poca confiabilidad de los datos.

## **Análisis comparativo: similitudes y diferencias entre países**

Como atinadamente señalan Fernández y Coppola (2008b), “si se analiza la situación en cada uno de los países, se puede dar cuenta de una serie de similitudes y de diferencias en cuanto al grado, desarrollo e implementación de políticas y estrategias para la evaluación de la docencia universitaria” (p.155).

Entre las similitudes detectadas destacan las crecientes presiones de rendición de cuentas; la institucionalización de mecanismos para la evaluación de profesores; la existencia de múltiples instancias evaluadoras y evaluaciones (con frecuencia desarticuladas y en ocasiones contradictorias entre sí); el insuficiente consenso sobre lo que es ser un buen docente universitario y sus funciones y quehaceres; la falta de modelos claros y suficientemente consensuados de evaluación; los conceptos reduccionistas de evaluación que privilegian la medición; la supeditación de los fines evaluativos a los administrativos y la creciente vinculación de los resultados de las evaluaciones con estímulos monetarios y con otras cuestiones de índole administrativa como el financiamiento, la distribución de recursos -materiales y simbólicos- y las condiciones laborales; el carácter individual y poco participativo de los procesos de evaluación; el privilegio o predominio de un tipo de quehacer o actividad de los profesores universitarios en demérito de otros como es el caso del excesivo énfasis que se le otorga a la producción científica, centrada en las publicaciones; y el predominio del uso de cuestionarios aplicados a estudiantes para evaluar la función docente de los profesores.

Como diferencias podríamos señalar en coincidencia con Fernández y Coppola (2008b), los distintos niveles de desarrollo en materia de evaluación de la docencia, siendo Argentina, de acuerdo a los autores anteriores, el país con menor desarrollo en ese campo de los analizados. Por otra parte, hay una disparidad en cuanto a los actores ejecutores de las políticas. “En España, México y Colombia se registra una presencia significativa del Estado en materia de evaluación aunque con fines diferentes, ya que en México y Colombia está claramente ligada la intervención estatal con las políticas de incentivo salarial. En España se manifiesta esta tendencia en el rol de las Comunidades Autónomas” (p.156).

## **Tendencias**

Entre las tendencias que parecen vislumbrarse a futuro destacaríamos por una parte, dentro de un marco de mayores restricciones presupuestales y recursos cada vez más limitado para las universidades, un crecimiento sostenido de las políticas de rendición de cuentas, con exigencias cada vez más estrictas; un aumento del grado de obligatoriedad de las evaluaciones y de los sujetos a evaluar, ampliándose a todo el personal académico; el sobredimensionar los aspectos “medibles” relacionados con la productividad asociada a la función investigativa de los profesores universitarios y paralelamente el relegamiento de aspectos difícilmente cuantificables relacionados con las funciones docentes, tutoriales, de extensión y de difusión de los profesores; y la ya mencionada vinculación de los resultados de las evaluaciones con estímulos monetarios y con otras cuestiones de índole administrativa como el financiamiento, la distribución de recursos -materiales y simbólicos- y las condiciones laborales.

Sin embargo, se vislumbran también algunas señales prometedoras en derroteros más optimistas, debidas en gran medida al creciente número de trabajos de investigación y propuestas en el campo, especialmente las impulsadas a través de redes de investigadores y revistas y foros especializados, entre las cuales destacan la generación de modelos evaluativos más sólidos, complejos y dinámicos; una creciente participación de otros sujetos e instancias; una ampliación de dimensiones, funciones y aspectos a evaluar y de mecanismos y herramientas de evaluación; y en general, una mayor profesionalización del campo.

## **Recomendaciones**

Buscando contribuir a la solución de la problemáticas detectadas, presentamos a continuación algunas propuestas orientadas a mejorar las políticas y prácticas evaluativas relacionadas con los profesores universitarios, organizadas por organizaciones o sujetos proponentes.

### *La Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO)*

A partir de las Conferencias Internacionales sobre la Educación Superior de 1998 y 2009, (organizadas por la UNESCO), se han formulado recomendaciones relativas a la labor del profesor, enmarcadas en las temáticas de calidad educativa y rendición de cuentas, entre las cuales destacan las siguientes:

- La evaluación del profesorado debe tener como principal función el desarrollo de las personas de acuerdo con sus intereses y capacidades;
- Los procedimientos de evaluación deben tomar en cuenta la dificultad de apreciar la capacidad personal, que raras veces se manifiesta de forma constante y sin variaciones;
- Cuando se lleve a cabo una evaluación del profesorado por parte de estudiantes, pares o administradores, esta debe cumplir con los cánones de la cientificidad, procurando la objetividad;
- Los criterios empleados y los resultados obtenidos se deben de dar a conocer a la(s) persona(s) interesada(s);

### *La Organización para la Cooperación y el Desarrollo Económico (OCDE)*

La OCDE, recomienda que los instrumentos utilizados permitan recuperar información cuantitativa y cualitativa, que posibilite dar cuenta del quehacer docente en toda su complejidad. Para ello propone que al evaluar al profesor se evalúen los siguientes conocimientos, habilidades, capacidades y actitudes: conocimiento del tema a impartir; habilidades pedagógicas; capacidad de trabajar con una amplia variedad de alumnos y colegas; y disponibilidad para contribuir con la escuela y la profesión (OCDE, 2009).

### *La Red de Investigadores sobre Evaluación de la Docencia (RIED)*

La RIED propone lo siguiente:

- La evaluación debe tomar en cuenta los aspectos políticos, los procesos administrativos y los resultados deberán ser empleados principalmente para la mejora de la práctica docente.
- Es necesario tomar una postura sobre la especificidad de las disciplinas que conforman los programas de formación profesional para reflejarla en la evaluación.
- La evaluación debe de proporcionar información cuantitativa y cualitativa incorporando infraestructura tecnológica que de soporte a formas distintas de realizar esta tarea incrementando su periodicidad.
- Revisar el diseño del sistema para informar diferencialmente a los distintos actores de este proceso (estudiantes, profesores, directivos) sobre las acciones de evaluación, a fin de que la participación de todos ellos se dirija principalmente al perfeccionamiento permanente de la actividad evaluada.
- Fortalecer una cultura de la evaluación supone trascender las posturas de desconfianza y excesiva preocupación por el cuidado de la imagen institucional y el desasosiego por el cumplimiento de compromisos políticos (Rueda y otros, 2010).

### *Otras recomendaciones*

Además de las recomendaciones anteriores, proponemos las siguientes:

- Buscar la generación de consensos sobre lo que es ser un buen docente universitario y sus funciones y quehaceres.
- Continuar trabajando en la formulación de modelos claros y suficientemente consensuados de evaluación.
- Superar los conceptos reduccionistas de evaluación que privilegian la medición.

- Evitar la supeditación de los fines evaluativos a los administrativos y la creciente vinculación de los resultados de las evaluaciones con estímulos monetarios y con otras cuestiones de índole administrativa.
- Considerar el diseño, planificación e implementación de un sistema de evaluación del profesorado como una empresa compleja, multifacética, democrática, y colectiva.
- Contemplar tanto la necesidad de rendición de cuentas, como las oportunidades de mejora y de desarrollo profesional de los profesores.
- Diversificar los rubros, estrategias e instrumentos de evaluación y los agentes participantes.
- Diversificar los usos de la evaluación, poniendo mayor énfasis en el uso de los resultados para proporcionar retroalimentación profesional a los docentes y diseñar junto con ellos, estrategias de atención a las limitantes detectadas.

Finalmente, proponemos que la evaluación de los docentes universitarios contemple las siguientes características:

- Que sea participativa: esto es que propicie la participación de toda la comunidad educativa, pero especialmente de quienes serán evaluados.
- Que sea flexible: esto es que pueda hacerse ajustes dependiendo de los contextos y situación de los participantes.
- Que sea multivariada: esto es que las fuentes de información no dependan de un solo agente ni de un solo método e instrumentos.
- Que sea consensuada: es decir que sea el resultado de un proceso amplio de consulta entre la comunidad universitaria.
- Que promueva la autoreflexión y el autoanálisis: que sus productos y procesos sirvan para analizar y reflexionar sobre el propio quehacer y el de la institución.
- Que sea multidimensional abarque las principales dimensiones del trabajo docente: esto es, que no se limite a evaluar sólo una o algunas de ellas, sino que abarque todas aquellas que hacen de la práctica docente una práctica integral.

## Conclusiones

El análisis y evaluación del ser y quehacer del docente debe ocupar un lugar de primera importancia en la agenda de las universidades, pues son los y las docentes los responsables de conducir, auspiciar y mediar el desarrollo de la construcción de conocimientos, habilidades y valores en sus alumnos.

Múltiples estudiosos del asunto de la evaluación de los profesores universitarios han manifestado su preocupación por su actual situación, en especial dadas las formas en que se han realizado las evaluaciones y los usos que se le ha dado a la información generada. El reto de las universidades en general y de las mexicanas en particular en materia de evaluación de la docencia, consiste en valorar lo hasta el momento realizado y construir políticas, estrategias, mecanismos e instrumentos que permitan mejorar la evaluación de los profesores y generar estrategias que les ayuden a crecer y a ser cada vez más mejores profesores.

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# Le Rôle de la Traduction Pédagogique dans L'enseignement des Langues Etrangères: Etude de Cas.

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## Abstract

The purpose of this research is to verify the essential characteristics and necessity of educational translation in teaching a foreign language. To achieve this purpose, we tested two different methods, the current eclecticism and the direct method, on two separate groups of people and compare their "academic" success, their ability to expression by their foreign language owing to a simulation made publicly and complete our analysis with an anonymous questionnaire distributed to learners in order to understand their methods of study. The results of our study show that learners in Sample 1 studying two hours less, have better results than the Sample 2, in the exam, and the former have much less use of the dictionary than their classmates. The simulation made clearly shows that the learners in the Sample 1 are more able to express themselves comparing to the Sample 2, although they made more grammatical mistakes than their classmates. In addition, the characteristics of the samples lead us to believe that the gap between the samples in scores and performance can be significantly much larger if the test was done on students having average levels and/or difficulties and that is strengthening our idea that educational translation is a true teaching tool respecting the ethics of teaching and a real necessity for the learners.

## Résumé

Le but de cette recherche est de vérifier le caractère essentiel et nécessaire de la traduction pédagogique dans l'enseignement d'une langue étrangère. Afin d'y parvenir nous avons testé deux méthodes différentes à savoir l'éclectisme actuel et la méthode directe sur deux groupes d'individus distinct et comparer leurs réussite « universitaire », leurs capacité à s'exprimer dans la langue étrangère enseigné par le biais d'une simulation faite en public et achever notre analyse par un questionnaire anonyme distribué aux apprenants afin de comprendre leurs méthodes de travail. Les résultats de notre examen écrit démontrent que les apprenants de l'échantillon 1 avec 2 heures de travail par semaine en moins ont bien mieux réussi l'examen que l'échantillon 2, et que les premiers ont beaucoup moins recours au dictionnaire que leurs camarades. La simulation faite nous démontre clairement que les apprenants de l'échantillon 1 certes commettent d'avantages de fautes grammaticales que leurs camarades de l'échantillon 2 mais arborent une aisance orale que les apprenants de l'échantillon 2 n'ont pas. Par ailleurs les caractéristiques des échantillons nous poussent à croire que ces écarts de score et de performances peuvent être significativement beaucoup plus élevés si le test avait été fait sur des étudiants de niveaux moyens ou/et en difficultés ce qui nous renforce dans l'idée que la traduction pédagogique est un vrai outil respectant l'éthique de la didactique pour l'enseignant et une vraie nécessité pour l'apprenant.

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*Keywords:* eclecticism; translation teaching; European Language Portfolio of the Council of Europe; ethics in language teaching.

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## Introduction

Avant de pouvoir établir la relation existante entre traduction pédagogique et l'enseignement/l'apprentissage d'une langue étrangère, il convient de définir les deux termes de façon distinct. En effet selon le dictionnaire

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Larousse le langage signifie : « capacité, observée chez tous les hommes, d'exprimer leur pensée et de communiquer au moyen d'un système de signes vocaux et éventuellement graphique. » (Larousse, 2011). Le langage a donc pour objectif de communiquer avec les autres et exprimer ses pensées, ses idées, ses vœux...

Comme le souligne Locke : le langage est : « Lorsqu'un homme parle à un autre, c'est afin de pouvoir être entendu ; le but du langage est que ces sons ou marques puissent faire connaître les idées de celui qui parle à ceux qui l'écoutent » (Locke 1693 : III 1-2). Tandis que le terme traduire du latin traducare signifie: "transposer un discours un texte, dans une langue différente" (Larousse, 2001). Au-delà de la traduction de base, le terme traduction (du latin Traductio) consiste « à énoncer dans une autre langue (ou langue cible) de ce qui a été énoncé dans une langue (la langue source), en conservant les équivalences sémantiques et stylistiques. » (Larousse Encyclopédique, 2011). N'oublions pas également que l'un des synonymes du terme traduction est représentation et que celui-ci désigne une "action de rendre sensible quelque chose au moyen d'une figure, d'un symbole ou d'un signe" (Larousse, 2011). Au-delà de sa définition la traduction lui-même est divisée en trois composantes différentes: la traduction pédagogique (Delisle, 1980), (sur laquelle nous allons nous concentrer dans cette analyse), la traduction littérale et la traduction professionnelle. La traduction pédagogique dit également traduction explicative signifie la traduction « destinée à l'apprentissage et/ou l'enseignement d'une langue étrangère » (Timur Agildere, 2005), la traduction littérale fait référence à une traduction « mot-a-mot » du texte et/ou de la phrase et la traduction dite professionnelle « fixe comme but la didactique de la traduction destinée aux étudiants ayant déjà une bonne connaissance de la langue de départ et celle d'arrivée » (Timur Agildere, 2005). La traduction professionnelle est donc destinée à un public qui maîtrise déjà la langue étrangère en question et qui a pour objectif celui de devenir traducteur professionnel (traducteur simultané, traducteur assermenté...)

Pour Goldstein l'homme se sert du langage: "pour établir une relation vivante avec lui-même ou avec ses semblables, le langage n'est plus un instrument, n'est plus un moyen, il est une manifestation, une révélation de l'être intime et du lien psychique qui nous unit au monde et à nos semblables." (Goldstein 1948 : 330).

Le langage et la traduction ont donc le même objectif celui de communiquer, et transmettre ses pensées. Comme le souligne Lederer dans son ouvrage intitulé "la traduction aujourd'hui" "sous le même mot traduction se cachent des finalités différentes. Il existe donc une véritable relation entre l'enseignement des langues et la traduction.

Dans l'analyse d'un discours ou bien d'un texte la méthode employé n'est guère importante puisque la seule chose qui reste dans nos mémoire c'est le sens que le donne à ce discours.

Depuis le XVIII ème siècle, les méthodes d'apprentissages d'une langue étrangère ont fortement évolué. Que ce soit la méthode traditionnelle, directe, indirecte, naturelle, audio-orale ou bien communicative toutes ont connus leurs « heures de gloires » avec chacune plus ou moins des limites et des avantages. Pourtant le choix de la méthode varie selon le profil des apprenants, de leurs besoins, caractéristiques et lacunes , en effet plus l'apprenant est jeune (nourrisson) plus il est aisé de faire de lui un vrai bilingue (dans son sens maximale à savoir pouvoir s'exprimer dans les deux langues et avoir une connaissance parfaite des deux langues, des deux cultures et être capable de penser dans les deux langues), au contraire plus l'apprenant est dans un âge avancé (adulte) plus le recours à la traduction est requise. Car dans l'apprentissage d'une langue étrangère, l'apprenant adulte aura tendance à se réfugié dans sa langue maternelle (Timur-Agildere, 2005). De plus avant de débiter toute entreprise d'apprentissage d'une langue étrangère les objectifs à atteindre doivent être clairement définis, afin de choisir la méthode la plus approprié (Delisle,1988).

### **Place de la traduction pédagogique dans l'enseignement d'une langue étrangère.**

Le rôle de la traduction dans l'enseignement des langues étrangères fait l'objet de nombreuse controverse depuis plusieurs années. Surtout depuis que celle-ci est considéré comme une science a part entière. Comme le souligne Demirkan Denk (2006) « la traduction, est un art du langage qui fait appel à des sciences telles que la grammaire comparée et la lexicologie (l'étude de la dérivation des mots et de leur signification) ». Certains auteurs mettant en avant les défauts de la traduction pédagogique restent retenant à l'utilisation de celle-ci dans l'apprentissage d'une

langue étrangère Pour n'en citer que quelques-uns Puren (1988), Cuq et Gurca (2003) ou bien encore Lavault (1998) apparente la traduction pédagogique à un transcodage qui ne fait que ralentir l'objectif idéal de faire penser dans la langue étrangère sans passer par l'écran de la langue maternelle. En effet pour Puren (1995) afin de parvenir à faire penser en langue étrangère directement les apprenants, ces derniers doivent s'entraîner de façon intensive à la traduction si la méthode indirecte est choisie par l'enseignant ; selon le même auteur un risque de facilité peut apparaître tant par les apprenants que par l'enseignant, risquant de faire traduire à l'enseignant des termes qui ne sont ni des expressions idiomatiques, ni un mot abstrait ni une subtilité linguistique.

L'idée principale ici n'est pas de justifier systématiquement l'utilisation de la traduction dans l'apprentissage d'une langue étrangère mais bien de prendre conscience que la traduction pédagogique si et seulement si celle-ci est utilisée dans des cas précis tels que la compréhension d'une subtilité linguistique, littéraire ou bien encore l'emploi d'un terme abstrait est acceptable.

En effet il a été démontré que la traduction interlinguale longtemps utilisée comme seul moyen d'élucider le sens des mots étrangers a des effets néfastes sur la formation des automatismes et ralentit la pensée en langue étrangère (Roman, 2006).

Pourtant il semble difficile de bannir totalement la traduction dans l'apprentissage d'une langue et encore moins la traduction pédagogique. Ceci pour diverses raisons, en premier lieu comme le souligne S. Timur Agildere (2005) cela facilite et favorise la compréhension de l'apprenant, en second lieu il s'agit d'un gain de temps pour l'enseignant comme pour l'apprenant adulte qui est contrairement au nourrisson impatient de pouvoir s'exprimer dans la langue étrangère et qui lorsque la traduction de certains vocabulaires n'est pas donnée va chercher la traduction de ce terme dans un dictionnaire au risque de commettre un contre-sens dans la compréhension du texte, en troisième lieu c'est un moyen de sécurisation des apprenants faibles. En effet selon une étude réalisée par Candelier et Hermann-Brennecke démontre que ce sont les apprenants les plus en difficultés et donc par conséquent ceux qui participent généralement le moins en classe par peur de se tromper auprès de ces autres camarades, qui ont le plus recours à la traduction. Utiliser la méthode directe et bannir la traduction pédagogique du processus d'apprentissage c'est tout simplement marginaliser de façon systématique ces apprenants en difficultés et s'éloigner des exigences éthiques en didactique des langues. Par ailleurs comme le précise Poiarkova (2010) « l'activité traduisante fait appel aux quatre compétences fondamentales de la didactique des langues vivantes étrangères : compréhension écrite et orale, expression écrite et orale ». La traduction pédagogique étant un acte de communication, plus encore il s'agit « d'un acte social » (Peytard et Moirand, 1992) pouvant posséder plusieurs sens et/ou plusieurs expressions selon le contexte dans lequel il est employé. Apprendre une langue, ce n'est pas juste savoir parler dans cette langue ou bien savoir s'exprimer dans celle-ci, c'est également connaître la culture de cette langue, ces jeux de mots, son évolution culturelle et intellectuelle. Prenons l'exemple du terme « banlieue » celui-ci désigne selon le dictionnaire Larousse : « Ensemble des localités administrativement autonomes qui environnent un centre urbain et participent à son existence » pourtant le terme de banlieue peut-être interprété de plusieurs façons non définies dans le dictionnaire. En effet le terme de banlieue a connu une forte évolution de sens, il désigne aujourd'hui une partie de la population qui concentre des problèmes économiques, culturels et sociaux. Le terme de banlieue a donc un sens géographique comme un sens sociologique étroitement lié l'une à l'autre. Les synonymes de ce terme sont également incompréhensibles pour celui qui ne connaît pas le contexte de ce terme, pour n'en citer que quelques-uns « cités dortoirs », « ghettos urbains » ou bien encore l'expression « mal des banlieues ». Abandonner donc la traduction dans l'apprentissage d'une langue étrangère risque donc de faire percevoir le sens du mot, inconnu pour l'apprenant, d'une manière ambiguë (Roman, 2006). L'utilisation de la traduction semble donc nécessaire lorsque l'on est en face d'une expression idiomatique, d'un mot abstrait ou bien encore dans le cas d'une subtilité linguistique telle que les métaphores ou bien encore les expressions issues d'une œuvre littéraire tel que l'expression peau de chagrin. En effet sans l'aide de l'enseignant et de sa traduction l'apprenant adulte dans le cas d'un étudiant anglophone par exemple (en se référant à un dictionnaire) risque de traduire l'expression par « shagreen » ou bien encore par « shrinking » alors que son sens exact est : « qui se réduit, rétrécit de plus en plus » (Dictionnaire Larousse, 2011). « De plus, la Peau de chagrin entend se structurer autour d'une théorie, celle de l'usure vitale : l'individu, comme les

sociétés, dispose d'une quantité limitée d'énergie, et il faut trouver le système régulateur qui concilie l'expansion et la durée ; faute de quoi, c'est la mort, soit par immobilité et sous-vie, soit par dépense folle et autoconsommation de soi. » (Encyclopédie Larousse, 2011).

Comme le fait remarquer Sophie Moirand (1990) les « quatre composantes de communication » sont présentes dans l'activité de traduction.

Qui sont : « La composante linguistique (connaissances des règles) est nécessaire pour la compréhension du texte en langue source et la production du texte en langue cible. La composante discursive (connaissance des différents types de discours) correspond aux genres textuels placés aux différents niveaux du langage, que l'apprenant peut être amené à traduire (textes journalistiques, modes d'emploi, etc.). La composante référentielle contient des connaissances sur les domaines de l'activité humaine et correspond aux différentes spécialisations de la traduction technique (économie, droit, etc.). La composante socioculturelle est une des plus importantes pour un acte de traduction réussi, car le traducteur doit posséder des connaissances approfondies des références culturelles et sociales des deux communautés langagières. » (Poiarkova, 2010). L'emploi de la traduction pédagogique est d'autant plus justifié si l'on prend pour référence le Portfolio européen des langues du Conseil de l'Europe (2001) qui par souci d'éthique en didactique des langues, met au centre de l'apprentissage les besoins, motivations, ressources, caractéristiques et lacunes de l'apprenant. Comme le souligne le Portfolio : « il est absolument essentiel de définir avec un maximum de précision des objectifs immédiatement valables au regard des besoins des apprenants et réalistes du point de vue de leurs caractéristiques et des moyens disponibles. » (Conseil de l'Europe 2001 : 5) Selon ce document l'objectif n'est plus de faire de l'apprenant un bilingue au sens maximal du terme qui pense dans la langue étrangère pour s'exprimer mais plutôt de développer chez l'apprenant des capacités interdisciplinaires afin qu'il soit doté d'un répertoire langagier assez riche dans lequel toutes les capacités linguistiques et composantes de communication trouvent leur place. Afin d'arriver à jongler aussi facilement dans les deux langues (langue d'arrivée comme langue de départ : langue maternelle) et atteindre une telle capacité de communication linguistique l'apprenant doit acquérir toutes les compétences générales (linguistiques, culturelles, contextuelles, et sociales).

Sans avoir la prétention de dire si l'une des méthodes est plus efficaces qu'une autre, le but de cette analyse est de vérifier le caractère essentiel et nécessaire de la traduction pédagogique dans l'enseignement d'une langue étrangère.

## **Méthodologie**

Afin d'y parvenir nous avons testé deux méthodes différentes à savoir l'éclectisme actuel et la méthode directe sur deux groupes d'individus distinct et comparer leurs réussite « universitaire » et leurs capacité à s'exprimer dans la langue étrangère enseigné par le biais d'une simulation faite en public. L'éclectisme actuel utilise la traduction pédagogique dans son programme d'apprentissage, cette méthode plus souple combine les différentes méthodes existantes. Elle a pour principal avantage de rendre l'apprentissage de la langue étrangère plus pédagogique, plus attrayante et d'avantage adapté aux besoins et lacunes des apprenants, tout en permettant aux apprenants de participer plus activement au processus d'apprentissage. Tandis que la méthode dite directe a pour principe le bannissement total de la traduction ou l'enseignant doit expliquer le vocabulaire à l'aide d'objet, d'images etc. Sans avoir recours à la langue maternelle. Le but de cette méthode directe étant de faire parvenir l'apprenant à penser dans la langue étrangère le plus rapidement possible. Nous avons testé ces deux méthodes distincts sur deux groupes d'échantillons composés chacun de 15 apprenants de niveau équivalent à savoir A1.

La langue maternelle (L1) est le turque pour nos deux échantillons et la langue d'arrivée (L2) est le français.

La méthode éclectique avec usage de la traduction pédagogique fut appliquée à l'échantillon numéro 1 tandis que la méthode directe fut appliquée à l'échantillon 2. Pendant trois semaines les deux groupes d'échantillons ont vu les

cours similaires à savoir le chapitre 1 et 2 du manuel Taxi. A la fin des trois semaines le même examen fut appliqué aux deux groupes et avant l'examen un questionnaire anonyme fut distribué aux apprenants afin de comprendre leurs méthodes de travail. Par ailleurs afin de contrôler leurs niveaux d'expression orale ainsi que leurs aisances orales une simulation académique a été faite sur les deux échantillons. La simulation en question consiste à établir deux tables rondes avec la participation de tous les apprenants (rencontre donc des échantillons 1 et 2) ou chaque table ronde est composée des membres de chaque échantillon respectivement. Le sujet de la simulation étant pour ou contre l'adhésion de la Turquie à l'Union Européenne, chaque groupe (échantillon) se doit de convaincre les jurys en argumentant les raisons qui les motivent à être pour ou contre le sujet proposé.

### **Caractéristique des échantillons**

Les apprenants ont été choisis parmi les 30 plus brillants étudiants de l'université Turgut Özal tout département confondu. Par ailleurs pour être certains de la motivation des candidats les cours ont eu lieu les samedis.

### **Résultats**

Les résultats de notre examen écrit démontrent que l'échantillon 1 a bien mieux réussi l'examen que l'échantillon 2 avec une différence de dix points dans la moyenne de l'échantillon (afin de rendre notre analyse plus significative et réduire nos marges d'erreur le choix des apprenants dans les deux échantillons a été élaboré soigneusement et choisis parmi les étudiants les plus brillants de l'université). Dans l'échantillon numéro 1 la moyenne du groupe s'élève à 85/100 contre 75/100 pour l'échantillon 2. Par ailleurs l'analyse des questionnaires distribués en début d'épreuve nous indique que 93,3 pour cent des apprenants de l'échantillon 2 (soit 14 étudiants sur 15) ont eu recours au dictionnaire en dehors de la classe de cours contre seulement 40 pour cent pour l'échantillon 1 (soit 6 étudiants sur 15). Par ailleurs la dernière question de l'enquête était : « si vous aviez le choix opteriez-vous pour un apprentissage avec traduction pédagogique ou sans traduction du tout ? » 100 pour cent de l'échantillon 2 ont indiqué vouloir être transféré dans une classe avec traduction pédagogique comme méthode d'enseignement, tandis que dans l'échantillon numéro 1 aucun ne souhaite être transféré dans une classe où la méthode directe est employée. On constate également au travers de l'analyse de notre enquête que les apprenants de l'échantillon 1 consacrent en moyenne 2 heures de travail personnel en moins que leurs camarades de l'échantillon 2 pour des résultats meilleurs. Et enfin la simulation faite nous démontre clairement que les apprenants de l'échantillon 1 certes commettent d'avantages de fautes grammaticales que leurs camarades de l'échantillon 2 mais ils arborent une aisance orale que les apprenants de l'échantillon 2 n'ont pas. Cette aisance orale s'explique a priori par le fait que les apprenants de l'échantillon 1 ont acquis lors des cours d'apprentissages de la langue étrangère une confiance en soi ainsi qu'une capacité à accepter de faire des erreurs (qu'ils peuvent se tromper) sans que cela les traumatise.

### **Discussion**

A la lumière de cette analyse il nous semble indéniable que la traduction pédagogique pour un public adulte est nécessaire dans l'apprentissage d'une langue étrangère. Par ailleurs les caractéristiques des échantillons nous poussent à croire que ces écarts de score et de performances peuvent être significativement beaucoup plus élevés si le test avait été fait sur des étudiants de niveaux moyens ou/et en difficultés ce qui nous renforce dans l'idée que la traduction pédagogique est un vrai outil respectant l'éthique de la didactique pour l'enseignant et une vraie nécessité pour l'apprenant.

Bien entendu le choix de l'éclectisme n'est pas sans limite, pour certain cette méthode manque de rigueur et ressemble plus à du bricolage « qu'à une reconstruction fondée sur une analyse méthodologique originale » (Demirkan Denk, 2006). Alors que pour d'autres auteurs comme Galisson (1980) ces enseignants ne font que transgresser le manuel. Mais comme le dit Baudelaire « manier savamment une langue, c'est pratiquer une espèce de sorcellerie évocatoire. » (L'Art romantique, 1852). D'autres peuvent critiquer la traduction pédagogique pour obsession de la communication et son laxisme vis-à-vis de la grammaire. En effet la traduction pédagogique vise avant tout la compréhension et la communication sans se soucier « a priori » du maniement correct de l'outil linguistique qui est la grammaire. Comme le souligne Rivaroli (1783) dans son œuvre : le discours sur l'universalité de la langue française, « la grammaire est l'art de lever les difficultés d'une langue ; mais il ne faut pas que le levier soit plus lourd que le fardeau. » Cette tendance éclectisme a l'avantage d'être souple et capable de s'adapter aux besoins des étudiants, mais il peut s'avérer source d'échec car cette méthode ne doit être envisagée que si l'enseignant a une connaissance parfaite de la langue enseigné.

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INTE 2014

# Learner autonomy and self-regulation in eLearning

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## Abstract

The calibration concept refers to the accuracy of the perceptions that students have of their own academic performance. The studies point to its importance in self-control of metacognitive strategies. Metacognitive judgments play an important role in self-regulation of learning to provide information to students in order to enable them to make decisions in the learning tasks. In an online education system aspects related to self-regulation and self-efficacy gain particular relevance. Our results indicate that the difference between the actual grade and after performing the assessment task is higher when considered by default. A positive and statistically significant correlation between the two classifications (real and after) was found.

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• *Keywords:* elearning; self-regulation; calibration; adults learning

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## Introduction

The judgment students make about their cognitive process or its outcome has been investigated. Calibration means the distance between the level of perception and the actual level of understanding, capacity, competence or preparation in a particular area. The calibration concept refers, therefore, the accuracy of the perceptions that students have of their own academic performance (Stone, 2000). The studies point to its importance in self control of metacognitive strategies (Pieschl, 2009). Metacognitive judgments play an important role in self-regulation of learning providing information to students to enable them to make decisions in the learning tasks.

In an online education system, with an emphasis on the idea of a learner as a constructor of his own knowledge, aspects related to self-regulation and self-efficacy gain particular relevance.

## Self-regulation and calibration

There is an increasing emphasizing on student-centered learning and on them taking a proactive role in the construction of knowledge. The teacher's role is to guide and mentor the process. There has been over time a change in the way of looking to the learning process. In this sense, there is an emerging shift that displaces the process emphasis on the teacher to a perspective where the focus is on the learner. This means that it is increasingly recognized the active role of the learner in the learning process. The demands placed at this point for learners to achieve success, require him to learn new skills such as flexibility, responsibility, independence and being active. New predictors of academic success are placed in the ability to manage the learning process itself (Macejka, 2014).

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The autonomous learning requires self-management competencies and proactive, self-knowledge and self-control of the learning process.

According to Bjork, Dunlosky & Kornell (2013) for a learner to become effective in the learning process should *not only be able to assess accurately the states of their own learning, but also be able to manage their own learning and activities in response to such monitoring* (p.422). Self-regulated learning is recognized as an important factor in active control of the learning process and, consequently, in students' academic performance. According to Zimmerman (1986) self-regulated learning in education is based on the premise that students use metacognitive, motivational, and behavioral processes in their learning. Self-regulated learning involves the selective use of specific elements that are tailored to each task learning (Zimmerman, 1998, 2002).

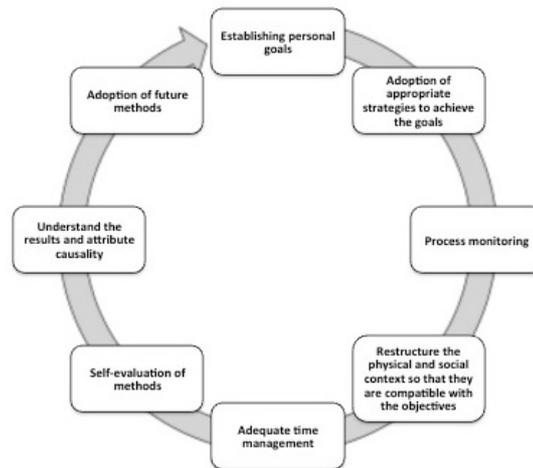


Fig. 1. Components of self-regulation (Zimmerman, 2002)

The self-regulated learners, in a metacognitive point of view, are able to make decisions that regulate the selection and use of different forms of knowledge. They do this by planning, organizing, implementing, managing, and evaluating the whole process. Metacognition has a prominent role here. Firstly it encompasses the knowledge of how people learn and process information, as well as their learning processes. Secondly, we have the task. In other words, understanding the type of task and the type of information processing that it entails. Finally, we have the knowledge of cognitive and metacognitive strategies such as planning, monitoring and verifying the results. Metacognition can thus be seen as a way of monitoring and control of thought (Goulão, 2013).

The dynamics established between monitoring and control is called calibration. This can be understood as a measure of the relationship between trust and performance. *Calibration* is the degree to which the person's perception of performance corresponds with his or her actual performance (Hacker, Bol & Keener, sd). The calibration plays an important role in the self-regulation cycle. This is due to the fact that the judgments students have about their training, may lead to review their situation to a learning task. Calibration, or absolute precision evaluates the accuracy of the judgments that the learner makes about their performance. In this context the *deviation* measures the degree to which a learner underestimates or overestimates the performance and it is obtained by calculating the difference between confidence of correct answers and actual performance on the task. We talk about overestimate of performance when there is a high degree of confidence but low performance. In underestimate the performance there is a low degree of confidence but a high performance (Pieschl, 2009).

In summary, self-regulation is important for the function of higher education is to develop competences for lifelong learning. Those who develop competencies for self-regulation will be more apt to go beyond the necessary to adapt to new challenges situations.

## **The online learning context**

Technological development, as well as the demands of society and the labor market urge to the change of learning environments. The virtual learning environments promote a more active role on the part of students in the construction of their own knowledge (Goulão, 2010). These same environments comprise different formats to support learning that allow a more appropriate choice according to the contents to be transmitted and the learning styles of each.

The eLearning gives the student time and space flexibility, allowing a better management that suits their needs in education. In these learning systems, one of the most important roles of the teacher is being the mediator/facilitator. This means that the teacher should aim to provide appropriate educational aid to students' constructive learning (Goulão, 2012, p.29). Associated with virtual learning environments, we find three essential concepts: adaptability, mobility, and cooperation. This means that the incorporation of ICT in the educational context, using the virtual spaces, allows a more effective response to the educational challenges by allowing using strategies and tools that best fit to the real needs of their learners. The research work of Azevedo & Cromley (2004) points to the implications that the design of virtual learning environments has for the acquisition of knowledge. It follows, on one hand, the need of teachers being aware of this situation and look to train their students so they regulate their learning. On the other hand, at the environments' designers level so they conceive structures that allow students to proceed to their learning self-regulation.

In an online education system, with an emphasis on the idea of a learner as a constructor of his own knowledge, aspects related to self-regulation and self-efficacy gain particular relevance. We live in a society that appeals to these skills, which allow individuals to adapt quickly and effectively to new challenges. For this reason, current research has shown the importance of encouraging our students to control their learning process. The impact of a more personal, social and participative pedagogy is distinguished. (McLoughlin & Lee, 2010).

Students in eLearning require greater self-direction and self-regulation to achieve their academic goals (Bol & Garner, 2011). To lead the students to reflect on their learning strategy and tailor their metacognitive strategies to achieve success in the task is of great relevance.

Working in virtual environments, from the point of view of the learner, has implications and behavioral changes in their posture. It is necessary that they are aware that there is a close relationship between autonomy, that virtual environments provide, and maturity, motivation, and self-discipline of the learner. In other words, greater autonomy implies a greater maturity, greater motivation, and greater self-discipline. This is because more freedom implies greater responsibility on the learner.

In summary, the combination of various resources such as multimedia technologies, and internet use make learning can happen in any setting and at any time (at school, at university, at home, in leisure spaces, among others). This feature of absence of spatiotemporal constraints combined, also, with the need for lifelong learning is the basis of new educational scenarios and changes in the relationships that are established between the different actors in the teaching learning process. This approach applied to the educational field is extremely important because it allows the learner to be at the center of their learning with active participation constructing their own knowledge.

## **Method**

### *Objectives*

The objectives of our research are to identify:

- a) in general terms, the pattern of responses on the classification students hope to obtain in the evaluative task, and
- b) the association between the degree of the expected and the real grade in an evaluative task (calibration)

## Design and participants

Data collection was made through questionnaires and occurred in three specific times: immediately before the assessment, immediately after the assessment, and after know the classification. A total of 55 undergraduate eLearning students participated in the survey, as volunteers; 16% males and 84% females; the average age of the participants was 41, ranging from 26 and 57 years old (see Table 1) seven students were in their 20s, 19 students were in their 30s, 18 students were in their 40s, 10 students were in their 50s. The median age was 41.

Table 1. Descriptive statistics of participants' age

Variable	N	Min.	Max.	M	SD
Age	54	26	57	40.93	9.02

## Material and procedure

- Self-assessment

We used three diferents questionnaires. The first one immediately before the assessment. Another one immediately after the assessment test, and, finally, when they know their classification (table 2).

Table 2. Description of the self-assessment questionnaires

Moment	Questionnaire
1 <sup>st</sup> – Before the assessment	<p>We are doing a study about the perception of the students regarding their classifications. So we would like to count on your cooperation in to the different moments of evaluations of united course. That is, this test will arise whenever there is an evaluation moment, before and after the same, and it is important you answer twice. It is simple and does not take long. Ready to collaborate? Come on, then! Knowing that in this e-folio ... is asked to answer 2 questions on Topic 1, according to the rules which will be made available, what do you think will be your classification in this work? Once you have answered must click "Submit all and finish". Do not forget, the scale is 0-4 and must indicate only one number that may have, or not, one decimal place. Example 1; 3 Example 2; 3.4</p> <p>Thank you, again, for your cooperation! 😊</p>
2 <sup>nd</sup> – After the assessment	<p>As we said earlier, we are to undertake a study on the perception of students regarding their classifications. For this we would like to continue to rely on your cooperation. As already noted is simple and does not take long. Ready to collaborate? Come on, then! Now that ended your e-folio ... and uploaded them, which do you thought to be the classification you will get? Do not forget, the scale is 0-4. Indicate only one number and after answering must click "Submit all and finish". Thank you, again, for your cooperation! 😊</p>
3 <sup>rd</sup> – After know the classification	<p>Following the work we are doing we have another question for you. The answer does not require you much time. We appreciate your opinion.</p> <p><i>It was asked, before starting, and after completing your e-folio A, to indicate a rating in each of these moments.</i></p> <p><i>Now that you know the classification obtained in this work, compare it with the ratings assigned to the two previous times.</i></p> <p><i>For this comparison the note you got in your e-folio</i>  <i>a) is it higher / lower / equal to it flagged?</i></p>

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b) why? Indicate at least one reason for this.  
c) how that fact will influence your study process in the future?  
Thank you!

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- Academic performance

Participants in our study were students who were in continuous assessment. In this situation there are three assessments: 2 moments online (e-folios) and 1 moment face to face. Each e-folio has a maximum rating of 4 values. The works were designed, provided and graded by the teacher responsible for the course. Students were informed that our "presence" was just for research.

Participants were asked to complete the questionnaire online at their own place. This course belonged to the 2nd semester.

Figure 3 presents the overall research procedure used in this study.

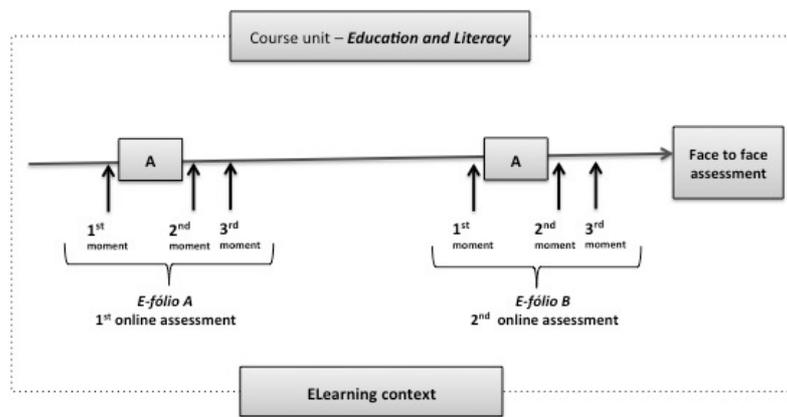


Fig. 3. The overall research procedure

In this paper we will present only the results obtained from the analysis of the first moment of evaluation conducted online (e-folio A).

#### Data analyses

We proceeded to the analysis of participants' responses according to our objectives. It was the purpose of this research to identify, in general terms, the pattern of responses on the classification they hope to obtain in the evaluative task, and to identify the association between the expected and the real grade in a evaluative task (calibration).

To answer to our first goal we grouped the result of the difference between self-reported ratings on the 2nd moment and the actual score obtained. For this we considered as reference point 0 which meant: Real Rating (performance) = Self-reported Rating (confidence of correct answers).

To analyze the last goal we used the Pearson correlation statistic and Student t test.

## Results

We will present the results taking into account the two objectives of our research.

### *Pattern of responses on the classification they hope to obtain in the evaluative task*

We found that the number of students who responded to the two moments - *Before* and *After* - was quite different. Since the students who responded to the moment *After* was superior. Table 3 presents the results shown in moments *Before* and *After*.

Table 3. Pattern of responses on e-fólio A – self-reported ratings (confidence of correct answers)

	e-fólio A	
	Before	After
<b>Mean</b>	2.92	2.95
<b>Mode</b>	3.0	3.0
<b>Std Dev.</b>	.464	.481
<b>Minimum</b>	2.0	2.0
<b>Maximun</b>	3.5	4.0

In this result only the subjects who responded at both times were taken into account.

### *Association between the degree of expected and a real grade in a evaluative task (calibration)*

Before we begin the presentation of this item results it is necessary to identify some assumptions. So,

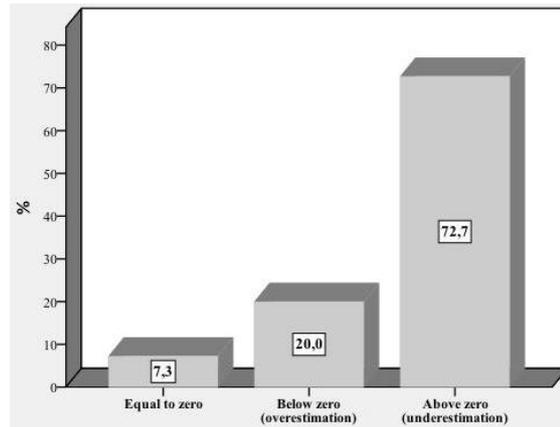
- Difference = (Real grade (*performance*) – Self-reported grade “After” (*confidence of correct answers*)): *judgment about the performance*
- Positive values = Students had better actual score than self-reported grade: *underestimation*
- Negatives values = Students had a worse actual score than self-reported grade: *overestimation*
- Equal to zero = The actual score was equal to the self-reported grade

As previously mentioned the number of students who responded “After” was superior. Thus, the results that we present from now relate only to the time “After”.

Table 4. Pattern of responses on e-fólio A – Real and self-reported

	e-fólio A	
	Real	After
<b>Mean</b>	3.18	2.85
<b>Mode</b>	3.7	3.0
<b>Std Dev.</b>	.419	.543
<b>Minimum</b>	2.0	2.0
<b>Maximun</b>	3.8	4.0

After known the general results we will proceed to the analysis of the differences between self-reported ratings. For this, we have grouped the differences between real grade and self-reported grade in three major category - Equal to zero / Below zero (*overestimation*) / Above Zero (*underestimation*) (Graphic 1).



Graphic 1. Results e-folio-A

As can be seen there are marked differences in the categories *Below Zero* and *Above zero*. In the e-folio A, 72.7% of students had a better Real score than indicated, and 20% had a worse score than what was expected.

In the category *Below zero*, 50% of people had a difference between [0.22; 0.80] more than what was indicated. In the category *Above zero*, 63% of people had between [-0.2; -0.21] points of difference under the indicated. That is, the difference by default is greater than the gap by excess. Students who thought they would have better score missed for less.

We will then see what happens with the average differences between the Real and After grades on e-folio A.

Table 5. Results for the *T* test

	Real	After	<i>T</i> (54)
	Mean (SD)	Mean (SD)	
e-folio A	3.18 (.419)	2.85 (.543)	4.157 (s)*

\* $p < .05$

As can be seen the students in e-folio A indicate a rating significantly lower to the ranking that they actually obtained (Real).

To test the hypothesis whether there was an association between the actual score (Real) and self-reported score *After*, we used the Pearson correlation test. It was found that the actual score (Real) is positively correlated with the score indicated after completion of work,  $r = .301$ ,  $p = .026$ . Higher self-reported rating *After* is associated with higher actual classification (*Real*).

So, our results indicate that the difference between the actual grade and the one indicated after performing the assessment task is higher when considered by default. I.e., students who thought they would have better grades missed for less. In addition, a positive and statistically significant correlation between the two classifications (real and after) was found.

## Conclusions

Our aim was, first, to analyze the pattern of responses on the classification students hope to obtain in the evaluative task. Our results indicate that the average self-reported ratings at *After* category is below the average of the actual ratings. In addition, students who underestimated their classification are much more than the students that overestimated it. However, students that overestimated their grades missed the actual grade for less.

Secondly, to analyze the relationship between the degree of expected and actual grade in the task (calibration), we used Pearson correlation and Student the t-test. The findings with these tests allow us to say that the differences

found between performance and confidence of correct answers are statistically significant. This suggests that there is a positive correlation between them, which means that the higher self-reported rating *After*, higher the actual classification (*Real*).

To develop self-regulatory competence of students is not only very important to help them achieve success now, but also to ensure future successes. Actions relating to the control of performance have a critical role in the self-regulatory process leading to a monitoring process of learning by the students. This action control allows them to not only detect the weaknesses of the learning process, but also alert to the effectiveness of learning strategies that are being used. Teachers can help students in this self-regulatory process so that the responsibility of the learning process can be transferred to students.

In our study we tried that students reflect on their own learning process when designing the experimental study in those three moments, with particular relevance to the last moment. We tried therein that students did a self-reflection and a review of the whole learning process to find their weaknesses or reinforce strategies that led to success. Ultimately, our goal was that the students applied self-monitoring in their learning and develop their own monitoring mechanism becoming an integral part of their personal learning.

According to Cheng (2011), *Self-regulated learners optimize Their learning strategies through continuous self-assessment of Their learning efficacy. It is in the interests of teachers to develop students 'self-regulation ability If They really want to Enhance students' learning* (p.14)

To conclude, self-direction for general or specific objectives, by the students, is extremely important. The ability to self-regulate learning is extremely important to overcome procrastination and achieve success factor. This importance is enhanced when we are in online contexts where the emphasis is on the student as responsible for their learning process. Knowing this reality is relevant to provide information to teachers that seek to develop tasks and strategies that help reduce procrastination and thus make them more self-regulated learners.

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## Learning of the clinical skills in critical care by the virtual reality

Sylvie Charette, nursing professor à l'Université du Québec en Outaouais, Canada

Simulations vary in their form — including written case studies, role-playing with live actors, mannequins and virtual-reality environments — but they all seek to present a simplified, yet accurate reproduction of real-world health-care situations. They are essential learning tools that give participants opportunities to gain valuable experience without any risk of harming a patient. Students are able to demonstrate critical thinking as they conduct nursing assessments and interventions, interact as a team and make critical care decisions. Tight staffing situations mean that instructors, preceptors and on-duty nurses may not have the time available to lead the classes and workshops in which students have traditionally honed their skills.

Through simulations, students explore complicated situations that may not have a one-size-fits-all protocol. Opportunities to encounter high-risk situations that rarely occur in a typical work setting or a practicum and for repeated practice build confidence and improve clinical reaction and response time, contributing to a smoother transition for students into the workplace. Simulations offer instructors a window into the thought processes of students, enabling them to tailor their teaching interventions accordingly. Instructors and students can choose to pause at critical moments in the simulation to explore different approaches and see how they play out. Students are allowed to make mistakes that would not be permitted to occur in real practice settings for reasons of patient safety. In some cases, instructors need not even be physically present to directly observe the simulation as it takes place.

The mannequins in use at many nursing schools have until now been considered the gold standard for simulation in education. These sophisticated “patients” possess the ability to simulate breathing, speech and other sounds, and to “respond” physiologically to interventions and medications. However, they are very expensive and complex pieces of equipment to operate, maintain and repair, requiring specialized technicians as well as preparation and maintenance time. Virtual reality simulators, on the other hand, offer a cost-effective alternative that requires minimal hardware and technical support once a system is up and running. These computer-based simulations can provide rich learning experiences that combine text, animation, audiovisual cues and video and audio clips. Visual interfaces can be adapted to correspond with the computer systems (such as electronic health records) in actual use by nurses. Advances in video game technology have opened up a number of exciting possibilities: 3-D mapping of user movements allows for more realistic physical actions, such as the selection of objects from an instrument tray; virtual online role-playing game environments such as

Second Life provide a model for real-time avatar-based team interactions between students and educators in different locations.

A research team at the University of Sherbrooke is currently developing a virtual patient simulator that will allow nurses to explore a number of clinical situations using virtual reality. The first-generation prototype will present various trauma nursing scenarios with lifelike conditions and sequences of events. This project will enable students to practise these steps at school or on a home computer and receive instant feedback on their performance.”

The project team, which consists of researchers from nursing, education and informatics, is working in collaboration with a company that specializes in video game development. A master’s-level computer science student will be working with the firm over the summer to develop a core prototype based on biomedical concepts and trauma scenarios that have been developed by the nursing science team. Preliminary beta testing is scheduled for the fall. The results will inform refinements, particularly to the visual interface. The team hopes to have a fully functional prototype by 2015.

# Learning strategy, personality traits and academic achievement of university students

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## Abstract

Several experts (Paunonen & Ashton, 2001, Laidra, Pullmann, & Allik, 2007, Komarraju et al., 2011 and others) noted a significant correlation between learning styles, personality traits and academic achievement. We decided to find out what is the relation between the Big Five personality traits (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism) and different preferred learning strategies (Deep Processing, Elaborative Processing, Fact Retention, Methodical Study) and academic achievement (measured by GPA and success at the state final examination). The sample included 254 graduates of the first cycle degree programs at Constantine the Philosopher University in Nitra. We found a significant relation of all four learning strategies with academic achievement and positive relation with personality traits Openness, Conscientiousness with academic achievement of university students. Conscientiousness and Openness appears to facilitate a variety of effective learning strategies and may be especially useful traits for attaining high levels of academic achievement.

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*Keywords:* Learning Strategy; Deep Processing; Elaborative Processing; Fact Retention; Methodical Study; Openness; Conscientiousness; Extraversion; Agreeableness; Neuroticism; Academic Achievement

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## Introduction

Psychologists, educators and researchers focusing their attention on the learning environment and the learning outcomes or academic achievement, try to understand how to offer the best effect of education with respect to individual differences in processing, keeping and equipment information of people in the process of education. Researchers use different terms associated with human individuality, such as personality types, personality traits, attitudes, cognitive styles, learning styles for a description and explanation of these differences.

According to Schmeck (in Gadzela & Baloglu, 2003), many professionals associate the teaching itself with the personality of a person, attitudes and thinking. Learning can be observed through measuring of learning styles and learning strategies from the aspect to link the thinking and personal differences. The importance of measuring learning styles and learning strategies lies in the fact that they participate on learning outcomes in the context of different approaches of educators towards learners.

Schmeck (1983) defined learning strategy as a pattern of how information-processing activities are used to prepare for an anticipated test of memory. Schmeck et al. (1977) describe 4 key learning processes: 1. Deep Processing - depth of processing and organizing information and thereby defines the processes of conceptualization, search for meaning, comparison and contrast, categorization, organization and critical evaluation; 2. Elaborative Processing - student's inclination to personally encode the information, through such methods as self-involvement; concerns the process of personalizing information and translating it into the student's own words and experiences, as well as practical application, and the use of the visual imagination; 3. Fact Retention - student's proclivity to memorize facts and details; storing of factual information, facts, names, dates, formula and definitions; 4. Methodical Study - conventional study habits or how often a student studies and the

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student's usage of techniques in "how-to" study guides (i.e., those techniques frequently believed to lead to earning high grades).

Another significant aspect of learners personalities which reflects in their academic achievements are individual personality traits. Experts have described the relationship of individual personality traits with academic achievement and primarily dominant is the approach to description known as Big Five (for example Paunonen & Ashton, 2001, Laidra, Pullmann, & Allik, 2007, Komarraju et al., 2011). The accepted form of Big Five model deals with factors which could be compiled into acronym OCEAN, consisting of first letters of individual factors/features: Openness to experience, Conscientiousness, Extraversion, Agreeableness, Neuroticism. There are however efforts to reduce as well as to expand this model. Digman (1997, in Čerešník, 2012) identified two meta-traits gained by Big Five factors rotation. The first one is related to the ability of general social adaptation and we could name it as successful/unsuccessful socialization. The second one is related to specific adaptation to gender and is commonly known as agency/communion. Komarraju et al. (2011) focused on measuring the relationship of academic achievement, the Big Five personality traits and learning styles and they formulated following findings: (a) Openness was positively related with the two reflective learning styles (Synthesis-Analysis and Elaborative Processing), (b) Neuroticism was negatively related with all the four learning styles, and (c) Agreeableness and Conscientiousness were positively related to all the four learning styles. (d) Extraversion was positively related with Fact Retention and Elaborative Processing. According their research it is interesting that three personality traits (Openness, Agreeableness and Conscientiousness) and all the four learning styles were positively correlated with GPA (the average grade earned by a student, figured by dividing the grade points earned by the number of credits attempted, The American Heritage Dictionary, 2000).

The aim of our research is to find out the relationship of described Big Five personality traits and individual preferred learning strategies of university students with the emphasis on the relation of these personal characteristics to academic achievement and to compare our findings with existing research (Paunonen & Ashton, 2001, Laidra, Pullmann, & Allik, 2007, Komarraju et al., 2011).

## **Methods**

### *1. Measuring Tools*

We applied the questionnaire used by Schmeck in our research to determine learning styles – The Inventory of Learning Processes (ILP - Slovak version – Kaliská, 2013). Deep Processing: measures the depth of processing and organizing information and thereby defines the processes of conceptualization, search for meaning, comparison and contrast, categorization, organization and critical evaluation. Methodical Study: measures conventional study habits. Fact retention: measures the storing of factual information, facts, names, dates, formula and definitions. Elaborative Processing: concerns the process of personalizing information and translating it into the student's own words and experiences, as well as practical application, and the use of the visual imagination.

For measurement of personality traits we use the NEO-FFI (Slovak version – Ruisel & Halama, 2007). The NEO-FFI consists of 60 items designed to assess the Big Five personality traits: Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness.

With regard to multiple studies (Bartling, 1988, Busato et al., 1998) pointing to changing learning processes throughout the course of study period, we decided to express academic achievement by average State exams score at the end of the study period. At the same time we expressed the academic achievement of university students through GPA - the average grade earned by a student, figured by dividing the grade points earned by the number of credits attempted (The American Heritage Dictionary, 2000).

### *2.2 Participants*

The research sample consisted of 254 graduates of Constantine the Philosopher University who at the time had completed the first level of university education by successfully passing the state exam. Respondents were from 21 to 28 years old, their average age was 23.25 years. Research sample consisted of 91 males and 163 females.

## Results

Table 1 Descriptive Statistic of Variables

	Minimum	Maximum	Mean	Std. Deviation
Neuroticism	5	42	22,75	7,27
Extraversion	17	45	32,07	6,03
Openness	13	45	28,14	5,82
Agreeableness	13	42	30,05	5,76
Conscientiousness	14	46	31,81	6,35
Deep Processing	2	18	11,63	3,30
Methodical Study	0	20	10,76	3,88
Fact Retention	0	7	3,35	1,77
Elaborative Processing	5	14	10,55	1,85
Grade-Point Average	1,00	2,88	1,52	,28
The State Final Examination	1,00	2,44	1,78	,46

Table 2 Correlation Analysis of Big Five Personality Traits and Learning Processes

N = 254		Deep Processing	Methodical Study	Fact Retention	Elaborative Processing
Neuroticism	Pearson Correlation	<b>-,351**</b>	-,039	-,009	<b>-,155*</b>
	Sig.	,000	,541	,883	,013
Extraversion	Pearson Correlation	,064	,005	<b>-,162**</b>	,107
	Sig.	,308	,934	,010	,090
Openness	Pearson Correlation	<b>,223**</b>	,116	,114	<b>,295**</b>
	Sig.	,000	,066	,070	,000
Agreeableness	Pearson Correlation	,044	,006	<b>,144*</b>	,041
	Sig.	,482	,921	,022	,511
Conscientiousness	Pearson Correlation	<b>,300**</b>	<b>,234*</b>	,016	<b>,258**</b>
	Sig.	,000	,000	,794	,000

Table 3 Correlation Analysis of School Achievement and Big Five Personality Traits and Learning Processes

N = 254		Grade-Point Average	The State Final Examination
Neuroticism	Pearson Correlation	-,071	-,009
	Sig.	,259	,888
Extraversion	Pearson Correlation	-,030	<b>-,137*</b>
	Sig.	,630	,029
Openness	Pearson Correlation	<b>,219**</b>	,098
	Sig.	,000	,119
Agreeableness	Pearson Correlation	,080	,019
	Sig.	,205	,758
Conscientiousness	Pearson Correlation	<b>,184**</b>	<b>,228**</b>
	Sig.	,003	,000

Deep Processing	Pearson Correlation	<b>,331**</b>	<b>,263**</b>
	Sig.	,000	,000
Methodical Study	Pearson Correlation	<b>,279**</b>	<b>,216**</b>
	Sig.	,000	,001
Fact Retention	Pearson Correlation	,075	<b>,140*</b>
	Sig.	,233	,026
Elaborative Processing	Pearson Correlation	<b>,263**</b>	<b>,249**</b>
	Sig.	,000	,000

In our research, we reached the following findings in the area of analysing the relationship of Big Five personality traits and learning processes:

a) in-depth processing in learning process, expressed by depth of processing and organizing information, searching for meaning, comparison and contrast, categorization, organization and critical evaluation increases within preferred learning processes the more the student's personality contains the traits conscientiousness and openness; on the other hand, students use this approach less the more dominant Neuroticism is;

b) learning strategy known as Methodical Study connected to how often a student studies and the student's usage of techniques in "how-to" study guides is more utilized by university student's learning the more their personality includes the trait Conscientiousness;

c) learning strategy Fact Retention expressed by student's proclivity to memorize facts and details, storing of factual information, facts, names, dates, formula and definitions is preferred all the more, the more is present the trait Agreeableness and the less is present the trait Extraversion;

d) within learning strategy Elaborative Processing, which expresses the student's inclination to personally encode the information, through such methods as self-involvement; concerns the process of personalizing information and translating it into the student's own words and experiences, as well as practical application, and the use of the visual imagination are our findings similar as with the learning strategy Deep Processing.

In the area of relationships of above observed personal characteristics which intersect with learning process and quality in and out of school and their relation to academic achievement, we discovered that:

a) learning strategies Deep Processing, Methodical Study and Elaborative Processing are significantly related to academic achievement expressed by GPA, as well as by State final exam at the end of study; Fact Retention correlates on the level of statistical significance only with the achievement in the State final exam but that the correlation coefficient is quite low here;

b) from all personality traits, only Conscientiousness is significantly related to academic achievement; in academic achievement expressed by GPA as well as Openness;

c) both forms of expressing academic achievement significantly positively correlate together ( $r=,345^{**}$ , sig.=,000).

## Discussion and Conclusion

Personality traits facilitate learning behavior and motivate the person, and these traits are decisive for the person in insisting or giving up (Blickle, 1998, in Ibrahimoglu et al, 2013). Considering that learning is actually processing information, the most important elements of the process are perception, attention, memory, and thinking. On the other hand, learning is the management of mental responses to stimuli. Personality traits are also involved in this process and they act as an intermediary. In this context, personality traits seem to have some effects on learning styles, and there seems to be a significant relationship between some personality traits and learning styles (Ibrahimoglu et al, 2013). We discovered significant relations between learning strategies of university students and their personality traits. A similar relationship model was observed between Deep Processing and Elaborative Processing, whereby the more Openness and Conscientiousness are represented in students' personality traits, the more are these learning strategies preferred and utilized. Vice-versa, the more dominant the trait Neuroticism, the less are these two learning strategies preferred and applied. Similarly Sternberg (1996, in Ruisel & Halama, 2007) ascertains the coherence of Openness factor to learning strategies.

Barbaranelli et al. (2003, in Laidra, Pullmann, & Allik, 2007) reported a negative between academic achievement as measured by grade point average (GPA) and self-reported Energy as measured by the Big Five Questionnaire for Children, as well as positive correlations between GPA and Intellect/Openness. De Raad and Schouwenburg (1996, in Laidra, Pullmann, & Allik, 2007) considered Conscientiousness, the factor that describes how organized, motivated and thorough an individual is, to be the most prominent in school contexts. In research of Laidra, Pullmann, & Allik (2007) the personality trait Conscientiousness significantly correlated with GPA in all grade levels. Another personality factor consistently predicting academic achievement through all grades is Openness, which is related to the ability to grasp new ideas and to the tendency to seek novel educational experiences (Costa, & McCrae, 1992) and Conscientiousness in Elementary School and Junior High School children. The Conscientiousness positively influences academic achievement and work performance (Ruisel & Halama, 2007). We also supported the coherence idea of personal trait Conscientiousness with academic achievement of university students in our research, measured on one hand by GPA, on the other hand by achievement in State final exam. However, based on our findings, much more significant personal predictor and correlate of academic achievement are student's learning strategies. We confirmed the connection of all three learning strategies to academic achievement in both forms of its representation (GPA as well as State final exam achievement). In case of Fact Retention learning strategy, we confirmed the coherence with academic achievement only at the level of State final exam.

The research findings of Komarraju et al. (2011) establish a number of interesting linkages between the Big Five personality traits, learning styles and academic achievement, and also show that relationships between openness and GPA are partially mediated by reflective learning styles. Conscientiousness was positively and significantly associated in their research with all four learning styles, and also showed the strongest association of any of our predictors with GPA. We reached identical findings in our research with the exception of relating the trait Conscientiousness with the Fact Retention learning strategy. Conscientiousness appears to facilitate a variety of effective learning strategies and may be an especially useful trait for attaining high levels of academic achievement (Komarraju et al., 2011). We confirmed that university students who are purposeful, reliable and have a strong will are the ones who achieve high academic success. We also found that Openness is positively associated with GPA. University students, who are open to experience, prefer diversity, intellectual curiosity and independent judgment have achieved high academic success.

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# Learning styles and visualization in numerical analysis

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## Abstract

It has been observed that most students of engineering careers prefer learning by watching and doing, in other words, their prevalence style of learning is visual or kinesthetic. On the other side, visualization in computer environments helps students to make their own knowledge construction. In accordance with what was stated above, a toolkit for numerical analysis was developed, so as to assist students in the learning process of the topics covered in different courses of Numerical Analysis at Facultad Regional San Nicolás from the Universidad Tecnológica Nacional of Argentina.

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*Keywords:* numerical analysis; visualisation; learning styles

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## Introduction

Traditional teaching of numerical methods (NM) is often characterized by over-emphasizing algorithmic developments and procedural handling of the symbolic aspects of mathematical objects. By this way of teaching NM, students construct a partial mathematical knowledge consisting mainly of algorithms, situation that makes them manipulate symbols routinely, without giving significance to the basic concepts of NM. The lack of articulation between the different semiotic registers (Duval, 1999) that should be acquired, does not allow students to make an adequate comprehension of the mathematical concepts involved.

Visualization is one of the abilities that is used when conveniently relating NM with technology. One of the meanings of visualization in the dictionary of the Spanish Real Academy is “the action of make in mind a visual image of an abstract concept”. As Malabar and Pountney (2002) declare, visually stimulating computer environments can allow students to become immersed in their own knowledge construction. From these points of view, the inclusion of computer programs can be a facilitator of learning processes because they provide means to articulate the different semiotic registers of a concept.

Sometimes, the task of writing a program is a hard duty for students that have not yet developed skills on programming. In order to help students, some visual tools that implement NM have been developed to be used by them, so as they are able to concentrate on the possibility of appliance of the methods and on the results obtained.

These tools are interactive windows developed with Scilab, Mathematica and Maple. Among other capabilities, these software let users create own designed windows, taking advantage of the power of calculus and graphing that these software have.

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## Learning styles

Students process information and learn in different ways. They may prefer graphical ways of representing information, printed words, "heard" information or the use of experience and practice. The previous preferences can be classified as Visual (V), Read/Write (R), Aural (A) and Kinesthetic (K) (Fleming & Mills, 1992).

In different studies learning preferences of students were determined, obtaining diverse results. For example, the largest group of students of educational disciplines in the Czech Republic consisted of those preferring kinesthetic learning style (Klement, 2014). Ictenbas & Eryilmaz (2011) concluded there is no learning style that outranks others for all engineering disciplines in their University in Turkey.

For several years, most students enrolled in Numerical Analysis at Facultad Regional San Nicolás have shown their preference for the visual learning style. These students preferably learn through visual contact with the educational materials and are able to bring to mind a lot of information at once, finding it easier to absorb large amounts of information quickly. The viewing habit helps them to establish relationships between different ideas and concepts, developing a greater capacity for abstraction. Visual representations of the material, such as graphs, charts and diagrams and the use of videos, films or computer programs improve this type of learning.

## Visualization in mathematics

Visualization is a broad concept, in fact it is a concept on which there are different conceptions in research on the teaching of mathematics. In the Encyclopedia of Cognitive Science by Nadel (2003), visualization is considered as the ability to store and retrieve representations defining the visual characteristics of environmental stimuli, including the graphic symbols used to represent written words (Phillips, Norris & Macnab, 2010). Arcavi (1999) declares that visualization is the ability, the process and the product of creation, interpretation, use and reflection about pictures, diagrams or boards in our minds, on paper or with technological tools in order to represent and communicate information, thinking and developing unknown ideas and anticipating the comprehension.

Visualization in mathematics education permits a broader coverage of mathematical topics, and allows students access to new ways to approach their own mathematics (Elliott, Hudson & O'Reilly, 2000). With visual arguments, students can conceptualize ideas. For Zimmermann and Cunningham (1991), visualization supplies depth and meaning to understanding, serving as a reliable guide to problem solving, and inspiring creative discoveries. In this sense, visualization cannot be isolated from the rest of mathematics; in other words, symbolic, visual and numerical representations must be connected.

The use of apps presenting different semiotic registers in the learning process of mathematical concepts let students interact dynamically with different semiotic representations of the object studied, promoting conceptual learning.

The authors of this paper believe that the use of personalized windows like the ones presented herein below will not only help students to develop the visualization ability, but also enable a dynamic interaction which let students relate different semiotic representations of the studied object, stimulating the conceptual learning.

## A toolkit for numerical analysis using visualization

For the teaching of the different issues of NM at Facultad Regional San Nicolás, Argentina, a set of tools that implements numerical methods was developed, using the symbolic software Maple, Scilab and Mathematica. Some of them will be shown here, highlighting their potential. Others can be seen in [www.frsn.utn.edu.ar/gie](http://www.frsn.utn.edu.ar/gie), resources.

The main purpose of these visual tools is that the user can get a numerical solution for different mathematical problems with the corresponding method/s, in a friendly graphical interface, without worrying about the commands needed for this solution.

By this way, students will not only focus attention on the object under study, but also through visualization, they will be able to compare the methods under study, analyze the pros and cons of applying them to discover math concepts, make generalizations; thus developing and promoting a different kind of mathematical thinking.

*A first example.*

When solving systems of linear equations, it is important to take into account the number of operation needed to obtain the solution, because of the processing time and the propagation of error, assuming the finite precision of machines. Focusing on this fact, the window for decomposition methods gives, for a system, the solution by the Doolittle and Cholesky methods –when possible–, and the number of operations needed. This window, described in a previous work (Rodríguez, Caligaris & Laugero, 2014) is shown in Fig.1.

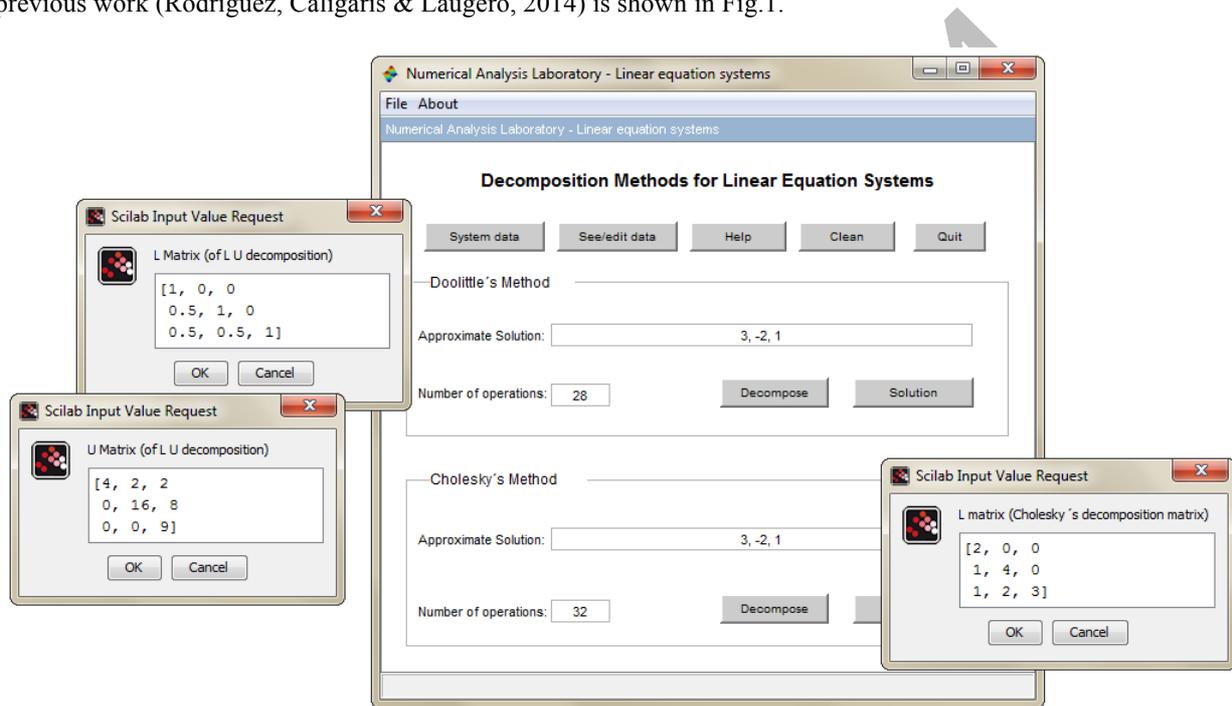


Fig. 1. Window for decomposition methods for solving linear system equations

In Fig. 1, the result of executing the methods available in the window for the system (1) are shown, and the matrices of the decomposition for each method (one for Cholesky, two for Doolittle) are also shown.

$$\begin{pmatrix} 4 & 2 & 2 \\ 2 & 17 & 9 \\ 2 & 9 & 14 \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} 10 \\ -19 \\ 2 \end{pmatrix} \quad (1)$$

In class, students run this window for several systems of different dimensions, 2x2, 3x3, 4x4, 5x5, etc., intentionally given. They met with systems in which the methods could not be applied –where the window gave the corresponding justification–, and they were able to complete by themselves the data presented in Table 1.

Table 1. Amount of operations in decomposition methods

Number of equations	Doolittle method	Cholesky method
2	9	13
3	28	32
4	62	62
5	115	109
6	191	163

The fact that students were able to obtain results and complete this table by themselves –visualizing and doing–, made them take ownership of the conclusion “Cholesky is the most appropriate method when solving linear systems with considerable number of equations, if the corresponding conditions are accomplished”.

*A second example*

Partial differential equations (PDEs) often arise when setting the mathematical model of many engineering problems (Burden & Faires, 2002). Most of them generally don't have exact solution, and Numerical Methods are required so as to obtain an approximation.

Windows for elliptic, parabolic and hyperbolic equations were developed, so as students can obtain results graphically (Caligaris, Rodríguez & Laugero, 2010).

In Fig. 2 a window developed with Scilab for solving the wave equation is presented. The solution is shown as a function of time and space variables.

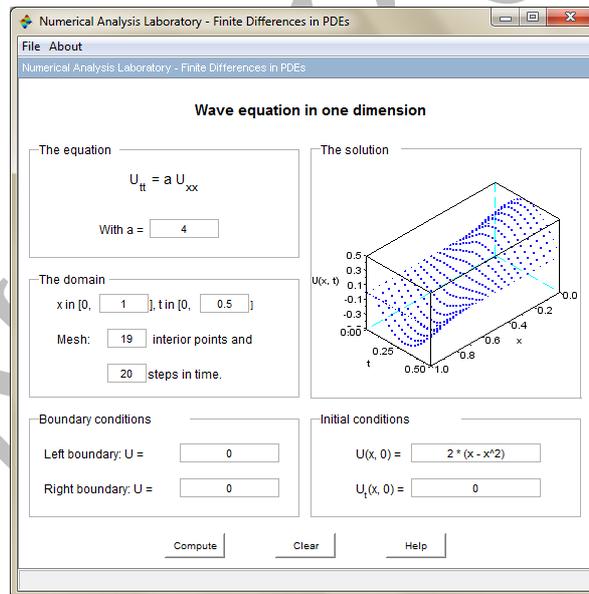


Fig. 2. Window that implements finite difference method for wave equation.

In Fig. 3 a demo window developed with Maple is shown. It offers three preloaded problems, and the exact and approximate solutions are shown. There is also a button that calculates the exact error on each point.

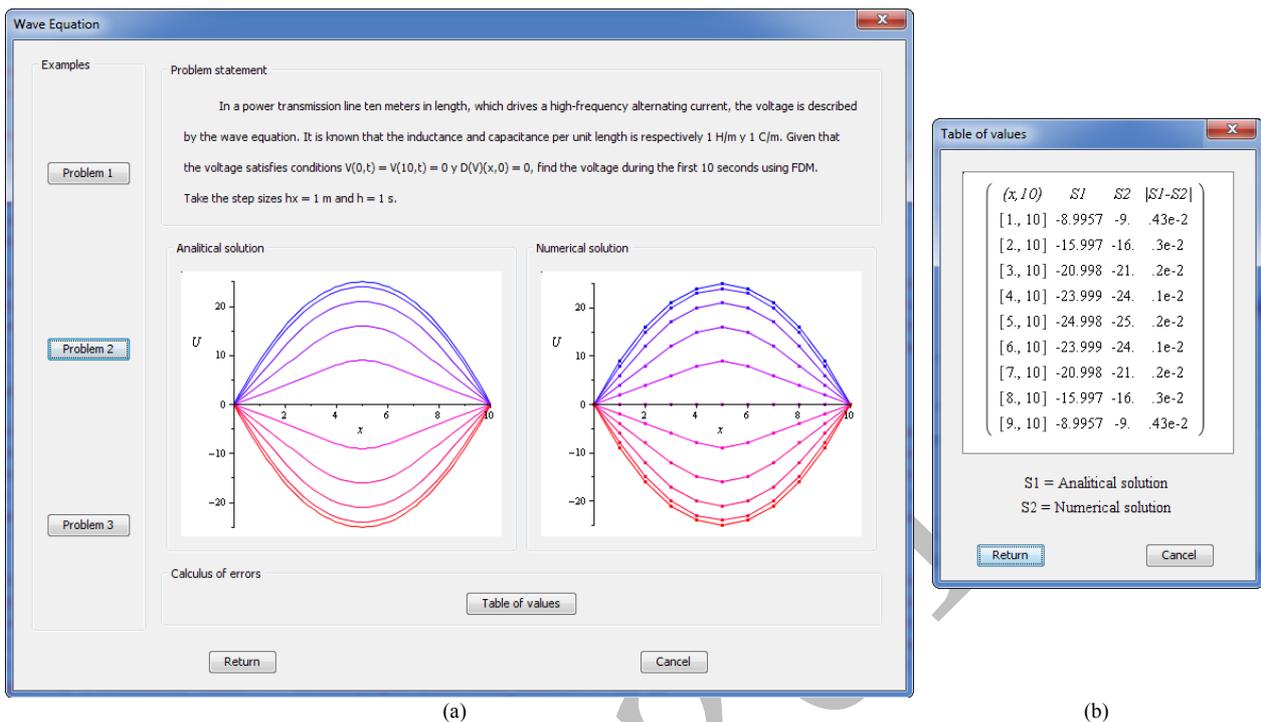


Fig. 3. Demo window for the wave equation.

What is meant with the use of these windows? When applying a numerical method for solving a differential equation, a list of pair of values with a considerable number of decimals is obtained. The simple action of watching a list of numbers does not allow students to make an image of the solution obtained. Different semiotic registers are used in the representations shown in Fig. 3: in (a) a graphical representation of the exact and the approximate solution can be compared; in (b), the numerical results of the exact and the approximate solution are shown, together with the absolute error obtained. By watching together these two registers, students will be able to construct the concept of an approximate solution for the wave equation.

On the other side, it is not possible to appreciate the differences between the two solutions graphically. This is the aim of the table shown in Fig 3 (b): the error in the numerical approximation is shown. Analyzing the numbers here is appropriate.

### A third example

Interpolation and function approximations are other topics taught in numerical analysis courses at Facultad Regional San Nicolás. The main purpose of the interpolation is to estimate the function values between known data at discrete points. This possibility is used in various ways to derive other numerical methods, for example the methods for numerical integration.

Fig. 4 shows a window developed with Mathematica in which the polynomial interpolation and the cubic spline for the same set of points are plotted. This application is a CDF file that can be opened and executed with the CDF Player, available for free in <https://www.wolfram.com/cdf-player/>.

One of the disadvantages that usually arises among students is to distinguish situations in which it is desirable to use a polynomial interpolation. Students will be able to determine from observation, that it is not appropriate to use an interpolating polynomial passing through all the given points to obtain an approximation of  $f(0.5)$  in the example of Fig. 4 because, in order to pass through the points indicated, there are some fluctuations in the studied range.

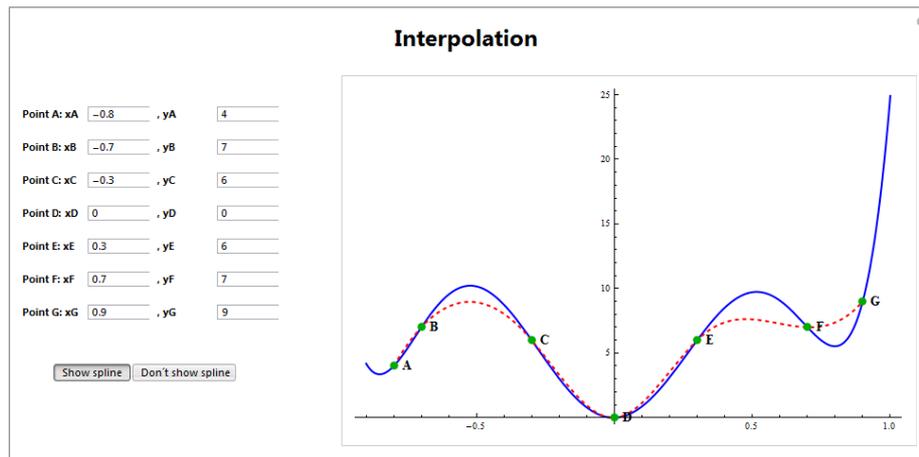


Fig. 4. Window for obtaining interpolating polynomials

## Conclusion

Technology made possible visualization in mathematics, particularly in the field of numerical analysis. With symbolic and numerical software and the widespread of computers, students can acquire mathematical objects in a different way: students have now tools for developing competences to argue, analyze and conjecture, among others.

The tools presented here can be particularly important when searching for ways to work with students raised with visual stimulation. However, quantity does not ensure quality, and there are many open questions about which visualizations are most effective in increasing student learning, and about how they should be used in the classroom (Rogness, 2011).

By interacting and experimenting, students understand better the concept that is being taught. Didactic sequences applied in the teaching must bring together learners and resources to let knowledge arise. It is important to analyze the way that students learn, so as to develop sequences consistent with the group for which they are intended.

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# Learning transfer in national occupational skill standard (NOSS) system and workplace learning: how training design affect it?

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## Abstract

Development of human resources and skills is central to the success of any organization. However, past studies have identified that less than 15 to 20 percent of the knowledge and skills acquired in trainings are actually acquired in workplaces. This causes trainees to possess limited skills as well as result in loss of funds invested in training programs, which could contribute to the mismatch in job preparation. Due to the concerns over the issue of mismatch between training and the demand of the industry, this study was designed to identify the critical elements to reinforce sustainable learning transfer. This study employs an exploratory qualitative study on the learning transfer. The qualitative data was collected from instructors, employers, NOSS panel, trainees and colleagues, through face-to-face interviews and focus group discussions. Qualitative findings revealed that training design is an important factor that influences learning transfer, especially in National Occupational Skill Standard (NOSS) system and workplace learning in Malaysia. The findings have implications on preparing a highly skilled workforce.

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*Keywords:* Learning transfer; workplace learning; NOSS; Malaysia.

## Introduction

Increased in the number of skills graduates who did not work or work outside the field clearly shows that there is flaws in the system of training in Malaysia. The issue of skills mismatch among trainees still haunting the trainees and employers. This skills mismatch problem raises questions about the appropriateness of skills training system based National Occupational Skill Standard (NOSS) particularly in producing highly skilled workers at once can fill the job opportunities needed by employers.

Study shows that, level workability of the National Youth Skills Institute (IKBN) graduates found that 26% (in 2005) and 30% (in 2006) employed graduates are not using and only use a little bit of skills acquired at work (Department of Skills Development, 2011b). Clearly shows graduates have problems to apply the skills and knowledge acquired from the skill training institutions to working environment. Based on level workability of this study, it shows that what is learned at the skills training institutions does not match with what is practiced in the industry at once do not meet the needs of the industry. Oftentimes dissatisfaction exists among employers on the outcome of these programs were accompanied by their employees (Department of Human Resources, 2009). This is

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because of the difficulty in linking what is learned by workers with daily work in the workplace (Jørgensen, 2011; Nielsen, 2009). Therefore, various causes can be associated with this skills mismatch problem. One of them is related to the transfer of learning. This is because trainees attending skills training institutions have difficulty in carrying out their duties properly and efficiently while at work because they do not have sufficient skills, knowledge and behaviour in doing the work (Ahmad et al., 2010). It is also supported by Pang et al. (2009), transfer of learning is difficult to apply in NOSS training system because not achieving the quality or the employers' required in the workplace. The extent to which the truth of this statement becomes a question mark because no specific studies on the transfer of learning lead to the training design is done especially for this NOSS-based systems. Thus the exploration of learning transfer that led to the training design for skills-based NOSS training system must be done to clarify this point.

#### *National Occupational Skill Standard (NOSS)-based training system*

Mainstreaming of TVET and skills training to be a widely discussed topic. This is because by increasing the quality of skills among the workforce is becoming one of the factors to achieve high-income status. Based Training and Development Master Plan 2008-2020 (PILPKK), in ensuring the training and skills development to be more effective, several factors are taken into consideration. Among these are the standards and regulations, certification and recognition, training providers, trainers, industry-driven training, and training methodology (Ministry of Human Resources 2008). Therefore, these factors should be seriously considered to ensure the smooth development of skilled manpower thereby to enhance the value chain to become a high-income country.

Thus National Occupational Skill Standard (NOSS) system has been used as a legal standard and to produce skilled manpower. Introduction of NOSS system is also able to create and strengthen the relationship between training institutes with the working world. In 2010, a total of 283 NOSS developed both externally and internally. This contributed to the total number of active NOSS until 2010 was 1,291 NOSS (Department of Skills Development 2010). This increase indicates NOSS development has become a major guideline in this country by various training institute in developing a skilled workforce.

However, Pang et al. (2009) noted that the lack of research or evaluation of this NOSS-based training system because of lack of published materials and practical information on every aspect of empirical systems, including how it was developed. Although this system has been stable and has the strength, the system has been criticized, particularly in terms of the orientation of the static and narrow jobs that are more likely to form a traditional behaviourist work, and not in accordance with the requirements of the modern workplace (Pang et al. 2009; Spottl 2000). Therefore, it is necessary to study the NOSS-based training system is done especially in terms of transfer of learning in view the suitability of this system in this modern technological age (Ruhizan et al. 2014). Additional Pang et al. (2009) again, learning transfer is difficult to apply in NOSS training system because not achieving the quality or the needs of employers required in the workplace. However, no empirical studies that proves this statement. This supported by Ahmad (2012), less the study of the phenomenon of learning transfer in skills training in Malaysia, especially those involving NOSS system-based training.

#### *Workplace Learning*

Previous study found that there are various definitions associated with workplace learning. Generally, workplace learning has been described as the relationship between two significant human processes: working and learning (Barnett & Ceci, 2002; Fuller et al. 2005; Sambrook, 2005). Table 1 summarize the various definitions of workplace learning that had been done by researcher. As a conclusion, for this research, workplace learning is a combined definition involving formal, informal learning, unstructured, incidental or ad hoc that occur in the work environment.

Table 1: Definitions of Workplace Learning

<b>Authors</b>	<b>Date</b>	<b>Definitions</b>
Billett	2001	Work practices serve to structure activities and guide in ways that influence the learning of the knowledge required for performance at work. These experiences are not informal or

		unstructured, incidental or ad hoc. Instead, they are structured by the requirements of work practice rather than the practice of educational institutions
Hodkinson and Hodkinson	2004	Workplace learning is sufficiently diverse and complex that no one theory, at least none yet fully developed can adequately deal with all its aspects. Within this complexity, only some types of workplace learning are susceptible to the clear identification of workplace learning
Sambrook	2005	Work-related learning encompasses learning at work (the more formal provision of education and training courses) and learning in work (the more informal processes embedded in work activities)

According to Billet (2001), workplace learning is to develop vocational practice. However, workplace learning should not replace school-based learning but the two can complement each other (Aarkorg 2005). In addition, workplace learning is also important in ensuring transfer of learning occurs between employees to increase productivity. This is because, the role of learning in the workplace helps employees to generalize and maintain the skills and knowledge learned in the training institutions. In accordance with the concept of transfer of learning that emphasizes generalization and maintenance of knowledge and skills to ensure the effectiveness of the transfer. Although workplace learning is entailed learning without written curriculum documents used to plan teachers' actions and learners' experiences, qualified teachers and didactic teaching practices, but according to Billet (2001) yet, it is imprecise and misleading to describe individuals engagement in work activities as being unplanned or unstructured, as they are highly structured and intention.

The importance workplace learning has begun to attract the attention of many employers and organizations, generally in Malaysia. This is because many of the benefits that they receive as well from increased productivity. Nation-state involvement and company for workplace learning is also can be economical, educational, social and cultural (Lindell and Stensrom, 2005). In addition, the implementation of workplace learning can also provide benefits to employees. According to Nilsson (2003) work environment, which facilitate and stimulate learning positively influence health, wellbeing and personal development of their employees.

However, not all implementation of workplace learning is successful. This is because there are some features of workplace learning to equip to this effective workplace learning. Literatures show that conducive environment is a precondition for successful workplace learning (Kunjiapu & Yasin, 2010). Beside that strong leadership commitment also pertinent (Wongboonsin et. al., 2007) while variation in work tasks improves the quality of workplace learning (Kock, 2008). These are all necessary to ensure that workplace learning can occur thus ensuring investment made by employers is worthwhile to ensure employees are skilled.

According to Kunjiapu and Yasin (2010), reveals that workplace learning through workplace learning is still a relatively young topic in Malaysia. Yet studies on workplace learning in employer involvement of trainee skills are lacking. Therefore, need for a study to see how the process of learning that occurs in the workplace involving the skills of trainees in particular.

## **Training Design**

Training design refers to the principle of learning and training content that takes into account the objectives, materials used and content structures of the trainings (Munna & Suring, 2011). Thus, improper preparation of training design may lead to ineffective transfer of learning. Previous studies found that training designs and training facilities contributed a significant influence on the transfer of learning (Blume et al., 2010; Burke & Hutchins, 2007; Hutchins, 2009; Baldwin et al. (2009) found that training design is the most widely studied by researchers in the effectiveness of a training program. While Lim & Morris (2006) emphasize on the role of the training design in providing trainees with the right level of knowledge. Therefore, organizations need to design a training program that suitable or relevant with trainees' knowledge and skills. In fact, training organizations should provide trainees a training environment that is similar with the real work environment. When the training environment and practical exercises are similar to the real work, the acquisition and transfer of learning is more likely to improve.

In terms of workplace learning, employers must plan training design to ensure improvement and retention of employees' performance through formal, informal or incident learning. This is to ensure improved and sustainable performance of employees. The validity of the training content also has a significant impact on learning transfer. The training content validity refers to the extent to which training programs evaluated by the trainees through

objectives and goals reflection of the training program (Holton et al., 2000). In this sense, trainees' satisfaction and confidence towards the training programs designed affect the organization in developing a valid or suitable training content.

Based on Baldwin and Ford (1988) model, training design include with learning principles, sequence and training content. From this model, a good training or learning experience makes more likely that students will understand and remember what they have learned. But training design cannot generalized and maintenance directly. Therefore, more specific studies should be conducted to determine the depth-related factors that influence the design of training. This is important to ensure that training programs are available to help transfer thus making the training program is effective.

Since the Holton et al. (2000) conceptual model consists of many aspects of different factors that influence the transfer of learning, it is considered as the more thorough and comprehensive model than others (Ahmad et al. 2010). In this conceptual model training design can be show on capabilities variable. Two factors of capabilities used in the job is the lack of opportunity to use the learning and the lack of personal capacity to try learning (Holton et al. 2000). Besides that, lack of content validity on learning content can make it difficult for trainees to understand and relate to the job. Therefore, all of these factors must be taken seriously to make sure learning transfer can be done.

Therefore all of these factors must be consider in this study whether it is suitable for NOSS system and workplace learning in Malaysia. The results from these studies indicate various interpretations depending on the study environment. This indicates that the flexibility of learning transfer depends on training and workplace environmental conditions (Ruhizan et al. 2014).

## Methodology

This study used a qualitative design-a case study, which is triangulated by methods and resources. This study triangulated by a method with involved face to face semi-structured interviews with the instructor, the NOSS panel, employers and trainees who are currently employed, focus group discussion with ex-trainees who have worked and have work experience and observation at the institute and workplace environment. The sources for triangulation were selected by sample selection from a variety of organizations and positions. Through this method, the researchers are able to share their experience and are thus able to explore and understand the phenomenon of a research by immersing themselves deeply into what is interpreted through conversations and expressions of their feelings. This is supported by Yin (2003), through face interviews, the researcher is able to answer the questions 'how' or 'why', when the investigator has little control over events is thus able to explore the events in detail. Meanwhile, Konting (2005) explained that focus group discussions generated data that provides the researcher with the opportunity to be more flexible in analyzing the specific things that are not clear and need justification.

## Findings

Two types of data used by the thematic analysis are face interview and focus group discussion data. Data were analyzed with the aid of Nvivo software version 8.0. Based on the analysis of training design themes that done, then the final order of the themes and sub-themes are shown in the table 2 below. Table 2 show that theme and sub theme that produced from past study and new data that emerged from interviews and focus group discussion. Overall exist six themes (Ruhizan et al. 2014), and 20 sub-themes that were issued on the theories, models and new findings from interviews conducted. Then for the last stage of the analysis is to produce a report theme. At this stage, it deals with the final explanation of how the themes and sub-themes are identified and analyzed.

Table 2: Training design Themes and Sub-Themes Arising From the Thematic Analysis

Training Design	
a) Personal Capacity to Transfer	
- climate of working environment	Expert interview & focus group discussion
- pressure level	Holton et al (2000)
b) Opportunity to Use	
- Opportunities to use skills	Tracey et al. (1995)

- sufficient information and material	Bates et al (2000), Holton et al. (2000), Enos et al. (2003)
- sufficient financial resources	Facteau et al. (1995), Burke & Baldwin (1999)
- sufficient human resources	Burke & Baldwin (1999)
c) Perceived Content Validity	
- Similarity training and work	Burke & Baldwin (1999), Expert interview & focus group discussion
- Expert help in job	Expert interview & focus group discussion
d) Transfer Design	
- Various examples and materials for teaching	Expert interview & focus group discussion
- facility equipment	Burke & Baldwin (1999),
- Training programs related to job performance	Baharim (2008)
- Collaborating with industry and institutes	Expert interview & focus group discussion
- The role of instructor and employer	Expert interview & focus group discussion
e) Curriculum and Training	
- NOSS updates based on industry needs	Expert interview & focus group discussion
- Refer to the manual and module	Expert interview & focus group discussion
- Follow the procedures for safety	Expert interview & focus group discussion
f) Transfer Effort-Performance	
- performance improvement	Holton et al. (2000)
- Future changes	Holton et al. (2000)
- reward	Holton (1996), Bates (2000)
- skilful	Expert interview & focus group discussion

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Therefore in this study, the training design consists of six sub-themes, namely personal capacity to transfer, perceived content validity, opportunities to use, transfer design, curriculum and training design, and transfer effort-performance. Then explanation about the themes like below.

#### *Personal Capacity to Transfer*

Personal capacity to transfer emphasize the extent to which trainees have the time, energy and emotional readiness to do the work necessary to make changes at once transferring learning in the workplace (Holton et al. 2000). So for this study there are two theme that affect the personal capacity to transfer like pressure level (Holton et al. 2000) and climate of working environment. Stress levels theme refers of emotional stress and also pressure from the time angle faced by trainees in applying learning outcomes. While climate of working environment theme mainly gained from a of the interview data and refer to the existence of a real work atmosphere that gives a better understanding of training to trainees.

#### *Opportunity to Use*

Holton et al. (2000) explain the opportunity to use of learning is the extent to which trainees are given or obtain resources and tasks at work that allows them to use the training in the workplace. This involves the readiness of the organization in providing trainees with the opportunity to apply new skills, the resources (equipment, information, materials, and supplies) sufficient to use the new skills in addition to financial and human resources are sufficient. Therefore, the sub themes that represent the above definition is an opportunity to use skills (Tracey et al., 1995), enough information and material (Bates et al., 2000; Enos et al., 2003), sufficient financial resources (Burke & Baldwin 1999 ; Facteau et al., 1995) and sufficient human resources (Burke & Baldwin, 1999).

#### *Perceived Content Validity*

Perceived content validity defined as the extent to which trainees judge training content to meet the needs of the job (Holton et al. 2000). So for this study, this theme emphasizes how the skills and knowledge taught is similar to the expected performance as well as what the trainees need for perform more effectively. It also address the extent to which teaching methods, assistance, and equipment used in the training were similar to those used in the work of trainees. Therefore, a number of sub themes were represented themes such as similarity training and work (Burke & Baldwin 1999), and expert help in job. Sub themes expert help in the work and role of the instructor and the

employer is the new code that appears as a result of interviews conducted. Sub-theme expert help in job is defined as expertise of the trainees themselves, including being an expert in a field as a result of their exposure in the work environment such as industry training by helping other trainees and instructors on a new skill.

### *Transfer Design*

Holton et al. (2000) explain the transfer of design refers to what extent the training is designed and delivered for give trainees the ability to transfer learning outcomes into work, and designing training based on job requirements. So for this study, it refers to how training is designed clearly and link learning with work performance through the use of clear examples, the method is similar to the work environment, and the activities and exercises that clearly demonstrate how to apply the new knowledge and skills. Therefore, the sub-sub-theme theme representing this theme is as The role of instructor and employer, facility equipment (Burke & Baldwin, 1999), training programs related to job performance (Baharim 2008), Collaborating with industry and institutes .

The role of instructor and employer sub theme refer to the input and experience of existing instructor or supervisor diversify teaching by using examples of the corresponding. Next, the facility equipment sub theme was provided by the training institute should be complete and in accordance with the requirements of the industry so that trainees can learn what the industry wanted. Training programs related to job performance sub theme refers to the training to help trainees improve job performance and training delivered is easily understood by the trainees. Next collaborating with industry and institutes sub themes are collaboration being created between industry and institutes related to the use of new technologies that can be delivered and taught to trainees through courses and intensive training to trainees and instructors. While the role of the instructor and the employer sub-theme refers to the role played by instructor in ensuring product knowledge and skills can be delivered more effectively.

### *Curriculum and Training*

Curriculum and training theme is a new theme that emerged as a result of interviews conducted. This theme includes content NOSS-based training system developed for skill training is based on industry needs. Additionally, this theme can also refer to the content-job training covering a wide range of activities including courses, intensive training, workshops, discussions, etc. that provide information to the trainees while working at once be able to maintain existing skills trainees. So for this theme, there are three sub themes that represent it like NOSS updates based on industry needs, refer to the manual and module and follow the procedures for safety

### *Transfer Effort-Performance*

According to Holton et al. (2000) transfer effort-performance are expectations of helping to transfer the learning will lead to increased job performance. So in the context of this study, it refers to the extent to which trainees believe that by applying the skills and knowledge learned in training will improve their performance. These include whether trainees believe that striving in new skills have made a difference in the past or will affect future productivity and effectiveness. In addition it also includes the extent to which trainees believe the application of skills and knowledge learned in training will lead to the desired recognition. This includes the involvement of the organization showing the relationship between development, performance, and recognition of the work of trainees.

Then there are four sub-themes underlying i.e. improved performance, future changes, rewards (Bates et al. 2000; Holton III 1996), and skilful. Improved performance refers results from the use of skills and knowledge learned to improve their performance. While future changes is the extent to which results from the application of skills and knowledge to change the future trainees. Reward sub theme is obtained recognition to trainees as a result of training utilization of credit, allowance, salary, expenses and others. While skilful sub theme is acquired skills will help trainee in the improve performance while working as a specialist in a particular field.

## Discussion and Conclusion

Based on the findings of the study show that there are several themes that are supported by previous studies related to the training design. Among them is the personal capacity to transfer, the perceived content validity, lucre to use, transfer design, and comes back-transfer performance. Whereas curriculum and training theme is a new themes arising from the findings from interviews and focus group discussion. This is because the researchers found that this theme is a new finding that should be emphasized when dealing with NOSS system and workplace learning. In addition, there are also some new sub-themes arising from interviews and focus group discussion. Among them is the climate of the working environment, training and work similarity, expert help in job, various examples and materials for teaching, Collaborating with industry and institutes, the role of instructor and employer, and skilful. The researcher considers this sub-theme necessary to ensure transfer of learning in the context of skills training in Malaysia can occur effectively.

Overall, the training design includes a comprehensive training system based on NOSS and workplace learning in Malaysia. This is evidenced by the emergence of new theme and sub theme that have never existed in any previous transfer model. This also supports the Baldwin et al. (2009), that the transfer of learning are not fixed and vary depending on environmental conditions and job training. Thus, in this study, the transfer of learning has been adapted for skills training environment in Malaysia.

The findings of this study can thus help the trainees, trainers and employers to ensure that what has been learned can be transferred to work efficiently. It also helps instructors and employers in ensuring things are needed in developing training programs for NOSS-based training systems and learning in the workplace. This will ultimately help the government in producing highly skilled workers thereby achieving a high-income nation status. However, these factors need to be supported by further empirical studies. For instance, which factors contribute to the transfer of learning. Therefore more emphasis will be given right to such factors.

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# Least square support vector machine and minimum redundancy maximum relevance for diagnosis of breast cancer from breast microscopic images

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## Abstract

In these days, there are many various diseases, whose diagnosis is very hard. Breast cancer is one of these type diseases. In this study, the aim is to determine cancerous lesions taken from light microscopic. Here, totally 180 that be 3x60 breast microscopic images set are taken from Firat University Medicine Faculty Pathology Laboratory. In this study, 23 features are used. These features are totally obtained 92 (23x4) features by rotating for variety angles (i.e., 0°, 45°, 90°, 135°) breast microscopic images. In this paper, new method is found. This method are called as Minimum Redundancy Maximum Relevance Least Square Support Vector Machine (mRMR\_LSSVM). In this study, the structure of this method composes from three steps. These are feature select step, classification step and testing stage. In feature select step have found optimal feature subset using minimum redundancy and maximum relevance via mutual information (mRMR). In classification step is used LSSVM. For validation of the proposed method is found the accuracy rate. This accuracy rate, with (mRMR\_LSSVM). was obtained %100 in breast microscopic images.

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• *Keywords* :Breast microscopic images; Least square support vector machine; minimum redundancy and maximum relevance

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## Introduction

Breast cancer is one of the cancers, which is frequently encountered in women, and it is the second major cause of death after lung cancer (Ferlay et. al, 2007). However, early diagnosis decreases mortality rate up to 41% (Roder et. al, 2008). Early stage detection and treatment results in a 98% survival rate, however this plummets to 27% if metastases have spread to distant organs (American Cancer Society, 2009). Today early cancer diagnosis cannot be achieved exactly. Even though there are lots of studies realized on breast cancer diagnosis, required result cannot be obtained (Roder et. al, 2008). For this reason, multi-modality solutions may be developed by means of information such as thermography, radiography, mammography, histology images and electrical and mechanical features of cells, etc. Thus, requirement of classifying the histology and mammography images available comes out with the aid of algorithms developed in the computer environment.

In this study, total 180 (3x60) breast microscopic images have been examined, which are specified as 60 normal (nm), 60 benign (bm) and 60 malign (mm). Then mutual information based maximum relevance and minimum redundancy algorithm is utilized to select some of effective features (C. Ding et. al, 2003). Breast microscopic images are determined from Firat University Medicine Faculty Pathology Laboratory. Features of breast microscopic images have been selected by m(RMR). Breast microscopic images are classified as normal, benign and malign with, mRMR\_LSSVM method. Invasive breast cancers are a heterogeneous group of tumours that show a wide variation with regard to their clinical presentation, behaviour, and morphological spectrum. At least 18 different histological breast cancer types (ie pathological entities) are described by the World Health Organization (WHO). Invasive ductal carcinoma not otherwise specified (IDC NOS) accounts for the large majority of breast cancers (50–80%). IDC NOS is a diagnosis by default, being defined by the WHO as a tumour that fails to exhibit sufficient morphological characteristics to be classified into one of the histological special types. Approximately 25% of invasive breast cancers are recognized as ‘special types’, and characterized by distinctive growth patterns and cytological features (Lee, et. al, 2003). In one study, classification based on subdivisions of a whole slide image containing a high concentration of cancer cell nuclei consistently agreed with the grade classification of the entire slide (Weigelt, et. al, 2008). In another study, A prospective study of the Doppler color flow features of 55 proved breast cancers was performed. On a three-level scale of low to marked vascularity, visual assessment of the color flow images classified 82% of the cancers as moderately or markedly vascular (minimal: 14%, moderate: 29%, marked: 53%) (Weigelt, et. al, 2008).

The minimum redundancy maximum relevance for feature select is proposed in Section 2. The structure of LSSVM for classifier is given in Section 3. Experimental results and Discussions of method mRMR\_LSSVM is introduced in Section 4. Accuracy rate is given Section 5. Finally, the conclusion is presented in Section 6, respectively.

### Selection based on Mutual Information with Max-Relevance and Min-Redundancy

Table 1 includes all the features examined. Using feature selection based mutual information algorithm, subset features can be selected from features space.

**Table 1.** List of features used to represent breast cancer histology images

Ftr No	Feature (Ftr) Name	Ftr No	Feature (Ftr) Name
f1	Autocorrelation	f13	Sum of squares
f2	Correlation1	f14	Energy
f3	Correlation2	f15	Entropy
f4	Dissimilarity	f16	Inverse difference Moment
f5	Cluster prominence	f17	Difference variance
f6	Cluster shade	f18	Contrast
f7	Sum variance	f19	Local homogeneity
f8	Sum average	f20	Cluster shade
f9	Sum entropy	f21	Inverse diff. normalized
f10	Homogeneity1	f22	Inverse diff. moment normalized
f11	Homogeneity2	f23	Difference Entropy
f12	Maximum probability		

Mutual information (C. Ding et. al, 2003) between  $f_i$  and  $c_i$  can be given by

$$I(f, c) = \sum_{i,j} p(f_i, c_j) \log \frac{p(f_i, c_j)}{p(f_i)p(c_j)} \quad (3)$$

Then max relevance is represented as

$$\max D(S, c), \quad D = \frac{1}{|S|} \sum_{f_i \in S} I(f; c) \quad (4)$$

And then minimum redundancy is given in

$$\min R(S), \quad R = \frac{1}{|S|^2} \sum_{f_i, f_j \in S} I(f_i; f_j) \quad (5)$$

Fusing the above two constraints we can get “minimum-Redundancy-Maximal-Relevance” m(RMR) criterion as

$$\max \Phi(D, R), \quad \Phi = D - R \quad (6)$$

where  $I(f_i; c)$  is mutual information values between individual feature  $f_i$  and class  $c$ ;  $c$  is target class ;  $\Phi(\cdot)$  is the near-optimal features.

### Least Squares Support Vector Machine (LSSVM)

The standard LS-SVM algorithm was introduced as follows. Assume a set of training set is given like  $\{x_i, y_i\}_{i=1}^N$ , with the input  $x_i \in R^N$  and the output  $x_i \in R$  The following regression model is constructed by using nonlinear mapping function  $\varphi(\cdot)$ , which maps the input data to a higher dimensional feature space:

$$y = w^T \varphi(x) + b \quad (7)$$

where  $w$  is the weight vector and  $b$  is the bias term. As in SVM, it is necessary to minimize a cost function  $C$  containing a penalized regression error, as follows:

$$\min C(w, e) = \left(\frac{1}{2}\right) w^T w + \left(\frac{1}{2}\right) \gamma \sum_{i=1}^N e_i^2 \quad (8)$$

subject to the constraints

$$y_i = w^T \varphi(x) + b + e_i \quad i = 1, 2, \dots, N \quad (9)$$

where  $r$  is the regularization parameter which balances the model's complexity and the training errors, and  $e_i$  is the random errors. And then, Lagrange function is adopted to solve this optimization problem.

$$L(w, b, e, \alpha) = J(w, e) - \sum_{i=1}^N \alpha_i \{w^T \varphi(x) + b + e_i - y_i\} \quad (10)$$

where  $\alpha_i$  is Lagrange multipliers called support value. The solution of the above equation can be obtained by partially differentiating with respect to each variable

$$\begin{aligned} \frac{\partial L}{\partial w} = 0 &\rightarrow w = \sum_{i=1}^N \alpha_i \varphi(x_i) \\ \frac{\partial L}{\partial b} = 0 &\rightarrow \sum_{i=1}^N \alpha_i \\ \frac{\partial L}{\partial e_i} = 0 &\rightarrow \alpha_i = \gamma e_i, \quad i = 1, \dots, N \\ \frac{\partial L}{\partial x_i} = 0 &\rightarrow w^T \varphi(x_i) + b + e_i - y_i = 0, \quad i = 1, \dots, N \end{aligned}$$

$$\begin{bmatrix} 0 & \vec{1}^T \\ \vec{1} & \Omega + \gamma^{-1} \end{bmatrix} \begin{bmatrix} b \\ \alpha \end{bmatrix} = \begin{bmatrix} 0 \\ \gamma \end{bmatrix} \quad (11)$$

$$\begin{aligned}
y &= [y_1, \dots, y_N] \\
\vec{1} &= [1, \dots, 1] \\
\alpha &= [\alpha_1, \dots, \alpha_N] \\
\Omega &= \{\Omega_{ij} | i, l = 1, \dots, N\} \\
\text{and } \Omega_{il} &= \varphi(x_i)^T \varphi(x_l) = K(x_i, x_l), i, l = 1, \dots, N,
\end{aligned} \tag{12}$$

where  $K(x_i, x_j)$  is the kernel function, and must follow Mercer's theory. The common examples of kernel function contain linear, polynomial, radial basis function (RBF) kernel and multi-layer perceptron (MLP). In our work, RBF kernel was selected as the kernel function as

$$K(x, x_i) = \exp(-\|x - x_i\|^2/\sigma^2) \tag{13}$$

The LS-SVM regression model can be obtained as

$$y(x) = \sum_{i=1}^N \alpha_i K(x, x_i) + b \tag{14}$$

When using SVM or LS-SVM, there are three crucial problems need to be solved, namely, the determination of the optimal input feature subset, proper kernel function, and the best kernel parameters. However, no systematic methodology is available for a prior selection of kernel function. In this paper, RBF kernel was used as the kernel function of LS-SVM, as it was a nonlinear function and a more compact supported kernel, and could reduce the computational complexity of the training procedure while giving good performance under general smoothness assumptions. Proper parameter setting plays a crucial role in building a good LS-SVM regression model with high prediction accuracy and stability. We employed Grid search Technique and Leave One Out Cross-Validation to find out the optimal parameter values, namely, regularization parameter  $\gamma$  ( $c$ ) and the RBF kernel function parameter  $\text{sig}2$  ( $r2$ ) which is the bandwidth in the case of the RBF kernel. Grid search is a two-dimensional minimization procedure based on exhaustive search in a limited range. In each iteration, one leaves one point, and fits a model on the other data points. The performance of the model is estimated based on the point left out. This procedure is repeated for each data point. Finally, all the different estimates of the performance are combined. The assumption is made that the input data is distributed independent and identically over the input space (Pelckmans et. al, 2003). [Pelckmans].

#### Accuracy Rate For mRMR\_LSSVM Method

Accuracy rate founded for breast microscopic images with mRMR\_LSSVM are as

$$\text{Accuracy}_{\text{his}} = \frac{\text{sum}(\text{sonuc}_{\text{his}}(i)==c)}{\text{length}(\text{sonuc})} \tag{19}$$

where  $i$  is number testing images.  $c$  is types that should be of images.  $\text{Accuracy}_{\text{his}}$  is accuracy rate for breast microscopic images.

#### Experimental results and Discussions of mRMR\_LSSVM method

For implementation of mRMR\_LSSVM methods for diagnosis of breast cancer from breast microscopic images, we taken breast microscopic images from Firat University Medicine Faculty Pathology Laboratuary. These breast microscopic images which are normal breast microscopic (nbm), benign breast microscopic (bbm), and malign breast microscopic (mbm) are given in Fig.1 (a), (b), (c). mRMR\_LSSVM for diagnosis of Breast Cancer from

breast microscopic images is offered. Some of samples out of totally 180 (3x60) breast microscopic images are given in Fig. 1.

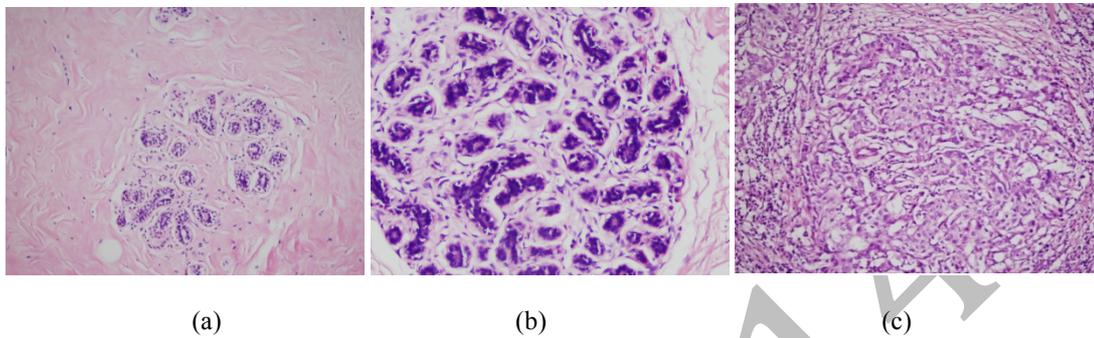


Fig.1. Examples for (a) normal breast microscopic (*nbmI*), (b) benign breast microscopic (*bbmI*) and (c) malign breast microscopic (*mbmI*) of breast cancer

These breast microscopic images are used for 90 training and 30 testing. So,  $30n_{his}$ ,  $30b_{his}$  and  $30m_{his}$  are used for training.  $30n_{his}$ ,  $30b_{his}$  and  $30m_{his}$  are used for testing. In this study, 23 features are used. These features are totally obtained 92 ( $23 \times 4$ ) features by rotating for variety angles (i.e.,  $0^\circ, 45^\circ, 90^\circ, 135^\circ$ ) breast microscopic images given in the Fig 1. From these 92 features, for each of normal, benign and malignant breast microscopic images are selected 10 features using mutual information based maximum relevance and minimum redundancy. Breast microscopic images are classified as normal, benign, and malignant. Afterwards, of the breast microscopic images, whether or not it is normal, benign or malignant, are found using mRMR\_LSSVM method. mRMR\_LSSVM method are founded accuracy rate %100 in breast microscopic images.

Table 2. The diagnosis achievement results obtained by mRMR\_LSSVM method

Test Results	Accuracy Diagnosis (%)			
	$n_{mam}$	$b_{mam}$	$m_{mam}$	Accuracy $_{mam}$
mRMR_LSSVM	TN=30 FP=0	TP=30 FN=3	TP=30 FN=0	%100

## Conclusion

So far, in every field of health have been made different studies. And many systems have been developed

(A. Şengür, 2008). In this work, total 180 are used breast microscopic images. These images are used for 90 training and 90 testing. So,  $30n_{his}$ ,  $30b_{his}$  and  $30m_{his}$  are used for training.  $30n_{his}$ ,  $30b_{his}$  and  $30m_{his}$  are used for testing taken from Firat University Medicine Faculty Pathology Laboratory. These breast microscopic images are used for 90 training and 90 testing. As feature selection method have used minimum redundancy and maximum relevance via mutual information (mRMR). In this paper, new method are found. This method are called as Minimum Redundancy Maximum Relavance Least Square Support Vector Machine (mRMR\_LSSVM). This method is found to be as good as the previous classification techniques. As a next step to mammography and histology images taken from the same patient could participate atomic force microscopic images. Thus, a cancer diagnosis can be made more powerful.

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# Legibility of textbooks: a literature review

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## Abstract

The purpose of the study was to analyse findings in the field of the textbooks' legibility, readability and visual word recognition. The paper focuses on the most significant findings for comprehending the texts' spatial characteristics during reading, word and letter recognition. The aim of the study was to analyse the factors which have induced inconsistencies between the findings acquired by scientists, as well as to compare findings which continually lead to progression in this field.

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*Keywords:* Legibility; Letter recognition; Readability; Textbooks; Typeface

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## 1. Introduction

In order to keep informed, people definitely depend on reading material (Aberson & Bouwhuis, 1977). In schools and universities, reading is the major source of input for learners and students. And yet, very little is known about how type features and spatial characteristics of texts are perceived by the readers. Studies of legibility are vital to find out the importance of type design and typographical issues in learning and reading. It is more than a century that many researchers have been concerned with legibility of print. There have been lots of recommendations and rules regarding legibility, but they were not based on scientific studies and were based on subjective findings and partly on principle of harmony in art. Few studies have been done in 19th century (Weber, 1881; Javel, 1881; Cattell, 1885) but after the first quarter of the 20th century, the researchers highly expanded their studies in this area (Messmer, 1904; Pyke, 1926; Tinker & Paterson, 1928-1950; Tinker 1963-1965; etc.). Another field of interest to researchers has always been the effect of typography and spatial features of text on reading comprehension. Reading comprehension is “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language. It consists of three elements: the reader, the text, and the activity or purpose for reading” (Rand, 2002). The typography of textbooks is of interest for two main reasons. First, it is important that the typography not interfere with the reader’s understanding of the text. Although true for both adults and children, this issue is of greater significance for children who are just learning to read. Second, readers’ responses to the visual appearance of the text may affect their motivation to read. It was Cattell (1885) who first noticed the reading speed as a basic predictor of readability. Many studies in the English language have reported a strong association between reading speed, accuracy, and reading comprehension (Dowhower, 1987; Fuchs et al., 2001; Tan & Nicholson, 1997). Most research in this area has been concerned with English typographies (e.g., Bernard et al., 2002) and has aimed at building guidelines for designing English texts. In fact, very few researchers have examined non-English texts. Thus, guidelines cannot be simply applied to non-English script because of unique differences not only in word forms but also in letter shapes, average word length, and connectivity. Whole time of researches there has been a disagreement among the scientists and typographers and among researchers concerning the best typographical factors used in print. The aim of this study was to collect main results of legibility and readability researches together to predict the direction of further researches.

## 2. Legibility and eye movement

As Pardo (2004) cited, the content of the text, the readability of text, and the font features can influence the interaction of the reader with the text. Different typefaces have different connotations and can have influence on the readability, interpretation, and the impact of the words they represent (Thangaraj, 2004). Some important issues to be considered dealing with the best typography choices in print are font type, font size, and leading (Tinker, 1963). All these features affect legibility. Legibility is related to the capability of a text to be identified properly and it is related to the ease of eyes to detect words and letters which is important for data acquisition during reading. Since the first step in the reading process is visually acquiring the information, increasing legibility can enhance text acquisition (Sheedy et al., 2005). Typeface characters have effect on legibility by affecting the way that readers can discern words and letters. Therefore, a greater legibility leads to a greater ability to recognize and consequently to a greater ability to read the text. (McCarthy & Mothersbaugh, 2002). Reading speed is an important factor to be considered while dealing with legibility. For being legible, a text must be read rapidly and easily (Hughes & Wilkins, 2000-2002). Optimal legibility is achieved if the typographical factors, like size of type and leading, together make an easy and rapid reading with comprehension (Tinker, 1963).

Eye-movement measurement is a modern way to determine the readability of texts. The perception of information takes place in saccades. When readers finish one line, their eyes have a sweep to the beginning of the other line which is called return sweep (Nanavati & Bias, 2005). Leading (line spacing) is one factor that has a great effect on having an easy return sweep. If the space between the lines is not too much or too little, the return sweep occurs easier and faster (Vanderschantz, 2008).

In many studies, it was important to verify that readers actually read the text and acquired the information conveyed by the passage. Many researchers (Chan & Lee, 2005; Dyson & Kipping, 1998; Muter & Maurutto, 1991; Osborne & Holton, 1988) asked participants to answer questions about the text in comprehension tests immediately after finishing the reading tasks. Some studies have shown no difference on comprehension tests in different conditions of interline spacing (Kruk & Muter, 1984) and column and line length layout (Dyson & Kipping, 1998; Kruk & Muter, 1984). Some researchers (Soleimani & Mohammad, 2012) asked participants questions to check the recall of information after two or three days from the reading task.

Working memory has a limited capacity (Oberauer & Kliegl, 2001). Therefore, for giving a chance to short term memory to be able to comprehend the text, there should be some levels of automatic decoding. If too much energy is needed to recognize the words, less mental energy will be left for comprehending (Pardo, 2004). Features of the text affect the interaction between reader and the text for comprehension (Pardo, 2004), the spatial characteristics, like font type and size, leading and margins noted as factors that can influence reader-text interaction. Features of a text are really important for readers to be able to make meaning. For example, Serif fonts in 16 points is deemed as the most preferable ones considering legibility (Hughes & Wilkins, 2000). Legibility of a text affects its readability which means the ease of comprehension (Mills & Weldon, 1987). Consequently, it affects reading comprehension (Woods, Davis, & Scharff, 2005).

It was shown that typographical variables, such as text size and type, line length, density, margins, and spacing, affect readability of online text (Dyson, 2004; McPherson, Nunes, & Zafeiriou, 2003) and readers' preferences (Bernard, Fernandez, & Hull, 2002), too. However, some previous researches on text spacing on webpages has produced mixed results (Chaparro & Bernard, 2001; Spool et al., 1997). Reading text with margins affected both reading speed and comprehension, so that reading margined text was found to be slower, whereas comprehending the text with no margins was better (Chaparro et al., 2004). In another study, moderate webpage spacing in comparison to less and more spacing produced higher user preference but no performance differences in a series of search tasks (Chaparro & Bernard, 2001).

### 3. Font selection

Although readers can read words in different fonts, it is not deniable that recognizing words with some fonts is easier than with others (Van Rossum, 1998). People always appreciate the fonts they like and complain the ones that they don't like but they have to use (Friedman, 2009). Many researchers consider serif fonts more legible and it is because of their serifs which add more information to the eyes (Geske, 1996) and enhance the legibility of a text by helping the readers to distinguish the letters and words more easily (McCarthy & Mothersburgh, 2002). Mills & Weldon's (1987) research on paper shows that the texts which have descenders are easier to read comparing to the texts that do not have descenders. The results of the study done by Beymer, Russell, & Orton (2008) and the results of studies by De Lange, Esterhuizen, & Betty (1993) showed out equal legibility between serif typefaces and sans serif typefaces. Shaikh's (2005) research also confirms these findings, he has concluded that there is no difference between perceived legibility of serif and sans serif fonts. A number of scientists believe that serif fonts are read faster. For example, Romney (2006) has written that serif fonts are believed to be read faster due to their invisible horizontal line made by serifs, so it increases the saliency of letters as Arditi & Cho (2005) have stated. Another reason for their belief about superiority of serif fonts over sans serif fonts is that the horizontal strokes that sit along the baseline help the readers to track the lines easier; therefore, they lead to faster and more efficient reading (Arditi & Cho, 2005). Moret-Tetay & Perea (2011) are against the prominence of serif fonts. The space between letters in serif fonts is slightly reduced due to the ornaments that they have. Consequently as Woods, et al. (2005) have mentioned, serifs in serif fonts act as visual noise when the readers' eyes attempt to detect the letters and words. The reduction of the space leads to other problems: One is a problem which is called lateral masking or crowding which is hindering of letter recognition when a letter is flanked by other letters (cited in O'Brien, Mansfield, & Legge, 2005) and the other is that letter position coding may be hindered which decreases the ability of word recognition (Perea, Moret-Tatay, & Gomez, 2011).

The results of many studies have pointed out that there is no difference between reading the serif or sans serif typefaces (e.g. Paterson & Tinker, 1932; Poulton, 1965; De Lange, Esterhuizen, & Beatty, 1993). The results provided by certain researchers could not be considered externally valid, which some of the researchers themselves concluded (Tinker, 1963; Zachrisson, 1965; Lund, 1999) since they noticed great differences in readability within the group of either serif or sans serif typefaces. Land says that the presence or absence of a serif could be an influential factor, but for the process of reading, a completely ephemeral for measurement (Lund, 1999). Gasser et al. (2005) maintain that the typefaces are not legible by nature but it is the familiarity of the readers which gives that feature to typefaces.

A number of other factors have been noticed as more significant for both readability and legibility, such as: sizes of the typefaces, line width, tracking, paragraph uniformity and the relations of the text color–the background (Paterson & Tinker, 1944; Tinker & Paterson, 1946); x-height, stroke width (Paterson & Tinker, 1932; Cheetham, Poulton, & Grimby, 1965; Poulton, 1965; Poulton, 1972). Chandler (2001) examined font type and size to investigate their influence on reading speed and comprehension of onscreen reading. He used Palatino and Helvetica in 8, 10, and 12-point. Type size was proven to have a significant effect on reading speed: 12-point font was read faster. However, there was no significant effect of font type selection on reading speed, and he did not find any effect of type size and font selection on comprehension. Font size has been always of interest for researchers in relation to the legibility of print (Tinker, 1963). Tinker claims that in smaller sizes, eyes have more fixations and move slower and have more pauses for recognizing the letters and words. He has stated that the eye fixation for smaller sizes have fewer words. Also they believe that the perception time for smaller sizes is longer and more regressions take place in reading with smaller sizes. Most of the publishers state that 10 or 11 point size is the smallest one that should be used for books. Although, there is no agreement among them. Geske (1996) conducted a study to find out which point size is suitable for on-screen reading. He used 9, 10, and 12-point sizes in Helvetica but results did not indicate any significant differences. Finding of Bernard et al. (2010) is similar to that of Geske (1996). Subbaram (2004) found that the largest font which was 14-point size was proven to be more legible. Beidler (2006) also has stated that the first thing for improving the legibility is increasing the type size. As Silver & Braun (1993) have concluded, the higher legibility of the larger size could be because of creating more visual angle which makes the words and letters more distinguishable. Delamate (2010) has stated that reading speed could be affected both vertically and horizontally by crowding. As he presents, larger font sizes can make more spaces between lines, therefore, they can decrease crowding. Legibility of print increases as the size of the characters is increased up to a point which is called CPS (Critical Print Size). Decreasing the size of letters below it will decline speed of reading (Rubin, 2008). Another issue influencing speed of reading is visual span. Visual span is the number of neighboring letters that can be recognized without moving eyes (Legge et al., 1977). Reading speed declines when visual span gets smaller. Fewer letters can be recognized in one fixation; consequently reading speed slows down (Legge & Bigelow, 2011).

The influence of font size on comprehensibility was found by Chandler (2001) and Fuchs, Langenhan, & Hippius (2008). Woods et al. (2005) confirmed that present legibility of a text affects its readability and the ease of comprehension. Gasser et al. (2005) focused on the effect of font type on information recalling. They wanted to find out whether the existence of serifs has any role in information recalling. They used two serif fonts (Courier and Helvetica) and two sans serif fonts (Palatino and Moraco). All materials were typed in 12-point size. The study revealed a significant effect of serif fonts on information recalling. As cited in Gasser et al., (2005), markings of serif fonts make the row of lines to be separated more easily, consequently, reading becomes easier and it use fewer attentional resources for reading. Then more attentional resources remain for processing the message of the text which results in deeper processing and easier recall of information. Another reason for having the result above could be due to familiarity of the participants with serif fonts (Gasser et al., 2005).

#### **4. Line spacing and leading**

Nearly all researchers believed that line spacing has an impact on reading speed (Scales, 2011; Hooper & Hannafin, 1986). Set solid (no leading) is tiring of eyes because single line spacing requires more fixations in each

line which means fewer words could be read in each fixation, so reading time becomes longer (Mills & Weldon, 1987). In printed materials intended for adults, it is generally accepted that the addition of two or three points of extra space between lines improves text readability and legibility (Spenser, 1968). Hughes & Wilkins (2002) argued that the additional space makes it easier to follow each line and facilitates an accurate return sweep of the eyes to the beginning of each successive line; it may also help with word recognition, as there will be less visual interference or “contour interaction” from lines above and below that being read. Tinker (1965) reported a series of experiments involving tests of silent reading speed with adults and found that although line spacing greater than the point size of the type conferred a significant advantage with some type sizes and line lengths, it was not always the case, and too much space could be detrimental. He concluded that optimum line spacing depends on line length, type size, and typeface. The greater the line length, the more important it is to add extra space between lines. He advised that for optimal sizes of type (9, 10, 11, and 12 points), an interlinear space of 1 to 4 points can be added to increase legibility. The majority of studies on reading English words support the double-line-spacing advantage for reading on computer screens (Kolers, Duchnicky, & Ferguson, 1981; Kruk & Muter, 1984; Muter & Maurutto, 1991). In fact, doubleline spacing decreases lateral masking, reduces the number of fixations, and results in more accurate return sweeps during reading (Kolers et al., 1981; Kruk & Muter, 1984; Morrison & Inhoff, 1981). The relation between line spacing and word spacing is also important. According to the principles of Gestalt psychology, there is a tendency to group elements in the visual field on the basis of their proximity (Bruce & Green, 1985). Given that the typographer’s aim is to group words into lines, the space between lines must therefore be greater than the space between words. If not, distracting vertical “rivers” of white space may be created. Hartley (1994) argued that to avoid “optical bridging” between lines, the minimum line spacing must be increased by an amount equivalent to the specified word spacing.

A new approach to assess the legibility is suggested by Tarasov et al. (2013) and Sergeev & Tarasov (2013). The reading speed was examined with dissociated text samples. It helped to reveal the inherent features of texts with no influence of the cognitive component. The samples were built with one font size (12 points which equal to 4.50 mm) and different line spacing factors. The authors also used a metric scale jointly with typographical one. As shown in Tarasov & Sergeev (2013), the highest reading speed was obtained with leading factor 1.7 which equal to 9,64 mm or 2.14 times of x-height.

## **5. Column setting and line length**

Efficient use can be made of space by combining shorter line lengths and a multicolumn format. Newspapers and magazines, which typically use such formats, are available on the World Wide Web. Presenting text in multiple columns allows short line lengths to be compared with longer line lengths with a similar amount of text, since there is an inevitable column setting–line length trade-off. A number of studies comparing single and multiple columns formatting and layouts have been reported (Neal & Darnell, 1984; Tinker, 1963), with inconclusive findings regarding the column setting and line length, making it difficult to draw conclusions. On one hand, Poulton (1959) reported that single columns with long line length were read faster than were double columns, showing evidence of the disadvantages of a multicolumn layout with medium or short line length in English print text (Duchnicky & Kolers, 1983; Dyson & Kipping, 1998) and online text (Zaphiris & Kurniawan, 2001). On the other hand, Foster (1970) found an advantage for a multicolumn layout with medium or short line length in print and online text (Andreyev & Martynov, 2000; Lam et al., 2000). A single-column layout with long line length makes it difficult for the reader to accurately locate the beginnings of new lines after the long lateral eye movement, particularly when there is close vertical spacing (Bouma, 1980), suggesting a possible interaction of column setting and line length with line spacing. However, some studies showed no difference between double-column presentations with medium line length and single-column presentations with long line length (Creed, Dennis, & Newstead, 1987; Hartley, Burnhill, & Fraser, 1974).

## 6. Conclusion

Almost equal numbers of studies showed advantages and disadvantages of serifs, as well as a preference of numbers of columns in text. The preferences of specific line length and font size are highly dispersed. The mean value of legible line length is about 100-120 mm. The mean value of the most legible font size is close to 12 points but without specification of typeface.

This review demonstrated a substantial inconsistency between many findings of previous studies which were held at various times. Although there are massive bodies of analysis considering typography, there is no agreement among researchers regarding legibility factors in print. Perhaps the problem can be solved with further replication of prior studies, especially to non-English languages. This review confirms that reading speed, which is the main predictor of legibility, is more sensitive to typographical factors rather than to comprehension and recall. As *Tinker (1963)* mentioned, using larger font sizes make the peripheral vision perceives fewer words and consequently reading speed decreases. However, many of subsequent studies have found no significant differences between different font sizes. It can be suggested that legibility is more sensitive to some combinations of spatial features of text. Since this review, also, did not reveal any difference between the different typefaces over reading speed, comprehension, and recalling, no special type font is suggested to use in print and everyone is free to choose it themselves. The point to pay attention to is the familiarity of the subjects with special typefaces and subjects' preferences.

In this review we detected the similar problem in all of studies above. It is an absence of a unified approach. We suggest it is the principal reason of such contradictory results obtained. Firstly, the lighting within the studies has to correspond to a standard light condition. As *Daly (1993)* showed, the light conditions are extremely effect the subject's perception, it concerns both the colour assessment and qualimetric measures. All of that are the different kinds of psychophysical studies, as well as reading tasks. Secondly, paper and other substrates contribute to the text appearance. The spectral features of paper should be under strict control, too. Since deficiencies in light sources and viewing conditions can distort the appearance of texts and substrates, they are likely to cause miscommunication about text stimulus, processing and perception. All this requires a certain viewing conditions, which are described in some international standards, such as ISO 3664:2009. It's known that the most important feature of lighting is photometric brightness of a stimulus. The main goal of light standardizing is to achieve a predictable brightness of text stimulus. The universal light booth used during the psychophysics and qualimetric studies (*Tarasov et al., 2012*) is a good sample of such standard light source. A new research methodology based on use of this booth is developed (*Tarasov et al., 2013*). The lack of unified measuring units is a big drawback, too.

We offer the following solutions to the problem of uniformity. It's necessary to use an International system of units (SI) during all text-based measurements, instead of different uncoordinated measurement units. We propose to use x-height (in millimeters) as the only measure of specific typeface. Line spacing should be expressed as a fraction of x-height or it should be measured in millimeters. The light conditions should agree with ISO 3664:2009 (low level). Each study should be described in details: illuminance level, spectra, geometric parameters of viewing (we suggest the distance to the stimulus to be 0.4 m), view angle, subject's visual acuity and the presence of glasses, etc. The text stimuli, also, should be fully described: sheet size (in mm), column setting and line length (in mm), margins (in mm), x-height (in mm), mean inter-word spacing (in mm or in x-height), mean inter-letter spacing (in mm or in x-height), inter-line spacing (in mm or in x-height), full specification of typeface, optical density of paper and text, etc.

Obviously this review leads to some questions. A better understanding of these questions will come through further and continued research.

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# Level of ict competencies at the university

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## Abstract

The purpose of this study was to identify the level of ICT Competencies of university students from Mexico and Hungary. The research type is quantitative and exploratory. The instrument consists of 14 items. The sample was of 567 students. 302 students of Veracruzana University in Veracruz, Mexico. 265 students of Óbuda University in Budapest, Hungary. The situation of education in Hungary and Mexico is not so different although each country have taken different paths. The results referring of Hungarians and Mexicans Student's perceptions about their competencies in ICT indicate that they express a high level of competencies in ICT.

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*Keywords:* ITC; Students, Competencies, Mexico, Hungary

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## Introduction

International comparison analysis tool is an effective way to understand the situation between two or more different regions around the world. In this sense, the literature show the relevance to analyze how ITC is been used in education in order to get a deeper comprehension about the educational strategies, learning methods and pedagogical techniques more effective to be applied in the classroom.

For this reason, in this study we review the current situation of students in two universities. One is located in Óbuda University at Budapest, Hungary and the second one is Veracruzana University located in Veracruz, Mexico. In order to contextualize how ITC is been adopted in these two countries some data are presented in this document taken of international sources.

When The Global Information Technology Report (GITR) and the Networked Readiness Index (NRI) were created some 12 years ago, the attention of decision makers and investors was on adopting business and financial strategies that would allow them to develop in the context of a fast-moving but nascent Internet economy.

Over more than a decade, the NRI has provided decision makers with a useful conceptual framework to evaluate the impact of information and communication technologies (ICTs) at a global level, and to benchmark the ICT readiness and the usage of their economies.

According to the Networked Readiness Index (NRI) of 2013, Hungary was ranked in the 44 position with a score of 4.29. Meanwhile, Mexico was ranked in the 63 position with a score of 3.93. In we take in consideration the previous NRI report, it means 2012, Hungary descend one position in 2013, but Mexico increase 13 positions from 76 place in 2012 to 63 position in 2013.

Mexico experiences a sharp rise of 13 positions to attain 63rd place in the rankings, driven mainly by government efforts to deeply develop its offerings of online services (28th), increase its citizens' participation to support their

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government (25th), and an overall improvement in the business and innovation environment. Despite these important steps forward, the country has made less progress in further developing its ICT infrastructure (82nd) and significantly reducing its access costs (63rd), notably in terms of mobile telephony (102nd).

As a result, ICT uptake in terms of Internet users (78th) or households with Internet access has not progressed. This, coupled with a skills shortage (87th) because of the low quality of the educational system (100th), has resulted in little progress in terms of economic impacts accruing from ICTs (72nd). Adopting and implementing a holistic digital agenda that could boost the development and uptake of ICTs and their inclusion in a more robust innovation system could help address some of these important weaknesses and provide better results.

According to The Global Information Technology Report (2013), the situation of the countries in Central Europe - such as Hungary, Poland, and the Slovak Republic in 44th, 49th, and 61st place, respectively - have remained stable with little variation in the rankings, despite relatively well developed ICT infrastructures and penetration rates. However, serious weaknesses in their innovation systems hinder their capacity to properly integrate their digital development into a well-performing ecosystem that allows for higher innovation rates (Bilbao-Osorio, Dutta & Lanvin, 2013).

Therefore, the thematic of how ICT is been incorporated in Education remains as a pending point in many countries around the world. In this case some data corresponding to Hungarians and Mexicans students will be presented in this document in order to analyze what is happening in these countries.

## **Methodology**

The purpose of this study was to identify the level of ICT competencies of university students from Mexico and Hungary. The research type is quantitative. The methodological strategy used was replication of the instruments used by one of the authors in another international research project where perceptions of teachers and students from two mexicans universities (Veracruzana University and Chihuahua Public University) and one spanish university (Salamanca University) were compared (García-Valcárcel y Arras, 2011). However, in this paper are showed the results of an exploratory study comprising just one dimension of the instruments that were applied: ICT competencies levels of students.

The instrument of ICT competencies levels of students is composed by 14 items. The reliability of the questionnaire obtained by the technique of Cronbach was 0.87. The design of the instrument included Likert scale with four categories: "None, Few, Quite and A lot". For purposes of this study it is assumed that students have a certain level of competency are shaped by the categories "Quite" and "A lot". Meanwhile, the absence or deficiency in competency categories is represented by "Nothing" and "Little".

The sample consisted of 567 students. Of which, 302 students belonged to the Bachelor of Administrative Computer Systems from Veracruzana University located in Veracruz City, Mexico. Also 265 students participated of the Bachelor of Mechatronics at Óbuda University in Budapest, Hungary. Inclusion criteria of the sample were: (1) Public universities; (2) Students of careers related with systems; (3) Students close to graduation.

## **ICT Competencies**

According to Llorente and Cabero (2005), the digital or technological literacy is presented today as an essential element for the education of university students which, when articulated in relation to the ICTs, involves the need of being knowledgeable in the use of new and old codes, symbolic systems and ways of interaction.

The development of these competencies appears as a paradigm in education and, to delve into the concept of competency, they provide a definition that describes competent persons are those who do very well what is expected from them in a given field. For Fuentes (2007: 53), competency is: A set of knowledge, skills, attitudes, and values that are needed to effectively perform an occupation or a productive role.

This definition involves observable behaviours that contribute to the successful completion of a task, and it implies knowing, knowing-how and knowing how to transfer that knowledge (Cárcamo and Muñoz, 2009). Linking this concept to ICT competencies, it can be said that the latter are a group of skills, knowledge and attitudes that are applied to the use of information and communication systems, as well as the devices that the activity involves and, according to *NETS for Students* (2007), also the knowledge that people should know and be able to learn and transfer, effectively, in order to live productively in a digital world.

These competencies are included in the educational standards that various countries have developed in the form of profiles, such as NETS (2007) in the United States, the Official certificate in Computing and Internet (B2i) in France, the incorporation of ICTs indicators in the National Curriculum in England, as well the transversal integration of the ICTs in schools, in Belgium (Llorente and Cabero, 2005).

It is important to note that all the previous standards describe key points of the educational development of ICT-literate students. NETS (2007) includes: the ability to make Web designs, presentations, databases, and the ability to use graphics software, spreadsheets, databases, online applications, e-mail, chat applications and word processors, among others. Moreover, UNESCO (2008) has presented the ICT competency standards for teachers, which combines the requirements for teachers and students in today's world and emphasises the current importance of ICTs for all countries, including the members of the OECD (Aypay, 2010).

Competencies in ICTs can be classified as: a) the core competencies of digital literacy, which are related to the use of ICTs in the classroom presentations and activities, and involve the use of digital tools to obtain information, and the use and development of materials obtained from various online sources; b) the implementation competencies, which are related to the use of skills and knowledge to create and manage complex projects, solve problems in real-world situations, collaborate with others, and make use of information and experts networks; c) the ethical competencies, which are related to the ethical, legal and responsible use of ICTs (UNESCO, 2008).

## Results of the ICT Competencies Levels

In the table 2, we can check the average values in the competencies by university. Also we can check the results of the ANOVA test. According to the ANOVA test there are significant differences in at least 8 different items found.

Table 2. ANOVA test result of the Levels of Competencies

Item	Global Average	Veracruzana University Average	Óbuda University Average	Levene Statistic	Sig.
You use the main informatics and network resources.	2.82	3.02	2.58	18.826	0
You use the applications in a productive way.	2.74	2.86	2.6	0.065	0.798
You apply the digital tools to obtain information from varied sources.	3	3.02	2.97	7.677	0.006
You select, analyze, and makes an ethic use of the obtained information.	2.75	2.9	2.57	10.584	0.001
You communicate in an effective way the information and ideas, using a variety of media and formats.	2.73	2.67	2.8	2.916	0.088
You make use of models and simulations to explore complex topics.	2.29	2.46	2.11	5.967	0.015
You interact and collaborate with your partners, using a variety of digital resources.	2.84	2.71	2.99	10.885	0.001
You participate in groups that develop project for the production of original works or solve problems.	2.58	2.42	2.76	4.229	0.04
You solve problems, and make decisions using the appropriate tools and digital resources.	2.72	2.64	2.81	20.657	0
You plan and organize the required activities to solve a problem or make a project.	2.68	2.67	2.69	0.108	0.742

You create original works as a medium of personal expression.	2.38	2.66	2.06	11.077	0.001
You make a rational, legal and responsible use of the information through ICT	2.8	2.83	2.75	0.715	0.398
You value ICT as an instrument of permanent learning.	3.2	3.2	3.22	565	0.389
You value ICT as a medium of collaboration and social communication.	2.98	3.14	2.81	565	0.385

#### 4.1. Differences in ICT Competencies

The differences found in the ANOVA test include the use of computer resource selection and ethical use of information obtained from the network, interaction with classmates through digital resources, problem solving through the use of digital tools and the creation of jobs as medium. In the rest of the items no relevant differences were found. Regarding the item "You use the main computer and networking resources" the global results indicate an acceptable level of competency reflected by 70.7% (57.6% "Quite" and "A lot" 13.1%). While reviewing the results by university, there are a trend mostly competent in the Mexicans students (81.1%) compared with the Hungarians students (58.8%).

In relation to the item "You apply the digital tools to obtain information from varied sources" we can see that in general results again the students are competent, shown by 81.8% (61.9% "Quite" and "A lot" 19.9%). Meanwhile the university results denote that there is a position mostly competent in Hungarians students (85.3%) compared with the Mexicans students (78.8%). Regarding the item "You select, analyze, and realize an ethic use of the obtained information" the results indicate an acceptable level of competence of 64.2% (51.3% "Quite" and 12.9% "A lot"). While observing the results by university shows a position further competent in Mexicans students (73.2%) in relation to the Hungarians students (54%).

About the sentence "You make use of models and simulations to explore complex topics" the global results show a perception of certain level of incompetent shown by 64.4 % (12.7 % "Nothing" and 51.7 % "A little"). Analyzing the results by university we can see a higher perception about the level of incompetent in the Hungarians students (72.1 %) in comparison with the Mexicans students (57.6%). Meanwhile in the item, "You interact and collaborate with your partners, using a variety of digital recourses" the global results show an acceptable level of competency shown by 69.5% ("Quite" 49.6% and "A lot" 19.9%). While reviewing the results by university is shown a position mostly competent in Hungarians students (79.2%) compared with the Mexicans students (60.9%).

Referring to the sentence "You participate in groups that develop project for the production of original works or solve problems" the global results denote an acceptable level of competency given by 54.1% (43.2% "Quite" and "A lot" 11.0%). While the university results, show a disparity in trends, because while Hungarians students indicate themselves as competent (65.3%), Mexicans mostly have a level of no competency (55.7%). Moreover for the item "You solve problems, and make decisions using the appropriate tools and digital resources" global results show an acceptable level of competency reflected by 64.7% (52.7% "Quite" and "A lot" 12.0%). The university results marked a higher level of competency in Hungarians students (72.1%) compared with Mexicans students (58.3%).

In the sentence "You create original works as a medium of personal expression" the global results indicate mostly a level of low competency, denoted by 58% (46.4% "A Little" and 11.6% "Nothing"). While in the results at the university level, there is a perception of low competency in the Hungarians students (74.3%) and a trend in their perception about certain competency in Mexicans students (56.3%).

#### 4.2. Similitudes in ICT Competencies

Meanwhile, we found that six items are not significantly different. Regarding the item "You use the applications in a productive way" the global results indicate a level of competency indicated by 66.7% (56.5% "Quite" and "A lot" 10.2%). Considering the results of Veracruzana University and Óbuda University, we found a similar level of

competency in Mexicans students (70.8%) in relation with the Hungarians students (61.9%). For the sentence "You communicate in an effective way the information and ideas, using a variety of media and formats" global results mark an acceptable level of competency given by 64% (52.9% "Quite" and "A lot" 11.1%). While, observing the percentages by university, there is a small higher difference in the level of competency in Hungarians students (68.7 %) against the Mexicans students (59.9%).

In relation to the item "You plan and organize the required activities to solve a problem or make a project" the global results have a permissible level of competency denoted by 59.6% (47.4% "Quite" and 12.2% "A lot"). The results by country show a higher level of competency in Hungarians students (60.4%) in relation with the Mexicans (59.6%). Regarding to the item "You make a rational, legal and responsible use of the information through the ICT" global results indicate a higher level of competency given by 70.7% (58.7% "Very much" and 12% "Quite "). While observing the results by the origin of the students, there is a slightly higher level of competency in the Mexicans students (71.9%) compared with the Hungarians students (69.4%).

For the phrase "You value the ICT as an instrument of permanent learning" the global results show mostly a level of competency given by 87.4% (53.4% "Quite" and 34% "A lot"). Meanwhile, checking the results of Veracruzana University and Óbuda University, we found that there is a level of competency almost equal among Hungarians students (87.6 %) and Mexicans students (87.4%). Finally, for the sentence "You value ICT as a medium of social communication and collaboration" global results indicate an acceptable level of competency shown by 78 % (54% "Quite" and 24 % "A lot"). While observing the results by the origin of the students mostly they reflect a higher level of competency in Mexicans students (82.8 %) compared with Hungarians students (72.5%).

## Conclusions

The results referring of Hungarians and Mexicans Student's perceptions about their competencies in ICT indicate that they express a high level of competencies in ICT. The students got a high level of competency to the use of ICT as a permanent means of learning and as a means of social communication. The student indicated to make productive use of the various applications that are offered. The main use is given to these tools is as a means of obtaining information, and they say they make a legal and responsible use. These results suggest the need to develop strategies that promote the effective use of technology resources in students and teachers.

As for differences by university (Veracruzana and Óbuda) percentages indicate that there are higher levels of competencies in the Mexicans students. The most significant differences are presented in the preference to work with colleagues who use computer media, this may be, in the case of Mexicans students because there boredom for this type of activity, lack of communication or a grade of mistrust on the commitment or ability of their classmates. So, the Mexicans choose to perform activities in individually way, without having to go through a process of collaborative work. While, the Hungarians students prefer the teamwork over the individual work.

Finally, it is important to continue working with comparative analysis in order to detect what is happening in the universities around the world in order to make proposals of incorporation of ITC in education based in the best practices in teaching and get a better understanding about the actors (teachers and students) who participate in this educational process.

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continuity in the preparation of teachers that resulted in the need to restructure the teacher education program to support secondary and primary education programs.

#### *Consultants*

Consultants were identified and selected by the American institution and presented to the client for approval. Consultants were chosen based on education, expertise and experience within appropriate academic disciplines, willingness and availability to commit to project timelines, and cultural awareness of working in the region. Consultants included a Professor of Instructional Technology, a retired Assistant Dean for Planning, Assessment and Research, an Associate Professor of English, an Associate Professor of Educational Leadership; and an Assistant Professor of Science Education. A doctoral student nearing the end of her studies was added to the project to focus on assessment.

#### *Project Scope and Staging*

The purpose of the project was to align the teacher education program with peer programs, and national and international standards. Consultants examined the existing program to identify what the institution was doing well, build on work already completed within the *College's Strategic Plan 2012-2016*, and align these elements with best practices. The project was divided into five stages; conduct a needs assessment; prepare faculty; implement the program; assess for effectiveness; and revise. Stages 1 and 2 of the project have been completed. The first stage of the project, completed in the fall of 2013, included a summative assessment and analysis of the organizational capacity of the colleges, an appraisal of the current teacher education program and identification of potential options. This stage included a review of relevant standards associated with the institution's aspirations for accreditation and best practices in the field of teacher education through the identification and analysis of aspirational peer programs. The second stage, completed in the spring of 2014, focused on faculty professional development including providing guidance through mentoring, coaching and instruction for the faculty. The workshops focused on college, program and course learning outcomes and how they aligned with national, institutional and college goals related to teacher preparation and were intended to support the process of curriculum design, and meeting expectations for accreditation.

#### *Limitations and Delimitations*

Limitations of faculty knowledge and skill necessary to implement primary and secondary education programs were not realized until after the second site visit. This limitation may delay the project. Time, distance, language, and culture limit the depth and breadth of the data collection. Having only five days "in-country" to conduct interviews limited input from a wider audience and the necessary use of English speaking faculty and interpreters to address language and culture added a level of interpretation that could potentially cloud consultant perceptions and understanding. These limitations created a potential for the misinterpretation of data. Consultants attempted to mitigate these issues by using a variety of interpreters. Consultants regularly communicated with English speaking faculty and administrators that were fluent in the country's native language that had studied in the United States or in the United Kingdom.

The use of scholarly research to support consultant recommendations and proposed changes is largely based on research about, or provided by professional organizations associated with American higher education. Where possible and relevant, data from international organizations were used. While the concepts and findings identified in each *Supporting Research* section relies on U.S. and Western-based studies, the results of studies are usually generalizable to many non-western countries and cultures. The recommendations and actions for consideration identified throughout the Stage 1 report were provided to guide the institution and were not offered as mandates or requirements. While the report referenced various professional standards, there is no direct relationship between implementation of the recommendations and the institution receiving accreditation from any national or international professional association or agency.

## **2. Process and Methodology**

### *Preparation and Peer Review*

Prior to the initial site visit, consultants compared the institution's teacher preparation program with several

other programs, as well as associated professional standards. U.S. based teacher preparation programs used in the analysis included the consultant's home university, Indiana University, University of Maryland, University of Georgia, George Mason University, and the University of Kentucky. Standards for teacher preparation came from the National Council for the Accreditation of Teacher Education (NCATE), now the Council for the Accreditation of Educator Preparation.

#### *Documents Review*

An exploration of the *institution's Strategic Plan 2011:2015* and the *College of Education's Strategic Plan 2012-2016* provided useful planning information and clarified how the proposed restructuring might fulfill strategic objectives. Standards associated with the Teacher Education Accreditation Council (TEAC), received from the institution, provided a foundation from which to explore other standards and best practices. Other external documents reviewed focused on standards and best practices in the United States, included *CAEP Accreditation Standards* from the Council for the Accreditation of Educator Preparation (CAEP), the successor to the National Council for Accreditation of Teacher Education (NCATE), *Raising the Bar, Aligning and Elevating Teacher Preparation and the Teaching Profession* from the American Federation of Teachers, *The Standards and Indicators for NCTQ*, from the National Council on Teacher Quality (NCTQ), and *NSTA Standards for Science Teacher Preparation*, from the National Science Teachers Association. Because of its importance to the profession, several documents from the American Association of Colleges for Teacher Education (AACTE) were used to explore the clinical preparation of teachers. AACTE documents included *The Clinical Preparation of Teachers: A Policy Brief*, and *The Changing Teacher Preparation Profession: A Report from AACTE's Professional Education Data System*. International documents for teacher preparation included *Building a High Quality Teaching Profession: Lessons From Around the World* from the Organization of Economic Co-operation and Development (OECD), *Preparation, Recruitment, and Retention of Teachers* from the International Academy of Education, *ICT Competency Standards for Teachers* from United Nations Economic, Scientific and Cultural Organization (UNESCO), and the *National Educational Technology Standards for Teachers (NETS)* from the International Society for Technology Education (ISTE).

#### *Site Visits*

Consultants conducted a site visit in the early fall of 2013 and interviewed more than 200 administrators, faculty, and students from the institution's Colleges of Arts, Education, and Science. The consultants found the interviewees to be open and forthright which added to the breadth and depth of the review. English speaking faculty and skilled interpreters facilitated the flow of information. An introductory presentation clarified the project scope including purpose, stages and timeline, introduced the consultants, provided an agenda for the week, and described the process and methodology. The exit brief focused on preliminary findings, provided a list a possible teams to support the restructure, presented a possible model for revising the curriculum, identified structures and systems necessary for facilitating success, and presented a plan to revise the service agreement to include restructuring the colleges of arts and science beyond teacher preparation. Areas addressed in the exit brief were expanded upon in the findings and recommendations portion of the stage report. Attendees at both sessions were afforded opportunities to ask questions to clarify concepts and processes and to voice concerns.

Stage 2 workshops for faculty were focused on college, program and course learning outcomes and how they align with National, Institutional, College and Professional goals related to teacher preparation. Consultants built the workshops based on the standards associated with the clinical model and organizational structure submitted in the Stage 1 report. The importance of the adoption of the clinical model and an organizational structure that supports teacher education were stressed and identified as a critical path items that needed to be complete prior to moving to the project's implementation stage. The need for robust data management systems to collect, store, and facilitate retrieval of evidence of student learning, used in the accreditation process, was stressed during both site visits and the institution was provided several software packages to explore including:

- LiveText (<https://www.livetext.com/>)
- NetDimensions (<http://www.netdimensions.com>)
- Chalk & Wire (<http://www.chalkandwire.com/>)

- Taskstream (<https://www.taskstream.com/pub/>)

Following the second site visit, consultants provided additional resources that refocused faculty from a teacher centered to a learner-centered outcome emphasis. Specific recommendations were provided and supported by the following websites:

- CAEP Standards: <http://caepnet.org/accreditation/standards/>;
- Core Teaching Standards: [http://www.ccsso.org/Resources/Publications/InTASC\\_Model\\_Core\\_Teaching\\_Standards\\_A\\_Resource\\_for\\_State\\_Dialogue\\_%28April\\_2011%29.html](http://www.ccsso.org/Resources/Publications/InTASC_Model_Core_Teaching_Standards_A_Resource_for_State_Dialogue_%28April_2011%29.html);
- Next Generation Science Standards: <http://www.nextgenscience.org/>; and <http://www.nextgenscience.org/sites/ngss/files/NGSS%20DCI%20Combined%2011.6.13.pdf>.
- National Academy of Science: <http://home.comcast.net/~physedteacher/NatAcadStanPE.pdf>.
- Home Economics Standards: <http://www.nasafacs.org/national-standards--competencies.html>
- Physical Education Standards: <http://www.cec.sped.org/~media/Files/Standards/Professional%20Ethics%20and%20Practice%20Standards/CEC%20Special%20Education%20Professional%20Practice%20Standards.pdf>

### 3. Findings and Recommendations:

The *Findings* presented were based on pre-site visit analysis, observations and conversations with faculty, students and administrators, and reflect consultant perceptions of the institution. *Supporting Research* was offered to clarify consultant recommendations as well as to provide guidance to the action plan. *Recommendations* were based on the research, standards, and best practices associated with the academic field of teacher preparation and international higher education as well as the experience and education of the consultants in applying that research. Implementation of the recommendations should be considered within in the culture and context of higher education in the country. Findings and Recommendations are framed using the CAEP framework adopted in August 2013.

The CAEP framework used in this report include:

- *Content and Pedagogy*
- *Clinical Partnerships and Practice*
- *Candidate Quality, Recruitment and Selectivity*
- *Program Impact*
- *Provider of Quality Assurance and Continuous Improvement*

Facilities, Equipment and Supplies; Fiscal and Administrative Capacity; and Student Support Services, formerly addressed by National Council for Accreditation of Teacher Education NCATE, but omitted from the current CAEP framework, were addressed at the end of the *Findings and Recommendations* section in a category entitled *Capacity, Environment and Facilitating Structures*. Issues associated with environment and culture were included in this final section.

#### *Content and Pedagogy*

The primary focus of the *Content and Pedagogy* section is curriculum and assessment of student learning: “Most students understand that the curriculum is at the very heart of the college experience. The messages embedded in curricular structures and requirements, therefore are incredibly important to how students view what really matters in a college education. If students are presented with curricular choices simply as a disconnected series of requirements, it is unlikely that they will ever understand what the most important outcomes of college are” (American Association of Colleges and University, 2006, p. 15). Key findings included overlap and redundancy of offerings; lack of electives, English for science education courses, a limited general education program, and a limited approach to student assessment.

*Finding:* There was overlap and redundancy of offerings, and courses were often presented out of sequence. Courses often had similar or redundant content, were taught from the same book, and were provided without a building block approach. Without a complete curriculum review and alignment, there is very little chance to actually know the extent of the issue.

*Supporting Research:* “Education systems benefit from clear and concise profiles of what teachers are expected to

know and be able to do in specific subject area” (Organization for Economic Co-operation and Development 2006, p. 14). Teacher preparation programs to provide students with the knowledge, skills, and dispositions that align and support those educational systems. In creating their curriculum design principles, Meyers and Nulty (2009) built upon the Biggs 3 P model of learning. The Biggs model (1989) focuses on student context and teaching context; process; and product, including desirable outcomes. Biggs (1989) identified “course structure, curriculum content, methods of teaching and assessment” as being the key elements of teacher context. Meyers et al. (2009) built on Biggs by identifying five curriculum design principles to align authentic learning environments. Principles in the Meyers et al. model focus on building courses that are “authentic, real-world and relevant content; are constructive, sequential and interlinked; require students to use and engage in progressively higher order cognitive processes; are aligned with each other and the desired learning outcomes; and provide challenge, interest and motivation to learn” (p. 566).

*Recommendation:* Viewing the curriculum as a whole rather than the sum of disaggregated parts is important and routinely present in high quality academic programs but is especially important in teacher preparation programs. Building a curriculum by scaffolding content and aligning it vertically as well as horizontally would create a sound foundation for student learning.

*Finding:* The lack of electives limited students’ exposure to diverse content feeding the perception that education theory and pedagogy are disconnected from content. The limited breadth and depth of the English language content courses hampered student learning in upper-level science courses. The general education program was limited and lacked the breadth of knowledge necessary to support the development of effective communication and critical thinking skills expected of college graduates.

*Supporting Research:* Electives provide students with the opportunity to explore new subjects and develop interests in areas that might be outside of a rigid curriculum. In their study of factors that determine the quality of higher education, Tsindou et al. (2010) suggested that, second only to practical experience, “students believe that elective modules are quite important since they provide the opportunity to customize their studies and get an insight into areas of specialization as early as possible” (p. 242). In *No Pardon for Poor English in Science* (2003), Jaffe made the case for English as the primary language of science and technology: “Almost any scientist will say that if you lack English fluency, your career will go nowhere. And that is probably true of those whose English skills stop at the conversational level. Some protest the dominance of English, but most accept the fact that it has become the de facto language of science” (Jaffe, 2003, p.1). The study of English and writing is prevalent in many general education courses. The modern general education program is a vestige from the original common curriculum of the 18<sup>th</sup> and 19<sup>th</sup> centuries and forms the basis for liberal arts, focusing on breadth of knowledge, the development of writing skills and critical thinking. In *The Changing Landscape of Higher Education*, Staley and Trinkle (2011) indicated that “General education has been defined both as a curriculum for broadening the mind—one of the hallmarks of an educated person—and as a way to prepare for active participation as a citizen” (p. 2).

The Association of American Colleges and Universities (2006) suggests that, “In today’s colleges and universities, where there is an ever present focus on specialization, general education courses expose students to a variety of disciplinary-based content and practices in order to provide a shared breadth of education for all.” General education courses aim to assist students in developing transferable skills, such as integrative thinking, communication, quantitative reasoning, and critical thinking crucial for life-long learning. Essentially, general education builds a foundation of knowledge necessary for graduates to be effective citizens in a quickly changing and interconnected world (Laird & Garver, 2009). Institutions are urged to make it clear to students that all requirements in the general education and majors are designed to foster the achievement of particular overarching learning outcomes, and clarify how general education requirements link to requirements in the majors (AAC&U, 2006).

Developing and implementing a general education program with a variety of elective courses does not come without the need for order. In describing the concerns of a disconnected and disjointed general education program, Bob Dickerson, president emeritus of the University of Northern Colorado, characterized the lack of order in some programs, “a meandering, sloppy, ill-conceived smorgasbord of curricular stuff is not quality general education. It is neither purposeful no coherent” (Mrig, 2013, p. 7).

The key to developing a general education program is to focus on the things that will help the institution

achieve the outcomes most commonly associated with institutional goals for students. These include “increased persistence and completion, competitive and financial advantages, and improved quality and employability” (Mrig, 2013, p. 11). Of particular note for the restructuring project, Mrig (2013) draws attention to the research suggesting, “numerous studies demonstrate that performance in certain first year classes, primarily in mathematics and English, is a leading indicator of persistence and student success. Students who do not complete these classes or do not succeed in them are much more likely to drop out and not complete their college degree” (p. 12).

*Recommendation:* The institution and faculty should consider developing a general education curriculum that supports a strong foundation in English, math, communication, critical thinking, and global awareness; is flexible enough to support the exploration of career options; and that creates a strong foundation and alignment with majors. English courses focused on science and technology should be offered to those students considering matriculating through those majors. The development of a curriculum involving some level of elective courses will be important and should be explored in more depth in Phase 2 of the project.

*Finding:* Assessment of student learning was often limited to traditional testing and there was no centralized method to collect and analyze assessment data associated with student learning.

*Supporting research:* Effective assessment relies on developing a culture of evidence. “Assessment approaches must help students understand that the development of transferable skills and the achievement of essential learning outcomes are what will be most important to their future success” (AAC&U, 2006, p. 16). Students must be able to demonstrate and provide evidence of what they have learned. Institutions should consider developing a “range of practices to assess student learning at various levels...that are fed back into a cycle of improvement that results in informing curricular design and teaching practice” (AAC&U, 2006, p. 16).

Casazza & Silverman (2013), suggest that once a student enrolls in an institution of higher learning, an evidence-based process of individual assessment, diagnosis, and placement must be ensured, aligned with a comprehensive support program and used to develop a specific plan can then be created and monitored continuously to facilitate the student’s progress toward his or her goals.

Constructive assessment involves a diversity of methods, both formative and summative. According to the University of Texas College of Education Center for Teaching and Learning (2013) formative assessment is used during the learning process to provide feedback and to provide focus for student effort and includes written reflections, polls or surveys, checks for understanding, and targeted reflections called wrappers. The Center (2013) suggests summative assessment is designed to evaluate student learning and to measure their achievement of desired outcomes and includes papers, projects, and presentations, as well as a collection of student work presented in a physical or electronic portfolio.

*Recommendation:* The institution was asked to consider implementing new and innovative methods of assessment to supplement the existing “test oriented” model.

### *Clinical Partnerships and Practice*

Teacher preparation has been transformed from the application of classroom theory applied at the end of a student’s coursework, to a clinical practice model that integrates the student early and often into his/her chosen profession. The OECD described this shift: “Many countries have moved their initial teacher education programs towards a model based less on academic preparation and more on preparing professionals in school settings, with an appropriate balance between theory and practice. In these programs, teachers get into classrooms earlier, spend more time there and get more and better support in the process” (Organization for Economic and Cooperation and Development, 2006, p. 14). This section will focus on the findings, selected research, recommendations, and proposed changes based on the clinical preparation model.

*Finding:* The institution’s current teacher preparation model was limited to physical education, kindergarten, special education and fine arts education. Majors in the areas of science and the arts and desiring to teach took pedagogy courses after completion of a content major. While this model has produced positive results for some science students, there is no data to suggest that teachers produced by this model are equally or more effective in the classroom. Neither of these approaches to teacher preparation have sufficient early clinical opportunities for pre-service teachers. This issue is particularly acute with students in science and arts majors.

*Supporting Research:* “We do not learn from experience...we learn from reflecting on experience” (Dewey, 1938). *Preparing Teachers: Building Evidence for Sound Policy* (National Research Council, 2010) suggests a clinical model for teacher preparation, that integrates pre-service teachers into the classroom early and often, produces teachers that are more productive and effective in providing children with a quality education. In a study of 15,500 education school alumni who graduated in the 1990’s, 75% reported having had only one semester or less of field experience, yet characterized that experience as the most valuable aspect of their education program (National Research Council, 2010). The most common finding in that study was a desire for more, longer, earlier, and better-integrated fieldwork experiences” (Levine, 2006). In a more recent study 65% of nearly 2,300 potential mid and second career teachers surveyed stated real classroom experience is an important aspect of a teacher preparation program (Hart, 2008). The American Association of Colleges of Teacher Preparation, AACTP (2010) suggests, “clinical preparation is a staple of teacher preparation programs-and for good reasons. Preparation programs that are focused more on the work of the classroom and that allow teachers to engage in the actual practices involved in teaching tend to produce first year teachers who are more likely to remain in the profession than those from less clinically-based programs” (2010). The National Council for the Accreditation of Teacher Education (NCATE) clinical practice model discussed in *Transforming Teacher Education Through Clinical Practice: A National Strategy to Prepare Effective Teachers* (NCATE, 2010) shifts the focus of teacher preparation from a disconnected and loosely based educational knowledge to an integrated experience that is “fully grounded in clinical practice and interwoven with academic content and professional courses” (NCATE, 2010). One of the benefits of the clinical model is the early integration of field experience and foundations into the curriculum as described by AACTE: “Knowing one’s subject matter is necessary, but not sufficient for effective teaching. Teaching requires knowing the content to be taught, but knowing how to teach that content to students of varying backgrounds and levels of understanding. It further requires that teachers be able to teach the content, a process different from knowing about how to teach it. Teachers must understand and also be able to do a wide variety of things, a process termed enactment, and do many of them simultaneously” (AACTE, 2010, p. 4).

The American Association of Colleges for Teacher Education (2010) identifies eight critical components of clinical preparation. These include: strong school-university partnerships; settings (excellent placement schools); appropriate clinical placements that support learning for teacher preparation candidates; clinical teachers; coordinating faculty; school based clinical curriculum that links theory with practice; length of program; performance assessment.

In analyzing case studies focused on school-university partnerships, Ross (1995) identified four factors that stood out in determining the success of academic partnerships with schools: (1) shared beliefs and mutual respect for overlapping competencies, (2) a facilitative school history, (3) small ongoing grants from external agencies, and (4) vigorous leadership. Obstacles identified in the studies included the small number of people involved in the professional development schools (PDS) effort, cultural differences between the two organizations, the university’s reward structure, conflict with outside agencies, the weakness of PDS networks, and the ravages of time.

The development of a partnership between an institution of higher education preparing candidate teachers and the schools in which they will practice is critical, as advocated by NCATE: “All teacher preparation programs and districts have to start thinking about teacher preparation as a responsibility they share, working together” (NCATE, 2010, p. 4).

The NCATE design principles for clinically based preparation include: student learning is the focus; clinical preparation is integrated throughout every facet of teacher education in a dynamic way; a candidate’s progress and the quality of the varied elements of a preparation program are continuously judged on the basis of data; programs prepare teachers who are expert in both content and how to teach it and are also innovators, collaborators and problem solvers; candidates learn in an interactive professional community; clinical educators and coaches are rigorously selected and prepared and drawn from both higher education and the P-12 sector; specific sites are designated and funded to support embedded clinical preparation; technology applications foster high-impact preparation; a powerful R&D (research and development) agenda and systematic gathering and use of data supports continuous improvement in teacher preparation; and strategic partnerships are imperative for powerful clinical preparation.

*Recommendation:* Developing an appropriate and effective model for teacher preparation is critical to the successful restructure of the College of Education. The recommended model represented the dynamic relationship between

content with foundation and practice courses, and suggests content is front-loaded and foundations and practices courses are built into the curriculum over time in an incremental way, not just at the end. The model corrected for the lack of early field experiences and limited time for content application inherent in the 4+1 diploma model currently in use.

#### *Candidate Quality, Recruitment and Selectivity*

In most developed countries teaching is considered a calling to serve the common good and teacher candidates are “recruited” rather than placed based on low class rankings or test scores. Cooper & Alvarado (2006) called on institutions to “cast a ‘wide net’ in recruiting (teacher candidates), including targeting secondary school students, para-professionals already working in schools, and mid-career professionals in other fields” (p. 7).

*Findings:* Students are assigned to colleges based on placement scores and P-12 performance rather than on interest and/or awareness of career opportunities. The problem was intensified by the lack of a systematic method of aligning non-education majors with career needs within the country. The use of a centralized system of assigning students to majors rather than student self selection and the limited alternatives to teaching may lead to unintended consequences such as poor teacher candidate quality, low pass rates on the National Teacher Exam, and a 25% graduation rate.

*Supporting Research:* Selection of a college major is an issue of interest-major fit. American College Testing, ACT researchers suggest, “College majors have different academic cultures. Selecting a college major that is rewarding, that provides opportunities to do preferred activities and express one’s values, is an example of interest-major fit” (2013, p 12). The misalignment or disconnect between student interest-major fit has important consequences. “Evidence is accumulating that the fit between students’ interests and their college major is important in understanding and predicting student outcomes. Research at ACT (2013) and elsewhere suggests that if students’ measured interests are similar to the interests of people in their chosen majors, they are more likely to: remain in their major; persist in college; and complete a college degree in a timely manner” (p. 12). Interest-major fit benefits both the students and the colleges they attend; students engaged in good-fit majors are more likely to stay in college, stay in their major, and finish sooner” (American College Testing, 2013, p. 12).

Ideally, teaching is about self-selection, service, and passion rather than mere placement. The OECD has suggested that “...countries that have succeeded in making teaching an attractive profession have often done so not just through pay, but by raising the status of teaching, offering real career prospects, and giving teachers responsibility as professionals and leaders of reform. This requires education that helps teachers to become innovators and researchers in education, not just deliverers of the curriculum” (Organization for Economic Cooperation and Development, 2011, p. 5). To reinforce the relationship of interest, fit, and self-selection of teacher preparation programs, the Organization of Economic Cooperation and Development (2011) indicates, “sometimes qualities that are harder to measure, such as commitment and sensitivity to students’ needs” (p. 11) need to be given greater weight to students applying to teacher preparation. While student interest and fit are important, setting and maintaining high standards are critical. “Effective teacher preparation programs, both traditional and alternative, must include high standards for entry and require strong content preparation, substantial pedagogical training, and supervised clinical experiences in schools” (Cooper & Alvarado 2006, p. 23).

*Recommendations:* Within the limitations set forth by the national ministries, the institution was asked to consider revising the selection process for pre-service teachers, develop majors associated with career alternatives for students not interested in teaching, and make teaching a “preferred” profession. A placement process that would permit students to explore majors and careers was also suggested.

*Findings:* There was uneven preparation of entering students in teacher education programs and limited support for remediation after their entry.

*Supporting Research:* In writing about the path to college completion in the United States, the professional organizations associated with developmental education highlight the need for supplemental support and remediation. In the first of the five imperatives identified in *Meaningful Access and Support: A Path to College Completion* (2013), Casazza & Silverman offer that “no one path to college completion exists, nor is one type of academic support sufficient for every student. Varied systems must be in place that provide different levels of support and are

embedded into the overall fabric of all institutions. These systems must, in fact, start before college as high schools and middle schools begin to align their curricula and exit criteria to the entry requirements of postsecondary institutions. At the postsecondary level, support systems cannot be limited to one type of institution, just as they cannot be limited to one type of student.

*Recommendation:* The institution was asked to consider investigating an academic support program including developmental courses that facilitate the foundation necessary for advanced study.

*Finding:* Professional advising, the processes associated with helping students select the correct classes and sequence of classes was not available but needed and desired by the students.

*Supporting Research:* Support to navigate the matriculation process is necessary and particularly important for first generation students. Habley noted the importance of this conduit between student and university: “Academic advising is the only structured activity on the campus in which all students have the opportunity for one-to-one interaction with a concerned representative of the institution” (Habley, 1994, p. 2). In addressing the link between advising and retention, NACADA, the Global Community for Academic Advising offers, “academic advising is the direct link between the academic affairs and student affairs components of a campus that can build a culture of student retention” (Nutt, 2013). In a recent study, *College Choice* by American College Testing, ACT (2013), addressed the need for advising with educational and occupational planning. “Overall, 61% of females and 62% of males indicated they need assistance from colleges in this area... Regardless of whether the students selected a planned major, more than half of all ACT-tested high school graduates indicated that they need assistance with deciding their educational and occupational plans” (p. 10).

*Recommendation:* The institution was asked investigate the development of a structured advising program using a combination of faculty, professional and student peer advisors.

#### *Program Impact*

Building a strong relationship between the academy and society is essential. No place in the university is this more important in solidifying that aim than with the relationship between a society’s schools and the institution that prepares its teachers. The American civil rights activist, Martin Luther King Jr. (1947), highlighted the concept in saying “the purpose of education is to provide each member of society the capability to contribute to the collective goals, (philosophical, idiosyncratic, practical and social), of that society where these goals are based around the accepted values of the community and that those goals and values are based on the historical and cultural wisdom of that community.” Increasing the breadth and depth of academic programs and how those activities might better serve society is the focus of this section.

*Finding:* Academic programs were disconnected, offerings were not diverse, the current model limited the program’s impact local schools, and there were programs that were not focused on teacher education.

*Supporting Research:* There are no standard methods of organizing a college of education, and there is only limited research regarding the topic. In *Organizing a College of Education* Ohanlon (1973) and his faculty colleagues came up with three methods to organize: by function, historical precedent, and by edcology (the study of teaching and the learning process (Preface, 2005). James Christianson (1976) provided some criteria and principles for organizing a college of education including: (1) developing a logically consistent organization; (2) that would generally improve the efficiency and effectiveness of the organization; (3) that is not restricted by departmental prejudices, traditional biases, or other interests of pressure groups within the college; (4) that permit professional individuality, but precludes exploitation of the college by the individual; and (5) assures the integrity of the college without submerging and/or stifling the creativity and responsible freedom of the professional staff.

*Recommendation:* The proposed organizational model included the development of teacher preparation, educational studies, and human services departments and focused programs on faculty with content knowledge for specific areas rather generalists teaching courses out of their areas of expertise. The model relied on content expertise provided within the Colleges of Arts and Science. The proposed reorganization emphasized the knowledge, skills, and dispositions of the faculty within the departments, facilitated interdisciplinary collaboration, and took advantage of the content expertise within the various colleges. The model also provided a focus support organizations including integrated technology and research across all majors, and provided opportunities for non-education programs to expand their offerings.

### *Provider of Quality Assurance and Continuous Improvement*

In explaining the need for a more robust education system, Almusallam (2009) suggests that the “(client nation) has a diverse system of post secondary education, that is expanding rapidly in response to demographic changes and increasing demands for participation. There is rapid economic and industrial development and an increasing exposure to international competition in many areas of activity. Post secondary education must expand and standards of education and training that are equivalent to international best practice must be achieved and widely recognized. ... In doing this the Commission is drawing on the best ideas we can find elsewhere in the world, but the system we develop will be our own” (p.1)

*Finding:* The institution had an extensive quality assurance system including a published strategic plan that was modified in November 2010 and was intended to guide institution’s actions through 2015. The *College of Education’s Strategic Plan 2012-2016* aligned with the institutional document; however, there were few overt signs that the faculty or students connected to or engaged with either plan.

*Supporting Research:* “The strategic plan in higher education has often been viewed as a tool to articulate institutional mission and vision, prioritize resources, and promote organizational focus. Many early strategic planning attempts produced documents that described the institution, but did little to stimulate a process. These ‘shelf documents’ often ended in widespread discontent within the institution, since many who participated in the process spent long hours on the plan’s development and then saw relatively little implementation” (Hinton, 2012, p. 7). The disconnectedness between the development and utilization of the plans is the lack of an implementation plan and identification of people responsible for its integration into the life of the institution. “Turning goals and objectives into a working plan is the function of the implementation plan” (p. 12) and the continuing engagement on the part of the planning committee. The implementation plan delves into the work of getting the job done and includes identifying the resources each goal and step will require. Resources for implementing strategic planning are defined in the broadest way possible and include: people, time, space, technology, and funding. Sometimes, the exact amount of a critical resource is not known at the time of the plan’s inception; however, the type of resource can be identified (Hinton, 2012).

The client university’s stated vision was to be among the outstanding universities recognized for community engagement through excellence in education and leadership. Their mission was to serve the community with excellent teaching and learning, relevant and respected research, lifelong learning opportunities, effective and efficient administration, leadership service and development, and community engagement for mutual enrichment (Client University Strategic Plan, 2011-2015).

*Recommendations:* Consultants suggested that the restructuring project align operational practices with the fundamentals of the institution’s strategic projects and the college establish plans and committees to implement relevant aspects of its’ strategic plan.

*Finding:* There was a limited sense of shared vision and philosophy, exacerbated by reform fatigue, developed from previous planning efforts that produced limited results.

*Supporting Research:* Reform fatigue occurs when people are asked to invest their efforts to change the institution for what is considered by leadership as an effort to improve the institution but that might be perceived by some as more work that does not produce the desired or needed change (Kezar, 2001). In *Leading Change: Why transformation fails*, Kotter (1995) provides an eight-step model for organizational transformation. Steps include (1) establishing a sense of urgency, (2) forming a powerful guiding coalition, (3) creating a vision, (4) communicating the vision, (5) empowering others to act on the vision, (6) planning for and creating short-term wins, (7) consolidating improvements and producing still more change, and (8) institutionalizing new approaches. Although focused on individual transitions, William Bridges’ “transition model” (2004) provides a useful framework for organizational conversion. The three elements of Bridges transition model are: ending, losing, letting go; the neutral zone; and new beginning. Bridges suggested that change initiatives fail because the efforts are too focused on change and not enough on transition (McLaughlin, n.d.). "A change can work only if the people affected by it can get through the transition it causes successfully" (Bridges, 2013).

*Recommendation:* Building upon and valuing prior work is essential to successful change. Implementing and change

management strategy, that acknowledges these efforts, often mitigates reform fatigue. Consultants urged the institution to consider developing and implementing a change and transition management plan designed to ease the transition from a single college focused on education to a management plan of three colleges providing diverse offerings of academic disciplines that support job and career development as well as prepare students for graduate education.

#### *Capacity, Environment, and Facilitating Structures*

“Unless a capacity for thinking be accompanied by a capacity for action, a superior mind exists in torture” (Charles Horton Cooley, Sociologist 1864-1929). The CAEP standards address the purpose, processes, and products the restructure hopes to accomplish through this project. In *Capacity, Environment, and Facilitating Structures*, the focus turns to what is necessary to accomplish goals and facilitate change.

*Finding:* Institutional leaders and administrators appeared supportive of the restructuring. Some administrators had already initiated change in an isolated and uncoordinated way. Inadequate and timely communication negatively impacted collaboration and coordination between colleges, campus sites and programs and hampered change efforts. An uneven distribution of financial and personnel resources, including excessive teaching loads, exacerbated issues.

*Supporting Research:* There is increasing evidence that effective communication is a key for building and maintaining a viable organization. Effective communication serves as a systematic tool to establish, integrate, and achieve organizational objectives (Blazenaite, 2011). Research suggests effective communication is important in facilitating a free flow of information and managing organizational processes to bring large-scale organizational benefits (Szukala, 2001; Zaremba, 2003; Tourish and Hargie, 2004; Eisenberg et al., 2009). Twenty-first century organizations need the capacity and skill to respond efficiently and effectively to external and internal forces and people working within organizations need clear, pertinent, and reliable information to respond to these forces (Schein, 2010).

*Recommendation:* Consultants urged administrators to address the issues of collaboration and communication by developing and implementing a communication plan to facilitate change and transition. Consultants stressed the importance of members receiving timely communication necessary to contribute to the successful implementation of the restructuring.

*Finding:* In general, student environmental conditions were negatively impacted by a lack of space to support student group projects, and extra or co-curricular activities. The lack of facilities and systems for commuter students were especially problematic as the institution is predominately a commuter school serving local and regional students. Some academic departments were isolated which created challenges that limit student success. Inadequate, under-maintained, and unevenly distributed technology lab space and equipment, and scientific equipment for research and limited infrastructure capacity impacted the achievement of academic goals.

*Supporting Research:* The Council for the Advancement of Standards in Higher Education (CAS) is a consortium of forty professional organizations and the “pre-eminent force for promoting standards in student affairs, student services and student development programs” (Council for the Advancement of Standards in Higher Education, 2013). The CAS general standards are applicable to all facets of an institution of higher education and can provide guidance for how an institution might view various aspects of its’ operation. These standards are particularly relevant to activities occurring outside of the classroom.

In addressing technology, CAS (2013) states “Programs and services must have adequate technology to support the achievement of their mission and goals. The technology and its use must comply with institutional policies and procedures and be evaluated for compliance with relevant codes and laws. Programs and services must use current technology to provide updated information...to enhance delivery of programs and services.” In providing guidance regarding facilities and equipment, standards state “programs and services must have adequate, accessible, and suitably located facilities and equipment to support the mission and goals. If acquiring capital equipment as defined by the institution, programs and services must take into account expenses related to regular maintenance and life cycle costs. Facilities and equipment must be evaluated on an established cycle, including consideration of sustainability, and be in compliance with codes and laws to provide for access, health, safety, and security.”

Recommendation: Consultants suggested the institution undertake a formal evaluation to ensure technology, scientific equipment, and facilities meet the needs of all students and faculty fairly and equitably

#### 4. Conclusion

The main focus of this case study was to demonstrate how research and current literature is used to reinforce observations and validate recommendations for change to provide a solid foundation from which to develop an action plan. The evaluation, while similar to research, has its own set of criteria and expectations and should not be undertaken without a level of academic rigor. In addition to the findings highlighted throughout the study, consultants came to various conclusions provided some level of clarity to a complex and often challenging process. The following process findings were identified after the first two stages:

1. Consultants should listen to client needs but should not be swayed by views that limit chances of success. Clients often limit their views and aspirations based on the context and often do not see the whole picture. This is especially problematic when attempting to seek international accreditation.
2. Consultants should avoid coming to conclusions and making recommendations too early in the process. Patience and reflection on the data and process will likely lead to better recommendations.
3. Consultants should challenge what has been done in the past or views that are solely generated based on a single person's point of view or experience, called the N of 1. Use of a variety of experiences, multiple resources and research associated with best practices will produce the best results.
4. Consultants should realize their power, or lack thereof, to implement change. Consultants provide the map but the institution and its faculty must make the journey. And every journey begins with the first step. It the consultant does not see that first step, a push forward might be necessary.

The project remains open and proceeding, but on a delayed schedule.

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# L'identità maschile nelle professioni educative: un caso di studio

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## 1. Premessa

L'assunto iniziale che ha ispirato questa indagine è la constatazione che in Italia le professioni educative sono connotate da una forte disparità tra i generi. Sulla scorta dei dati inerenti la sola iscrizione a corsi di laurea a indirizzo pedagogico, risulta che gli studenti maschi tra l'A.A. 2000/2001 e quello 2010/2011 costituiscono appena il 13,20% (Mapelli e Olivieri Stiozzi, 2012). L'inversione di tendenza, seppure minima, relativa all'A.A. 2010/2011, con una quota maschile di 15.584, 474 iscritti in più rispetto all'AA. 2009/2010, concerne corsi di laurea delle facoltà di Scienze della Formazione "non pedagogici". Ad esempio, ciò si verifica nei due corsi di laurea triennale di Scienze della Comunicazione dell'Università di Udine, dove i maschi risultavano in maggioranza: rispettivamente il 64,50% e il 60,61%. Inoltre, gli studenti maschi rappresentavano oltre il 30% degli iscritti totali in due corsi triennali in Scienze e Tecniche Psicologiche dell'Università dell'Aquila (42,72% e 34,67%) e in ambedue i corsi di Scienze della Comunicazione Pubblica, d'Impresa e Pubblicità dell'Università di Trieste (30,86% alla laurea magistrale biennale e 31,15% alla biennale specialistica) (Idem).

Relativamente all'allontanamento maschile dalla professionalità educativa si pongono alcune ipotesi che riconducono alla costruzione ideologica delle identità di genere.

Nella nostra epoca ancora persiste un pregiudizio retrivo inerente le presunte caratteristiche tipicamente maschili, lontane da un profilo femminile altrettanto stereotipato, carico di qualità riferite alla cura e all'affettività.

Tale scenario si riflette nei dati relativi l'occupazione. L'epoca contemporanea è ancora connotata da una segregazione lavorativa di uomini e donne. I primi sono presenti in gran numero nel settore scientifico-tecnologico e scarsamente rappresentati in quello umanistico e sociale. Nel caso delle donne il dato si rovescia, specialmente nel campo educativo, roccaforte lavorativa femminile.

Specificamente nel sistema scolastico, più è basso il grado di scolarizzazione, minore è il numero di docenti uomini. Ciò è riscontrabile già a partire dal segmento della scuola dell'infanzia e in

quello della scuola primaria, livelli di scolarizzazione associati alla cura primaria e lontani dal prestigio sociale e dall'autorità di cui godeva il maestro della vecchia scuola elementare. In quasi un decennio, a Milano si è registrato un ulteriore aumento della femminilizzazione della scuola primaria: dal 94,8% del 2000 si è passati al 96,2% del 2009 (Idem).

## 2. *Un caso di studio*

Allo scopo di pervenire a una comprensione profonda della percezione dell'identità maschile all'interno delle professioni educative, ho condotto tre interviste, una di persona, una telefonica e un'altra tramite il noto social network facebook, a persone impegnate nei servizi socio-educativi, cercando di indagare i principi, le visioni del mondo (*Weltanschauung*) e le direzioni in merito alla maschilità. Sono state scelte alcune tracce e le relative sub-tematiche, da cui ho attinto testimonianze, opinioni, esplicite ed implicite, e modi di vivere:

- le motivazioni che hanno spinto a intraprendere la professione educativa
- le caratteristiche personali e professionali che dovrebbe possedere un educatore uomo
- i pregiudizi sulla scarsa attitudine all'educazione e alla cura del maschile
- il proprio modo di incarnare la maschilità
- quanto debba esserci di solido e di dinamico nei ruoli di genere
- l'interazione tra i comportamenti/atteggiamenti pubblici e quelli privati

Piuttosto che cercare una forzata convergenza di pensiero, mi sono soffermato sugli aspetti più soggettivi, ponendo l'enfasi non sui meri costrutti ideologici, bensì sui singoli vissuti, cercando di accompagnare ognuno degli intervistati sulla strada della riflessività sulle esperienze personali e la rielaborazione interattiva della propria storia di vita.

È stata mia cura non adottare un paradigma interpretativo sinottico, volto a rintracciare un'artificiosa oggettività comune utile agli esperti di statistiche e schemi quantitativi. Pertanto, mi sono impegnato a non trascendere il personale e di rimanere ancorato alla solidità del biografico. Dai diversi racconti sono emerse diverse tipologie di maschilità, ognuna delle quali si riflette nel modo di interpretare ed esplicitare la professione educativa.

Nel corso delle interviste, ho cercato di creare un clima di fiducia e di empatia, evitando le interruzioni e orientando, mediante appositi input, l'intervistato nelle tracce delineate. Qualora vi siano state difficoltà nell'espressione, i miei interventi sono stati miranti a favorire l'espressività, con le dovute cautele e la consapevolezza del rischio di alterare la spontaneità dell'eloquio. Non mi sono posto in modo, per quanto possibile, neutrale, come se si trattasse della

somministrazione di un questionario, fingendo che la relazione significativa tra intervistatore e intervistato non sia essa stessa una componente rilevante dell'intervista, soprattutto nell'instaurare una comunicazione vera, precondizione indispensabile nella ricerca qualitativa (Merril, West, 2012). Il coinvolgimento forte della soggettività è dunque da intendersi come parte del metodo. La traccia è stata usata in modo flessibile, per non riproporre una sorta di questionario vocale, strutturato da domande standard che non lasciano spazio alla libertà di esprimersi e di cogliere la priorità dei temi, che non è stata imposta *a priori*, ma espressa liberamente dall'intervistato.

### **3. Alfonso, l'idealista-solidarista**

Il primo intervistato, Alfonso Di Bartolomeo, sociologo di 39 anni, che dal 2000 ha «iniziato un percorso legato alle politiche sociali e a tutti i servizi legati alla 328 [Legge Quadro per la realizzazione del sistema integrato di interventi e servizi sociali]», tra cui presso il “Centro aiuto minori” del tribunale di Salerno, fondando l'associazione Superabile Onlus, di cui è presidente, che offre da quasi 10 anni un centro socio-educativo rivolto a persone disabili, gestendo il «“Centro amico” [centro socio-educativo per disabili], del comune di Pagani [della provincia di Salerno], come coordinatore dei centri educativi di Nocera [Inferiore], Scafati e Sant'Egidio [Del Monte Albino]». Oltre gli incarichi di coordinamento/supervisione, da circa 6 anni Alfonso veste i panni di operatore nel progetto di “Assistenza specialistica scolastica” rivolta ad alunni diversamente abili. In aggiunta, si occupa del coordinamento di servizi rivolti ad anziani, come quello dell’“Assistenza domiciliare anziani”. Il suo campo d'azione professionale è rivolto alle «fasce deboli».

Alfonso da subito afferma «che è forte la componente donna nell'educatore», evitando però di ridurre la questione al genere. La buona riuscita professionale, infatti, sarebbe legata più che alla formazione accademica alla storia di vita, alle esperienze professionali e soprattutto all'educazione dei genitori. Se a ciò si aggiunge anche la bontà d'animo, la compagine degli elementi che rende un educatore un «buon educatore» diventa completa:

c'è un buon numero di donne, laureate, io dico in scienze dell'educazione, poi percorso per diventare educatore diverso, non è fatto di teoria ma è fatto soprattutto [...] di pratica che inizia già prima, diciamo dell'università. Invece per quanto riguarda i maschi, appunto vista la concentrazione, io ti parlo tra Pagani e Nocera [Inferiore], io non è che ne conosco tantissimi, ma vista questa concentrazione tu lo scegli più per qualità, cioè nel senso quello che caratterizza l'educatore maschio è appunto la sua qualità, ma non perché sia superiore alla donna, perché non è facile, non è facile l'educatore. È facile sicuramente fare il percorso teorico, quello che si fa all'università, poi lo vivi tutti i giorni, lavorando, facendo pratica, facendo volontariato, cercando di aiutare delle persone quindi

facendo assistenza e poi successivamente facendo il tuo lavoro che è cercando di trasmettere degli elementi fondamentali, cognitivi, degli elementi che possono essere fondamentali [...] perché diciamo è legato alla personalità, al tipo di famiglia, al tipo di educazione che gli è stata data, poi sicuramente al percorso universitario, poi successivamente se sei una brava persona, se hai degli elementi fondamentali come la solidarietà e la voglia di aiutare gli altri, allora diventi un bravissimo educatore.

Un primo elemento su cui soffermarsi è lo scarso valore attribuito al titolo di studio, che sarebbe un elemento quasi irrilevante per l'accesso alla professione. Il peso teorico è decisamente subordinato alla pratica e alla costellazione delle esperienze, sia lavorative che extraprofessionali. Quelle brave hanno una migliore attitudine educativa. Chi esercita questa professione deve avere delle caratteristiche personali diverse da coloro che sono impiegati in un altro settore. Un peso notevole è attribuito alla genitorialità, sull'importanza dell'educazione impartita da coloro che sono considerati «i primi educatori». Dal percorso familiare dipende in maggior misura la riuscita professionale di chi è impegnato nei servizi socio-educativi. Non basta essere laureati per essere degli educatori, ma occorre un orientamento familiare e una storia personale basati sull'interiorizzazione di buoni principi. Da ciò matura un senso di solidarietà, esplicitato anche nell'ambito delle esperienze private e quotidiane, rivolto in particolare alle fasce deboli, in cui rientrano disabili, anziani e minori. Sebbene c'è la consapevolezza del rischio di cadere nell'errore di ricorrere a cliché e di ricondurre i bravi educatori maschi all'adesione a un certo ideale politico, l'esperienza sembra rafforzare tale credenza.

Ti ho fatto prima il cenno politico perché mi sembra quasi che tutti gli educatori maschi bravi che io conosco fanno comunque parte della schiera sinistra, ex sinistra, che purtroppo, è un errore racchiudere nella bandiera della pace, il volerci bene, facciamoci un canna in piena libertà, eliminiamo la corruzione dalla faccia del mondo. Ora o è un ideale [...] però gli educatori che conosco io, chi ha un percorso familiare è un bravissimo educatore. Chi si è iscritto all'università (batte la mano sul tavolo mentre parla) solo per laurearsi in scienze dell'educazione, onestamente li conosco, vendono anche... vendono anche i mobili, come conosco qualche laureato in sociologia prima di me che ha preso il posto nell'azienda dei trasporti [...] “mi metto a fare il doposcuola per guadagnare gli 80 euro però alla fine voglio continuare nel mio lavoro”, questo fa un buon educatore.

In riferimento all'orientamento sessuale, esso è determinato da un fattore biologico perché «si nasce femmina, si nasce omosessuale [...] non è una colpa», non è dunque frutto di una scelta o di un percorso di vita. Le forze storiche, sociali, culturali, ambientali, famigliari e relazionali non incidono nell'identità sessuale, che è stabilita da «un gene». È curioso il fatto che Alfonso nonostante si dichiari laico e sia indifferente alla normatività cristiano-cattolica, si serva di concetti – quello di peccato – e citazioni di ordine religioso.

oggi il sesso è diviso in maschio, femmina e c'è l'omosessualità [...] che è una cosa che purtroppo in molti casi non viene accettata, non lo so perché [perché], alla fine è la piena normalità, è la piena normalità [...] Ma è normale! l'importante è che le componenti fondamentali, è un gene: si nasce omosessuali o si nasce maschio o si nasce donna. Quindi ci nasci omosessuale, lo scopri. Mi fa piacere che nei tempi moderni si scopra meno, meno, meno, in modo meno drammatico di come succedeva all'epoca. Conosco storie di persone che si sono ammazzate quando [si] sono scoperte omosessuali quando è normale, se è omosessuale non ci sono problemi [...] tanto non è che dobbiamo condividere per forza il sesso. Perché poi il problema è questo, l'omosessualità o sull'essere maschio o femmina c'è una grande ignoranza, perché [perché] si guarda sempre al sesso, ma allora qua dovremmo trombarci tutti quanti tutti i giorni? [...] ti ripeto: si nasce maschi, si femmina, si nasce omosessuale, non è un peccato, non è una colpa. L'importante è che poi il percorso della vita prosegue in modo normale, cioè il maschio faccia il maschio, la donna faccia la femmina, faccia la femmina, l'omosessuale faccia l'omosessuale, cioè nel senso senza essere cattivi, senza far del male agli altri, senza essere cattivi, guardando sempre al bene comune, cioè si può essere, cioè come diceva chi era papa Francesco che diceva "chi sono io per giudicare?" Ma veramente France [Francesco]. Noi possiamo giudicare solo nel momento in cui qualcuno fa del male ad un altro! e questo lo ricollegiamo al ruolo dell'educatore: tu l'educatore può essere bravo, può essere meno bravo, però se tu aiuti, se tu ti aiuti, se tu stai cercando ti aiutare, anche di imparare [insegnare] "a" a un ragazzo disabile già hai fatto un gran lavoro, ce ne vorrebbero tantissimi allora poi di educatori in, in questo senso.

Anche su un tema così ampio e articolato Alfonso non può fare a meno di interconnettere la costituzione di base di un soggetto con il suo potenziale educativo. In piena sintonia con la filosofia delle professioni di aiuto, il sociologo ritiene che l'aiutare gli altri sia «un elemento fondamentale» che possa suggerirci se un educatore sia bravo o meno. Le intenzioni, specialmente se nobili, sono ciò che conta, e sono preminenti alla preparazione teorica e alle competenze operative.

L'omosessualità è accettata incondizionatamente. La stigmatizzazione è rivolta alla sola cattiveria.

Alfonso delinea un quadro di azioni entro quali muoversi: una famiglia che orienti, interventi mirati alla situazione particolare – il bambino che al bar si comporta da scostumato. Il suo profilo è idealista-solidarista. La sua ricerca verso il bene comune e la pro-socialità pare essere dettata da motivazioni politiche e solidaristiche. Incarna un tipo di sociologo che non si limita a osservare e descrivere la società, ma che con il suo intervento cerca di migliorare non solo l'utenza con cui è coinvolto, bensì la società in senso generale, sentendosi chiamato in causa a intervenire anche nel quotidiano.

#### **4. Antonio, il missionario**

Intervistando un profilo più giovane, Antonio Ferrara, classe 1986, che da poco si è affacciato alla pratica educativa, si perviene a un identikit che rispecchia l'idea di Alfonso di educatore inteso come «brava persona». Occorre premettere che questa intervista è stata condotta tramite facebook per cui la limitatezza del materiale ha impedito un'analisi in profondità, ma ha comunque offerto spunti interessanti ai fini della ricerca.

Una volta conseguita la laurea in Scienze dell'educazione, Antonio ha ottenuto la qualifica professionale di Animatore sociale nel 2013. Attualmente, lavora «come educatore domiciliare per l'assistenza a minori non autosufficienti in merito al progetto “Home Care Premium” promosso dal piano di zona ambito S2 ex S3 Cava - Costiera Amalfitana.»

Circa la motivazione che lo ha spinto a intraprendere un percorso accademico pedagogico, Antonio rivela la sua indole missionaria: «Ho deciso di studiare Scienze dell'educazione poiché avevo intenzione di esercitare una professione che mi permettesse di aiutare gli altri.» Il suo intento si colloca controcorrente rispetto alla maschilità intesa dai costrutti ideologici e stereotipati, non rincorrendo prestigio, denaro o autorità, ma scegliendo di diventare un “crocerossino”. Ne consegue che «ogni professione richiede a chi la esercita determinate caratteristiche. Per questo credo che un educatore maschio abbia caratteristiche, che ha acquisito, elaborato e sviluppato lungo il suo percorso di studi e di lavoro, diverse da coloro che si occupano di tutt'altro. Essere educatori significa essere di esempio per gli altri, accoglienti con l'educando, ispirare fiducia, avere pazienza e rispetto, essere umili e coerenti con ciò che si dice e fa.» Il tipo di rapporto che si instaura tra educatore ed educando richiama quello auspicato da Rousseau nell'*Emilio*. Aspetto centrale della missione di un educatore è quella di favorire lo sviluppo dell'educando offrendogli in prima persona un modello virtuoso di comportamento. Ed è questo il discrimine tra l'esperto dei processi educativi e qualunque altro professionista: l'educatore non può scindere la saggezza teorica dalle buone pratiche, non può sottrarsi allo sguardo dell'educando, per il quale deve rappresentare l'ipostatizzazione dell'idealtipo di persona educata. L'esposizione alla quale è sottoposto gli impone l'obbligo morale di mantenere una condotta corretta che sia di esempio pratico.

Dinanzi all'espressione «l'educazione è roba da donne?», Antonio riconosce che si tratta «sicuramente» di «un pregiudizio diffuso, poiché da sempre è la donna che si prende cura dell'educazione del proprio piccolo o di un altro essere umano. Nella mia – per ora – breve esperienza lavorativa devo dire che questa differenza non l'ho avvertita molto poiché sono stato accolto come un operatore al pari degli altri.» La certezza che si tratta di uno stereotipo gli è maturata anche in base alla propria condizione personale, di un uomo che ha scelto di aiutare gli altri educando. Nel rapporto con l'utenza, ha riscontrato una preferenza da parte dei bambini verso l'educatore dello stesso sesso: «molte volte i bambini maschi tendono a cercare di più l'educatore maschio mentre le bambine le educatrici.»

Antonio racconta anche un aneddoto, vissuto come un feedback gratificante, e che suggerisce

che la sua vena educativa sia di tipo romantico-sentimentale :«Ricordo di un ragazzo, che era in procinto di lasciare la comunità, il quale mi chiamò in disparte e mi disse di essere stato contento di avermi incontrato e che se anche era stato poco il tempo trascorso insieme, sentiva di potersi fidare di me. Si augurò di poter incontrare un ragazzo, un amico di cui potersi fidare così come aveva fatto con me. Queste sue parole mi fecero molto piacere poiché credo che avere la fiducia di ragazzi che il più delle volte si portano sulle spalle situazioni di abbandono sia una gratificazione per il lavoro svolto.» La maschilità è dunque percepita e incarnata come lontana da concezioni di stampo viriliste o patriarcali, disvelando apertamente le sue componenti di debolezza e di cura, che non sono appannaggio del femminile: «Essere maschio significa innanzitutto riconoscersi come essere umano, dotato di intelletto e di sentimenti; riconoscere la propria forza ma anche debolezza; essere autorevole ma non autoritario; prendersi cura delle persone care non solo rispondendo ad esigenze economiche o materiali in genere, ma anche affettive; far sentire la propria presenza sia nei momenti felici che in quelli più difficili della vita.»

In accordo con il *modus operandi* di Alfonso, che contraddistingue un buon educatore dal suo agire monistico nella vita privata e in quella professionale, anche Antonio è dell'avviso che non si può smettere di essere un educatore lontano dai contesti di lavoro. Di ciò che si pratica sul campo restano delle tracce anche nel quotidiano e nel privato. «Penso sia difficile scindere completamente la dimensione professionale da quella privata poiché chi svolge la professione di educatore lo è prima ancora nella propria vita, dando il buon esempio, essendo coerente, accogliente, umile, una persona che ispira fiducia, un punto di riferimento per quelli che lo circondano. È opportuno comunque che l'educatore si ritagli i propri spazi e momenti di riposo, evitando di incappare in periodi di elevato stress che lo possono portare al burnout».

Riflettendo sui dati inerenti la violenza sulle donne, perpetuata da uomini, nella maggior parte dei casi mariti, compagni, fidanzati, ex, familiari o amici, e alla constatazione che una lettura statistica suggerisce che gli uomini sarebbero più violenti delle donne, Antonio ritiene «che l'uomo sia violento sia per natura, poiché dentro di sé sono presenti meccanismi tali che lo spingono innanzitutto a conservare il proprio bene, la propria salute anche a discapito del bene e della salute dell'altro, ma anche per forme di cultura tali che incentivano ad utilizzare la violenza, in particolare sulle donne, solo per l'affermazione della propria mascolinità, basti pensare alla cultura araba.»

Sono diversi gli aspetti insiti in queste poche righe sui quali vale la pena soffermarsi. Innanzitutto la violenza scaturirebbe per *physis* e farebbe parte dell'economia naturale della specie per garantire l'auto-conservazione, esplicitando una visione aderente alla teorizzazione del *thanatos* freudiano. In secondo luogo si riconosce che la violenza sia anche il frutto di costrutti socio-culturali, in accordo alle forme dicotomiche di supremazia maschile assicurata tramite la subordinazione femminile. L'esempio utilizzato, che descrive una realtà sicuramente controversa,

quella araba, indica che tutto sommato non si percepisce la gravità e l'impellenza della lotta alla misoginia della nostra cultura. Il femminicidio made in Occidente è offuscato da una generalizzazione su tutta la cultura araba.

In tema di omosessualità, il pensiero di Antonio è alquanto deciso, non manifestando alcuna apertura, negando i diritti civili alle coppie dello stesso sesso: «La mia opinione su questo argomento parte dal mio credo cattolico - cristiano, e pertanto sono contrario alle unioni omosessuali così come alle adozioni di figli da parte di coppie omosessuali. Ritengo infatti che un bambino per crescere bene abbia bisogno di un padre e una madre.»

Antonio premette da subito che la sua risposta è influenzata dal credo religioso, difatti la sua posizione è in accordo con quella ufficiale della Chiesa cristiano-cattolica. Da ciò potremmo indurre che è la fede a orientare il suo pensiero (forte) e la sua azione. Questo spiega la sua contrarietà categorica alle adozioni omosessuali per una questione di benessere del bambino, il quale necessiterebbe di un maschio e di una femmina, non di genitori promiscui. È dello stesso avviso anche sui ruoli di genere: «Personalmente ritengo che i ruoli debbano essere ben definiti in modo tale da dare e garantire un punto di riferimento solido e stabile al bambino (nel caso di una famiglia) o all'educando (nel caso si parli di educatori).» Egli eleva il modello di famiglia nucleare a modello da asportare anche nell'offerta educativa, evocando implicitamente la minaccia della società liquida e contingente che può essere scongiurata assicurando solidità e stabilità all'educando. Il suo profilo, è missionario-romantico.

### **5. Aniello, il professionista**

Un altro giovane educatore intervistato è Aniello Mazzeo, classe 1986, che dopo aver conseguito la laurea in Scienze dell'educazione e la laurea specialistica in Educatori professionali, in entrambi i casi all'Università degli Studi di Salerno, si è affacciato presto al mondo lavorativo attraverso varie esperienze, tra cui tirocinio, volontariato e contratto lavorativo vero e proprio. Cronologicamente, vanta un'prima esperienza a Salerno, paese in cui è cresciuto, presso scuole secondarie e primarie nell'ambito dell'associazione "Mentoring USA/Italia – Onlus" all'interno di un progetto contro l'abbandono scolastico, per circa 10 mesi. Successivamente ha svolto un'esperienza di tre mesi presso l'associazione "Gruppo LOGOS Onlus", sempre a Salerno, in qualità di facilitatore in un gruppo di auto-aiuto rivolto a giocatori anonimi, quindi persone con dipendenza dal gioco d'azzardo. In seguito a questa esperienza, Aniello si è trasferito al Nord dove ha svolto uno stage di circa un mese a Novate Milanese, in provincia di Milano, presso un asilo nido gestito dalla cooperativa "Koiné Sociale Onlus". Attualmente ha iniziato da poco, all'incirca una settimana, a lavorare tramite la cooperativa "La nuova famiglia", situata in provincia di Monza, presso una comunità alloggio per ragazzi disabili dai 25 ai 65 anni.

Anche nel suo caso le opinioni espresse sono frutto di esperienze professionali, riconfermando il primato della pratica sulla teoria. Riconosce che si tratta di pareri personali e non di regole generalizzabili, in quanto in quasi tutti le risposte specifica che si tratta del suo personale punto di vista, usando diciture quali “nel giudizio di quanto ho visto io”, “a mio giudizio” (10 volte), “ora ho visto”, “per quanto mi riguarda” (2 volte), “ho notato”, “io penso che” (5 volte più 2 volte “penso io”), “per quanto ho visto io”, “secondo me”.

A livello di primo approccio, alla domanda se i suoi supervisori o coordinatori hanno avanzato delle richieste o aspettative particolari in merito al suo essere maschio, Aniello pone già sul piatto una tematica molto cara a chi si occupa di gender studies: l'autorità maschile. Dalle sue parole si evince che essa è una componente importante nelle professioni educative, e traccia già una prima distinzione tra l'identità maschile e quella femminile

no loro, capita comunque che nelle ricerche diciamo di mercato del lavoro ci siano delle richieste particolari per quanto riguarda comunque l'ambito maschile e quindi una figura specifica di educatore maschio per specifici [specifici] ambienti, per esempio come ad esempio nelle comunità per tossicodipendenti o per quanto riguarda comunque comunità per minori abbandonati o disabili gravi, quindi la figura dell'uomo è specificamente... specifici, specificatamente l'educatore maschio viene richiesto nel giudizio di quanto ho visto io, in queste comunità... quindi comunque la figura del maschio in determinati ambiti socio-educativi è richiesta anche con una maggiore autorità e forza fisica, a mio giudizio, quindi ci può anche stare una richiesta specifica dell'educatore maschio

Nel raccontare il suo rapporto con i bambini, sollecitato dalla domanda «con i bambini dunque non eri timoroso nell'esprimere il tuo affetto, la tua emotività, pure con il contatto fisico?», sembra che Aniello tendi spostare il discorso dal piano emotivo a quello professionale e ad intendere le due dimensioni poste su differenti livelli, trascurando l'importanza dell'assertività relazionale

no, con i bambini comunque poi, poi ho instaurato un buon rapporto diciamo, non solo diciamo affettivo, ma anche comunque professionale perché comunque stavo svolgendo un tirocinio professionale lì, formativo, quindi comunque venivo visto dai bambini diciamo come...eh...mmm...ehm... una sorta di... fratello maggiore, ovviamente erano bambini che avevano difficoltà enormi a casa, come ad esempio abbandono scolastico, famiglie separate e situazioni di disagio familiare grave, quindi diciamo che i bambini mi vedevano, mi vedevano come una figura non dico paterna, ma comunque una figura di riferimento e di appoggio.

Il rapporto con i bambini, di cui si sono affezionati «più i maschietti, devo dirti la verità, che le femminucce» - confermando l'osservazione di Antonio – è definito buono e l'atteggiamento percepito dai bambini, avendo l'impressione che la sua figura sia accostata a quella di un fratello maggiore, indica che l'aspetto relazionale, non citato da Aniello, riveste in ogni caso un ruolo di primo piano.

Sull'idea che le donne siano educatori migliori degli uomini, in un primo momento Aniello riconosce la pluridimensionalità della questione, elencando diverse variabili che “a suo giudizio”

concorrono alla riuscita educativa.

no, io penso che dipenda dal singolo soggetto, dall'ambiente in cui ti trovi, con chi hai a che fare, qual è l'utenza e quindi ci sono vari fattori, diciamo per quanto riguarda il nostro settore quindi non bisogna generalizzare, a mio giudizio non bisogna generalizzare chi è più bravo o chi meno, dipende poi dalle esperienze professionali che hai tu alle spalle, dipende qual è l'utenza con cui hai a che fare, dipende se c'è un rapporto comunque con i colleghi, anche questo [...] se è buono, dipende un po' l'ambiente pure circostante dove ti trovi, se ti mettono comunque a tuo agio oppure comunque di diciamo ci sono delle difficoltà diciamo evidenti come carenza di risorse, di denaro oppure diciamo [...] minori [...] anche diciamo appunto [...] tenore anche di vita, di cultura, di società [...] io penso che comunque la differenza diciamo dei servizi [...] posso dire tra Nord e Sud [...] c'è la crisi anche qui però ho notato che qui un minimo di risorse le famiglie diciamo la comunità in generale le spende diciamo le cose per far fare delle attività ai ragazzi

Parlando invece in termini più generali, precisamente di propensione femminile all'educazione e alla cura, il parere di Nello è in linea all'opinione diffusa secondo cui la donna avrebbe una maggiore indole educativa. La nota interessante è che quest'opinione proviene da un professionista del settore, il che pone due interrogativi: la larga condivisione, da parte degli stessi educatori, come riscontrato anche nel caso di Antonio, di quest'idea dovrebbe spingerci a considerarla non più come un pregiudizio, ma come un'ipotesi molto accreditata, oppure dovremmo interrogarci sugli educatori, sulla loro formazione e la loro pratica? La consapevolezza che nell'educazione entrano in gioco diverse variabili, non dovrebbe far indurre che la questione sia meno biologica – le donne sarebbero più inclini all'educazione – di quanto si creda? Gli educatori, uomo o donna che siano, non dovrebbero essere i primi a operare verso un cambiamento dei pregiudizi e delle convinzioni prevalenti? La risposta qui riportata non sembra andare verso una direzione contro-intuitiva rispetto al pensiero comune.

forse ehm... no, io penso che la donna a prescindere dall'istinto materno e cose comunque uhm diciamo che forse è un pochino più portata rispetto a noi uomini riguardo forse l'educazione, la comunque la [...] la rigidità, non dico la rigidità però comunque [...] in determinate cose, però comunque ti ripeto, non vedo male nemmeno un uomo in determinati ambiti come ad esempio la tossicodipendenza, la disabilità, o anche i minori perché comunque la figura maschile a mio giudizio può servire in determinati casi

La conversazione sembra riportare a un altro pregiudizio, che gli esplicito sotto forma di domanda: «l'uomo è più indicato nel contenere disabilità e tossicodipendenza rispetto alla donna?»

in determinati casi che si vengono a creare, per quanto ho visto io, sì. Nel senso che comunque se ci sono delle difficoltà comunque diciamo in famiglia oppure comunque di rapporto, di scontro, di conflitto, per quanto riguarda comunque determinati ambiti dove se lavori comunque ci sono dei conflitti o degli scontri, oppure delle difficoltà la figura maschile viene comunque ad emergere nei confronti a mio giudizio della donna, non che la donna sia di aspettative minori, non sappia gestire un conflitto, però l'uomo, vista anche la figura che si ritrova, può forse anche dare una mano in più,

affiancato alla donna, per quanto riguarda la gestione dei conflitti. [Rispondendo alla domanda «per una questione di autorità?»] forse [l'uomo] viene visto come una figura comunque paternale quindi comunque ancora forte, non dico, non che la donna non sappia gestire queste difficoltà eh, però forse l'uomo, la figura dell'uomo forse non dico può far intimidire però comunque per quanto riguarda la gestione di determinati ambiti, come la, la tossicodipendenza, può comunque incidere [...]

La prova del nove indiretta della già esplicita associazione, in questa prospettiva, tra maschilità e autorità/forza/durezza/irruenza arriva dalla successiva risposta – alla domanda «e invece quando si ha a che fare con bambini, adolescenti, giovani?» – nella quale si ripristina la parità di genere nell'intervento educativo, riprendendo in considerazione le altre variabili già predisposte in precedenza.

a mio giudizio dipende perché dipende un po' con chi hai a che fare, qual è l'utenza in generale [...] tu hai detto gli adolescenti quindi penso che comunque gli adolescenti, uomo o donna che sia, comunque, comunque è una problematica difficile da gestire quindi non mi va di, comunque di sottospecificare donna o uomo chi sa gesti... chi sa meglio gestire la situazione. Bisogna vedere un po' l'ambito in cui viene a crearsi questo conflitto, questa difficoltà e l'operatore in base anche all'esperienza [...] che si ritrova e quindi vedere un po' come gestire questa difficoltà, questo conflitto

Dall'analisi del suo punto di vista si può dedurre che la richiesta di un educatore maschio è circoscritta all'interno di contesti in cui si ha a che fare con un'utenza difficile, come nel caso di minori abbandonati, disabili gravi e tossicodipendenti, che sono pertanto inseriti in un'unica categoria, che necessita non tanto di educazione, ma di caratteristiche tipicamente maschili. Qui Aniello rafforza il significato delle parole precedenti, in particolare all'affermazione che «la figura del maschio in determinati ambiti socio-educativi è richiesta anche con una maggiore autorità e forza fisica, a mio giudizio, quindi ci può anche stare una richiesta specifica dell'educatore maschio.»

Una dicitura ricorrente è “gestione dei conflitti”, indice che l'educatore è inteso, più che una figura volta a favorire, anche nel senso etimologico di “*educĕre*” – tirar fuori – lo sviluppo e la formazione delle facoltà mentali, sociali e comportamentali di un individuo, e più in generale la sua umanizzazione, come una specie di mediatore, o per rientrare nel racconto di Aniello, un facilitatore – ruolo che ha svolto nell'ambito dell'esperienza nel gruppo di auto-aiuto per persone dipendenti dal gioco d'azzardo. Se l'educatore è colui che interviene nella gestione dei conflitti, allora ne discende che coloro ai quali è rivolto l'intervento educativo vivono una problematica legata a un conflitto, una negoziazione, il che a sua volta implica che le parti in causa sono almeno due, di conseguenza occorre una mediazione interpersonale per risolvere la situazione o condizione causale.

Da questa concezione si comprende anche l'irrilevanza teorica, attestata dall'assenza di riferimenti in tal senso o a una qualsiasi strategia: se il compito di un educatore è quello di aiutare il raggiungimento di un compromesso, mediante un processo di transazione, durante una situazione conflittuale, ne consegue uno scarso interesse per dei possibili fondamenti generali o delle linee guida entro cui orientare la propria azione. Aniello è dell'avviso, che «dipende un po' con chi hai a che fare.» Il tema della gestione dei conflitti ricorre anche quando si parla

dell'educatore donna:

in generale... mah... diciamo che [...] non è che mh... non è che è succube, nel conflitto oppure nella situazione spiacevole che si può venire a creare, però comunque in determinati ambiti, ti ripeto, forse soprattutto in quello della tossicodipendenza che ci può essere una, una, una maggiore irruenza, violenza da parte diciamo degli utenti forse la figura maschile è un pochino più indicata ma non per una forza fisica, ma più che altro per una sorta di, comunque di esperienza che un educatore maschio può avere nei confronti anche di una donna, non che la donna non sia capace gestire questo conflitto [...] comunque [...] una sorta di autorità che comunque si può venire a creare, una sorta anche di rispetto, sai vedendo una figura maschile, tra uomini non c'è subito un conflitto, si tenta anche un po' di mediare, di non arrivare ad esempio alle mani, penso io [...] forse l'uomo è in... in, in maniera intrinseca può diciamo gestire meglio questa piccola situazione di conflitto [...] comunque per quanto riguarda sempre la tossicodipendenza eh, poi per quanto riguarda [...] bambini, infanzia o disabilità comunque a mio giudizio una differenza tra uomo e donna è veramente scarsa, minima, forse la tossicodipendenza, la figura maschile ti ripeto può essere un po' più di aiuto rispetto, non perché la donna non si sappia saper imporre [...] ma perché a mio giudizio l'uomo viene visto con una sorta anche di maggiore rispetto, per quanto riguarda anche problematiche [...]

Ancora una volta emergono elementi non proprio avanguardisti sui rapporti di genere giacché l'uomo è descritto ancora come portatore di autorità, più esperto della donna, una figura che ottiene rispetto. Grazie a questi fattori, anche in situazioni difficili si eviterebbe di degenerare nella violenza, quasi a dire che se si ha di fronte un uomo si pensa due volte prima di ricorrere alle mani. Viene evocato un quadro un po' stereotipato e patriarcale. Sono ancora assenti i richiami spontanei all'aspetto emotivo, che viene menzionato soltanto dopo una relativa stimolazione – la domanda se sia più vantaggiosa la presenza di un'educatrice piuttosto che di un educatore nel caso di bambini con deprivazione affettiva – : «mh... diciamo che la donna nell'ambito di, per quanto riguarda i conflitti familiari e diciamo soprattutto se si rivolge a dei minori forse può gestire nel senso di una sensibilità maggiore rispetto all'uomo nella maggior parte dei casi può forse gestire meglio sicuramente le situazioni che te hai appena, hai appena elencato.»

Occorre da subito premettere che il termine “sensibilità” è stato utilizzato più volte da me, l'intervistatore, e che quindi con molta probabilità sia stato preso in prestito dall'intervistato, che sembra non utilizzare spontaneamente termini che richiamano la sfera emotiva. Quest'ipotesi è rafforzata quando gli si chiese se «il maschio educatore deve avere delle caratteristiche personali e professionali diverse dal maschio che lavora in altri ambiti professionali»

ovviamente ogni settore richiede delle attività, delle competenze, delle esperienze diverse, diciamo del lavoratore [...] a prescindere che sia uomo o donna, secondo me, quindi è normale che non si può mettere a paragone un ingegnere uomo con un educatore uomo oppure con un... un ragazzo che ha studiato economia, quindi marketing, quindi nel commercio rispetto sempre a un educatore [...] comunque ci sono ambiti diversi, le esperienze che si vengono a creare sono comunque differenti, i divieti, i conflitti sono anche diversi, di natura anche diversa [...] non si può fare queste, una differenza a mio giudizio.

Le competenze educative sono equiparate alle competenze tecniche di un qualsiasi altro campo professionale. Non c'è traccia del quoziente emotivo, e quando glielo si chiede esplicitamente se per un uomo impegnato nell'educativo che ha sviluppato una maggiore sensibilità, emotività e empatia sia utile utilizzare queste componenti anche nella vita privata, la risposta è negativa:

no, io penso che poi uno debba scindere comunque il rapporto di lavoro rispetto comunque alla vita privata, familiare che uno ha [...] non credo che si possa fare. [...] se uno ha dei pregi comunque anche caratteriali e deve comunque saperli far sfruttare [fruttare] come in ambito anche lavorativo [...] poi è normale che la gestione di un conflitto tra due ragazzi disabili non puoi certo influenzare la tua rendita diciamo di conoscenza personale per quanto riguarda il proprio carattere [...] dipende dalle situazioni sempre a mio giudizio, poi è normale che se uno ha dei pregi come [...] l'ascolto, l'empatia, il dialogo deve anche sfruttare soprattutto nell'ambito in cui, io e te ad esempio ci ritroviamo, come quello educativo

Le capacità di ascoltare, di dialogare e di entrare in empatia sono viste come pregi del carattere, dipendono dunque dalla dimensione privata del soggetto e non fanno parte del setting di un educatore. Nel suo caso non sembra esserci un'apertura o interesse in tal senso. Come già affermato in precedenza, Aniello scinde le competenze tecnico-educative e il comportamento privato, e tra i due piani non sembra esserci uno scambio reciproco. Difatti, quando gli chiedo se il percorso professionale lo abbia arricchito in sensibilità e empatia rispetto ai suoi coetanei occupati in un altro settore, arriva una risposta un po' confusa:

mh... no, per quanto mi riguarda io sfrutto molto diciamo la tematica comunque del dialogo e quindi... anche il fatto [...] anche un po' dell'empatia però è normale che nel nostro campo uno debba saper comunque comportarsi e quindi c'è una sorta comunque sempre di dialogo e di confronto, non solo per la gestione dei conflitti nel nostro campo lavorativo, ma anche per quanto riguarda comunque, una sorta comunque [...] vivere e quindi anche una gestione dei conflitti a prescindere dal... diciamo dalla situazione spiacevole che si può venire a creare, quindi no, non vedo perché ci debba essere questa scissione.

Secondo Aniello per essere un buon educatore non è necessario il rafforzamento e lo sviluppo delle qualità ascrivibili al quoziente emotivo – sensibilità, empatia, pro-socialità, comprensione – , ma occorre essere inclini al dialogo, che è posto in primo piano. Sembra quindi prevalente la dimensione professionale-razionale, mediante un processo di negoziazione/condivisione finalizzata alla ri-soluzione dei conflitti. Il suo profilo è “professionista”, inteso come chi esercita un'attività lavorativa ai fini di una retribuzione. Non vi sono altre motivazioni o interessi in merito.

Il dialogo viene riconfermato come elemento principale perché si ribadisce che si tratta pur sempre di gestire i conflitti. Nel caso del femminile «la donna forse lei ha maggiore sensibilità rispetto all'uomo in determinate circostanze, questo è poco ma sicuro [...] è normale che riguarda sempre in base un po' comunque, France [Francesco], all'educazione, al rispetto che comunque la famiglia ti ha... ti ha inculcato, secondo me»

## 6. Conclusioni

Da questi tre profili identitari emerge un certo relativismo nella pratica educativa, giacché non si fa cenno a possibili strategie, comportamenti o linee guida generalizzabili. Tutto dipende dalla singola situazione e dal contesto. Una variabile comune è la preminenza della pratica sulla teoria, la quale non incide sulla validità di un educatore, che sul campo acquisisce gli strumenti, umano-relazionali – nel caso di Alfonso e Antonio – e dialogici – nel caso di Aniello – per poter assolvere efficacemente il suo compito. La laurea costituirebbe soltanto il punto di partenza, la chiave d'accesso alla professione, che necessita di esperienza lavorativa, non di costrutti teorici. La dualità dei generi è concepita come una struttura fondamentale da cui l'educazione, ma anche la società, non può prescindere. Tutti gli intervistati fanno cenno all'importanza della divisione dei ruoli, ma soltanto Alfonso, un educatore spurio, essendo un sociologo prestatosi al “bene comune”, è aperto a una versatilità dei ruoli. Vige la consapevolezza del doversi lanciare nel contesto reale piuttosto che contemplare il contesto ideale appreso sui libri. Dallo scarso merito attribuito al corso di studi universitario sorge la domanda se siano i Dipartimenti a indirizzo pedagogico ad attrarre gli uomini – ma a questo punto anche le donne – in base alla loro offerta formativa o alle prospettive occupazionali, oppure se la cifra educativa sia determinata prevalentemente da altre caratteristiche (predisposizione caratteriale, maturazione di un atteggiamento pro-sociale in base al contesto socio-ambientale, scelta di un percorso di studi non ritenuto troppo impegnativo, ripiego dopo aver fallito l'accesso al corso di laurea preferenziale e/o altri fattori contingenti) e quindi gli educatori si formino e si facciano avanti da sé.

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# Lifelong learning for improving customs education system in Latvia and the world

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## 1. Abstract

2. Paper is devoted to actual problem of education and human resource management in field of customs administration and Latvian experience for solving crucial training problem – interaction of custom administration processes and relevant knowledge. Generally training organizers are developing own training programs following objectives of staff development strategies, but custom's community stakeholders - World Customs Organization and world customs administrations together with academics are looking for better training support mechanism, how to create contact points for university and customs internal training and to create qualitative business training programs in the customs area. The aim of research is to describe the mechanism of existing and potential training management. As the result of study the generalized approach for satisfaction of training needs for joint tax and customs administration worked out and proposals on the improvement of training management mechanism is offered. Research based on comparative analysis of literature and practical experience of custom education institutions.

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*Keywords:* Customs administration; public administration; human resource management; training needs; universities

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## Introduction

New information technologies and knowledge economy development caused also changes in public authorities' behaviour. Humans should continually "renew" their knowledge and skills. To meet the needs of employers and workers, the education system should also become more flexible by providing people with the competence level that complies with contemporary requirements, on the one hand, and by cost-effective training implementation (in terms of time, human resources and employers' resources), on the other hand. In case of public administration, an effective training system ensures that staff complies with modern requirements and provides public services according to public interests. One element of the human resource management system is career development programme building, while respecting both organizations' and employee's interests as well as the needs of society. In present conditions, implementation of career development programmes faces serious challenges. Under the impact of both internal and external factors, organizations and customs offices are undergoing significant changes, which do not allow them to create effective career development plans for employees. Personal development encourages the employees to make responsible choices for their future. It gives them a feeling of self-mastering over their lives. It puts them in charge of their jobs, careers and future work opportunities. Personal development, a process which aims to help people in their attempt to learn about approaching manners and the way these manners can be changed have become an important characteristic of managerial development in many organizations. (Barbu, Popescu, Stegaroiu & Valentin 2010). Therefore, employees themselves should take responsibility for the implementation of their own career plans, which so far has not been typical for customs authorities. Traditionally, the relationship between customs authorities and staff based on the following principles: loyal service; knowledge

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and skills are acquired and exercised only within their own organization, in return receiving a certain status in the society; remuneration and career opportunities from the moment of recruitment to leaving the organization. Over the past 20 years, such relationship has changed because customs authorities (due to reorganization, modernization, IT implementation, etc.) enforced to reduce number of customs officers and recruit outsourced professionals, as well as to recruit employees only for implementation of a single project. In these circumstances, customs authority's human resource management would rather switch from vertical to horizontal career planning and advancement. It means that an organization requires employee's individual ability to learn independently and to learn new ways of working, what means that employer- employee relations are not based on the principle of life-long employment, but on the principle of professional evaluation. Thus, modern state administrations are aware of the importance of employees' inclusion in the labour market after leaving public service. The authors consider that it is especially significant that economic security-related authorities, including customs authorities, respect this principle, otherwise, knowledge and skills of former civil servants could be used to weaken the economic security of the country.

The new European Union (EU) common customs training strategy seeks to build not only common e-learning modules, where training is supported by the European Commission (EC) and managed by the Member States (Petersone, 2012), but also flexible and interoperable customs education and training system. The concept that customs officials need fundamental education, instead of short-term training, appeared only in the 90s of the last century. On the one hand almost all of customs officers have higher education. However, it should be noted that, in most cases, such education is obtained in non-custom-related fields through traditional academic education at universities, or as higher education for customs profession, but under the umbrella of the existing customs training centres, which due to lack of accreditation, are not recognized outside the customs authorities. On the other hand, there are lots of customs officers with practical work experience who have been trained in their national customs services. They want that their informally acquired knowledge and skills are approved by a formal education document, which should be valid outside the customs field and should also be recognized academically. Despite the fact that different countries have different customs service capacity and work priorities, the methods that are suitable for carrying out their official duties and responsibilities, are similar. The Customs service is a special element in the system of not just a state administration (Chevers, 2013). The scope of professional knowledge for all employees at customs is similar, both globally and in Latvia, including the European Union.

The interest of the European Commission in this matter is declared by means of the aims in the Strategy 2010 to develop the information society and its innovations for the period till 2020. Meeting such demands is not an easy task. Therefore, besides an increase in the potential of knowledge, the students should develop creative skills and personality traits that would lead them to the enhancement of their problem solving skills. The issue of Knowledge Management and creation of knowledge-based systems is urgent and relatively new, still under dynamic development; but in practice, some of the knowledge systems have been successfully implemented, as well as the principles of work with knowledge, such as lifelong learning. The roles of knowledge and understanding for organizational performance have become more noticeable now than ever before. Knowledge management is a set of tools and processes, which served to improve the performance of public servant by transforming them to knowledge workers (Lodhi & Mikulecky, 2010). Furthermore, the success of a business depends on its successful management of business processes and successful decision making processes. The company can achieve this success by usage of Business Process Management System (BPMS) and Business Intelligence System (BIS) as key parts of proposed knowledge management system framework (Curko, Vuksic & Loncar, 2009). In order to enhance the visibility of the outputs of the Education and Training 2010 work programme, the European Commission has developed the KSLLL (Knowledge System on Lifelong Learning) website which will offer you the possibility to find easily accessible and up-to-date information on mutual learning in the fields of education and training for the development of lifelong learning in Europe (Knowledge System for Lifelong Learning).

Lifelong learning has been at the centre of many national education reforms in the past decade and higher education policy has been considerably shaped by it. At a policy level, a simple, elegant vision of integration and mutual dependence between learners, industry and higher education institutions (HEIs) is prescribed. In terms of this prescription, study programmes at HEIs are aligned to industry's skills and knowledge requirements and learners actively select and pursue educational opportunities in order to make and keep themselves employable (Witt & Lill,

2012). The European Union raised the issue of lifelong learning since 30 October 2000, in Brussels signing the “A Memorandum on Lifelong Learning” issued by the Council of Europe, which marked the beginning of this new approach to education and training. In Latvia, lifelong learning is discussed relatively recently. In 2007, lifelong learning policy guidelines, its implementation programme and regional action plans were developed that focus on access to lifelong learning and offer quality education to the regional population. Lifelong learning combines formal, non-formal and informal learning. However, false beliefs still prevail in the society about the nature of the principle of lifelong learning, such as lifelong learning is seen as an individual component or stage of the system (adult education), or type (non formal education), etc., and not as an all-embracing and inter-related principle of all types and levels of education. Lifelong learning, combining formal education with non-formal learning, contributes to full personal development and allows people to better adapt to the new era and social changes. Recognizing the central role of knowledge in economic development involves giving absolute priority to education. Progress can be achieved only through performance, human capital is the key and education is the main way by which people gain greater powers. Many economies in transition, as they open to international competition, stronger, based on market forces, should increase their efficiency and competitiveness by raising employment training by investing in education. Unfortunately, the difficulties of the transition process make a mark, more or less, on education systems, affecting the present and future training of human resources (Mirela, Adina, Dascălu, Constantinescu & Vlăsceanu, 2011). The article aims to explore lifelong learning opportunities for the implementation of measures to improve the education system for customs profession. As tasks are stated – exploration of the factors influencing the education system for customs profession in the world and Latvia; to assess the advantages of the qualifications framework being used to enhance the lifelong learning system in customs; to develop a model of recognition of knowledge acquired in the professional enhancement programme and through professional experience. In this paper, the following methods are used: empirical analysis, statistical data processing, including the deductive method and synthesis.

#### **Aspects for implementation of education system for customs profession in Latvia**

It is evident for both the customs officers and administration that changes in technologies as well as severe competition can lead to a situation that the document of education is the key for a good professional to obtain or retain a job. Of course, the idea of the recognition of education acquired and the relevant education document issued after completing non-formal learning and through experience is not new. In the world, including Europe, this practice has existed since the end of the last century. However, starting reorganization of education and training of the people in the field of customs, the EU Commission DG TAXUD (European Commission Directorate-General Taxation and Customs Union) should have foreseen such a possibility introducing a specific mechanism of action. The authors think that it should have been initially stated, that knowledge, skills and experience, acquired through non-formal education, should be recognized alongside with formal education. At present many customs training centres are trying to use an innovative approach for training and adopt a mixed approach for the development and expansion of the competency model. However, some customs departments rely on strict in-house rules, which were designed primarily through job experience of many years (and even centuries). That is to say, staff who is usually not specialist trainers is teaching other staff either in classrooms or through on the job supervision. The research reveals that:

- 85% of MS provide 75% or more of their technical training internally; by contrast just 37.5% of trade respondents do so;
- 55% of formal technical training in MS is delivered in classrooms (though respondents agree that in many cases formal training is only a part - usually less than half of the development of technical competencies), in trade this number falls to less than 30%;
- 20% in MS is delivered through on the job training, but 50% of training in trade is “on-the-job”;
- Just 14% of training in MS and 12% in trade are through electronic learning provision;
- Only 4% of MS training is through seminars, conferences or learning events for training and development provision, whereas 27% of training in trade organizations is through these events (BTRAIN- Feasibility study on

a potential EU academic programme for the customs profession, 2011).

Global collaborative design is a common practice nowadays due to the international nature and business scope of many corporations. The authors would like to extend the concept of the future of the joint to the customs authorities in the EU. Therefore, it is critical to educate future customs officer with the knowledge and skills to succeed in the now common multinational settings (Pētersone & Krastiņš, 2012).

Human resources policy of the State Revenue Service (SRS) is to improve the professionalism of their staff and ensure that staff development goes hand in hand with organizational development. In 2011 EC TAXUD recognized that Riga Technical University, together with the State Revenue Service (SRS) has created a unique precedent in Europe and in the world, which combines formal and non-formal education of employees working in the field of customs and taxation in a single system and which is focused on training the employees in public and private sector. Although Riga Technical University is focused mainly on educating staff for one state institution, namely the SRS, however, it is essential to understand that knowledge, skills and abilities offered by the study programme are also required in other sectors of the economy.

In the Integrated Customs and Tax Administration and in training of the employees of customs and taxation, a common educational profile of customs and taxation is established, i.e., the amount of the required general knowledge and skills is the same, but the specific ones are adapted for the given qualification of the relevant field of study. Thus, the authors want to emphasize the first preference for integrated training, i.e., the fact that acquiring just one specific educational profile, employees can easily rotate from one operation to another. The study programme is universal, with concentration both on training needs for national administration, as well as employees working in the private sector. The second advantage is identical interpretation of legislation in public and private sectors and the ability to understand other specific fields. The study programme has a tendency to reach compatibility with the SRS and the professional development system of employees working in the private sector. The third advantage is the elimination of the opportunity to learn twice and acquisition of the same knowledge and skills in formal and informal education.

Fig.1 shows that during the last 4 years, in the SRS, employee turnover has rapidly decreased from 16.92% in 1994 to 4.59% in 2013. High employee turnover rate was achieved in 2004, when Latvia joined the EU, and a lot of customs officers were transferred to other structural units of the SRS. It should be noted that, since 1994, the number of workers in the field of customs and taxation with higher education grew rapidly - from 34% to 93%, in 2012.

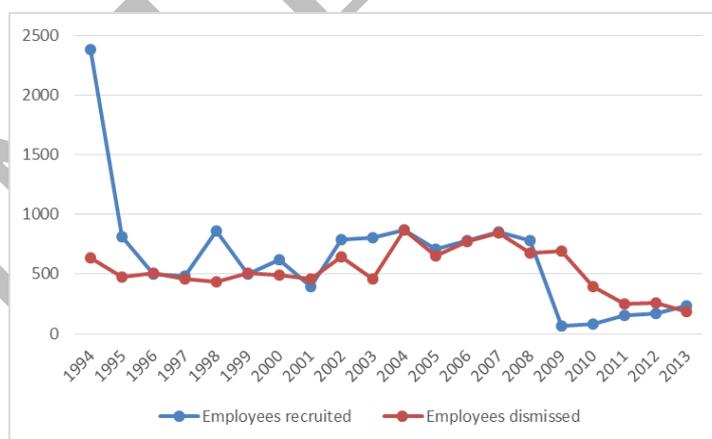


Fig. 1. Staff turnover at the SRS.

The number of people who have completed their formal education in the RTU study programme "Administration of Customs and Taxes" is relatively variable, which is mainly influenced by the economic situation in the country. Public financial support (budget places) in this programme has been relatively small and is only available since

academic year 2007/2008 in the professional bachelor degree programme, and since 2011/2012 in the professional master degree programme. It should be emphasized that the budget places allocated in relation to the total number of students is limited.

### **Advantages of using Qualifications Framework for the enhancement of lifelong learning system for customs profession**

The Bologna reform influences teaching in two ways. The first part of Bologna changes is about the programme structure: the length of study, a programme framework consisting of the obligatory and free choice courses, the uniform course definition, and the conditions for promotion based on course credits, etc. The second part advises different teaching style. The main goal of this part is enhanced efficiency of practical work with students, which should be concurrently evaluated and later becomes an important part of the final grade (Rožanc, 2011). However, as Urs and Sorin (2011) argued fundamental contribution of the Bologna Reform to European higher education is the focus on finalities of the educational process. The main aim of higher education is giving knowledge and forming professional competencies to the students for their integration into the labour market. For example, in Romania, the link of higher education and scientific research with the labour market encounters important difficulties: the persistence of the old educational models, the isolation of the educational process in mainly theoretical approaches, far from reality, inefficient nowadays, the resistance to the real change, the superficial implementation of the Bologna reform, the precarious status of practice in curricula, the weak and unconvincing cooperation between universities and employers, the employers' lack of confidence in the Bologna graduates. These difficulties generate problems in the graduates' integration into the labour market, a random process today, under the authority of chance, not of specialization. In the orientation of the academic process towards the labour market, in the growth of the graduates' employability, an efficient and competitive academic management plays a crucial role. By the curricular reform, by collaboration programmes and partnerships with employers, the link of academic education and scientific research with the labour market can become an institutional and systemic reality in the very spirit of the Bologna Process. Another advantage, which emphasizes Romania, the integration of the national education system in the European Union one together with the freedom of movement have led to the need for international recognition of the diplomas, respectively of the qualifications obtained through the completion of the curricula in national universities (Musuroi, Iacob, & Spataru, 2011).

One of the tasks to reach the objectives of the Bologna Declaration is to establish a national qualifications framework based on the educational programmes and learning outcomes of each individual course of study complying with the European Higher Education Area (EHEA) Qualifications Framework. The new Latvian framework for higher education, which is part of the LQF, is based on the three cycles of the Bologna process, i.e., bachelor, master and doctorate (Referencing of the Latvian education system to the European Qualifications Framework for lifelong learning and the Qualifications Framework for the European Higher Education Area). It is essential that the Bologna Process contributes to the fact that higher education is no longer isolated from the lifelong learning, because knowledge and skills, acquired outside studies, can be expressed in credits to be transferred into total credit points required for awarding a degree, qualification or acquisition of a study module. Those, who are involved in lifelong learning, can at the same time effectively take advantage of opportunities to master separate study modules in degree programmes. In Latvia, the education standards have been replaced by the new Latvian Qualifications Framework (LQF), which similarly to the EQF, consists of eight reference levels and imparts all levels and types of education. The regulations of the Cabinet of Ministers (CoM) also include a table with eight level descriptors based on learning outcomes, expressed in three dimensions: knowledge (knowledge and comprehension), skills (the ability to apply knowledge, communication, general skills), competencies (analysis, synthesis and assessment). However, the authors recognizing the role of professional standards in the field of higher education consider that, over-regulation and the existing structure of compulsory subjects, limit the contents of professional study programmes. In particular, the issue of the study subjects and their distribution is controversial in the field of study Internal Security and Civil Protection - general education courses, specialized courses, and to what extent practical placement should be provided. If educational standards are not flexible enough, there may be a

danger that programmes, related to strict national professional standards, are not competitive with the other national programmes, in which the educational standards do not exist, or they are more flexible. Further discussion of the European Qualification Framework, as an attempt to homogenise the educational processes from various countries, is one of the answers by which education planners try to cope with the issues raised by globalisation. In reality, it is an appropriate answer for globalisation, but which ignores the processes of globalization (Suditu, 2010).

According to the authors, due to a closer link between different national qualifications systems, the employees in the field of customs can gain more benefits than ever before:

- It will be good for the customs officials by improving access to lifelong learning. As a common reference, EQF will provide guidance on, how to combine the learning outcomes obtained under different conditions in formal education and employment and professional development acquired in customs service training centres in different countries, public and private educational institutions, which will help bridge the gap between education and training providers, such as those in higher professional education and training, which in the field of customs functions separately. This will facilitate the follow-through, so that the learners, for example, should not acquire the same subject repeatedly;
  - It will help people who have gained extensive experience in the customs service, to facilitate formal and informal learning. Since the emphasis is on learning outcomes, it will be easier to assess whether learning outcomes obtained in such environment are by content, relevance and results equivalent to formal qualifications;
  - This will enhance both the international mobility of customs officers and the students of customs programmes, which will enable them to acquire the formal and non-formal education at the universities in other countries and customs service training centres;
  - It will support the users of educational and training services and training providers to increase the transparency of qualifications obtained outside the national education system peculiar to the customs authorities and customs training centres in colleges around the world. Thus, the EQF will help both customs administrations and officials benefit from the advantages offered by extensive internationalization of qualifications.
  - According to the Law on Higher Education, in order to obtain higher education, the higher education institution with accredited study programmes assesses whether the learning outcomes achieved in previous training or professional experience meet the programme requirements and recognizes them, allocating credits. 30% of the credit points may be granted in recognition of the learning outcomes gained through professional experience, but study courses of the institution, education acquired through non-formal education, recognized by the higher education institution, and the final paper make up 70% of the credit points.
  - Rules and regulations for higher education provide two types of learning outcomes achieved through non-formal education:
    - The learning outcomes achieved through professional experience can be recognized only by that part of the programme, which consists of practical placement in the professional field that corresponds to the thematic area of the study programme, as well as the study course or module, in which practical knowledge, skills and competencies are obtained.
    - The learning outcomes achieved in previous education may be recognized, if they meet the highest level of education and have been achieved:
      - through continuing professional development programme obtaining the fourth or fifth level professional qualification;
      - in a separate programme course or study module as a listener;
      - in part of the study programme in the non-formal education programme, such as professional development education programme or continuing education programme;
      - in other types of non-formal education, such as self-study, with the exception of the programmes corresponding to the regulated professions;
      - the learning outcomes achieved and recognized in previous education or professional experience cannot be counted as final examinations of the study programme, state examinations, qualifying examinations or doctoral thesis;
- There is no chance that higher education institution could assess knowledge and skills acquired through the

experience and non-formal education, giving full credits for the study programme and immediately issuing a diploma of higher education. The higher education institution will grant the credit points for the knowledge and skills that an applicant will be able to demonstrate while the other part of knowledge will be acquired at the university and the applicant should pass the final examination in accordance with university requirements.

Regulations on the recognition of learning outcomes of foreign educational or professional experience achieved in other countries are different. For example, in Norway, universities are autonomous, and within the legislative framework, each school has developed its own rules and criteria, e.g., age restrictions or required experience. It is interesting to note, that, in Norway, this procedure is hardly used for awarding a diploma or degree. The procedure helps, when being enrolled at the university, as well as receiving the exemption from a course. In Lithuania, academic achievement assessment is made based on the standard national qualification system, which combines a number of factors: the qualification process, competency standards, credit transfer system, occupational and professional standards, evaluation, recognition and certification. Comparable number of the credits cannot be more than 50 % of the total number of the credits for the programme; the rest of knowledge is acquired through individual plan.

#### **4. Interaction of education and professional activities in customs services**

Process management is a competency of the customs administration, thus, what processes will be identified in the organization depend on many factors, such as the capacity of customs administration, government priorities, national legislation, joining to one of the conventions, participation in one of the international organizations, etc. (Pētersone, 2013). The learning outcomes achieved outside formal education are considered only, if they meet the programme requirements, and the authors believe that, in the SRS, it would be far-sighted to create their professional development and continuing education programmes as study programmes or course study modules at the universities. Thus, after successful completion of individual professional development and continuing education programmes, customs officers at the same time would obtain a formal proof about successful completion of the study course of the programme. Professional standard for customs officials is the most essential element of the study model, on the basis of which it is possible to create a harmonized and coordinated professional development system. The authors agree with Baranova (2013) research, that harmonization of the education systems and unification of educational and professional standards for Customs will enhance the level of professionalism. The competency model could be used as a tool for integration of the educational and professional spheres. The most significant goal of this model would be to create a coordinated and strategically far-reaching professional development system for the customs profession in the EU, where the best training models would become samples and uniform professional standards for customs would be developed, and professional training harmonized (Pētersone & Krastiņš, 2012). If the Customs administration and the universities create their study programmes on the basis of professional standards, alignment is easier. However, if the higher education institution and the customs administration have signed an agreement on employee training, mutual recognition of learning outcomes and practical placement, then granting of credits could become automatic, but it also means that the range of issues to be agreed on, include the competency-oriented professional education, impartial acquisition of results, validation criteria, process and evaluation assessment. Of course, the validation may be solved in different ways. However, it needs to be a component of each study programme. The teachers who work in the respective study programmes may assess the human experience most objectively. Therefore, in the RTU the Commission of the respective field of study takes the decision on recognition of the learning outcomes and the aptitude tests. The most objective validation criteria may be reached in the business process stage, which would also apply to both job descriptions and professional standards and, thus, to the study programmes. For example, for the purposes of structural optimization and implementation of cost accounting, the SRS has intended to improve and develop a process management system, identifying each process with clearly defined objectives, performance and final products and performance indicators, and introduce the implementation and expenditure accounting of the whole process (Pētersone, Ketners & Krastiņš, 2013). Thus,

the authors believe that the most relevant validation criterion is the end product of the process that confirms whether or not the prospective customs official is able to work in real time conditions. See Fig.2.

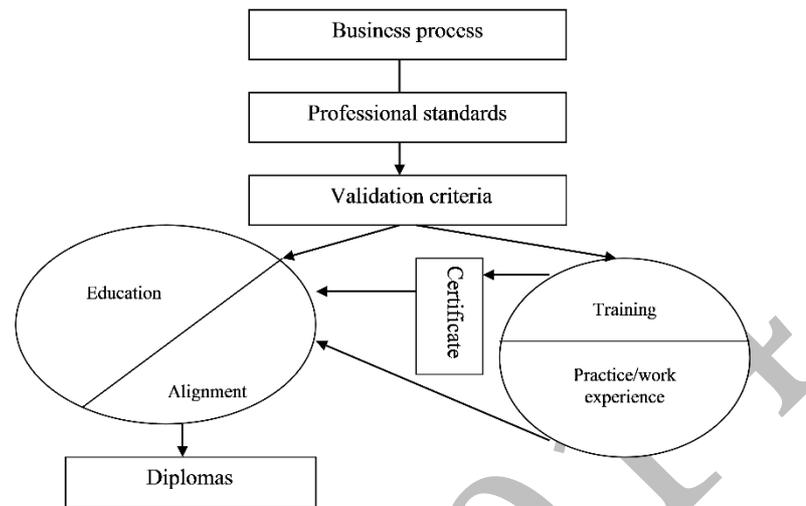


Fig.2. Recognition process of knowledge acquired in professional advancement programme and through professional experience

So far, in Latvia, the knowledge, skills and competency levels to promote the practical application of the standard in accordance with the principles included in the Qualifications Framework, i.e., one that is focused on clearly defined knowledge and skills outcomes, rather than the subjects and the number of hours (input), has not been determined. Moreover, in higher education, the learning outcomes have not been defined in accordance with the principles of qualifications framework. In the single regulatory framework for each educational qualification level, the framework envisages general description of the learning outcomes and defines them as knowledge, skills and competencies. Therefore, it ensures that acquisition of individual qualification is carried out in accordance with the learning outcome descriptors. Thus, it promotes the transition to a learning outcome-based training system. The authors believe that the learning outcome descriptions of the customs officials may be derived from the process management system in the context of both professional (special) and general knowledge and skills.

As a proof for the possibility of recognizing professional development programme and knowledge validation process acquired through professional experience, the authors would like to mention just a few examples, comparing the professional bachelor study programme "Administration of Customs and Taxes" and professional development course programme for customs officers that is implemented in accordance with the cooperation agreement with the RTU. For example, within the professional development course "Basic training" the new customs officers acquire the Electronic Customs Data Processing System (EMDAS), Integrated Tariff Management System (ITMS) and Risk Management System, which are similar to the study subject IMP 705 Customs Information systems with 4 credits. On the other hand, at least 26 weeks of work in the SRS, which corresponds to 26 credit points are equivalent to the following study subjects in the professional bachelor programme - IMP 013 Field practice and IMP 014 Project practice.

However, the authors believe that beneficiaries from the common customs education and training system would be the customs administrations, because, in the first place, multiple acquisition of one and the same process would not be possible, thus, saving the resources. Secondly, the customs administrations shall be able to match training required for a position, instead of the whole profession. Thus, the authors want to emphasize that in this way customs administrations could implement professional education and training that would also mean that the principle of professional validation is taken into account considering the issue of studies. On one hand, SRS has

taken responsibility of the employee training, and the professional development. It is most often not profitable for the organization because the time spent in a position has become very short. The employees should take responsibility for their professional education. Taking into account the specifics of customs profession only the customs administration may guarantee high quality of professional development for their employees.

## Conclusion

It is most significant to observe the principle of professional evaluation in those state institutions, which are related to economic security, including customs authorities. Otherwise, the employees are capable of using their knowledge and skills in order to weaken the country's economic security. Thus, modern state administrations are aware of public importance, when their employees enter the labour market after leaving the service. TAXUD EC recognizes that only Latvia has created a unique precedent in Europe and in the world, which combines a unified system of customs and taxation workers, formal and non-formal education or training that is focused on public and private sector employees in training.

Bologna Process contributes to the fact that higher education is no longer isolated from life-long learning because knowledge and skills acquired outside studies can be expressed in credits that can be transferred into total credit points required for conferring a degree or qualification, or for recognition of a study module acquired. The customs officials also benefit because they will be able to prove knowledge and practical experience in customs matters through formal qualification in civilian educational institutions. However, attention should be paid to, how many educational institutions in the EU and the world are able to provide adequate education in accordance with national, European and WCO professional standards. Throughout the world, only 14 bachelor, master and graduate degree study programmes have been recognized by the World Customs Organization, as meeting the requirements of the WCO international standards for customs profession.

Before the reorganization of the education and training system for customs, it is essential to establish a mechanism, which recognizes the education, acquired outside formal education and through experience, as well as ensures the issuance of relevant educational documents. Thus, the customs authorities should plan their professional development proactively and already in the beginning build their lifelong learning programmes as separate courses or study modules of university study programmes. Hence, the main beneficiaries of the education and training systems for customs are mainly customs services. Thus, multiple acquisition of one and the same curriculum would not be possible and the customs authorities would be able to match the required training for specific positions, not only for the profession of customs officials.

The more objective validation criteria are derived from the process management system, which would also be applied to both job descriptions and professional standards, as well as study programmes. So, the most accurate validation criterion is the end product of the process that will confirm whether or not the prospective customs official is able to work in real-time conditions.

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# Lightweight technologies used in health education: experiences with women in primary health care

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## Abstract

This study aimed to describe the application of soft technologies used in health education and experiences with women in Primary Health Care. This is a descriptive study, brand experience report, in Fortaleza, Ceará, Brazil. There were actions of health education in the prevention of cervical cancer, from a lightweight technology, a TV-shaped craft. From the health education activities with women, it was found that there are still myths about screening, which were clarified with health education. It is concluded that light technology applied in health education helps build health promotion.

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*Keywords:* Biomedical Technology in Health Education. Public health. Women's health.

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## Introduction

The use of technology becomes increasingly necessary as a tool that will work with the construction of knowledge, so technology refers to something that developed by the man himself should facilitate the completion of a job, as well as facilitate understanding and implementation of an action (SCHAL; MODENA, 2005). Therefore, health technologies are manmade tools that promote knowledge facilitates the understanding of the subject matter covered.

The new conception of health technology presents itself as a set of knowledge and tools that express the network of social relations in which its agents articulate their practice in a social totality (apud MIELKE GONÇALVES; OLSCHOWSKY, 2011). This set of knowledge ensures the improvement in population health services.

As Silva Alvim and Figueredo (2008) technologies in health are classified into three categories: hard technology, related to technological equipment, rules, routines and organizational structures, soft-hard, which comprise all well-structured knowledge in the healthcare process; and slight regard to the relations of production of communication, acceptance, bond, and empowering technologies. Knowing that these categories are interrelated, we highlight the soft technologies, necessary relations of human beings.

Soft technologies can be applied in different health contexts, especially in Basic Health Units, aim for the establishment of a humanized host, who sees the patient holistically and strengthen the bond between professional and patient. This can be confirmed by Olschowsky and Mielke (2011), when mentioning “the Family Health

Strategy has organized its work primarily from soft technologies as it is based on the principles of integrity, quality, fairness and social participation, establishing bonds with the public engagement and enabling responsibility among staff and community.”

The lightweight technology when applied to the context of women's health, allows the use of strategies that integrate knowledge and provide them with a view to adopting behaviors that enable health promotion, disease prevention and the achievement of self-care.

Regarding the health of women, it is observed that cervical cancer is characterized by uncontrolled replication epithelial lining of the body, affecting the underlying tissue (stroma), and may invade adjacent organs or structures, and the distance (BRAZIL, 2013). This condition primarily affects women between 35-55 years old and in need of primary care through early detection, through educational activities, aimed at clarifying and changing lifestyle habits and seeks disease prevention and health promotion.

In this context, it is relevant to the contribution of educational technology written in the context of health education and the role of this feature to promote health, prevent complications, develop skills and promote confidence and autonomy of women in Primary Health Care.

The objective was to describe the application of soft technologies used in health education and experiences with women in Primary Health Care.

## **Methodology**

This is a descriptive study type reporting experience, academic experienced by the Undergraduate Nursing, University Centre of Estácio of Ceará during the practical activities of the Department of Clinical Teaching II-Women's Health.

In April 2013, there was an activity of health education in the Unit Primary Health Care (UAPS), located in Fortaleza- Ce, belonging to the Regional Executive Secretary II (BE II).

In this activity, light technologies have been used in health education to women, focusing on prevention of cervical cancer, from the making of a television in a traditional manner, with recyclable material. The activities took place in the waiting room of the Unit, with the women waiting to consult gynecological nursing and completion of screening. Therefore, we established a strong interaction between the nursing students and patients.

This interaction was divided into two parts. At first, we used light technology for clarification of the theme. The second time was no evidence of the material used in making the screening test for early familiarization of patients with Pap smears.

To use light technology such as health education, was produced a flat-shaped craft by nursing students. The choice of television as methodology came from the audience is composed predominantly by women and knows that this population has specific affinity for teletransmitted novels, especially in the afternoons, a period in which the activity was performed in UAPS. Making these women does not leave their routines of daily living, while seeking the health service.

Television was made with cardboard, craft paper, magazine clippings, images taken from the internet and tube plastic box. Topics impacting images related to cervical cancer were willing, with the broadcast of the subject titled as “Save Woman” referring to the novel of success during the activity.

At the last moment, preventive kits, which contained male and female condoms, soap for cleaning in order to encourage women to conduct of practices presented were delivered.

To better understand the results, were presented on topics with the actions developed in UAPS in order to make them systematic and didactic.

## **Results and Discussion**

The results of soft technologies used in health education and experiences with women in primary health care were presented on topics: technology and education to take care of the patient and the doctor-patient relationship;

lightweight technology and education to patient safety in relation the use of condoms and Technology mild and safety of patient education regarding the use of condoms.

#### LIGHT AND TECHNOLOGY EDUCATION TO HOST THE PATIENT AND THE PATIENT- LINK PROFESSIONAL

The activity in UAPS provided a space for the construction of knowledge, seeking the interaction between the patient and the nursing students, who subsequently undergo the screening test of those women. This time set a host prior to gynecological necessary to break the barriers and myths surrounding this type of query to nursing.

According to Mielke and Olschowsky (2011), the host is understood as a work practice that seeks to ensure the listening, relationship, accountability, resolute attention, promoting citizenship and empowerment of the user. This can be seen in clients who participated in the prevention of cervical cancer workshop which interacted with the theme, being involved and participatory in relation to the subject matter covered.

With the participation of these women it was found that there are still myths about screening and many of them are not reported or understood at the time of gynecologic consultation. Being offered by academic work of paramount importance for the clarification of doubts and questions existing between those women. Additionally, you can establish a role of trust and relationship between users and students.

According to Coelho and Jorge (2009), the link is an achievement, not an immediate event. The more appropriate for the link the better the result, the greater the exchange of knowledge among health workers and the community.

With the link established between the nursing students and users, were extracted own information intimacy of those women for whom it was possible to implement appropriate interventions to the sexual practices of some. This feeling of confidence is strengthened to the point of the partners of women feel the need to participate in the health education provided something hard to find in current gynecological consultations as close partners in a world of machismo, which prevents them from seeking clarification or change certain habits that are not suitable for sexual activity.

#### LIGHT AND TECHNOLOGY EDUCATION TO PREVENT CERVICAL CANCER

With light technology applied in health education, track how much is needed to invest in various strategies to facilitate reflection about the understanding of the process of care for women, as regards the early detection of cervical cancer.

This condition is present in most Brazilian women between 35 and 55 years. According to the World Health Organization (WHO, 2007), strategies for early detection is early diagnosis (approach subjects with signs and / or symptoms of disease) and tracking (application of a test or examination in an asymptomatic population apparently healthy, in order to identify or precursor lesions suggestive of cancer and refer them for investigation and treatment.

This can be achieved through consultation nursing because nurses using strategies in primary care, which enable knowledge and adherence of women about self-care and disease prevention.

The activity carried out provided that knowledge about the disease and its risks, strengthening the adhesion of these women to periodic gynecological consultations.

#### LIGHT AND TECHNOLOGY EDUCATION OF PATIENT SAFETY IN RELATION TO USE CONDOM

The transmission of infection with human papillomavirus (HPV) occurs through sexual contact, presumably through microscopic abrasions in the mucosa or in the anogenital skin. Consequently, the use of condoms (condom) during intercourse with penetration partially protects from infection by HPV, which can also occur through contact with the skin of the vulva, perineal, perianal and scrotum (BRAZIL, 2013).

As stated emphasizes that this work provided the promotion of condom use women as a way of preventing HPV. For, with the exposure of barrier contraception (condoms) it was observed that some women had no knowledge of the female condom and after the demonstration and direct contact with the same obtained wide acceptance of

women by giving them a safe alternative when intercourse bringing more safety and autonomy in the choice of method.

## Conclusion

Upon the foregoing, it is concluded that the use of lightweight technology applied in health education helps build prevention, promotion and self-care, allowing better absorption of knowledge by women and interaction with healthcare professionals, providing the link between professional and patient before, during and after the completion of the screening.

So if lets say that light technology constitutes a low process, low cost, easy to apply and it provides a favorable result in the prevention of cervical cancer, if used in the reception of units of Primary Health Care.

It is noteworthy that light technology by itself does not have this positive result is not having a sensitive professional who develops an authentic and quality work. This requirement of a professional nature is what is needed for confirmation of Public Policy on Health, when it comes to quality of health care, because the humanized care and bonding technologies are considered as mild, i.e. relations inherent in any professional quality, being the main actor the user of the service, since this is directly benefited both their well-being, as the health-disease process.

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# Lineal development characteristics of preschool children paintings

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## Abstract

We did this research in order to identify lineal development characteristics of preschool children paintings. The study group consists of 125 children aged 2-6. We respited approximately 40 minutes of each age group children to paint. Children used crayons or pastel crayons while painting. The child's personal information and the interviews about his/her paintings were recorded on the back of the his/her paintings. According to the findings, children generally exhibit the lineal characteristics of the present period in their drawings. However, it is also determined that, there are child drawings showing upper or lower characteristics of lineal development period

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*Keywords: Preschool, 2-6 ages, Lineal Development, Child Paintings*

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## Introduction

According to Yavuzer each child starts his/her first painting works via scribbling. The first scribble is like the first cry. In the beginning children randomly draw lines on paper, afterwards he/she converts them to more organized and controlled style (Vural, 2009, p.126). Children start to make scribbling when they are 18 months old and they find a pencil in general. In these months children stand up and start to walk and understand what is said. while scribbling children also repeat words that he/she hear. Despite there is no psychological meaning, two-year-old children's scribbles look like each other. Scribbles are made up of often horizontal and sometimes vertical lines generally without lifting the pencil (Çankırılı, 2011, p.157). In the beginning lines are formed by all arm movements and arm pover with large curves. Afterwards the lines reach round and mixed line image by wrist, hand and fingers movements together. This line difference maintains its evaluation correspondingly with increasing children's age (Türkdoğan, 1981: 47, Baysal,2010). According to Meili-Dworetzki, paper handled by children as a bell glass that many graphic signs flutter around. Children consider neither base of the picture nor the right and left. This deficiency keeps up with Piaget and Inhelder's study about the development of the child's space concept (Yavuzer, 2010, p.32).

Gesell reports that a 4 year old child hold a pencil or brush like an adult and trace around his/her reflections onto paper with an effective imagery (San,1979,p.137; Aydın, 2006). The majority of 5 year old children draw a head and a body. Head contains eyes, nose and mouth but the arms and legs stick out the body. According to Burt, human figure is drawn quite correctly at this age but this is a symbolic sketch form (Yavuzer, 2010, p.42). According to

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Goodnow children may have problems to represent the position, movement and relationship between figures in the drawings until their 5th age. These problems may last until about ten years. As age progresses children can experience naturally the process of making realistic changes to represent the different positions of arms, knees and neck movements and entire appearance of figure (Artut, 2004, p.205).

According to San, as the environment interest increases nearly at the age of six rates in picture becomes more realistic. As rational and analytical power steps up, the authority to select connections between objects is also steps up. The progress in placing objects into space leaps to the eye. Details increase, the disorderly figures around the pages, start to accumulate around a center or figures are arranged in an order onto a ground line (bottom line). Understanding the rates of figures and objects and also their ratios of paper progresses. Children don't try to draw the things that he/she doesn't understand (Aydm, 2006). According to Lowenfeld, Schemas are seen after children's many experience related to the environment. Although, the lines that drawn by children are described a symbol or schema of a real object, "schema" is a concept that children obtain after many repeats and entirely unique for children (Artut, 2004, p. 207).

Schematic era that starts nearly at the age of seven and concept of shape materializes. While some of the children's schemas are the concepts that are very rich, some of them are may be weak symbols at the schematic era. The differences between the schemas are related to many reasons. But in terms of individual characteristics two children are different from each other; schemas are also non-identity of each other; while developing the concepts of these differences of schemas and these differences of people success is depend on the skill of teacher's activate to child's passive information (Yavuzer, 2010, p.55).

In Turkey there are some researches about children's pictures on these topics: determining the perceptions and attitudes of children from their pictures (Gül, 2006; Alan, 2009; Sağlam, 2011; Aksoy and Barak; Aykaç), identifying feelings (Öveçler, 2012), determining the style on pictures (Aydın, 2006; Bostancı, 2006; Büyükeviz). We didn't see any research that describes directly lineal development of preschool children. In this reason, we aimed to research into lineal development characteristics of children by age. In this study we search answers for the question "What are the characteristics the lineal development of 2 - 6 age children's pictures?"

## **METHODS**

This research is a descriptive study with screening model. We have examined 125 picture of children aged 2-6, 25 for each age group. We respited children approximately 40 minutes to paint. Children used crayons or pastel crayons while painting. A4 size white drawing paper was used in the paintings. The child's personal information and the interviews about his/her paintings were recorded on the back of the his/her paintings. Study group includes 49.6% (f=62) girls and 50.4% (f=63) boys. The research data is collected by home visits for age of 2-3 who can not attend preschool education and for the other age groups by making applications in their school. We acquire the personal information of younger age group by interviewing with parents or by examining student identification form in their files.

Before application we talked on the subject of the picture that will be make and we wanted them to paint "our home, our family". Enough time to complete their pictures was given to children (Aprx. 40 mins.). Children's paintings were examined by 3 different experts and important notes recorded by them. The characteristic determined by at least two of three experts; was taken by as characteristic of that picture. 5 critical characteristics are determined for two-three aged children, 9 critical characteristics are determined for four-five aged pre schema period and 7 critical characteristics are determined for six aged aged pre schema period. We received opinions from child development experts, preschool educators and painting teachers to identify these characteristics. We examined the pictures according to these characteristics.

## **FINDINGS AND OBSERVATION**

1. What are the lineal development characteristics of 2-3 aged children's paintings?

**Table 1.** Lineal development characteristics of 2-3 aged children's paintings

Age	Sexualiy	Scribbling Period (2-4)		Pre Schema Period (4-7)	
				4-5	6
		f	f	f	f
2 age	Female	15	14	1	0
	Male	10	10	0	0
3 age	Female	10	9	1	0
	Male	15	11	4	0

When we examine, we determined from the paintings of 2 and 3 aged children; while 14 of 2 aged female children show scribbling period characteristics, 1 shows 4-5 aged pre schema period characteristics; all of the 2 aged male children show scribbling period characteristics. These are also determined: 9 of 3 aged female children show scribbling period characteristics and 1 shows 4-5 aged pre schema period characteristics that is next period characteristic, while 11 of 3 aged male children show scribbling period characteristics, 4 of 3 aged male children show 4-5 aged pre schema period characteristics.

Examples of 2-3 aged children paintings;



2. What are the lineal development characteristics of 4-5 aged children's paintings? Datas are shown in Table 2.

**Table 2.** Lineal development characteristics of 4-5 aged children's paintings

Age	Sexualiy	Scribbling Period (2-4)		Pre Schema Period (4-7)	
				4-5	6
		f	f	f	f
4 age	Female	10	2	7	1
	Male	15	7	8	0
5 age	Female	14	0	10	4
	Male	11	0	11	0

When we examine, we determined from the paintings of 4 and 5 aged children; 2 of 4 aged female children show

scribbling period characteristics, 7 of 4 aged female children show 4-5 aged pre schema period characteristics and one shows 6 aged characteristic. While 7 of 4 aged male children show scribbling period characteristics, 8 of 4 aged male children show 4-5 aged pre schema period characteristics. While 10 of 5 aged female children show 4-5 aged pre schema period characteristics, 4 of 5 aged female children show 6 aged characteristics and all of the 5 aged male children show 4-5 aged pre schema period characteristics.

Examples of 4-5 aged children paintings:



3. What are the lineal development characteristics of 6 aged children's paintings? Datas are shown in Table 3.

**Table 3.** Lineal development characteristics of 6 aged children's paintings

Age	Sexualiy	Pre Schema Period (4-7)		Schematic Period (7-9)
		4-5	6	
6 age	Female	f 13	f 4	f 7
	Male	12	5	5

When we examine, we determined from the paintings of 6 aged children; 4 of female children children show 4-5 aged pre schema period characteristics, 7 of female children children show 6 aged characteristic and 2 of female children children show schematic period chracteristic that is next period characteristics. 5 of male children show 4-5 aged pre schema period characteristics, 5 of male children children show 6 aged characteristic and 2 of male children show schematic period chracteristic that is next period characteristics.

Examples of 6 aged children paintings:



## CONCLUSION AND DISCUSSION

When we examine 2 aged children's paintings in my study group; we saw scribbling are generally similar to each other and scribbles are horizontal-vertical, right-left circular shapes drawn without lifting the pencil. In addition following points attracted our attention; the movement control of scribbling is less and the drawing duration has short time and crayons are not used to colour by children. These characteristics that we identified from paintings are supporting the qualifications for the children at this age that determined by Çankırılı (Çankırılı, 2011, p.157) and Malchiodi (Malchiodi 1998/2005).

When we examine the three year old children's paintings we saw 5 of the children draw stickman, house and car. Drawings on the paper placed disorderly like they flutter around on the paper and this is supporting Piaget and Inhelder's (Yavuzer, 2010, p.32) study about children's development of the concept of place.

When we examine 4 year old children's paintings, we saw shapes -coarse human figures, house forms and the coloured objects limited by lines- are often placed disorderly to the page. These features are supporting Meili-Dworetzki's (Yavuzer, 2010, p.32) and Artut's (Artut, 2004, p.201) ideas about place, distance and size concept of children.

Garbage man, house and car drawings of 3 years old children and scribble drawings of 4 years old children support Artut's (Artut, 2004) ideas that "The transition between lines are slowly and gradually. Children may show both period's characteristics while lineal period transitions." In 5 year old children's paintings development of the ability of scheming, in the human figure lines attached to head, body lines and stickman drawings have the qualifications that determined by Burt (Yavuzer, 2010, p.42) for this age children. The effort of establishing relationship and scheming seem in the drawings support Artut (Artut, 2004, p.201).

The problems faced in these ages determined by Goodnow (Artut, 2004, p.205) and the relationships between figures and the effort to give movement to the figures that we seen in some drawings support Goodnow.

Based on the research findings it can be said that children's paintings show present period's characteristics in general but in every period there are children paintings that show lower or upper lineal period's characteristics. In this case lineal development is changed according to the environment where the children live and depending on children's personal characteristics like other developmental periods. Preschool teachers and parents should follow the children's development while taking into account individual differences and the present lineal development period of children. Since lineal development is important to inform us about children's muscle development, that is required to plan and follow up artistic activities by preschool teachers and parents.

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# Linking mathematics, culture and community

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## Abstract

The perpetual and constant change in the cultural diversity of the Canadian classroom lends itself to the development of mathematics activities based on traditional symbols related to different cultures. This paper presents the importance of linking mathematics, culture and community and ways of doing so that take into consideration the cultural diversity of the students in order to develop learning activities. Mathematical concepts based on cultural perspectives allow students to not only reflect and appreciate their own culture but also the culture and traditions of others. The involvement of members of the community is an essential part of the integration of cultural components into mathematical activities.

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*Keywords:* teaching; mathematics; diversity; culture; commuity

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## Introduction

Teaching mathematics to a group of students with the same mathematical abilities, the same learning styles and the same cultural backgrounds would probably be easy (Dossey, McCrone, Giordano & Weir, 2002). However, this is not the reality of the classroom. Students in the same class have various lived experiences, cultural backgrounds and learning styles (Scott, 2001). The cultural realities of each school jurisdiction characterizes the needs of its students which in turn determines the curriculum in order to meet the needs of the cultural reality within it. These cultural differences must be taken into consideration if learning, in any subject, is to take place.

Culture can be defined as the beliefs, values, attitudes, customs, social relationships, art and literature that define an ethnic group of people (Abidi, 1996; Banks, 2008). Many teachers of subjects such as mathematics, chemistry, physics and biology are under the impression that mathematics is a non-cultural subject (Banks, 2008; Dalley & d'Entremont, 2004; Lee, 2003). It is clear however that mathematics is not a culture-free discipline (Zaslavsky, 1996: 1998). It can be said that all cultures are rich in artifacts that exhibit mathematical concepts. Eglash (1999) studied the mathematics in the designs of the traditional bead work and basket weaving in native cultures. Massarwe, Verner & Bshouty (2012) completed a project that raised awareness of the relationship between geometry and culture in the construction of geometric ornaments.

In one way or another, mathematics is an integral component of all cultural contexts and the significance of all cultural contexts is influenced by the interpretation the individual within that culture. To take advantage of these rich cultural experiences means that students should be exposed to a variety of experiences and cultural resources. Schools could help students learn about their culture as well as the culture of others through learning activities that demonstrate the relationship between culture and mathematics.

Gajardo & Dasen (2006, p. 125) insist

...upon the necessity to consider the social and cultural contexts with which students evolve on a daily basis in the teaching of mathematics ... Each individual

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carries mathematical baggage pertaining to competencies acquired at school as well as the mathematical competencies acquired via the cultural traditions particular to each student(translation).

According to the National Council of Teachers of Mathematics (NCTM, 1989), students should be exposed to a variety of diversified experiences that are related to the cultural, historical and scientific evolution of mathematics. Civil (2002) emphasizes the need for the creation of mathematical experiences that are related to the cultural experiences of students as these experiences are often rich in mathematical concepts. The quilt is such an example. The quilt has a historical and artistic value and it's creation is mathematical in nature (Paznokas, 2003).

Grasping the extent of the cultural diversity of students is a responsibility of the teacher, in fact, knowing the students and the creation of a climate conducive to communication between students are two important elements of the management of multiethnicity in the classroom. ... Not only should the teacher know the ethnic or regional origin of the students and the cultural milieu to which they belong, they should also seek to know the learning styles of the students ... (Lafortune & Gaudet, 2000, p. 19, translation).

Because the teacher is responsible for organizing learning activities and teaching materials, he/she must consider the ethnic and cultural background of the students when planning these activities (Lafortune and Gaudet, 2000).

According to Ladson-Billings (1995, p. 128), "content integration refers to the ways in which teachers ...include and infuse data and examples from diverse cultural groups into their work." To do so, we must take into account student interests and use familiar situations that relate to their experiences when planning pedagogical activities. This will motivate and enable students to engage in activities that encourage them to understand the cultural traditions of others (Scott, 2001). Instead of relying on memorized algorithms, students have the opportunity to learn mathematics in a meaningful and relevant context.

## **Context**

Canada is comprised of ten provinces and three territories, but does not have a federal ministry of Education. Each province and territory is therefore responsible for its own education curriculum and programs of study based on the historical and cultural diversity of each region. The cultural reality of each school district is characterized by the needs of the students within that district which in turn determines the curriculum that will meet the needs of the cultural diversity within its borders. Educators facing the cultural diversity phenomenon must understand what this diversity represents in order to create a learning environment conducive to learning for all members of the class.

The intensity of migration to Canada signifies a constant change to the cultural configuration of Canada's population. The cultural landscape of the schools is in constant evolution. Teaching mathematics therefore requires knowledge of the everyday social and cultural contexts of the students. Each student carries his/her own mathematical knowledge, other than school knowledge, pertaining to his/her own culture. Although the subjects taught in a multicultural setting will remain the same, the content and the learning activities will be adjusted in such a manner as to take into consideration the ethnocultural diversity of the students within the classroom (Rocher & Lavelle, 2010).

Scott (2001, 94) indicates that "teacher behavior is the complex combination of knowledge, strategies, attitudes, beliefs, and values used by teachers" to transmit knowledge. It is the teacher's responsibility to understand the cultural diversity within his/her classroom. It is this knowledge that will create a favorable communication between the teacher, the student and learning. It is essential that schools create environments conducive to cultural exchange. Everyday situations can be linked to social activities of students with friends and family. Howes (2003, p. xiv) indicates that "bridges between home and school can best be made when practices within classrooms are culturally sensitive". Four teachers demonstrated that it is possible to create mathematics activities for students that demonstrate the relationship between mathematics and culture (d'Entremont, 2008). These four teachers reflected on their own practice and on the cultural values and beliefs of their own students in order to create motivating and relevant learning situations linking mathematics and culture. The activities developed corresponded to content integration of culture which is but one element of multicultural education. Content integration deals with the way

and the extent to which educators use traditions and information related to the cultural backgrounds of their students to “illustrate the key concepts, principles, generalizations, and theories in their subject area or discipline” (Banks, 2008, p.31). Culture has such a profound influence on learning. Gay (2009) indicates that “if teaching is to be adequate for diverse students, ... it too, must be culturally diverse”. This implies that mathematical learning activities must promote the cultural integrity of students while assuring academic success (Presmeg, 2007). The dilemma is how to incorporate the cultural practices of the students and mathematics in a significant and motivating manner.

## **Multicultural activities linked to mathematics**

### *3.1 The role of symbols in mathematics*

Mathematical conceptualization implies the integration of known knowledge and the assimilation of new knowledge to existing schemas. Symbols play an integral role in the integration of new knowledge. A key function of the symbol is that of communication (Skemp, 1987). Since we have no direct way to be in touch with the thought process of someone, or allow access to our own mental universe, we must use means, whether visual or auditory, to communicate. A sound or a visual representation, which is a symbol associated with a mental image, can be used to record information (Skemp, 1987). Mathematics is a language that has its own symbols, syntax, grammar, and a variety of representations. It also relies on an intensive use of different types of letters to represent variables, signs for numbers, diagrams, formulas and algorithms. Hyde & Bizar (1989, p. 129) indicate that, “mathematics is a way of thinking and understanding our lives and our world. It is a set of tools, a pair of glasses that we can use.”

One factor that influences how a child learns is the education he/she receives at home. Using familiar objects and contexts to teach mathematics can facilitate learning. For this reason alone, it is important to link the cultural reality of the students to the learning of mathematics. Recognizing the knowledge already possessed by the students received at home gives mathematics a relevant significance. Symbols may also be objects related to the historical and social aspect of a culture. Examples of such objects are the quilt, the pysanka, and the “ceinture fléchée” (the French sash). These three traditional symbols relate information pertaining to the cultures from which they originate. The mathematical aspects of these symbols can be used in the teaching of mathematical concepts as well as social studies and visual arts.

### *3.2 The quilt*

According to Paznokas (2003, p. 250), “not only can quilts help teach multicultural history, literacy, and art, but quilting also provides a perfect and enjoyable tool for teaching mathematics concepts.” The quilt can also tell a story (Bryan, 2005). The quilt details, motifs, colors, and composition often portray historical events (Tobin & Dobard, 2000). The creation of a quilt is an activity practiced in many cultures and passed on from one generation to another. Each quilt is recognized by its specific pattern which bears a specific name. The pattern in Figure 1 is entitled *Bowtie* and the pattern in Figure 2 is entitled *Shoofly* (Tobin & Dobard, 2000). The teacher may refer to the mathematical aspects of the quilt to address several mathematical concepts. Using such a model, the teacher can teach various mathematical concepts such as: area, perimeter, fractions, estimation, shapes, measuring, proportions, symmetry and transformations (translations, reflection, rotation).



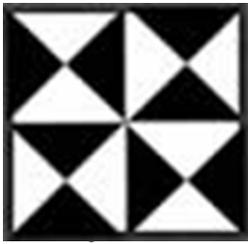


Figure 2 Shoofly

### 3.3 The pysanka

A symbol of Ukrainian culture is the pysanka (Figure 3), the traditional Ukrainian egg. Traditionally, all the colors and designs of the pysanka express a strong attachment to the land and natural elements. The symbols and colors used to create the patterns are connected to this attachment and each egg has a significant meaning. For example, red means joy and hope and the wheat represents the hope of a fruitful harvest. The same mathematical concepts can be taught in the context of the pysanka as with the quilt.



Figure 3: The world's largest pysanka in Vegreville, Alberta  
Source: [http://commons.wikimedia.org/wiki/File:Vegreville\\_pysanka\\_August\\_2008.jpg](http://commons.wikimedia.org/wiki/File:Vegreville_pysanka_August_2008.jpg)

The largest pysanka in the world is on display in Vegreville, Alberta. It is a giant jigsaw puzzle containing 524 three-pointed star patterns and 2 208 equilateral triangles (Hoffman, 1988). It is a giant mathematical jigsaw puzzle.

### 3.4 The ceinture fléchée (the French sash)

The ceinture fléchée (Figure 4) was an important part of the 18<sup>th</sup> and 19<sup>th</sup> century French-Canadian costume. It served as a belt,



Figure 4 The “ceinture fléchée”

Source: <http://www.museevirtuel-virtualmuseum.ca/media/edu/EN/uploads/image/mcq950037340.jpg>

helped to retain body heat and was used to aid in carrying heavy items. The French sash is a symbol that has a historical significance, as well as a practical, aesthetic and folkloric aspect.

For two weeks each year, Bonhomme Carnaval in Quebec City proudly displays his beautiful sash. The French sash also highlights winter carnivals in other parts of the country. The aesthetic and geometric aspect of the *ceinture fléchée* can be adapted to the teaching of various mathematical concepts. Teachers can use these three examples of cultural symbols to develop several mathematical concepts. Learning mathematical concepts in this way enables students to learn about their own culture as well as other cultures. For some, this may be called tokenism (reference here). Call it what you may, activities such as these provide meaningful ways to motivate children to learn mathematics.

#### 4. Community

The content of a multicultural curriculum must be created using a variety of resources, most of which can be located in the community outside the school (Gay, 2010). Cultural heritage should play a significant role in the creation of this curriculum where the goal is to connect school mathematics and the personal experiences of students. The goal of such a curriculum is student success. Gay (2010, p. 127) states that "to be effective, knowledge must be accessible to students and connected to their lives and experiences outside of school."

A factor that greatly influences how students learn is the education they receive at home. Integrating familiar objects and contexts in the teaching of mathematics can facilitate learning (Kaahwa, 1999; Scott, 2001). It is therefore important to create relationships that link the cultural heritage of students to the teaching of mathematics (Eglash, 1999). Recognizing the knowledge students have received at home or within the community will provide mathematical contexts that are significant and relevant to students. The learning situation then becomes familiar and has meaning for students. According to Scott (2001, p.120), “no multicultural classroom operates successfully without community involvement.. Zaslavsky (1996) informs us that multicultural education is the responsibility of the family and the community as well as the school. Silver, Smith & Nelson (1995, p. 125) recognize the importance “of culturally relevant teaching in which important characteristics of the students and their local community culture are linked to classroom instructional practice” . It is essential that students recognize cultural diversity and to this end, elements of diverse cultures need to be integrated into school curriculum.

Cobb & Hodge (2007, p.161) emphasize that “culture comprises a network of relatively stable practices that capture daily life within a group or community that are passed from one generation to another”. Language is a cultural element that is passed from one generation to another. Other activities, experiences and symbols are also passed on. The quilt, the pysanka and the *ceinture fléchée* are but three examples through which community members can play an important role in education. Members of the community are important educational resources. A community member that creates quilt can demonstrate quilt making while explaining the process, the pattern, the colors, and the choice of materials. Many mathematical concepts are needed in order to complete the quilt. These concepts can be referred to when demonstrating quilt making. The same can be done with the pysanka and the *ceinture fléchée*. Teachers can incorporate these activities into the mathematics curriculum.

Community participation is important for a number of reasons: it strengthens the link between home, school, and community; it strengthens the link between school and the cultural diversity of students, and it demonstrates the importance of incorporating cultural elements in the teaching of mathematics, all of which motivates students to learn about their culture and that of others while also learning mathematics. According to Wiest (200, p. 53), “exposing students to the contributions of members of their own and other cultures can help them gain confidence, self-esteem and a sense of belonging as well as respect for the mathematical thinking of other cultures”. Culturally relevant pedagogy validates students’ cultural backgrounds, and ethnic history and provides ways for educators to support cultural connections between the school and the community (Rosa & Orcey, 2013).

## 5. Conclusion

Curriculum developers and mathematics educators should take advantage of the cultural diversity of students to enhance the learning of mathematics through social and cultural activities. According to Hyde & Bizar (1989, p.89), “we now see the student as actively constructing meaning, connecting new information to existing knowledge structures, and creating new relationships among structures”. This can be accomplished by incorporating student lived experiences into the curriculum. Alberta Education (2007, p. 1), indicates that “the learning environment should value and respect the diversity of students’ experiences and ways of thinking, so that children are comfortable taking intellectual risks, asking questions and posing conjectures”. Teachers must find ways to use students’ differences and strengths to make mathematics meaningful to students and interesting to teach. Students should be actively involved in mathematics class by sharing cultural experiences from which the teacher can create mathematical activities that correspond to specific mathematical concepts. It is evident that different cultures have different traditions and different histories (Asher, 2002) and that the discussion of mathematics through the lens of one’s own culture can lead one to think not only about one’s own culture but that of others as well.

Due to the perpetual and constant evolving change in the cultural diversity within the Canadian classroom, the creation of math activities based on traditional symbols is essential. Curriculum developers, program designers and mathematics teachers should take this diversity into account to improve mathematics learning through social and cultural activities. It is clear that each culture has different traditions and different histories (Ascher, 2002) and the issue of integrating mathematical concepts in a cultural perspective can lead us to reflect on our own culture but also that of others. Cultural diversity is a force, “a persistent, vitalizing force in our personal and civic lives” (Gay, 2010, p. 15).

According to Zaslavsky (1996, p. 14), “multicultural education is many-faceted. It involves curriculum content, classroom management, ... assessment practices, the involvement of families and communities, teacher expectations, and professional development”. The teaching of mathematics in a multicultural setting is not obvious. Adapting mathematical content to take into consideration the cultural practices and knowledge of students, and incorporating the participation of community members, is not an easy task. Gay (2002) emphasizes that most teachers are not adequately trained to teach a class consisting of students from different cultures. Gay (2010, p. 164) states that academic success

is improved by accepting the fact that mathematical and scientific knowledge is present in all cultural groups, extracting math and science knowledge and skills embedded in the everyday activities and cultural heritages of different ethnic groups ... and connecting

school mathematics with the funds of knowledge present in different cultural communities.

The multicultural dimension of school mathematics will require increased attention to student's ways of thinking and reasoning in different settings (Silver et al, 1995). An awareness of the diversity of cultures and languages in schools should be an important element of every teacher training program. Educators need to understand their own culture and how cultural biases can influence teaching styles which in turn influence student academic performance (Rosa, 2010). This awareness must then translate into action.

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INTE 2014

# Los sistemas regionales de innovación base para un sistema nacional sustentable de innovación en México

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## Abstract

The importance of regional systems for the construction of a national innovation system in Mexico is proposed. The general education requirements, postgraduate training and production, dissemination and appropriation of knowledge of this system are presented, as well as structural and path changes to be performed in approaches to R&D for undeveloped economies like Mexico, and systems that promote this training, especially of doctors and how to transcend the ways of doing science and expand the concept of knowledge to the inclusion of traditional knowledge.

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*Keywords: Regional innovation systems; knowledge societies and education; graduate and innovation systems; science, technology and innovation in Mexico; Regional innovation system in Nuevo Leon*

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## 1.Introducción.

Existe una correlación irrefutable: las naciones que han alcanzado mayores niveles de desarrollo económico y bienestar social son aquellas que han invertido recursos humanos y financieros en educación y en ciencia, tecnología e innovación y no al revés. Son sociedades cuyas organizaciones e instituciones sociales han desarrollado la capacidad de crear conocimiento, de innovar y de difundirlo y aplicarlos en todos los ámbitos de la vida nacional. El conocimiento científico, tecnológico y humanístico es su principal componente, pero han revalorado e incorporado también el conocimiento tradicional, pues como lo señala FONCICYT (2011)

los conocimientos tradicionales pueden contribuir de manera valiosa a la comprensión y solución de problemas sociales y ambientales a nivel local, nacional y hasta global; por ello deben promoverse políticas públicas que los articulen con la ciencia, la tecnología, innovación, educación y cultura.

En México se hace ciencia y tecnología, se realizan innovaciones y se hacen bien, pero no con el enfoque, la extensión y celeridad que exigen las condiciones del entorno mundial, los requerimientos de competitividad de las naciones con quienes establecemos relaciones económicas, comerciales y culturales, ni con las necesidades internas para enfrentar nuestros rezagos estructurales, la creciente desigualdad, y las bases para el desarrollo sustentable del

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país, por lo que no tenemos aún las fortalezas requeridas para que el conocimiento, en su acepción mas amplia, nos ponga en la vía de ser sociedades avanzadas.

Por ello, es necesario redoblar esfuerzos para transitar hacia las sociedades del conocimiento y el desarrollo sustentable (Olivé y Sanoval, 2007), proyecto de nación en el que México está inmerso y que forma la utopía que nos hace avanzar, mediante trayectorias que nos lleven a una profunda transformación de los quehaceres económicos, sociales, educativos y culturales donde la ciencia, la tecnología y la innovación constituyan el soporte fundamental y se integren todos los saberes sociales, y donde se construya ciencia autóctona, no solo la ciencia de la agenda de las naciones desarrolladas, ciencia en y para los grandes problemas nacionales que no comparten ni son de interés de esas naciones.

La incorporación de la ciencia, la tecnología y la innovación en la generación de alto valor agregado en la economía y la sociedad, conducen a elevar la productividad y la competitividad, la conciencia e igualdad ciudadana, que repercuten a su vez, en un mejor desempeño económico, tanto en el mercado interno como en el mundo globalizado, con sus implicaciones positivas en la calidad de vida y el bienestar general de su población.

Los indicadores de nuestra desarticulación son evidentes: En el escenario internacional (FCCyT, 2012:3) ocupamos el lugar 12 en el tamaño de la economía, pero el 57 en el Índice de Desarrollo Humano (IDH), el 53 en competitividad global, el 79 en capacidad de innovación y el 107 en la calidad del sistema educativo. Estos valores no son los requeridos y es necesario impulsar con mayor ahínco políticas públicas que se conviertan en políticas de Estado para transformarlas.

En el terreno educativo, ciencia, tecnología e innovación los indicadores nos muestran debilidades aún más preocupantes si nos comparamos con los principales competidores del mundo. Pero aún si sólo nos comparamos con Brasil encontramos brechas abismales: Brasil tiene una cobertura educativa de 76% entre los jóvenes de 15 a 19 años que corresponde al nivel preparatorio (educación media superior) y en México es sólo de 52%. Para el rango de edad de 20 a 29 años relacionado con el nivel de licenciatura Brasil atiende al 21% y México sólo al 11% (Ancer, 2012: 21).

En relación a la formación de investigadores, pilar de la innovación, la situación es más contrastante. Mientras que Estados Unidos gradúa 54 mil doctores al año, Brasil 12 mil, Corea 10 mil, España 7 mil, en México graduamos únicamente a 3 mil doctores al año, y el 85% provienen de programas del Programa Nacional de Posgrados de Calidad (PNPC), (Conacyt, 2010: 73).

Como podemos observar, la cantidad de doctores a nivel nacional es aún modesta para construir las bases del conocimiento autóctono que requerimos y los sustentos para la producción e incorporación de conocimiento a actividades de alto valor agregado que nos permitan competir exitosamente con otros países de igual o mayor desarrollo, por lo que es necesario definir políticas públicas que señalen trayectorias para que se eleve sustancialmente la formación de personas con doctorado en todos los campos y áreas del conocimiento, suficientes para incrementar el acervo de personal altamente calificado para el desarrollo de la ciencia, tecnología e innovación en el país.

## **2.La ciencia en la sociedad del conocimiento**

Las sociedades del conocimiento (UNESCO, 2005) están cimentadas en la creación de alto valor agregado económico y social y la innovación permanente fundamentada en el conocimiento ampliamente y socialmente difundido, apropiado y aplicado. La formación de recursos humanos altamente calificados en nuevos campos del saber, que participen en la creación de conocimiento y que este sea traducido en esquemas de apropiación e

innovación asociadas a las organizaciones empresariales, a las instituciones gubernamentales y a las organizaciones sociales es estratégica en este tránsito.

Para ello, es necesario definir los grandes objetivos nacionales para el desarrollo sustentable que deberán abordarse con enfoques multi y transdisciplinarios, entre otros campos del saber:

“... matemáticas, biotecnología, aeronáutica, mecatrónica, tecnologías de la información, diseño y fabricación de maquinaria y equipo basados en la microelectrónica, informática y robótica” (Ancer, 2012:132).

Como también:

“...vigorización de infraestructura sostenible, segura, suficiente y de calidad; tecnologías no convencionales para el aprovechamiento de nuevos yacimientos de hidrocarburos; utilización de energías renovables y limpias; desarrollo de las ingenierías en todas sus vertientes; agro tecnologías para mejorar la producción de alimentos; manejo sustentable del agua; conservación y restauración de la biodiversidad; conocimiento y aprovechamiento de recursos naturales (entre otros minerales, combustibles, flora y fauna, pesquería) con criterios de sustentabilidad; cuidado del medio ambiente y mitigación de los efectos del cambio climático; prevención y atenuación de desastres causados por fenómenos naturales; desarrollo de nuevos materiales; fortalecer e incrementar el acceso de tecnologías de información y comunicación; consolidación de la industria aeroespacial; desarrollo de productos farmacéuticos y vacunas; atención a problemas emergentes de salud, así como los crónico-degenerativos, neoplasias y los derivados del envejecimiento de la población, reordenamiento territorial; problemas e impactos de migración; combate a la desigualdad y la pobreza; atención a la juventud, a los asuntos indígenas y a los de género; impulso al empleo de calidad, fortalecimiento de la identidad y la soberanía nacional (FCCyT, 2012:10) .

Políticas en ciencia, tecnología e innovación como las citadas son necesarias para preparar recursos humanos de alta calificación, orientados al conocimiento de vanguardia para elevar la productividad y competitividad del desarrollo sustentable de un país con las particulares características de México.

Para su plena penetración en las estructuras socioeconómicas, las sociedades del conocimiento deben atender la vocación productiva de las diversas regiones. Por ello, urge impulsar un proceso de desconcentración y conformar subsistemas regionales de ciencia, tecnología e innovación mediante la creación de parques tecnológicos integrados, de ciudades creativas y del conocimiento, pero no con lo que para los países desarrollados es la triple hélice simétrica (Ezkovitz, 2002) estado-empresas-universidades, que interactuando en espiral impulsan el motor del desarrollo, ya que para México como para otros países de América Latina estas hélices o aspas son fuertemente asimétricas pues las empresas privadas realizan poca investigación y desarrollo (I&D) y aplican poco conocimiento de frontera (hélice muy pequeña), las universidades públicas generan alrededor del 80 % de la investigación científica, tecnológica y humanística (hélice muy grande), y el gobierno no solo financia y proporciona el marco normativo-jurídico y de políticas públicas para la I&D, sino que cuenta con centros de investigación de alto nivel donde se genera una parte importante de conocimiento para sectores estratégicos (hélice mediana), quedando la sociedad civil con una participación muy limitada. Por ello, al modelo de la triple hélice habrá que hacerles las adecuaciones que implica la asimetría de las aspas y además sumarle una cuarta hélice formada por la sociedad civil, ya que las nuevas formas de producir conocimiento son socialmente construidas (modo 2 de Gibbons, et al, 1997) y la forma tradicional de hacer ciencia (método científico tradicional, ciencia académica o Modo 1 de Gibbons, et al), está siendo rebasada y sustituida por la ciencia posacadémica y la ciencia posnormal (Jiménez-Buedo y Ramos Vielba, 2009).

También es necesario contar con una visión estratégica orientada a la formación de cadenas de alto valor agregado y dirigida especialmente a sustituir la dependencia tecnológica del extranjero, ya que la agenda de la investigación de los países desarrollados no coincide en mucho con la que requieren países como México que tienen graves rezagos estructurales y donde la inequidad y la desigualdad son una de las más fuertes del mundo.

Consecuentemente, una política sustentable en ciencia, tecnología e innovación deberá estar articulada en torno a tres pilares:

1. El fortalecimiento de la capacidad científica y tecnológica: recursos humanos de alto nivel y de infraestructura. Es decir, aumentar la formación de recursos humanos en maestría y especialmente doctorado incrementando las becas y los programas de posgrado en general y de manera prioritaria en el PNPC, así como, ampliar adecuadamente y bien direccionada la oferta de posgrado y generar redes que permitan compartir los espacios físicos, laboratorios, bibliotecas, etcétera intra e interinstitucionalmente y entre las instituciones y los sectores productivo, gubernamental y social.
2. Vincular la creación del conocimiento y la innovación con el desarrollo sustentable de empresas e instituciones sociales para la producción de bienes útiles, patentes, protocolos de servicios, para el mercado y el bienestar social.
3. Realizar las actividades científicas y de innovación antes mencionadas en el marco de la cooperación, el trabajo en equipo, mediante la formación de redes temáticas en instituciones nacionales e internacionales (Villa, 2012) donde además estén involucrados los sectores a cuyas necesidades vaya dirigido el conocimiento.

La política sustentable en ciencia y tecnología está soportada fundamentalmente por quienes han obtenido el doctorado. “El doctorado es el nivel académico necesario para atender la esfera de competencias propias de la investigación, desarrollo tecnológico e innovación” (Conacyt, 2010:57). Por ello, los recursos humanos con nivel de doctorado son imprescindibles tanto para el reforzamiento de la formación académica de los jóvenes en los diferentes niveles del posgrado, particularmente el doctorado, como para incrementar los procesos de innovación y derivarlos en patentes y otros registros de propiedad intelectual que permitan una mayor generación y apropiación de alto valor agregado en el mercado, en las instituciones sociales, innovar protocolos de políticas orientadas a resultados para la eficiencia y la competitividad, así como para la construcción de una ciudadanía participativa y consciente.

### **3.Un elemento clave para el sistema nacional de Innovación. El Sistema Nacional de Investigadores y sus desafíos**

El Sistema Nacional de Investigadores (SNI) fue creado en 1984 en el contexto más agudo de la crisis económica de 1982 y con el propósito de radicar a los doctores en el país, evitar la fuga de cerebros, fortalecer la academia y la creación del conocimiento y abrir paso a la formación masiva de estudios de posgrado, mediante un mecanismo central de funcionamiento, el reconocimiento de la productividad y capacidad para formar recursos de alto nivel de quienes se encontraban en las instituciones de educación superior (IES) del país y de otorgar una beca según el nivel evaluado de este desempeño.

Así, para el año 2013, el SNI contaba con más de 19,000 doctores y alrededor de 500 programas de doctorado en el Padrón Nacional de Posgrados de Calidad (PNPC) que son el 50% del total, programas que gradúan en promedio a 2,500 doctores de los 3 mil que se gradúan al año. Aun considerando a los doctores que no se encuentran en el SNI, ¿Puede desarrollarse la competitividad que requiere la sociedad del conocimiento en la globalización con este ritmo de formación de capital intelectual?

La respuesta es negativa. Ni por su tamaño y extensión, a nivel cuantitativo, pero tampoco, ni por su grado de vinculación y capacidad de innovación, a nivel cualitativo. Es decir, se necesita acelerar el crecimiento en la formación de doctores y a su vez transformar la forma de inserción de los doctores en el proceso de innovación vinculándolos además de a las IES, a las empresas e instituciones sociales, para traducir la ciencia, la creación del conocimiento, en instrumentos útiles, en patentes y políticas vinculadas a resultados, que aumenten la competitividad en el mercado y eleven el bienestar social.

A casi treinta años de su creación los objetivos iniciales de este sistema se han cumplido, a excepción de la cantidad de formación de doctores que sigue siendo baja tanto en comparación con las necesidades urgentes del país como con la que realizan otros países. Es decir, en México se hace ciencia y se hace bien, pero no con la extensión y la celeridad que se requiere, como lo señalamos antes, por lo que se requieren nuevos instrumentos para avanzar en la política pública de construir un sistema sustentable de innovación en México, centrado en la formación de doctores, ya que al SNI no solo como marco para la retención y repatriación de talentos, sino como base para la creación y funcionamiento de programas de posgrado que formen principalmente doctores, no se le puede pedir que cumpla objetivos para los que no fue creado y los objetivos de un sistema de innovación en el tránsito hacia sociedades del conocimiento, rebasan a los objetivos del SNI.

### **4.La transformación necesaria del SNI para avanzar en la consolidación del sistema nacional de innovación**

El SNI a lo largo de sus treinta años de existencia ha sido objeto de muchas reformas progresistas y positivas que han permitido que se consolide como una institución seria, prestigiada y respetada en la comunidad científica. Sin lugar a dudas, nos encontramos en el umbral de una nueva reforma en el marco de la agenda para el desarrollo de la ciencia, tecnología e innovación orientada al desarrollo sustentable. Esta reforma tendrá que ahondar en las dos vertientes: la cuantitativa, relativa al crecimiento de los graduados en doctorado y de la capacidad científica, tecnológica y de innovación formativa del posgrado, así como en el atractivo de las becas y condiciones de trabajo para quienes se forman y para quienes son docentes, y de manera estratégica, la cualitativa orientada a la innovación, al fortalecimiento de la propiedad intelectual, en el registro y patentamiento y en políticas ligadas a resultados en el ámbito del sector productivo, de las empresas e instituciones sociales, pero sin descuidar la investigación básica y las nuevas formas de la construcción, diseminación y aplicación del conocimiento de la ciencia posacadémica y posnormal. Se requiere entonces de una auténtica renovación del sistema, donde a la actual valoración de la forma de trabajo y resultados obtenidos por quienes son doctores, se agreguen nuevos indicadores, indicadores de segunda y tercera generación (Scavone, 2003) diferenciados por las distintas necesidades y perfiles de las regiones, que formarán la nueva estructura de evaluación, un nuevo modelo guiado por una visión de largo

plazo y un conjunto de objetivos orientados hacia la innovación permanente en la sociedad del conocimiento y el desarrollo sustentable de México y sus regiones.

En relación a la vertiente cualitativa, es sin duda necesario fomentar y fortalecer la vinculación universidades - empresas – gobierno y sociedad y fortalecer las formas posacadémicas y posnormales de hacer ciencia dentro de la construcción social del conocimiento y su uso, así como de favorecer el estudio del conocimiento tradicional y su uso y apropiación, por lo que es indispensable fortalecer y valorar el trabajo en equipo mediante la formación de redes, otorgar valor a la participación en redes temáticas, en redes duales universidad-empresa, universidad- instituciones sociales, al emprendurismo social y no solo empresarial, por lo que la productividad centrada en publicaciones, en especial la de artículos indizados y sus niveles de citación no pueden seguir teniendo la importancia fundamental que ahora tienen, sino que serán una parte pequeña que ceda su lugar a los indicadores de impacto del conocimiento en la resolución de problemáticas productivas y sociales, así como otorgar valor especial a la actividad de investigadores que participen en empresas tanto con fines de lucro como en empresas sociales, parques tecnológicos, clúster, centros de vinculación e instituciones sociales orientados a la creación del conocimiento, la innovación y la producción de patentes y/o procesos de eficiencia orientados a resultados.

Estas propuestas están orientadas hacia el objetivo estratégico nacional de no sólo contar con un universo más grande de doctores que hacen ciencia, sino principalmente reorientar las tendencias actuales y dar un gran giro en el quehacer científico hacia el desarrollo tecnológico, la innovación para la creación de conocimiento que genere alto valor agregado productivo y social y contribuya a resolver los graves problemas nacionales de desigualdad y exclusión social que seguimos padeciendo, y aunque se tendrá que seguir haciendo ciencia normal, esta ya no será la fundamental y mayoritaria dentro del Sistema Nacional de Innovación.

Sin lugar a dudas, la educación superior y sus instituciones tiene un rol estratégico en esta reorientación y transformación del actual Sistema Nacional de Investigadores y su paso a la construcción del Sistema Nacional de Innovación, pues en México existe el acervo de recursos humanos en ciencia y tecnología necesario (pero no suficientes) para iniciar con determinación y éxito este proceso de transformación de las bases constitutivas que lleven también al nuevo modelo de educación superior, ciencia, tecnología e innovación.

## **5.Hacia la conformación del Sistema Nacional de Innovación**

El sistema de educación superior no puede sostener por sí solo la política nacional de ciencia, tecnología e innovación por más esfuerzos, reformas y cambios que se realicen, y el SNI que constituye el programa transversal de liderazgo científico del sistema educativo, aún menos, pues como ya expusimos sus objetivos son claros y acotados.

Si bien, los sistemas nacionales de innovación son muy complejos y requieren de muchos actores institucionales para su realización, son dos los ejes fundamentales sobre los que descansa: La política de educación superior y la política industrial sectorial en concordancia con la vocación productiva de las regiones, de las cuales derivan políticas de apoyo a estas dos.

En México se ha avanzado mucho en el terreno del sistema educativo, se cuenta con importantes activos institucionales de gestión, coordinación y legislación, pero por obstáculos políticos y financieros aún no se ha alcanzado la transformación del proyecto integral. Por ejemplo en sistema educativo persiste la formación deficiente del nivel básico en el sector público y mayoría del sector privado; se tiene una débil cobertura en el nivel medio superior aunado a una alta deserción escolar, se profundiza el déficit de cobertura y el problema de deserción y reprobación en licenciatura y se agrava la baja intensidad de formación de posgrado y particularmente de doctores en las áreas que debieran ser estratégicas y que anotamos en el primer apartado de este trabajo, por mencionar los problemas estructurales más urgentes.

Aún si se otorgaron los recursos presupuestales en los porcentajes que se requieren para resolver estos problemas y se hiciera de manera inmediata y progresiva, no sería posible en las actuales condiciones que las instituciones de educación superior se integraran al sector productivo y al social si desde la planeación estratégica a que obliga el artículo 26 Constitucional no ha regido la actividad gubernamental y paulatinamente el Estado fue dejando la rectoría de la economía y desde tres décadas no contamos con una política industrial sectorial que tenga su concreción en la vocación productiva de las regiones (UANL, 2013), y se ha abandonado la política social, dentro de ella la educativa, reduciéndola a evaluaciones estandarizadas y desvinculadas de la base del profesorado. Por ello la política educativa y la política industrial constituyen los dos ejes centrales sobre los que debe descansar el sistema nacional de innovación en México.

## **6.El estado de Nuevo León reúne las características para establecer el sistema estatal de innovación**

Para avanzar progresivamente hacia un sistema nacional de innovación es importante estudiar las fortalezas y capacidades existentes a nivel regional. Nuevo León, como entidad federativa cuenta con una infraestructura industrial y de servicios, extensa, moderna y altamente competitiva, es pionero en el impulso de parque industriales, de cluster y del proyecto de ciudad del conocimiento.

En Nuevo León el sistema educativo es muy grande, particularmente a nivel superior. Esta ventaja se acompaña por la existencia de importantes universidades, como la Universidad Autónoma de Nuevo León (UANL), de carácter público, el Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), la Universidad de Monterrey (UDEM) entre las más importantes de carácter privado.

Si bien el acervo de recursos humanos en ciencia y tecnología, contabilizados por los miembros del SNI, se concentran en el Distrito Federal con el 38% del total, en los estados de México, Morelos, Jalisco, Puebla, Nuevo León y Baja California el 27%, quedando distribuidos en el resto de los estados el 35%. Nuevo León ocupa uno de los primeros lugares en miembros del SNI entre las universidades públicas fuera de la capital del país.

Además de estas fortalezas, en años recientes el estado de Nuevo León ha canalizado importantes recursos para el desarrollo de la ciencia, tecnología e innovación. Promulgó la ley estatal, formó el Consejo Ciudadano de Ciencia y concertó con las organizaciones empresariales y educativas la creación del Parque de Innovación, Investigación y Tecnología que tiene como propósito, entre otros, de servir de apoyo para impulsar de cinco áreas del conocimiento estratégicas: mecatrónica, biotecnología, software y las tecnologías de la información y comunicación, nanotecnología y los servicios de la salud.

En este parque se encuentra el Centro de Ingenierías y Desarrollo Industrial de la UANL, junto con otras instituciones educativas y empresariales orientadas al desarrollo científico y de patentes. En este contexto la Universidad ha realizado con el gobierno del estado, para beneficio de la UANL y de la sociedad neolonesa, una estrecha coordinación para impulsar el desarrollo de otros programas estratégicos. La UANL participa en todos los clusters que el gobierno del estado de Nuevo León ha fomentado para que Monterrey y su área metropolitana transiten hacia una ciudad del conocimiento. Podemos enunciar los siguientes clusters: biotecnología, industria automotriz, aeronáutica, alimentario, electrodomésticos, vivienda y software, entre otros en proceso de conformación (Ancer 2012:134).

En suma, Nuevo León muestra como las políticas públicas pueden articularse con la participación de gobierno, instituciones empresariales y educativas y la sociedad, para impulsar proyectos que sienten las bases del sistema estatal de innovación y la construcción de la sociedad del conocimiento que abra caminos de vinculación tanto para la formación de nuestros jóvenes como para su integración a los mercados laborales con las competencias necesarias para satisfacer sus más sentidas aspiraciones en el mercado laboral y para que hagan un ejercicio conciente y participativo de su ciudadanía de manera responsable.

## 7. Financiamiento para ciencia, tecnología e innovación para el desarrollo sustentable

La OCDE destaca que la inversión en ciencia y tecnología es factor determinante del 25% del crecimiento económico en países en vías de desarrollo y de cuando menos el 50% en países desarrollados. Como puede observarse, los recursos orientados a la ciencia, tecnología e innovación son muy importante para detonar los procesos de desarrollo sustentable y en el caso de México, junto con la inversión en educación y de forma especial en el posgrado don elementos son fundamentales para ello.

En el marco de los compromisos del Plan Nacional de Desarrollo y las normatividades relacionadas, se debe alcanzar una asignación presupuestal federal y estatal para ciencia y tecnología que ascienda al 1% del PIB y al 8% en educación, es indispensable que las instituciones de educación superior y en especial las públicas que son las que realizan mayoritariamente la I&D, coadyuven en la resolución de las problemáticas educativas y de la reestructuración y reconceptualización del trabajo investigativo para generar, sieminar y aplicar conocimiento, desplegado esfuerzos para ampliar su oferta educativa y los proyectos de investigación mediante acciones que permitan aumentar los recursos presupuestales que se requieren para ello, sin olvidar su compromiso con los otros niveles del sistema educativo.

El compromiso del gobierno de Nuevo León y de la UANL con la educación, la Ciencia, la tecnología y la innovación, pero sobre todo con la juventud de México es irrenunciable. Participar honestamente en la educación implica una actitud optimista, la creencia de que los seres humanos podemos ser mejores y que podemos contribuir a crear un mundo mejor. Educar es fomentar el desarrollo de las capacidades, es proponer caminos para que sean recorridos con libertad, creatividad, responsabilidad y sean receptivos a la innovación para el desarrollo sustentable, pero esto requiere de una transformación de la forma de generar conocimiento y de la forma de formar donde las instituciones de educación superior, son aliadas responsables, experimentadas y comprometidas con la educación, la ciencia, tecnología e innovación y con México.

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# MAIA (movie analysis in action). A new teaching method in media literacy education

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## Abstract

MAIA (movie analysis in action) is a simple method in Media Literacy Education. It consists of a few simple operative steps, thanks to which you can design interesting learning situations to approach audiovisual text analysis with students. The method has been tested several times in last three years, in groups of young (16-18 years old) and adult students (23 years old and over). The main purpose of this teaching model is both to make the moment of "graphic transcription" of the audiovisual text more interesting, and to easily introduce the whole analysis process.

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*Keywords:* Media literacy; visual text analysis; teaching methods; media education; semiotics.

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## Movie analysis in education

MAIA (movie analysis in action) is a simple method in Media Literacy process. It consists of a few simple operative steps, thanks to which you can design interesting learning situations to approach audiovisual text analysis with students. The method has been tested several times in last three years, in groups of young (16-18 years old) and adult students (23 years old and over). Nevertheless, the method proposes very easy and pleasant activities, so it can be extended also to the younger students.

The main purpose of this teaching model is both to make the moment of "graphic transcription" of the audiovisual text more interesting, and to actually easily introduce the whole analysis process..

### *Audiovisual text description and graphic transcription*

Knowledge and skills, related to the media text reading, are certainly considered a sort of preambula of media literacy. The primary goal of any media education process is to know how to "read" media messages and especially their linguistic elements. The first step in media literacy is learning the basic elements of communication. So, the knowledge of the signs and codes of audio-visual language appears as a pre-condition to develop any other consideration on the media (Casetti, Di Chio 1990).

Among teaching strategies that media educators have developed, text analysis could be considered one of the best-know aspects of Media Education (Buckingham 2003).

Briefly, the process of analysis of the audiovisual text is traditionally structured on three levels:

a) description - the text is broken down into its constituent parts in order to deeply understand the writing techniques;

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b) meaning - the analyst "reconstructs" the text, linking the linguistic components to the narrative and thematic "content", giving a first interpretation;

c) judgment – that is the deep process of interpretation, which proposes a general critical overview.

The first level (description) allows to “closely look” at the structure of the video and to focus on its smaller parts (frames or shots), in order to recognize the linguistic elements in them. In teaching/learning situation, we can propose two operational steps (Rivoltella 1998):

1. breaking up the text into its meaningful units, i.e. the sequences and shots (frame by frame), and
2. accurately identifying, in every single frame, all the linguistic components.

How to make this analytical task? We can use the classic model of graphics transcription and produce a sort of “a posteriori script”. It allows to highlight all the audio-video components. This “written object” is the starting point to work on the reading skills development, to move from a "naïve look" (linked to the immediate vision, full of emotion, participation and psychic dynamics) to a "competent look" (which leads to the critical evaluation of the text language and communication - without, however, preclude the viewing pleasure).

	VIDEO	AUDIO
1.	2” I.N. MF of Sam (left) and of Werner using a knife	Werner: “Vedi Sam, è Natale. Guarda. Che ne dici? Me lo ha regalato Mylene” Background music
2.	1” I.N. P.P. of Mylene smiling while pouring from a jug	Background music
3.	2” I.N. P.P. of Sam watching the knife	Sam: “Non sono venuto per questo.” Background music
4.	2” I.N. P.P. of Werner	Sam: “Io voglio la tua confessione...” Background music
5.	2” I.N. P.P. of Sam	Sam: “...e i soldi.” Background music
6.	2” I.N. P.P. of Mylene	Sam: “Altrimenti, chiamo la polizia.” Background music

Therefore, the descriptive moment is crucial and adopting an appropriate methodology is equally decisive. Graphical transcription could be a useful methodological tool because it transposes the visual language in written verbal language, and it promotes critical distance from the video and analysis process.

But today graphical transcription could be replaced by an equally valid and functional methodology: MAIA.

#### *MAIA Method*

The importance of a “translation” of the visual text is undoubted. It can “fix” the text and make it available for analytical crossing. Today digital technology (digital cameras, video editing software) offers new tools to improve this descriptive step of media analysis: MAIA perfectly does it!

The main steps of the MAIA method are the following:

1. the careful viewing of the whole audiovisual text – it allows you to have an overview and to make some first "naïve" reflections about its style, language and narrative content;

2. the selection of shots - it is necessary to stop the audiovisual flow, following the sequence of shots, in order to turn them into pictures. This activity does not involve any particularly difficult technological tool, because now all the most common freeware video players (e.g. VLC) are equipped with useful functions for this task: "stop playback", play "frame by frame" and "frame snapshot" (extract frames). The selected images are collected in a specific folder on your PC. They will be the starting point for the next reproduction activity of the shots;

3. the re-production of the shots – The students now work in groups. They are asked to produce a picture that is as similar as possible to the original (the picture previously extracted from the sequence), by using a digital (video)camera. During this step, the students are invited to re-write the scenes. So, they perform a series of actions that are very significant for learning process and the starting point of audiovisual language analysis:

- a. they prepare a movie set, with the main environmental elements;
- b. they put the objects on the scene;
- c. they choose the "actors", and provide them with some distinctive features, similar to the original model;
- d. they try to light up the scene;
- e. they place the camera in a specific position, in order to copy the point of view of the original;
- f. the "actors" take on the position of the video characters, with the help of all the students;
- g. finally, they take some picture of the scene.

4. the selection of the pictures – at the end of the shooting, the students can download all the pictures in a specific folder in the PC. By using a picture viewing software, they can now select the best pictures, the most similar to the originals.



Werner: "Vedi Sam, è Natale. Guarda. Che ne dici? Me lo ha regalato Mylene"  
Background music



Background music



Sam: “Non sono venuto per questo.”  
Background music

Sam: “Io voglio la tua confessione...”  
Background music

Sam: “...e i soldi.”  
Background music

Sam: “Altrimenti, chiamo la polizia.”  
Background music

Fig. 1 – Confronting pictures from video and MAIA lab

### Final remarks

MAIA helps teachers to introduce students to the audiovisual analysis by using a simple, intuitive and active method. The technical tools, which are used in the process, are accessible to anyone and they don't require specific technical skills. The success of the educational action is certain, just activate a few simple warnings.

First, while the group works in the “video rewriting” (as it happens in the “verbal graphics transcription”), the media educator has the task to indicate, from time to time, the dense meanings of “rewriting”: it is the “on the field” discovery of picture language. The steps are very basic, but the in-action meta-reflection is very important. The teacher must continuously ask to reflect on the various phases of group work, and he has to highlight the how-and-why of the different actions and choices.

Secondly, MAIA method doesn't involve audio analysis, but it's possible to think about another activity that is focused on audio elements (by using, again, easy audio editing software). In addition, I note that MAIA is very

flexible. It can be centered, from time to time, on different aspects of the audiovisual language. For example, the media educator can focus on proxemics, on the use of light, on the point of view, etc. In short, he can implement all learning strategies that he has traditionally used in the video analysis. For all these reasons, MAIA is a simple and practical method available to all media educators.

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# Main difficulties for Hungarian-learning Korean students and effective Hungarian teaching methods

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## Abstract

Indeed, views vary from scholar to scholar, but according to a generally accepted theory, Korean and Hungarian are known to belong to the Altaic and Finn-Ugor language families, respectively. Originating in the Ural and Altaic Mountains, the two languages are close to each other in terms of language family as well as language type (agglutinative language). Thanks to these similarities, Korean students are seen to learn Hungarian easily, compared to other Middle Eastern European languages, i.e. Slavic and Romance languages. In spite of such advantage, there is a typical interlanguage Korean students often use ungrammatically, when learning Hungarian. This paper aims to look into the typical interlanguage and determine the reasons for its birth on the basis of the data I have accumulated, while teaching Korean students Hungarian for 12 years and the survey for 136 Korean students (34: freshman) at the Department of Hungarian Language of Hankuk University of Foreign Studies. The representative interlanguage forms are most found in phonetics / phonology, morphology and syntax. In the area of phonetics / phonology, Korean students have difficulty in clearly distinguishing between long and short vowels, e.g. a-á, e-é, i-í, o-ó, ö-ő, u-ú, ü-ű, and some consonants, i.e. d, dz, dzs, gyé, zé, zsé. In addition, few Korean students correctly tell vowel i from consonant j. In the area of morphology, the conjugation by person causes the most serious trouble to Korean students. Korean does not conjugate verbs by person instead of omitting subjects, whereas Hungarian conjugates verbs by person instead of often omitting subjects. The postpositions widely used in Hungarian are also headaches to Korean students. In the area of syntax, an interlanguage often appears in word order. Korean has a fixed word order, whereas Hungarian gives a speaker a freedom to change a word order according to his/her intention. In conclusion, I show effective teaching methods, which I am using on these difficulties to Korean students learning Hungarian..

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*Keywords:* Hungarian; Finn-Ugor language; phonetics; morphology; syntax; Korean students; effective teaching methods

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## Introduction

Both Korean and Hungarian are known to originate in the Uralic language family. It is accepted without great difference that Korean belongs to the Ural-Altaic language family, but there were many different views on the origin of Hungarian for a time (Kim Seung-gon, 1984). But paying attention to the language similarities between Lapps on the northern part of the Scandinavian Peninsula and Hungarians, János Sajnovics began to perform a study of the relationships between Hungarian and Lappish in 1768, which led to the historically first publication of a paper on “the relationships between the two languages” in 1770. Based on this paper, linguistic studies were carried out for 150 years, which made it possible to determine the relationships among Hungarian, Finnish, Estonian and languages of minorities spread in the former Soviet Union territory and to establish the concept of the Finno-Ugrian or Uralic language family (Lee sang-hyup, 1996). Thus, both Korean and Hungarian are said to derive from the Uralic region and to belong to agglutinative languages. But despite of such resemblances, I have found Korean students having plenty of difficulties in learning Hungarian contrary to expectations over the last 13 years. Based on my 13-year experiences at Korean universities, the present presentation will look into the matters Korean students found the most difficult in learning Hungarian and put forward my effective teaching methods used to help students overcome

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the challenges. I believe my teaching methods will serve as a supplementary data in teaching other languages as well.

### **Main Difficulties for Hungarian-Learning Korean Students**

In his recent presentation, Prof. Sándor Kovács, who has taught Korean students Hungarian for ten years, put forward several points in which Korean students have difficulties in learning the language: the distinction between long and short vowels in terms of phonetics, the proper use of definite and indefinite articles in terms of morphology, and the composition of Hungarian sentences in accordance with Hungarian word orders in terms of syntax (Sándor Kovács, 2014). I have also investigated a typical interlanguage of Hungarian-learning Korean students in terms of phonetics, morphology and syntax (Yoo Jinil, 2013). In this chapter, I will introduce the matters Hungarian-learning Korean students find the most difficult in each area on the basis of the both data and my 13 years of teaching experiences.

In the area of phonetics, students have difficulties pronouncing short and long vowels. While Korean requires no great differentiation between them, Hungarian requires a clear distinction between them, since they are different phonemes. However, as pointed out by Sándor Kovács, Korean students tend to pronounce most Hungarian long vowels short. For example, they pronounce long vowels í, ű, ő, ó as short ones i, ü, ö, o. The Korean vowel system has no é, a vowel which has characteristics of palatal consonant, flat labial, long sound and low sound (Park Soo-young, 2002), so most Korean students pronounce é as i which is similar to é and has characteristics of palatal consonant, flat labial, short sound and high sound. There is none of Hungarian round vowels ö, ő, ü and ú in Korean, so they are apt to pronounce them incorrectly. Among Hungarian consonants, voiced consonants cause Korean students great inconveniences. While the Korean consonant system has no voiced sound, voiced and voiceless sounds are coupled with one another in the Hungarian consonant system, so most Korean students pronounce Hungarian voiced sounds as voiceless ones. It is often hard for Hungarian native speakers to follow the consonant pronunciation of Korean students. Hungarian and Korean consonants number 25 and 19, respectively. This means that the Hungarian consonant system is more complicated and subdivided, which makes Korean students hard to pronounce several Hungarian consonants accurately. Dzs, z, zs, and gy are such representative examples. They are different phonemes in the Hungarian consonant system, but all the same ones in the Korean consonant system. Judging from my experiences, it is almost impossible for Korean students to pronounce them correctly.

In the area of morphology, the conjugation by person gives the most serious trouble to Korean students. In Korean sentences, their subjects are scarcely omitted, but their verbs are the same in form. On the contrary, Hungarian sentences have their subjects often omitted and their verbs changed in accordance with person, time (past, present and future) and mood (imperative, conditional etc.), and so on. In terms of verb conjugation, Hungarian is more complicated than Korean, which demands much time and effort to conjugate Hungarian verbs correctly. Besides, articles are scarcely used in Korean, whereas definite and indefinite articles are differentiated from one another strictly in Hungarian. This drives Korean students into much embarrassment.

In terms of syntax, Korean students find the greatest difficulty in using the correct word orders of Hungarian. Word orders are defined grammatically in Korean, while they can vary, depending on the wishes of speakers in Hungarian. For instance, a sentence of the third form is always composed in order of subject (S) + object (O) + predicate (P) in Korean. However, things are different in Hungarian: if no specific vocabulary is emphasized, a sentence is composed in order of S + P + O, but for example if O is emphasized, it is composed in order of S + O + P. In Hungarian, a sentence generally employs an order of S + P + O + other components, but if a specific vocabulary is emphasized, it is placed before a verb. Like this, Hungarian word orders are very variable. Therefore, it causes difficulties to Korean students accustomed to fixed word orders.

## Effective Teaching Methods and Conclusion

This chapter will introduce the teaching methods I have used for my Hungarian-learning Korean students to remove the above-mentioned mistakes and difficulties found in the students. I believe these methods will serve as a supplementary data in teaching other languages as well.

In the area of phonetics, I kept my students from pronouncing long vowels as short ones by letting them pronounce long ones excessively long when reading Hungarian-language texts. In principle, long vowels take about twice the time than short ones, but I let my students pronounce the former three times as long as the latter. This exercise made it possible for students to pronounce long vowels as long as Hungarians when talking with them. In addition, I refrained my students from pronouncing voiced sounds as voiceless ones by repeatedly letting them exercise the pronunciation of voiced ones to such that Adam's apple trembles. The exercise was somewhat effective in the pronunciation of voiced vowels. Further, I helped my students pronounce Hungarian vowel é and consonants dzs, z, zs and gy by making a consonant and vowel articulation table by method and location and letting students pronounce consonants and vowels pursuant to the table. As a consequence, I saw my students improving their pronunciation, though it was not as perfect as that of Hungarian native speakers.

In the area of morphology, I helped my students to master the complicated conjugation of Hungarian verbs by letting them make a person change table by time and mood with corresponding examples: the 1st/2nd verb conjugations of the present, the past and the conditional mood and the imperative mood. I let them read the table aloud repeatedly every day. The result was that they could conjugate Hungarian verbs relatively correctly without stress. Indeed, I have not yet created my own teaching method on the correct use of articles, but let my students repeatedly exercise the examples with definite and indefinite articles and without any article.

In the area of syntax, I helped my students get accustomed to Hungarian word orders by making typical forms of Hungarian sentences. They are as follows:

1. Subject + Intransitive Verb
2. Subject + Intransitive Verb + Adverbial phrase
3. Subject + Transitive Verb + Object
4. Subject + Transitive Verb + Object + Adverbial phrase

I roughly divided Hungarian sentences into those with and without emphasized specific vocabulary. I enabled my students to identify how nuances change according to the location of an emphasized specific vocabulary by letting them repeatedly exercise the corresponding sentences.

My teaching methods may also have the parts inapplicable to teachers and students. Nonetheless, I have acquired the methods by my 13 years of teaching activities and have found that they are very helpful for teaching students the parts they find most difficult.

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# Making learning foundational in developing school leaders

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## Abstract

In this era of accountability for results in schools, the preparation of school leaders requires clear focus on the concept of learning which is significant in addressing the challenges of producing results in schooling today. This paper suggests a redesign of school leader preparation programs to focus intentionally on learning through which candidates develop self-insights and environmental-insights that are grounded in practice and transferrable when they assume leadership positions.

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*Keywords:* educational leadership, school leaders, school development

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## 1. Introduction

The complexities of education today coupled with the increasing demand for accountability for student learning make it imperative that leaders maintain a focus on learning, not just students' learning, but the teachers' and their own learning as well. The preparation of school leaders, therefore, needs to ensure that aspiring school leaders are being prepared with skills directed at improving learning that will enable them to lead effectively. As such, a deep understanding of how learning occurs should be at the core of leadership preparation and development and allow for personalization, practice, reflection, the development of self-insight and environmental-insight, and intense practical experience with leadership. This paper proposes a refinement in the preparation of school leaders to focus much more intentionally on the concept of learning that is explicitly integrated into school leader preparation programs.

## 2. Focus on Learning

Various definitions of learning exist. However, for the purpose of this paper, Schunk's (2012) definition is used. He defines learning as "an enduring change in behavior or in the capacity to behave in a given fashion, which results from practice or other forms of experience" (p. 3). Schunk further delineates three criteria of learning. One criterion is that learning involves change – in behavior or in the capacity for behavior. People learn when they become capable of doing something differently. A second criterion is that learning endures over time; and a third criterion is that learning occurs through experience. Although knowledge and understanding of learning is not enough to guarantee success as a school leader, its absence or lack thereof virtually guarantees mediocrity or failure in substantive student achievement.

A strong knowledge base in how children and adults learn, and the hands-on use of that knowledge in various leadership roles are necessary for high performance in teachers and students. Whether the issue at hand has to do with developing a shared vision, establishing school goals, shaping school culture, attending to safety issues, engaging families and stakeholders, or advocating for policies, school leaders are responsible for helping students achieve at high levels. (Richardson & McDaniels, in press). Since schools' primary task is to produce learning, a deep understanding of learning will ideally figure prominently in the preparation of school leaders. Unpacking and explicitly utilizing essential skills in learning such as metacognition, transfer, self-regulation, motivation, and self-directed learning should be an integral part of aspiring leaders' experience over the course of the preparation program.

### *2.1. Learning for Leadership*

Instructional leadership figures prominently in the qualities of effective principals. In order to be well prepared to lead instructionally and to play a critical role in student achievement, aspiring principals must be able to not only define learning and understand how it occurs, but be able to unpack the attributes of learning through personal use in ways that are transferable to leading schools. This increases the likelihood that a school leader will know how to operate from a learner-centered core of knowledge.

Among the eight qualities of effective leaders proposed by Stronge, Richard & Catano, (2008), as necessary for the development of school leaders, instructional leadership and the principal's role in student achievement are most appropriate here. Preparation programs can focus on helping aspiring school leaders prepare for their instructional leadership role by requiring them to engage much more actively in their own learning. This has implications for the ratio of time spent in classrooms versus time spent interacting with and observing leadership in action during which they can develop self-insight as well as environmental insight.

London (2002) postulates that insight is the foundation for development, and that self-insight is the bedrock of meaningful personal growth and development. He defines self-insight recognizing personal strengths and weaknesses, and notes that people who understand their own strengths and weaknesses, motives, and attitudes are likely to be better at understanding their own behavior and why people react to them as they do. This is vital for effective leadership. Another aspect of self-insight is recognizing how one learns as well as what there is to learn. Knowing how to learn is critical to being able to acquire new skills and benefit from positive and negative experiences. London (2002) further notes that self-insight is the foundation for environmental insight in leadership that is adaptive, transformational and principled. Among the implications here are that preparation programs must be designed so that aspiring leaders are personally invested in their development and be given opportunities to engage in a variety of leadership development experiences, time to analyze and reflect on these experiences in ways that deepen their self-insight and environmental insight. To enhance self-insight, London (2002) suggests several sources of feedback to enhance self-insight, which when taken together appear congruent with principles of andragogy and self-directed learning.

### *2.2. Andragogy and Self-directed Learning*

Andragogy, the study of how adults learn, is an integral aspect of professional growth and school improvement, posits (Knowles, 1980) whose concept of andragogy profiles the adult learner as autonomous, motivated, and ready to embrace growth-oriented experiential based learning. Maaske (1939), a pioneer in adult learning, underscores that learning is not solely a product of the classroom, but that perhaps the most important and controlling basic motive in all adult learning is a desire for self-improvement. With this in mind, in the process of developing leaders, learning opportunities can be optimized by training aspiring leaders as self-directed learners, encouraging openness to peer feedback, engaging in goal setting, and development of self-reflection abilities. Having practiced these learning strategies throughout the program, by the end of preparation program, aspiring leaders can personalize these learning strategies so that as they assume positions as school leaders, they are likely to continue self-development and increase the likelihood of transfer of learning.

Knowles (1975) purports self-directed learning as a suitable model of instruction in andragogy. One

immediate reason is the emerging evidence that people who take initiative in educational activities seem to learn more and learn things better than what resulted from more passive individuals. One implication here is while some program participants appreciate the opportunity to be self-directed, often many are more interested in just knowing exactly what the professor wants. Essentially, they want to be taught in the way they teach, and make references to how they teach. So understanding the difference in pedagogy and andragogy is critical as they learn to become school leaders or obviate the risk of habitually applying pedagogy to every teaching and learning situation whether with adults or children. There is a need to help dependent learners in preparation programs to move from their dependence on pedagogical types of instruction such as lectures to more inquiry and discovery learning. From personal experience, many practicing teachers tend to request more familiar lecture type instruction rather than to take the intellectual risk to engage actively in inquiry and discovery. Hence, self-directed learning must be taught explicitly and intentionally. It may be accomplished much more readily with emphasis on experiential-based learning and less reliance on classroom coursework.

The experience that adults bring to a learning situation is identified in the literature on adult education as a major factor in how adults learn. Therefore preparation programs should provide opportunities for aspiring leaders to retrieve, reflect, and infuse their experience into their learning, and provide context, variability and personalization for learning success. As suggested in Richardson & McDaniels (in press), a note of caution for leaders is that portions of an adult's prior experience may be imbued with bias and presupposition and can influence their learning. Care must be taken to incorporate opportunities for aspiring leaders to critically examine, reflect, and contextualize their learning. While it is important to build on aspiring leaders' existing views of and experiences with leadership, it is as important to allow for expanding one's view of leadership through additional knowledge and experience.

### *2.3. Learning Environment*

Leadership is a complex skill, and according to Schunk (2012) learning complex skills typically occurs through a combination of observation and performance. As such, aspiring leaders would benefit greatly in processing the large volume of leadership information from a combination of explicitly integrated observation and performance activities. A natural place for these activities is the internship which ideally should be spread over the entirety of the program. According to Darling-Hammond, LaPointe, Meyerson & Orr, (2007) adults learn best when meaningful work incorporates both active and problem based learning that integrates theory and practice and stimulates reflection. Problem based learning, such as action research, field based projects, journal writing, portfolios, and feedback helps ground learning in application.

The literature highlights mentorship, internships, and collaboration through technology as necessary aspects of preparing school leaders. Steshly and Gray (2010) suggest that more attention to behaviors and characteristics of exemplary leaders should be integrated into administrative programs. They argue that using data to eliminate myths, building relationships, and studying great leaders all help reinforce what great leadership looks like in practice. It is also most practical for aspiring leaders to observe directly and be mentored by great leaders. While doing so, it is vital for them to maintain a strong focus on application of knowledge and reflective thinking. McCabe, Ricciardi & Jamison (2000), report that practicing administrators found that intern experiences, mentoring, and cohorts can be extremely valuable components of administrator preparation programs. These programs that ground theory in application were found to be most helpful in preparing for administrative roles. Schrum, (2011) notes that practicing administrators frequently stated that their graduate programs did not adequately prepare them for the technology demands of the job. Technology can be utilized in leadership preparation programs to enhance collaboration among participants and deepen reflective behaviors as they share insights into both theory and their practical experiences.

### **3. Implications for Leadership Preparation**

The emphasis placed here on the concept of learning, indicates a need to redesign traditional school leadership preparation programs in both process and content. A process that emphasizes active engagement, and

content that is well grounded in ongoing experience with leadership facilitates learning for leadership. It would be ideal to begin school leader preparation by tapping into participants' prior knowledge and existing experience with leadership. Allowing for analysis and reflection on what participants have already observed and experienced in their daily work will help in initiating the trajectory towards insights into themselves and their environment. Classroom discussions can lead to self-awareness, identification of gaps in knowledge with regard to leadership skills, and goal setting in which participants actively engage in setting goals for their own development.

### *3.1.A Strong Knowledge Base*

Building up participants' knowledge base early in the program by identifying the range of school leader behaviors from the literature provides them with concepts and ideas through which to think about leadership during their field experience. For example, Reeves (2006) seven dimensions of leadership (Visionary, relational, systems, reflective, collaborative, analytical, and communicative), or some similar articulation of leadership skill set provides participants with a range of leadership issues on which to focus as they begin observing, analyzing and reflecting on their field experience. Simultaneously beginning the internship with course work allows for active engagement in culling what is useful from the literature for leadership practice and what is useful from practice that can inform the literature, allowing for action research, problem-based learning, inquiry and discovery learning. Pairing early course work with leadership observations engenders the grounding of knowledge in application. Essentially, aspiring leaders will move into an internship experience as they begin their coursework thereby having opportunity to observe leadership and clarify misconceptions, about school leadership as they reflect on new knowledge, and bridge to existing knowledge. Reflection, analysis, and goal setting for their development then become the processes for class work.

### *3.2. Reflection on Learning Experiences*

Personalization, observation, analysis, and reflection on learning become hallmarks of a preparation program designed to help aspiring leaders transfer learning to their leadership role. At the core of leadership preparation is the practical experience with leaders during which candidates observe, clarify and apply their knowledge on an ongoing basis. By answering questions such as: What do you already know about leadership? What have you observed? What skills are required to lead? Participants build a list of skills to be learned, to be experienced, and/or developed further in their field experience. By beginning the program with self-regulated or self-directed learning aspiring leaders are being socialized to learn about leadership using some key attributes of learning, thereby personalizing their experience and their learning. The role of the professor becomes one of facilitator of learning by extending their thinking, questioning, giving feedback, correcting misunderstandings, and providing scaffolding for their learning by implicitly building in strategies that move them along their Zone of Proximal Development (ZPD) (Vygotsky, 1978). Professors collaborate with aspiring school leaders to set up milestones toward their ZPD so that with assistance they can acquire the skills, and knowledge. In this learning environment participants are responsible for monitoring and assessing their growth and development, making transfer of their learning more likely.

During coursework, emphasis on awareness of skills needed for leadership and reflection on changes in behavior serve to enhance self-insights, while internship field experience provides the context for developing environmental insights. Monitoring and assessing their behavior change over time during the program can further deepen understandings and skill development. For example, discussions regarding which leadership skills are already mastered, and which are areas for continued growth can enable participants to self-regulate and personalize their learning and deepen their self-insight and environmental insights. Continuous self-assessment on a range of leadership characteristics and skills such as Reeves (2006) seven dimensions of leadership, can form a strong basis for leadership development and growth. The literature on school leadership provides aspiring school leaders a wide range of content to utilize in the observation process during field experience.

While the content can encompass several texts and a wide range of literature, the process should be carefully laid out to fully engage participants in their learning, setting goals and monitoring and assessing their own development. At the beginning, the focus can be on understanding of one's self interacting in the school environment and observing the pivotal role of the leader. Learning can also take place vicariously during regular working hours as they interact with school leaders. The process could be iterative with identification, reflection, and action by asking questions such as: What leadership skills does this activity require? – identification. Where am I in my development of this particular skill? – reflection. How can I develop or improve my skill level in this area? - taking action. The above process, if continued, is likely to help aspiring leaders with the issue of transfer of their learning once they assume a leadership position.

### *3.2. Transfer of Learning to Leadership*

One of the critical aspects of leadership development is helping aspirants in making the transition to thinking like a leader. This should be an overall goal of the program, and as such participants must continuously pay attention to this evolving skill. Transfer and self-regulation, must be an integral part of their experience.

There are different types of transfer. Positive transfer occurs when prior learning facilitates subsequent learning. Negative transfer means that prior learning interferes with subsequent learning or makes it more difficult. Zero transfer means that one type of learning has not noticeable influence on subsequent learning (Schunk, 2012 p. 317). These distinctions are particularly important because aspiring school leaders bring a wealth of ideas about schools and school leadership to their learning. The overall goal is to give them opportunity to reflect on their prior knowledge and identify where positive, negative, or zero transfer are likely. Discussions and reflection should facilitate these distinctions to engender positive transfer of prior and existing knowledge.

The usefulness of knowledge is particularly critical for adult learners, and can aid in transfer (Schunk, 2012). Therefore, in designing coursework, a direct linkage should be made evident between the knowledge and its usefulness so that aspiring leaders can focus on extrapolation useable knowledge from their readings and focus on transfer in their field work.. Hence, the simultaneous iteration of classwork coupled with internship provides a rich learning environment in which transfer is more likely.

Fuchs et al (2003) note that self-regulated learning strategies can facilitate transfer. Self-regulation, which as Zimmerman & Schunk (2001) define it, refers to the processes by which learners systematically direct their thoughts, feelings, and actions toward attainment of their goals has the potential to help aspiring leaders take responsibility for their learning. Self-regulation requires that learners have choices. Therefore, program design would include choices particularly through goal setting. Careful choice of readings to develop knowledge base, choice in goal setting for individual skill development, and choice in strategies can facilitate self-regulation and allow for personalization of the learning. Modelling is an important part of self-regulation, and professors and internship site mentors can serve as models personalizing feedback, helping to identify opportunities for transfer, and encouraging habitual reflection.

### **4. Program Redesign**

The main components of the proposed learning-focused, experience-based school leadership preparation are less class time and more fieldwork with an initial sense-making phase, followed by a meaning-making phase and consolidation phase. The sense-making phase is comprised of readings, early observations, reflection and goal setting during which concepts of leadership are carefully reviewed and knowledge base is built up to engender meaningful reflection during observation. In the meaning-making phase of continued observations, reflection, analysis, and assessment of one's development requires careful facilitation and modelling by both professor and site mentor as aspiring school leaders focus on the ongoing development of their own skills. The culminating phase consists of consolidating learning and planning for transfer of learning to a leadership position.

## 5. Conclusion

School leadership with a focus on learning requires deep understanding of learning through personalization, practical experience, and insightful reflection. Learning as defined here as change in behavior over time, when unpacked, understood, personalized, and reflected, on has the potential to provide a set of skills that are germane to school leadership with a focus on learning. A redesign of traditional preparation programs with a practical, experiential curriculum designed to teach explicitly for transfer of skill, knowledge and strategies may improve the impact leaders have on learning in schools when they assume a leadership position. Organizing leadership preparation with clarity and focus on learning in ways discussed above can potentially change the skill level with which new school leaders assume their positions.

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# Managerial competency of crisis managers

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## Abstract

Crisis management is at the time of dramatic changes external settings to current issues. In today's tough competitive setting we can assume that organizations will increasingly compete for the most able employees who continue to deepen their knowledge, which are able to use not only normal but also crisis management. The managerial competency consist of skills and abilities contribute to the excellent performance of crisis managers. Crisis manager must be a strong managerial personality is able to cope with mentally and physically demanding process recovery company. Crisis manager has to deal with crisis situations well, it is necessary to constantly develop their managerial competency.

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*Keywords:* crisis manager; crisis situation; competence; professional knowledge; practical skills.

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## **Introduction**

The subject of crisis management is to deal with extreme situations and crisis situations of various extents up to catastrophes in all the phases of their management. A crisis situation can arise from the very essence without the intention to cause the crisis or on the basis of conflict. It is not important whether the conflict arises gradually on the basis of different interests or suddenly. Catastrophes have usually extremely fast change of parameters in the system, thus high dynamics.

## **Crisis and Crisis Management**

Any subject can suffer from a crisis – a political party, an alliance, a state, an organisation, a family, an individual etc. Moreover crises are becoming globalized in various systems. Nowadays, in the time of interconnected world through market, information networks, finance and state interests, the chance of crises development and wide spread is much higher. A common crisis can be defined as a change of balanced state towards imbalanced state or dominance of particular elements over the others. However, crises come in different forms – as natural disasters, big anthropogenic accidents and disasters as social, communal and economic threats. (Antušák 2009, p. 13-17) They threat not only individuals, families, organisations but also states, alliances, continents and supranational corporations. While crises can be statistically and locally foreseen, their immediate and real manifestations cannot be organised so that they happen in convenient time for an individual, company, state. There lies the memento of crises phenomenon. We generally know that a crisis can happen anytime but we do not know what kind of crisis it will be, who will be affected by it, how destructive will it be and we do not have the information about its coming in advance. More than 80% of crises are caused by mistakes in management, unprofessional or unethical behaviour, long-term underestimating or neglecting of rules. Crises have to be taken into account, foreseen and be ready for them.

Crises represent a potential threat which in today chaotic and turbulent environment cannot be avoided by almost anyone. They have become a concomitant phenomenon of people's lives and business. They affect without any difference both small businesses as well as world business giants, companies with a strong tradition as well as the recently founded ones. They attract the interest of media.

This era brings a new quality into the comprehension of adverse effects. It requires the effects to be approached coherently and confidently, not only by the so called method of trial and error. Systematic and continual approach is required. Campaign concept of crisis management costs huge amount of money but brings very little effect. (Antušák, E., & Kopecký, Z., p. 25-35)

For company management, as well as for the majority of political, legislative, governmental and other organs of public administrations, is dealing with actual problems connected with dealing with their profile – political, legislative, economical and other problems more important than dealing with not so common problems. The issue of preparation for crisis and the process of crisis management becomes a secondary problem, which results in a general decrease of motivation of crisis organs, citizens and the public to learn and prepare. But the process of crisis management requires strategic flexibility of organisations. Planning is the first step and goes hand in hand with safety.

Crisis management is usually perceived as a specific area of management, which deals with a specific set of approaches and methods used by management to tackle certain functions of the subject in the conditions of adverse effects caused by a certain type of extraordinary event. The management is considered to be administration with a strong participation of human factor. As all other activities, like technology, society and design, management is also art. Managers can work better if they use systematic management knowledge – knowledge based on science. If we accept the premise that the management is a symbiosis of science and art, than in the case of crisis management the symbiosis of science and art is even more important because the whole process takes place in abnormal conditions of a certain type of extraordinary event. (Bělohávek, F., Šuleř, O., & Košťan, P., p 230 – 234)

The problematic of management in the present turbulent environment of world's economics development fulfils a

very important and irreplaceable role in theory as well as in practice of every business subject but also in public administration. In the present management environment, in which are significantly applied the elements of globalisation expressing themselves in the worldwide scale and blending with regional elements, it is necessary to find suitable approaches for their combination and, therefore, optimise the position in the set environment. Crisis generally arouses as a result of mutual effect of internal and external risk factors on one side and unsuitable manager reactions on the other. For the majority of companies the globalisation tendencies are so critical that a number of the authors (P. F. Drucker, K. Lewin, D. A. Nadler, H. J. Leavitt and others) started to look for possibilities as to how to use the change of external environment to strengthen and exploit their positions. (Antušák, E., & Kopecký, Z., p. 35-40) P. F. Drucker emphasised, that these new conditions will require a new style of management, new creative approaches which will be able to understand the changes of external environment, to solve the arisen problems, to compensate them in required extent or even exploit them for their own benefit. The process of management work has started to be affected by a number of traditional as well as new threats and crisis phenomena which significantly determined the work environment of managers. Every crisis is an unrepeatable and unique event. The threats escalate independently on the will of human (especially the natural ones). Crisis situations and crises of variable character (natural, anthropogenic, security or military) aroused, are arousing and will arouse in all states of "crisis environment" (peace, crisis, war). Even so, there are basic steps that can be used in solution of every crisis. These elements of crisis management are similar for all the types of organisations irrespective of their susceptibility to crises. Crisis management has the following steps for crisis solution:

- Analysis of threat to the organisation
- Determination of crisis strategy
- Realisation of crisis strategy.

The whole process of crisis management is based on a number of interconnected activities which are called basic functions of crisis management. The functions are:

- Prevention phase – minimisation of sources (causes of crisis arousal) of crisis situations
- Coherence phase – preparation for the activities in crisis situations
- Anti-crisis intervention phase – preventing arousal of crisis situations
- Reduction phase – reduction of sources of crisis situations and their negative effects
- Restoration phase – removal of consequences of the effects of crisis situation negative factors. (Zuzák, R., & Königová, M., p. 50 – 55)

In principal, the standard techniques of management are applied in the phases of prevention and restoration, in the phase of solving the crisis we realise special techniques because we are significantly influenced by time factor. Especially typical for this phase is:

- Routine approaches
- Suppression of cooperative forms of management, strong autocratic management.

## **2 Crisis and crisis management**

The function of crisis manager requires much knowledge, skills and experience which cannot be acquired only by study. Managerial competencies, which consist of skills and abilities, contribute to an exceptional performance of a crisis manager. A crisis manager has to be a strong management individuality that is able to manage the demanding

process of extraordinary event both mentally as well as physically. A crisis manager has to correctly solve crisis situations. Therefore it is necessary that he always develop his managerial competences.

The concept of managerial competence is not entirely clean-cut, it is not possible to define one type of successful manager. The base for competence development is the personal potential of the manager. Through the development of this potential the requirements for a successful performance are met. It is, therefore, up to every manager to assess his level of competence and realise his need for further development. Managerial competence is, therefore, a set of complex skills and other prerequisites, especially motivation, for manager's performance. The organizations with highly motivated workers perform better than their competition. Their motivation is the result of how they are led. Competence approach contributes to success or failure of the organization by the highest portion.

A crisis manager has to be a strong individuality that has to be able to stir up the others, aim all his power at the realization of the right things and priorities, has to be able to manage the process of restoration both mentally as well as physically. A crisis manager is different form of normal manager because he does not only have to cope with potential technological malfunction but also has to carry out saving of people, property, protect his good name in the market which could be, in the case of production drop out, replaced by another.

The function and position of a crisis manager requires much knowledge, skills and experience which cannot be acquired only by study, they are inherited. He can acquire other attributes by relevant education and training, crisis manager or leader of crisis team.

Let us state the basic requirements for the personality of crisis manager

Proactive and conviction about his thing, he should have strong inside motivation, be able to foresee and be one step ahead the real situation, be able to control and manage the situation, not to be controlled by the situation.

Have deep knowledge and indentify with manager role, have professional experience with management of extreme situations – know the methods of coping with risk development, have deep professional knowledge of management sphere.

Have emphatic communication and team approach in the decision making process, has to be able to start communication and communicate with anybody even with a stranger, build a team of co-workers, assign adequate activity, evaluate, appreciate and motivate team members.

Is able to use both right and left brain hemispheres, systematically develops both hemispheres. He has intellectual and rational abilities but at the same time he has a grasp of emotional and affective part of human behaviour, has intuition.

Fulfils the trust and charisma of leader's personality, is able to let his charisma affect others and, therefore, creates space and gains time for situation evaluation and following decision making process.

Perceives quickly and reacts to impulses, does not hesitate with reactions to serious impulses, quickly evaluates situations and therefore eliminates the dangers of delay.

Uses scientific methods, is able to use basic scientific methods.

Has own ethical strength and resistance to emotions, resists dreadful effects of accidents and catastrophes, his capable of controlling the emotions of his and others. Has a professional attitude.

Has a good mental and physical state and keeps thinking positively.

Maintains overall strength and resistance of his personality, does sports, searches for sources of positive attitudes. (Rais, R., p. 73–76)

Apparently, the demands on constitution of the crisis manager are indeed very high and it is obvious that a successful crisis manager is considered to be among the top management. Therefore, a crisis manager is a subject who is characterized by special training, work conditions, specialities of system management and individual human qualities. His training is always very complicated and complete. If we summarize the demands on a crisis manager, we will reach the following profile of his characteristics, he should have: intuition, broad experience, ability to deal with people, decision making ability, stress management ability, creativity and innovativeness, should be able to make priorities and have action ability.

Let us take a look at management competences of crisis managers within integrated rescue system in the Czech Republic. Integrated rescue system (thereinafter IRS) was created after the catastrophic floods in Moravia in 1997 and shown its functionality during other extraordinary events which affected CR. We chose managers of fire brigade

for investigation who are within IRS system, by law, the main coordinators - crisis managers – of extraordinary events reparation control.

The function of crisis managers is very demanding and responsible especially at the operational and tactical level of IRS, the managerial and professional but also personality abilities of crisis managers are tested during the solution of extraordinary events. Therefore, it is necessary to strengthen and educate these workers. While managing the intervention they have to show considerable mental resistance, they also have to have extensive knowledge of the rules of law and regulation that govern the activity of crisis management sector, they also have to have basic information about the types of extraordinary events. That is why it is necessary to continually educate the crisis managers. Such a worker has to regularly attend various seminars and train mock situations. The prerequisite for the activity performance of professional IRS workers is, therefore, to gain professional knowledge. These are very important steps to assure readiness for solving extraordinary events.

Personal potential has to be pursued in these managers. Fulfilment of requirements for effective solution of extraordinary events is achieved by development of this personal potential. It is also necessary for this manager to assess his level of competence and realise his need for further development. Competence approach has a significant impact on the following management of extraordinary situations. Considering that the managers are the ones who have tacit knowledge, it is necessary for the organization to ensure the development of tacit abilities among its managers. This knowledge influences managers' style of work. They also manifest themselves in his decision making and the manner of dealing with problems from which follows that they determine the success or failure of his activity. Tacit knowledge has extraordinary significance for an organization and that is why they put effort into keeping them. (Kresová, P., (2010), p.63-64)

Well-established form for tacit knowledge passing in tacit form is by advice. Work as well as sharing of tacit knowledge is based on human contact. Within training, crisis managers use three basic tools that are very important and can significantly help managers in controlling knowledge work. They are stories, communities and tools based on apprenticeship. The traditional apprenticeship is based on distribution of work and clearly defined skills necessary for work execution. Nowadays not only apprenticeship itself belongs among them but also coaching, mentoring and counselling.

Passing the knowledge of a crisis manager is important for a better function of IRS and, therefore, better interventions within extraordinary events. (Matošková, J., (2010), p. 88-89) From the analysis of IRS crisis managers at the operational and tactic management level arise following conclusions:

It arose from the research that the competences of crisis managers are sufficient with regard to the execution of their work position. It was also found that skills and abilities, with which the crisis managers dispose, are considered to be appropriate for dealing with crisis situations. Organisation ability and professional knowledge can be considered the key characteristics for management of crisis situations. Individual managers expressed interest and will to extend their education. They consider education to be an important factor of success. On the base of this assessment it can be concluded that the managers are able and eligible to carry out the activities related to management of IRS. They are aware that their responsible approach to the problem solving can save a lot of human lives.

Crisis managers are unfortunately more and more overloaded, which is the result of unceasing reduction of IRS personnel, especially due to reduction in funding for IRS operation by state budget. It is the insufficient time and unceasing workload that impede the development of managers' personality.

Crisis managers also discovered the fact that methods for passing tacit characteristics within IRS are insufficiently elaborated, which they consider a big drawback.

On the basis of the findings it would be appropriate for the top management of IRS to elaborate better methods for improving management competences of crisis managers especially putting stress on sharing of tacit characteristics. One of the options is to create case studies related to extraordinary crisis situations, how should they be solved, and make conclusions for better management of these unexpected states. Appropriate tools could be methods of creative team problem solution like brainstorming or group discussion and decision making.

Within conferences and workshops observe practical sharing of knowledge. Younger crisis managers care about gaining knowledge from older managers in the form of presentations and stories based on a real event. The form of

cooperation between individual working compartments and sharing of their experience is important because some of the compartments do not have experience with some of the extraordinary situations.

### 3 Conclusion

With the development of methods and tools of crisis management relates the outlook on crises. While in the past crises were considered to be negative, nowadays a crisis is perceived as a certain test of organization readiness and an opportunity for application of creative precautions. Therefore, the readiness of crisis managers and their high competence is necessary for dealing with other extraordinary events.

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# Market orientation of teachers and researchers in higher education institutions: a new approach

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## Abstract

While the market orientation strategy has been widely studied in commercial sector, its use in other type of organizations such as Higher Education Institutions is still unsatisfactory. The main objective of this paper is related the concept of individual market orientation (IMO) and adapt the I-Markor scale to measure the IMO of Teachers and Researchers in Higher Education Institutions. This paper, based on an extensive literature review on Market Orientation and IMO, conceptualizes the market orientation strategy, taking into account higher education peculiarities and discusses the principle dimensions of the IMO concept in Higher Education Institutions.

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• *Keywords:* Market Orientation; Individual Market Orientation; I-Markor Scale; Higher Education.

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## Introduction

In particular, in Europe there have been profound changes in how education is delivered in Higher Education Institutions (HEI), according to *Bologna*, allowing students to move freely between European HEI. Also, the tendencies for decreasing of student's population and the growing budgetary constraints, made the environment of these institutions highly turbulent. In this context, the educational market has undergone changes and competition among institutions of higher education worldwide was established (Kirp, 2003; Maringe & Gibbs, 2009; Bugandwa-Mungu-Akonkwa, 2009).

The changing context of higher education and its confrontation with market forces are exerting intense pressures (internal and external pressures) on the management of these institutions (Rip, 2002; Kirp, 2003; Todorovic, McNaughton & Guild, 2005; Maringe & Gibbs, 2009; Bugandwa-Mungu-Akonkwa, 2009). The employees of the organisation contributes to various information about the market that can create competitive advantages. Thus, the understanding of how employees define and see the behaviour of market orientation is a key success to promote a market orientation (Schlosser & McNaughton, 2007, 2009).

In particular, the literature on market orientation currently offers little understanding of market-oriented perspectives and behaviours of individuals within service organisations. An impediment to empirical research was the lack of a scale to measure the market orientation of individuals. Hence, Schlosser and McNaughton (2009) developed the scale I-Markor to measure how employees acquire, share and respond to market information. This scale fits the definitions of Kohli and Jaworski (1990a, 1990b, 1993) of organisational orientation to the market to

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reflect the characteristics of individual employees. Thus, the market orientation of individuals reflects the attitudes and behaviours of employees while gaining, share, and responding to the market.

The main contribution of this article, through an extensive literature review, is to develop the concept of individual market orientation (IMO) to adapt the I-Markor scale to the HEI environment, to identify market oriented teachers and researchers in HEI.

This paper conceptualizes the market orientation strategy, taking into account higher education peculiarities and discusses the principle dimensions of the Individual Market Orientation concept in Public Higher Education Institutions.

## Literature Review

### 2.1. *The context of higher education*

With the globalization of markets, there is virtually no sector where competition has not grown significantly (Campbell-Hunt, 2000), also including higher education. Higher education has been the focus of significant growth in recent decades, requiring changes in their culture, governance, and administration (Rip, 2002; Todorovic, McNaughton & Guild, 2005). In this context, the educational market has undergone changes and competition among institutions of higher education worldwide was established (Kirp, 2003; Maringe & Gibbs, 2009; Bugandwa-Mungu-Akonkwa, 2009).

The changing context of higher education and its confrontation with market forces are exerting intense pressures (internal and external pressures) on the management of these institutions, as summarized in Fig. 1 (Bugandwa-Mungu-Akonkwa, 2009).

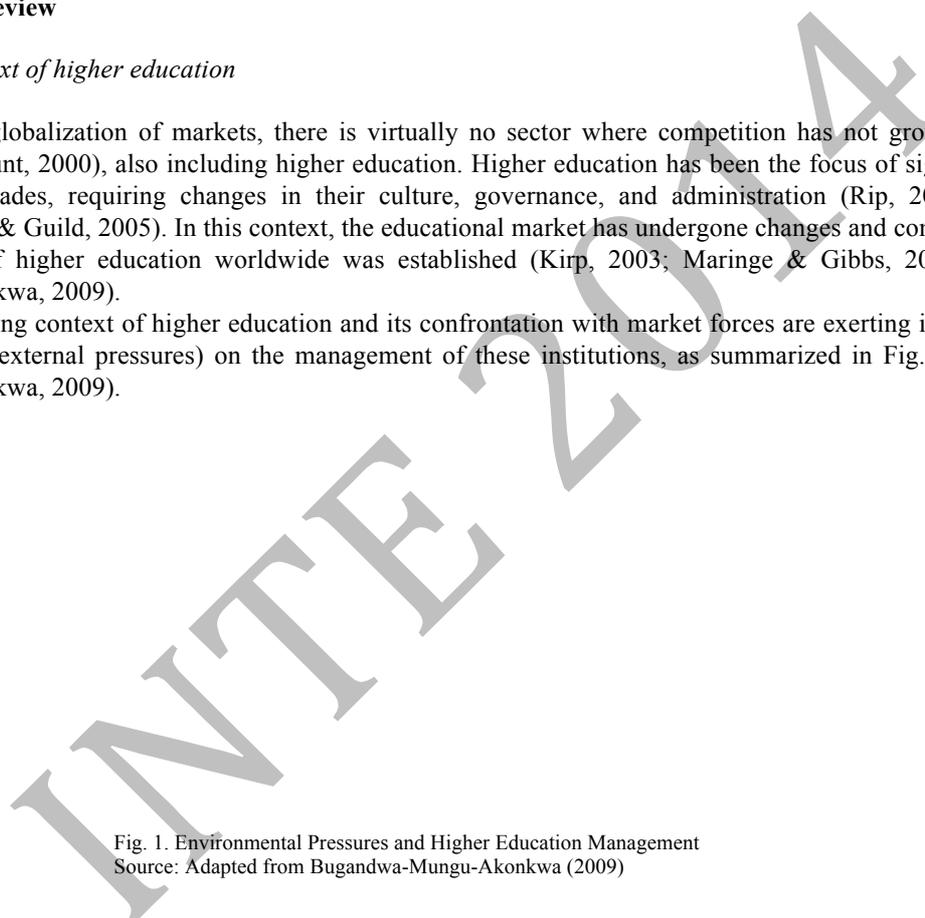


Fig. 1. Environmental Pressures and Higher Education Management  
Source: Adapted from Bugandwa-Mungu-Akonkwa (2009)

Universities are supposed to become more market oriented to face successfully their changing environment (Braun & Merrien, 1999; Davies, 2001; Jonghe & Vloeberghs, 2001; Haug, 2001), but this does not always happen in the optimal way (Jonghe & Vloeberghs, 2001).

### 2.2. *Market orientation*

Over the years there has been a dynamic evolution from the marketing concept to the market orientation (Rodrigues, 2004).

Thus, over time, there have been several approaches to the market orientation, such as the approach of Narver

and Slater (1990), and Kohli and Jaworski (1990a, 1990b, 1993).

Based on several studies that examined the relationship between competitive advantage and market orientation (Aaker, 1988; Anderson, 1982; Day, 1984; Kotler, 1977; Levitt, 1960; Ohmae, 1982; Porter, 1980, 1985), Narver and Slater (1990) conclude that market orientation consists of three behavioural components: customer orientation, competition orientation, and inter functional coordination, and two decision criteria: long-term focus and profitability. For the authors, customer orientation and competition orientation include all activities involved in acquiring information about buyers and competitors in the target market and its dissemination throughout the company. Inter functional coordination, the third behavioural component, is based on information about customers and competitors and includes the coordinated efforts of the entire company to create value for customers. In short, the three behavioural components of market orientation activities include the acquisition and dissemination of market information and coordination of efforts to create value for customers.

For Kohli and Jaworski (1990a, 1990b), the concept of "market orientation" refers to the implementation of the marketing concept, since an organisation that develops market-oriented actions does this in consistence with the concept of marketing, in which the fundamental pillars of marketing - customer focus, coordinated marketing and profit - are present.

For Kohli and Jaworski (1990a, 1990b), the company's market orientation is based on three dimensions: information generation, dissemination of information and response to the market because: there are one or more departments of the company to develop actions that allow it to know the current and future customer needs and the factors that affect them; there is the sharing of information by departments; and the various departments develop activities to meet customer needs.

In a market-oriented company, all departments and not just the marketers are involved in responding to market trends.

According to Kohli and Jaworski (1993), the consequences of market orientation effect performance, employees and clients in the organisation.

To the authors, market orientation is a unifying element of efforts and projects of individuals and departments, leading to a higher performance. Thus, the greater the degree of orientation to the company's market the greater the performance. Associated with this is the fact that employees feel they are making a good contribution, and feel a commitment to the organisation and satisfaction with what they do (*esprit de corps*). Thus the authors argue that market orientation results in psychological and social benefits for employees. For the authors the greater the degree of market orientation, the greater the *esprit de corps*, greater job satisfaction and increased employee commitment to the organisation. For customers, market orientation increases their satisfaction because it allows the organisation to better respond to the needs and preferences of customers, which leads to repeat purchases. Therefore the greater the degree of market orientation, the greater customer satisfaction and more repeat times of these purchases.

However, the focus of this literature, in terms of the unity of theory and empirical observation, is the organisation as a whole, and not the individual within the organisation (e.g., Narver & Slater, 1990; Kohli & Jaworski, 1993; Han et al., 1998; Farrell, 2000). The focus on the company ignores the underlying routines carried out by individuals who develop and shape the direction (Nelson & Winter, 1982).

### *2.3. Individual market orientation in higher education institutions*

The employees of the organisation contribute to various information about the market that can create competitive advantages. Thus, the understanding of how employees define and see the behaviour of market orientation is a key success to promote a market orientation (Schlosser & McNaughton, 2009).

The people in an organisation contribute to the level of organisation of market orientation through actions such as: fostering internal and external relationships (Helfert et al., 2002), with models of behaviour and social influence (Fulk, 1993; Wood & Bandura, 1989), and communicating tacit knowledge (Darroch & McNaughton, 2003). Although often assessed at an organisational level, a market oriented culture is supported by the attitudes and actions of the organization's employees (Schlosser & McNaughton, 2007).

However, in previous studies that individual contribution to the market orientation of a company is measured

incorrectly and, for the service sector, it is fundamental to understanding and meeting the long-term needs of customers through customer and employee interaction (Schlosser & McNaughton, 2009). The Kohli and Jaworski's or Narver and Slater's models of market orientation have been tested in empirical studies on higher education (e.g., Caruana et al., 1998a, 1998b; Flavian & Lozano, 2006; Webster et al., 2006; Bugandwa-Mungu-Akonkwa, 2009), but not at the individual level.

In summary, the literature on market orientation currently offers little understanding of market-oriented perspectives and behaviours of individuals within service organisations (Schlosser & McNaughton, 2009). An impediment to empirical research is the lack of a scale to measure the market orientation of individuals. Hence, the authors developed the scale I-Markor. The I-Markor scale measures how employees acquire, share and respond to market information.

This scale fits the definitions of Kohli and Jaworski (1990a, 1990b) of organisational orientation to the market to reflect the characteristics of individual employees. Thus, the market orientation of individuals reflects the attitudes and behaviours of employees while gaining, share, and responding to the market.

Previous research indicates that attitudes and behaviours of the individual employee relate to the market orientation of an organisation (e.g., Celuch et al., 2000; Harris & Ogbonna, 2001; Langerak, 2001a, 2001b). While individual actions and attitudes help shape and develop a total orientation to the market, organisations must clearly understand the influence of individual factors and interpersonal factors.

Langerak (2003) concluded that the nature of the link between market orientation and organisational performance is not yet adequately explained. This suggests that other considerations may shape the success of a strategy of market orientation.

Schlosser's and McNaughton (2009) research described and tested how and why individual employees can perform routines market orientation underpinning the guidance supporting the market orientation of the organisation.

Most studies that take into account the individual in creating a customer orientation are only tested with employees in sales and marketing (e.g., Pettijohn & Pettijohn, 2002). It will be important in this type of study to consider various types of employees throughout the organisation to test a market orientation - not a marketing orientation.

The Individual Market Orientation scale that assesses the individual level was developed by Schlosser and McNaughton in 2009 (Table 2), from the work of Kohli et al. (1993) and consists of 20 items, ordered in three dimensions of market orientation, at the individual level: (1) Generation of information, which includes eight items; (2) Dissemination of information, organized into seven items; (3) Response to market information, organized into five items. The three-factor I-Markor solution was similar to the conceptualized three factor Markor solution at the organisational level (Kohli et al., 1993).

## Methodology

The original list of scale items was reviewed to understand what terms or expressions don't fit in HEI context, for future content validation.

The proposal adaptation was validity by 8 responses, 80% of 10 academic experts contacted (published market orientation researchers and also teachers and researchers in HEI), as recommended by Hardesty and Bearden (2004). These researchers were solicited via email for their advice on content validity of the 10 terms/expressions. To the experts were sent a proposal adaptation of these terms and asked to provide open-ended feedback on the appropriateness's of that proposal. Feedback from the researchers was used to decide what terms we can use. Expert's comments or recommendations (Table 1) weren't divergent and helped us to achieve final adaption of I-Markor (Table 2).

Table 1. Content Validation.

<b>Corporate context</b>	<b>HEI context</b>	<b>Results: Comments/Recommendations</b>
Distributors	Students and Academic Professionals	Sometimes <i>Students</i> is considered as the right adaptation, other times we have to use <i>Colleagues</i>
Products	Services	Right adaptation
Customers	Employers	<i>Students</i> was considered the right adaptation
Business environment	University environment	Right adaptation
Industry (e.g. competition, technology, regulation)	Activity sector (e.g. competition, technology, regulation)	Maintain <i>Industry</i> – HEI Industry
Customers' purchases (e.g. distributors)	Students' and Academic Professionals' decisions/options	<i>Student's choices</i> was considered the right adaptation
Coworkers	Colleagues	Right adaptation
Company decision-makers	University decision-makers	<i>Organisation decision-makers</i> was considered the right adaptation, because in HEI industry we don't have only Universities
Marketing department	Organic or academic units	Maintain <i>Marketing department (or equivalent)</i>
Customer/adviser relationship team	Society/adviser relationship team	<i>My pairs (colleagues)</i> was considered the right adaptation

### **I-Markor scale adaptation for higher education institutions**

In Table 2 we adapted the I-Markor to the higher education institutions environment, to identify market oriented teachers and researchers.

Table 2. I-MARKOR A adapted to HEI Environment.

I-MARKOR <i>Francine K. Schlosser &amp; Rod B. McNaughton (2009)</i>	I-MARKOR for Teachers&Researchers in HEI <i>Teresa Felgueira, Ricardo Gouveia Rodrigues (2013)</i>
<p><i>Information acquisition</i></p> <ol style="list-style-type: none"> <li>1. I ask distributors to assess the quality of our products and services</li> <li>2. I interact with agencies to find out what products or services customers will need in the future</li> <li>3. In my communication with distributors, I periodically review the likely effect of changes in our business environment (e.g. company mergers and acquisitions) on customers</li> <li>4. I take responsibility to detect fundamental shifts in our industry (e.g. competition, technology, regulation) in my communication with distributors</li> <li>5. I talk to or survey those who can influence our customers' purchases (e.g. distributors)</li> <li>6. I review our product development efforts with distributors to ensure that they are in line with what customers want</li> <li>7. I participate in informal "hall talk" that concerns our competitors' tactics or strategies</li> <li>8. I collect industry information through informal means (e.g. lunch with industry friends, talks with trade partners)</li> </ol>	<p><i>Information acquisition</i></p> <ol style="list-style-type: none"> <li>1. I ask students to assess the quality of our services</li> <li>2. I interact with agencies to find out what services students and organizations will need</li> <li>3. In my communication with my colleagues, I periodically review the likely effect of education environment on students</li> <li>4. I take responsibility to detect fundamental shifts in our industry (e.g. competition, te regulation) in my communication with colleagues</li> <li>5. I talk to or survey those who can influence our students' choices</li> <li>6. I review our service development efforts with colleagues to ensure that they are in li students want</li> <li>7. I participate in informal "hall talk" that concerns our competitors' tactics or strategie</li> <li>8. I collect industry information through informal means (e.g. lunch with industry frien partners)</li> </ol>
<p><i>Information dissemination</i></p> <ol style="list-style-type: none"> <li>1. I participate in interdepartmental meetings to discuss market trends and developments</li> <li>2. I let appropriate departments know when I find out that something important has happened to a major distributor or market</li> <li>3. I coordinate my activities with the activities of coworkers or departments in this organization</li> <li>4. I pass on information that could help company decision-makers to review changes taking place in our business environment</li> <li>5. I communicate market developments to departments other than marketing</li> <li>6. I communicate with our marketing department concerning market developments</li> <li>7. I try to circulate documents (e.g. e-mails, reports, newsletters) that provide information on my distributor contacts and their customers to appropriate departments</li> </ol>	<p><i>Information dissemination</i></p> <ol style="list-style-type: none"> <li>1. I participate in interdepartmental meetings to discuss market trends and developmen</li> <li>2. I let appropriate departments know when I find out that something important has ha market</li> <li>3. I coordinate my activities with the activities of colleagues or departments in this or</li> <li>4. I pass on information that could help organisation decision-makers to review change our environment</li> <li>5. I communicate market developments to departments other than marketing (or equiva</li> <li>6. I communicate with our marketing department (or equivalent - e.g. organic units) co developments</li> <li>7. I try to circulate documents (e.g. e-mails, reports, newsletters) that provide informati appropriate departments</li> </ol>
<p><i>Co-ordination of strategic response</i></p> <ol style="list-style-type: none"> <li>1. I try to bring a customer with a problem together with a product or person that helps the customer to solve that problem</li> <li>2. I try to help distributors achieve their goals</li> </ol>	<p><i>Co-ordination of strategic response</i></p> <ol style="list-style-type: none"> <li>1. I try to bring a student with a problem together with a service or person that helps th that problem</li> <li>2. I try to help students achieve their goals</li> </ol>

## Final considerations

This paper conceptualizes the market orientation strategy, taking into account higher education peculiarities and discusses the principle dimensions of the individual market orientation concept in Higher Education Institutions.

We believe that the work presents some theoretical limitations, and in particular the proposed scale adaptation matters be corroborated by empirical support in order to get item purification.

In future research it is intended to understand the relationship between entrepreneurial orientation, market orientation and performance of teachers and researchers from Higher Education Institutions, and contribute to present new avenues for improving the performance of teachers and researchers from higher education institutions.

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# Marriage and sexuality in terms of Christian theological education

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## Abstract

We are living in the early 21<sup>st</sup> century and facing a deluge of social problems which threaten our world. Nowadays one of the serious problem we are facing is that marriage and sexuality have been distorted. Since the Fall, one of the serious criminals toward God has been sexual corruption. When God created man and woman, sexuality was intended to be sacred for their perfect relationship which is so called marriage. Therefore sexuality and marriage should be interweaved in terms of Christian theological education.

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*Keywords:* Sexuality; Marriage; Adultery; Divorce; Fall; Christian theological education

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## Introduction

We are living in the late 20<sup>th</sup> century and facing a deluge of social problems which threaten our world. One of the serious problem we are facing is that marriage and sexuality have been distorted. As we know, since the Fall, one of the serious criminals toward God has been sexual corruption. The Bible writes about two fearful judgements. These two judgements occurred in Noah and Lot's period, because of people's sexual corruptions. Even though God's judgement was so powerful that most of the corrupted people could not be survived at that time, sexual corruptions pervaded through the mankind and are still so powerful that it may threaten even the churches. When God created man and woman, sexuality was intended to be sacred for their perfect relationship which is so called marriage. Therefore sexuality and marriage should be interweaved. However, since the Fall, the relationship between sexuality and marriage has been vulnerable to brokenness. It means that in our society we are open to lots of problems regarding sexuality and marriage, such as, premarital sex and teenager unwed mothers, adultery and broken homes, pornographic films and criminals, homosexuality, prostitution and dreadful sexual diseases and so forth. Graciously, God has not given up mankind but has plan to save us according to His redemptive works. God also wants us to do our jobs for this redemptive works. What we have to do is to educate people according to His word. This education is called Christian education and also we need our theological perspective to support this and to distinguish ours from others.

## Theology of Marriage and Sexuality In Terms of the Creation

### *Marriage*

God willed to create man in his image, male and female, and he did so. God gave male and female the commission to replenish the earth and subdue it, so that reproduction has a theological and not just a biological and

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sociological validation (Bromiley 1980, 4). Therefore the theology of marriage should be understood as the product of the creation. What is marriage? In order to understand marriage, we need to understand that it is a relationship which is instituted by God. Marriage is not only of God, but it belongs to Him as well, not to us. Jesus says, "So they are no longer two, but one. Therefore what God has joined together, let man not separate" (Mark 10:12). However, many people believe that it belongs to them. Also false understanding of marriage would allow us to abuse it. Therefore, we need to understand the marriage fully to eliminate the abuses. In order to understand what marriage is as designed and ordained by God, it is necessary to look past the opinions and cliches of the world around us. Since the Bible gives us a rich understanding of what God intended in the marriage relationship, it is vital to examine the Bible's teaching on marriage.

First, we must realize that the idea of male and female was God's idea (Wheat 1980, 24). The Bible says, "So God created man in his own image, in the image of God he created him; male and female he created them" (Gen. 1: 27). In a loving, amazing, creative act, the Almighty God conceived the wonderful mysteries of male and female, masculinity and femininity, to bring joy into our lives. Second, marriage was designed by God to meet the first need of the human race: loneliness (Ibid, 25). Adam had the fellowship of God and the company of birds and animals, an interesting job, but he was alone. So a wise and loving Creator provided the perfect solution: another creature like the man yet wondrously unlike him. God's plan was to supply a completeness, a person totally suitable for Adam spiritually, intellectually, emotionally, and physically (Ibid). Third, marriage was planned and decreed to bring happiness, not misery (Ibid, 26). When the Lord brought the woman to Adam, the man expressed his feelings in words like these: "This is now bone of my bones and flesh of my flesh; she shall be called 'woman,' for she was taken out of man" (Gen. 2:23). Without a doubt marriage was designed for our joy, our happiness. Fourth, marriage begins with a leaving of all other relationships in order to establish a permanent relationship between one man and one woman (Ibid, 27). The Bible says, "For this reason a man will leave his father and mother and be united to his wife, and they will become one flesh" (Gen. 2:24). Christians have focused so closely on marriage as an institution that we seem to have forgotten that it is a living, personal relationship (Gundry 1980, 33). The original creation account in Genesis 1 and the meeting of Adam and Eve in Genesis 2 reflect God's intention that male and female would find their relationship satisfying and pleasurable (Ibid). Adam immediately recognized the purpose of God's dual creation: "Bone of my bones and flesh of my flesh!"

The principal we learn from Genesis 2:24 is that marriage means leaving. Unless you are willing to leave all else, you will never develop the thrilling openness of relationship that God intended for every married couple to enjoy. Fifth, marriage requires an inseparable joining of husband and wife throughout their lifetime ("...and be united to his wife..." Gen. 2:24), (Wheat 1980, 29). God's plan in marriage is an inseparable union that is brought about as we obey His command to cleave to one another. Marriage is a contract between two individuals who agree to a more or less permanent bond regardless of the love content. Sixth, marriage means oneness on the fullest possible sense, including intimate physical union without shame ("...they will become one flesh" Gen. 2:24), (Ibid, 31). The biblical expression for sexual intercourse between husband and wife is to know. Although it goes far deeper than the physical, becoming one flesh involves intimate physical union in sexual intercourse. Thus, in the divine pattern of marriage, sexual intercourse between husband and wife includes both intimate physical knowledge and a tender, intimate, personal knowledge. This makes marriage a very distinct relationship from that of family. Marriage, after all, is not defined as merely the means of procreating, even though this is one outcome of marriage. Rather, marriage is that special relationship of partners as discussed above (Olthuis 1975, 44-45).

Marriage also has a very important relationship with the church. The role of the church is one that calls the couple to confess their commitment to Jesus Christ, reminding them of their vows to each other, and responsibilities in light of God's Word (Ibid, 50). Thus the minister's role is not to marry the couple, but to acknowledge that God himself marries them in their vow. The church joins in promising to do all it can to support the marriage, and participate in bringing healing to couples whose marriages are breaking down (Ibid). Marriage also takes place within the jurisdiction of the state. The state sees its role in the marriage relationship as that of protecting the couple: requiring blood tests, maintaining laws against bigamy, and pledging-by means of the marriage license-to promote conditions which will be for the good of those entering into a marriage relationship (Ibid, 48). Finally, we should realize that the ultimate glue which holds a marriage together is not love, sex, an emotional feeling-even children, or the law. It is commitment. It is the conscious decision to stay together and make it work. Without commitment a marriage freezes to death (Conway 1991, 41)

When we use the term “love-life,” someone usually assumes that we are going to talk about sex. One of the popular mistakes we make in English language is that to make love means to have sex. In our culture, sex and love are often confused even though they are not interchangeable terms. As I mentioned earlier in the introduction, one young girl and two boys had sex each other and made a pornographic film. This kind of sex is not for love but for only their physical pleasures. Also recreational sex fails eventually not because it is immoral but because it is dull (Leone & O’Neill 1983, 24). Even though sex is sometimes for only physical pleasures, it would be accepted while this is in marriage. God created sex for man and woman in their marriage life. Smedes writes, “The average Christian has an especially hard time integrating his sexuality with his faith” (Smedes 1976, 15). Some Christians feel that their sexuality is nature’s strongest competitor for their loyalty to Christ. The Roman Catholic church has focused on procreation as the main purpose. Sigmund Freud and his followers, on the other hand, have stressed the primacy of pleasure. Some contemporary Protestant thinkers have sidestepped this debate between procreation and pleasure by emphasizing the relational aspect of intercourse in a “one flesh” union (Hollis 1975, 63). Then, what is a biblical view of sex? The Biblical attitude toward sex is positive and accepting.

First, the nature of sex has the dignity and goodness (Hollis 1975, 58). If God is the Creator of everything (Gen. 1:1, John 1:1-3), he is responsible for the fact that we are sexual beings. Sex, the Bible teaches, is one of the God’s good gifts, and it has been given to us richly to enjoy (I Tim 6:17). One implication of the belief in a Creator-God is that the creation is good. Bodies are good and sex is good, too. We should not attempt to escape the fact that we are sexual beings. Second, sex is the unity of personhood (Hollis 1975, 59). The Bible teaches that we are psychol-physical persons and sex should be a part of our total personality. Therefore, the attempt to limit intercourse to physical involvement and pleasure is contrary to the biblical understanding of a person as a total personality. Third, sex needs marriage and marriage needs sex. Marriage is God’s intention for creation, but his redemptive activity sometimes directs people toward a life which excludes marriage.

At the same time, there are many who simply do not have the opportunity to marry. Those who are called to be celibates and those who are involuntarily unmarried can be fully human by living for others, as Jesus so readily demonstrated (Ibid, 62-63). If God gave us sex as a good gift, what are the purposes of sexuality? We will discuss four purposes of intercourse here. 1) Union in “One Flesh” (Ibid, 63-64). “For this reason a man will leave his father and mother and be united to his wife, and they will become one flesh” (Gen. 2:24). The “one flesh” union refers to the fact that in intercourse a man and woman establish a new relation. This union involves the total being of both man and woman, and it is only possible because God has made us psycho-physical persons. In becoming “one flesh,” the couple do not lose their maleness and femaleness, but they do enter a new union nourished by love. 2) Procreation (Ibid, 66-67). An obvious purpose of intercourse is procreation. Procreation is not the only justification for intercourse nor is it necessarily more important than other purposes, but it is an extremely significant aspect of the sexual relationship between husband and wife. The Bible shows us this purpose of intercourse. In Genesis 1:28, we read: “And God blessed them and said to them, ‘Be fruitful and increase in number; fill the earth and subdue it.’” 3) Pleasure. The joy and spontaneity of sex are often missing. However, the Bible says about the pleasure of it, “May your fountain be blessed, and may you rejoice in the wife of your youth. A loving doe, a graceful deer—may her breasts satisfy you always, may you ever be captivated by her love” (Prov. 5:18-19). Sex is good, because it brings the pleasure that comes through the fulfillment of desire and the release of tension (Ibid, 57-59). 4) Communication. The Hebrew word, “*Yada*” which means “to know,” is sometimes used as a euphemism for intercourse. In Genesis 4:1, we find: “Now Adam knew Eve his wife, and she conceived and bore Cain.” We can find that this particular word is used because the biblical writers recognized that in intercourse a special kind of knowledge is conveyed. One purpose of intercourse, therefore, is communication. Indeed, the English word “intercourse” means “communication” (Ibid, 72). The value of intercourse as a means of communication has been stressed by the Elton Truebloods: “One of the most significant things to say about sexual intercourse is that it provides husband and wife with a language which cannot be matched by words or by any other act whatsoever. Love needs language for its adequate expression and sex has its own syntax” (Truebloods 1953, 54).

In sum, our sexuality belongs to creation, therefore, our feelings about it can be of a piece with God’s feelings about what he made (Smedes 1976, 26). Also human sexuality, a part of God’s good creation, ought to be affirmed and accepted with thanksgiving (Wolters 1985, 92). Sexuality is very related to marriage. Distorted sexuality and the

failure of the marriage in terms of the Fall leads to the undesirable results, such as, adultery, divorce and abortion etc. We will study about these results in terms of the Fall.

### *Theology of, Adultery and Divorce and Distorted Sexuality In Terms of the Fall*

#### *Adultery*

Adultery is legally defined as voluntary sexual intercourse between a married man or woman with someone who is not his or her marriage partner (Zimbwelman 1985, 224). However, biblical teachings regarding adultery are specific and not restricted to legal concepts. A marriage relationship emphasizes love, trust, commitment and faithfulness and is seen as sacred and spiritual. The trust which should develop in and through marriage is compared to that of Christ and the church. Therefore, adultery cannot be viewed as a joyful sexual fling- it is the breaking of a deeply mysterious spiritual bond. Failure to view marriage on this level reduces the relationship to a superficial and less enriching experience.

#### *Divorce*

The permanence of marriage is the content of the divine command. The Bible says, “So they are no longer two, but one. Therefore what God has joined together, let man not separate” (Matthew 19:6). Karl Barth wrote,

When marriage is seen in the light of the divine command, then it is clear that it is a lasting life-partnership. It is the full and exclusive union of a man and a woman for the whole of the time which still lies before them and is given them in common. To enter upon marriage is to renounce the possibility of leaving it (Barth 1968, 29).

Also Paul reminds both the Corinthians and the Romans that the institution of Christian marriage is permanent: “A woman is bound to her husband as long as he lives. But if her husband dies, she is free to marry anyone she wishes, but he must belong to the Lord” (I Cor 7:39). According to all these, divorce was never a part of the divine purpose. Divorce - the breakdown of oneness - came after the fall, as did every other departure from the original design of the Creator. The unity and goodness of God’s plan for human beings was broken by the sin of Adam and Eve.

#### *Distorted Sexuality*

As we studied earlier, the nature of sex has dignity and goodness and sex is the unity of personality and sex needs marriage. However, if sex occurs beyond what is God’s creational design for sex, it would be fallen into the distorted sexuality, such as, homosexuality, sexual eccentricity and pornography.

##### a) Homosexuality

God designed human sexuality for the context of heterosexual marriage and committed human love. Therefore, homosexuality should be condemned basically. Homosexuality, however, should be studied in terms of different aspects. Smedes wrote, “We who are heterosexual need to exercise humility when we talk about homosexuality simply because we are very ignorant” (Smedes 1976, 63). What is homosexuality? The term “homosexuality” means sexual relations, either over or fantasied, between persons of the same sex. It is derived from the Greek prefix *homo-*, meaning “the same as,” not from the Latin word for man. Thus the term is appropriately used for sexual behavior between men or between women. “Lesbian” or “saphic” are also sometimes used to refer to sexual relations between women; the Greek poetess Sappho, who lived on the island of Lesbos, immortalized female homosexual relations in verse (Broderick and Bernard 1969, 344). Homosexuality and lesbianism has existed throughout the history of mankind and appears in various forms and practices in all cultures. Some cultures accept or approve of it but the majority reject it as a normal lifestyle. Many homosexuals and lesbians are ostracized and designated as perverts. Gay groups are making new demands and want Christians to accept them. Several

homosexual churches have been organized and are functioning. These groups are allowing and encouraging members of the same sex to marry each other and establish households.

According to Smedes, these people consider homosexuality as a special form of normal sexuality (Smedes 1976, 65). Smedes added,

A homosexual person is different only because he happens to be in a minority. He is following his God-given nature just as a heterosexual is following his, and he looks for the same deep personal experience in sexual relations that any normal person does. There is no reason for him to change or what to change his inclinations. If there is a moral problem in connection with homosexuality, it lies with heterosexuals who in their ignorance and arrogance deprive homosexual people of their rights to full equality in society (Ibid).

However, the book of Leviticus condemns homosexuality (Leviticus 20:13). Christianity has historically reacted against it and many western countries outlawed its practice until recently. Without a doubt, homosexuality is a self-chosen person. The homosexual person is a decadent and dangerous creature. He is not simply sick in any medical sense (Leone & O' Neill 1983, 73); he is unhealthy and abnormal in a moral sense. Finally, a homosexual or lesbian can decide how to handle their homosexuality, and celibacy is an option for Christians. Their problems are no different from those facing heterosexual singles with strong sexual drives or married people whose needs are not met in marriage (Zimbelman 1985, 230).

#### b) Sexual Eccentricity and distortion

If sexuality is not normal it would be sexual eccentricity and distortion. According to Smedes, normal sexuality are: 1) Sexuality is interwoven with the total character development of a person. 2) Sexuality is a biologically rooted drive toward personal communion. 3) Sexuality is a movement toward heterosexual relations that are climaxed in a committed, loving, and permanent union. Any sexual eccentricity that aborts any of these or is continuously substituted for them is at least the beginning of distortion, such as, fetishism, masochism, sadism and transvestism and transsexuality. First, Fetishism is that some people are sexually aroused by things that have nothing to do with sex. Things like shoes, gloves, a piece of rubber, or some soft silky cloth can stimulate some people. These things are called fetishes. Second, masochism involves receiving pleasure from pain. Third, sadism is sexual gratification gained through causing physical or psychological pain and humiliation. Fourth, transvestism is to wear the clothes and mimic the manners of the opposite sex. And transsexuality is that a person feel like and want to be the other sex (Smedes 1976, 53-62).

#### c) Pornography

Pornography is harmful, because it makes sex trivial, uninteresting, and dull. Also children cannot grown in love if they are trained with pornography. Pornography is loveless; it degrades the human being, reduces him to the level of animal. The worst thing that can happen to sex now is to empty it of mystery, wonder, and longing.

### **Implications of the Theological Education**

#### *As the Tool of the Redemption*

The concept of creation is much broader than we normally think. Also the result of the Fall was so enormous and tragic that not only humankind but also every creature could not do anything for redemption but wait for. We studied about the marriage and the sexuality as the products and also we realized that the Fall affected marriage and sexuality negatively. Marriage and sexuality were created as good things, but as the results of the Fall, adultery, divorce and distorted sexuality came out into the world. Even though marriage has vulnerability to be broken by adultery and divorce, marriage should not be avoided by Christians, but sanctified. Sexuality is not simply to be shunned, but redeemed. All of this need the redemption and this redemption can be achieved by only God alone

through Jesus Christ, because He is the creator. Wolters wrote, “ If the whole creation is affected by the fall, then the whole creation is also reclaimed in Christ” (Wolters 1985, 59-69). This redemption restores the whole creation (Ibid. 57). Jesus Christ gave us the Redemption and “ the scope of redemption is as great as that of the fall; it embraces creation as a whole” (Wolters 1985, 59). Also God gave us the way to accomplish the Redemption through the Bible, church, politics and education, etc. As a Christian educator, I would like to study about the family ministry for the redemption of the marriage and the sex education for the redemption of the distorted sexuality in terms of the theological education.

### *Family Ministry*

Men and women were jointly created in God’ s image. And God created the first family relationship, Eve for Adam. Therefore, marriage is part of God’ s basic creation order. The deepest of human relationships resulted-marriage. In order to protect family life from the affect of the fall, we need family ministry. Money wrote about the family ministry,

In short, family ministry is a total approach to families-an outlook. The essence of family ministry is an attitude toward the family that must be integrated into every aspect of church life. Family ministry involves a style of servant leadership that is dedicated to making the church a community of vibrant families. It emphasizes home-centered nurture and nurture found through the church. Concern for individual families within the greater family of God is central to the church’ s identity and mission. *The church is more like a family than anything else* (Money 1987, 28).

This family ministry belongs to the church ministry in terms of the theological education. Effective Family ministry will reflect positive teaching which focuses on problems and conflicts while they are still manageable. A positive approach builds on what the Bible says about members of the body of Christ getting along with one another. It emphasizes the day-to-day skills needed to keep family members in harmony with each other and with God (Ibid, 30). What do we need for the family ministry? What the family ministry should be? Sell wrote some useful contents of the family ministry (Sell 1995, 14-21). First, family ministry is spiritual and moral ministry. The church needs to help produce strong marriages and families in order to promote Christian morality. Three of the ten commandments deal with adultery, obedience to parents and coveting someone’ s wife. It means that the church should do important things for the family ministry in order to keep the God’ s commandments. Second, family ministry is discipling. By “ discipling,” we usually mean bring new Christian to a certain degree of maturity and then training them to reach others. Discipling is a central function of the church. A major feature of family ministry is training parents to disciple their children in the Christian faith. Third, family ministry is biblical application, therefore family ministry deals with church life and church doctrine. It would give the families the theological truths which improve their family lives. Fourth, family ministry is prevention. Since the Fall, God’ s institution is in trouble. There are many problems which threaten the family life. Unfortunately, government and community services are more remedial than preventive. Like physicians, they wait until families are in serious trouble before they offer “ intervention.” However, the church, like no other social institution, is in the best position to prevent family problems.

### *Sex Education*

As we studied, sex is from God and it is good gift for humankind. The Bible, however, shows us quite basic and limited lessons about the sexuality. For example, God designed human sexuality for the context of heterosexual marriage and committed human love; deviations from this (bestiality, homosexual relations, adultery, prostitution, loveless lust) are all roundly condemned. “ But what about such matters as petting, masturbation, and sexual fantasies” (Wolters 1997, 90)? Also the Bible does not tell us about the sex education for our children or for some adults. When do we start sex education for our children? Is sex education necessary for our young children? How do we teach them about sexuality?

Many of us ignore the sex education and think the best sex education is no sex education of any kind at all. Many of us hope our children know about sexuality for themselves without bothering us. However, when we face the fact that the rates of teenagers sex and pregnancy and venereal disease are getting higher than before, we should do something for them. Leon Smith show us the possibilities for sex education (Otto 1978,101-116). First, a new framework, a new perspective is needed. For example, sex is God's good gift, all persons are sexual beings, sexual pleasure is good, and the culture affects all of us. Second, sex education as a shared responsibility. For example, churches support of sex education in public schools, churches encourage sex research. Third, the new sex education in the churches. For example, for persons of all ages, new materials are being developed, sex education training for ministers, sex education through counseling and acceptance of different life-styles. Fourth, two related movements involve sex education. For example, concern for equal status of men and women and the rise of marriage enrichment. Fifth, trends in three controversial areas. For example, pornography is being redefined, masturbation is being affirmed and toward acceptance of homosexual persons. Basically, I agree to first four sex education statements, however, I do not accept fifth statement fully. The reason I do not accept fully is that pornography(Matt. 5:28) and homosexuality(Lev. 18:22)is defined as prohibited product and behavior in the Bible. Christian communities, however, should take care of the homosexual persons as emotional and spiritual patients until they show the decision to be heterosexual people or to choose the celibate life.

## Conclusion

We need to have theological perspective in order to understand what God meant about something. As we studied, God had created sex and marriage as good things before the Fall. However, because of the Fall of man (Adam), all things have been distorted and malfunctioned. Without exception, marriage and sexuality have been affected by the Fall. However, even though marriage and sexuality have been distorted, these things should not be avoided by Christians, but sanctified. Because we believe that the atoning death of a man (Jesus Christ, the second Adam) is the salvation of the whole world. Jesus's ministry clearly demonstrates the restoration of creation. Christ is the great physician who heals our sickness unto death and restores us to health. Christ is also the great educator who teaches the Word of God and leads us to the truth. I, as a follower of Christ, am convinced that one way to get redemption and to restore the image of God is to accept Jesus Christ as the Redeemer and to learn from him. We need learn from him (Matt 11:28), also, we need some who teaches about Jesus Christ to the people who want to follow Him steadily. This kind of ideas made me a Christian educator. The redemptive ministry of Jesus Christ could be accomplished by Christian educators who have the ability to think theologically. We need to interpret this world through our theology. Our Christian education can come out through this kind of diagnosis. That is why we need to have theological foundations of Christian education. We need family ministry and sex education in terms of theological foundations in order to restore the Image of God in this area. As we studied, marriage life and sexuality which are incomplete because of the Fall could be prevented by the ministry of Jesus's redemptive word and our efforts as educators. And adultery, divorce and distorted sexuality, etc. as the products of the Fall, could be restored by the ministry of Jesus's redemptive work and our efforts as educators. Christ allowed us to do this ministry as His co-workers to restore God's purpose of the Creation through redemptive ministry. For the kingdom of God and His glory we should do our best as educators.

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# Mass media and children. Globality in everyday life

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## Abstract

Mass media play an important role in everyday life. There is a growing use of media in early childhood, so it is not surprising that they greatly influence children and young people as well as become an essential element of education. At present, it is difficult to imagine the world without such global media as TV or the Internet that most of us use every day. Children do the same. Most of them make use of media every day, both at home and at school. The aim of the article is to discuss theoretical analyses and empirical data which involve the use of mass media in everyday life.

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*Keywords:* mass media, children, everyday life, globality

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## Introduction

Nowadays, mass media have become an integral part of our everyday life. Media are not only sources of information and entertainment; they are also means of communication, the way we get in touch with others, regardless of distance. The use of media takes up a great deal of our free time.

Mass media are “all the electric and electronic means of recording, playing as well as broadcasting pictures and sounds, that is designed to reach the mass of the people” (Dankowska-Kosman, 2004, 89). Thanks to the range, regularity and repeatability, mass media have become the essential information system in today’s society (Smid, 2010, 93). Mass media include television, radio, press, computers, the Internet, mobile phones, landline telephones as well as video cameras which are used to record pictures (Huk, 2011, 19-20). In everyday life media can be divided into traditional and alternative. Traditional media include books, press, radio, television and films, whereas alternative media comprise satellite and cable television, multimedia computers as well as computers. That is mass media through which globality enters human everyday life.

### Children and mass media

Modern childhood appears to be so much influenced by media that it is often described as the media childhood (the TV childhood or the computer childhood). According to J. Izdebska (2006, 169), the media childhood comprises five aspects:

1. Daily and multi-hour presence of such media in a child’s life as TV, computer, the Internet and mobile phone.
2. The amount of time devoted to the use of media, a time of the day, how often children use media, interests and hobbies associated with media and types of programmes watched by children.
3. The way children use and receive media.
4. Specific relationship between the child and media.
5. The effects of child-media relationship including experience, behaviour, emotions which result from media.

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With so frequent use of media it is impossible to avoid their influence on human life. If the receivers are mature, they choose media content consciously and assess information passed by media critically. In that case, media can have a positive impact on the receivers. On the other hand, there might be children who, unquestioningly believing everything in media, are completely unaware of the media-related threats.

A particular attention should be paid on individual and environmental factors which determine the influence of mass media on people. E. Ejsmont and B. Kosmalska (2008, 92) mention the following factors:

- the age of the receiver: the way media content is perceived depends on the age of receiver; the level of understanding information, memorizing, emotional reactions as well as the reasons for watching TV are different, depending on the age of viewers;
- sex: in case of adults it determines the choice of programmes; as far as children are concerned, it might be noticed that boys more frequently choose watching TV;
- the level of intelligence: it determines the level of understanding media content and criticism;
- being popular among friends: spending time in front of the TV screen is more frequently chosen by children who are less popular with their peer groups;
- the level of identification with television characters: the more common features are found between a viewer and a TV character, the more frequently a viewer will imitate TV character behaviours;
- the level of realism perception: people who perceive TV content more realistic, more often imitate behaviours presented on TV; the older people become, the less realistically they perceive TV programmes.

Television and the Internet, through which globality enters everyday life, have become dominant types of mass media in children's lives. It results from the fact that these types of media cover a massive area. TV transmissions are extremely attractive and they affect several senses simultaneously, which means that they fully engage the viewer (Zieliński, 2006, 188). Nowadays, the Internet tends to compete with television offering us possibility of watching films, series or TV programmes. It is also widely used to listen to music, play computer games, communicate with others and meet new people. The use of media takes up a lot of time and pushes other, more valuable ways of spending free time into the background.

Many writers claim that mass media, particularly TV and the Internet may have two-way influence on people. They can affect us in a positive way by extending our knowledge and showing proper patterns of behaviour. Media and their content may also develop our interests and hobbies, knowledge, attitudes, values and lifestyles (Ejsmont, Kosmalska, 2008, 92). On the other hand, media can have a negative impact on people. First of all, people may become addicted to media. What is more, media may have a negative influence on behaviour patterns, including promoting aggressive behaviour. Among other media-related threats medical and social problems such as limiting social relationships should be mentioned.

One of the risks connected to the use of mass media is netoholism manifested by an addiction to the Internet or spending long hours in front of a TV or a computer screen. The effects of netoholism may include changes in child's personality such as a sense of helplessness, anxiety, fear or headaches (Biała, 2006, 97). As far as the use of the Internet is concerned, addiction psychology distinguishes three zones:

1. Green – the use of the Internet is moderate without any signs of addictions.
2. Orange – a person who uses the Internet realises some symptoms of risk and then learns how to use the Internet moderately.
3. Red – addiction. In this case therapy is necessary. What is more, prevention should be applied so as not to return to the Internet addiction (Ibid., p. 106).

Excessive media use (TV, the Internet) affects children's social life and leads to limiting social and family bonds. It also limits the time devoted to relax, housework, homework, meeting friends or playing. Media engage children in virtual reality and attach them to an electronic device e.g. a computer or a TV set rather than to a real person (Ejsmont, Kosmalska, 2008, 97).

The impact of media on children is determined by their attitude to the media content. It is therefore important to involve society, particularly parents and teachers in teaching children how to use media properly. The purpose of media education is to develop in children relevant, positive attitudes to media (Janicka-Panek, 2009, 25): criticism, ability to select media content properly, creativity, open-minded attitude, dialogue and tolerant attitude. On the

contrary, negative attitudes must be eliminated. They include media consumerism, media addiction, Machiavellianism, the agreement to be controlled or manipulated and the attitude of acquiescence towards propaganda (Podolski, 2006, 143-144).

### Mass media and family

Family is the environment where a child uses media for the first time. In most Polish homes a TV set occupies a central place and is the most popular means of transmitting culture and extending knowledge about the world (Izdebska, 1966, 45). Therefore, family is strongly influenced by media and their global impact. It depends on their members if the media influence is positive and negative. It is the family who decides how to use media and influences children by showing them appropriate patterns of spending free time. The family helps children develop their abilities to plan everyday activities, encourages them to physical activity, to develop hobbies and interests as well as to choose the best ways of spending free time.

Each family can benefit from appropriate use of mass media. It is commonly believed that media can:

- help educate children and develop their knowledge;
- extend parents' educational and psychological knowledge;
- inspire and encourage parents to use this knowledge in their contacts with children; that way media support educational function of the family;
- integrate family (using media together helps tighten family bonds);
- compensate deficiencies in the family (Ibid., 213).

On the contrary, if improperly used, media potential can bring harmful effects to the family life. Media-related risks include: disorganisation of family life, family disintegration, damages to family bonds as well as rows and arguments between family members. Furthermore, television or other media cannot replace parents in bringing up children (Izdebska, 2000, 81).

Even if family members receive media content properly, they might be affected by atomisation, which means separating family members and isolating them from the world around.

To prevent media-related risks, family bonds and relationships should be developed. Instead of spending free time in front of the TV screen, parents ought to encourage their children to other ways of spending free time.

The idea of parents' pedagogisation is getting more and more popular. It involves the necessity to prepare not only children but also parents for using media properly. If parents are conscious and competent media users, they have more possibilities to influence their children, transmit proper patterns of behaviour and control their children's media consumption (Musioł, 2007, 149). Parents should be responsible for preparing children to use mass media properly. They ought to equip their children with skills and abilities to assess media content critically and use information provided by media selectively. These competencies are called media literacy. The other important aspect which determines media influence on children is the amount of parents' attention they pay to the content of media which is transmitted to their children (Juszczak, 2006, 31-32).

If parents are engaged in their children's education, they show them different, interesting and valuable ways of spending free time, they help children develop a sense of responsibility for their lives, not only through extending their interests and hobbies, but also through imposing duties on them. If parents equip their children with the knowledge on how to use media appropriately, the family will not be threatened by side effects of media use. Nowadays, it is a significant issue which affects children's education and development. That is why we cannot remain indifferent towards media and their presence in family life.

Thanks to their rich content, the Internet and television may become invaluable sources of information which children can benefit from. It will happen only if a child uses these media in a proper way. It is parents' responsibility to prepare children for safety living in the world of media. Otherwise, media can have a negative influence on physical, emotional and social development of children. Therefore, it is a matter of great importance to engage parents in providing their children with safety and security when using media.

### Review of research on mass media in children's everyday life

EU Kids Online carried out one of the best known projects which examined children's activity on the Internet, based on the research conducted in 25 European Union countries. In Poland the project, financed by the EU "Safer Internet" Programme, was carried out by Dr Lucyna Kirwil's team. The research was conducted in 2010 and involved children aged 9 – 16 (535 boys and 499 girls) as well as their parents (one parent per each child). The other participating countries included Germany, Denmark, Sweden, Hungary, Great Britain, Italy, France, Norway and Greece, among others (Kirwil, 2011, 6).

The research reveals that, on average, a Polish child starts using the Internet at the age of 9. This is when globality enters children's everyday life in its all aspects. As far as other countries participating in the project are concerned, it appears that children in Denmark and Sweden begin online activity the earliest, when they are 7 years old. In Europe 93% of children use the Internet at least once a week and 60% is online everyday or almost everyday. Taking age groups into consideration, 33% of 9 – 10-year-old children and 15 – 16-year old teenagers surf the Internet every day. In Poland as many as 52% of children use a PC without adults supervision (in Europe the rate is 35%). Majority of Polish children, 90.5% use a computer at home, whereas in Europe the rate is 85% (Ibid., p.9). It is clearly visible that in Poland parents' supervision regarding children's online activity is lower than in Europe. Therefore, we should try to reduce the difference and encourage parents to become more engaged in supervising their kids when they are online. It is alarming that young people developed a habit to surf the Internet everyday.

The EU Kids Online project also proves that a lot of children do not have skills which allow them to use the Internet safely (however, the skills are developed when children are getting older). Depending on the index, it is from 1/3 to 2/3 of the whole examined group, which along with the low level of parents' control must be worrying in terms of children's online security (Ibid., p.14). Once again, the necessity for increasing parents control over their children online activity must be emphasized. It is also necessary to educate children how to be safe online.

The Internet addiction symptoms (including among others disturbances in sleep, eating disorders, spending more and more time online, neglecting family and friends, withdrawal from other activities e.g. doing housework or hobbies and interfering with school responsibilities) were proved by 18 – 38% of the research subjects, depending on the symptom. All the symptoms were noticed by only 9% of children in Poland (Ibid., p. 15-16). It is heartening that as many as 41% of Polish children did not notice any online addiction symptoms. Although, based on the above-mentioned research, it might be assumed that in case of children, the risk of becoming an Internet addict is relatively small, we should keep a watchful eye on young people and encourage them to spend free time in a safer and more educational way.

The most worrying conclusions drawn from the research involve children's online contacts with strangers and developing these contacts in reality. Every fourth Polish child keeps in touch with strangers online and every twelfth has ever met an online stranger in reality (Ibid., p.19). The data mentioned above explicitly indicate that children should become aware of stranger danger online. Additionally, parents and teachers must help children use the Internet safely and contribute to decrease in their children's online activity.

The report "Children active online" (Polish: „Dzieci aktywne online") produced by Gemius, a Polish research agency, for the needs of the 1st International Conference "Keeping children and young people safe online" discusses research results regarding online activity of children and young people aged 7 – 14 (<http://pliki.gemius...>). The report shows that in June 2007 every tenth Polish Internet user was 7 – 14 and spent on average 24 hours and 27 minutes online. In this age group girls spend more time online by 10 hours than boys. 45% of the young Internet users claim to be online everyday or almost everyday. Those living in large cities stay online the longest (33 hours and 42 minutes). Children most frequently visit culture and entertainment websites (on average 6 hours and 55 minutes). 70% of the respondents use social networking services. Also, 70% of children play online games and there is no significant difference in these groups between boys and girls (Ibid.). To conclude, children primarily seek entertainment on the Internet, which is proved by frequent playing online games. Contrary to stereotypes, girls as often as boys choose this kind of entertainment. The same proportion of children use social networking services, which proves that along with entertainment, staying in touch with friends seems to be equally important. As expected, children from large cities spend more time online than their peers from towns or rural areas. It can be surprising that girls spend on average 10 hours more online than boys.

Polish Internet Research is the project worked out by the Kidprotect Foundation. The research was conducted by Megapanel PBI / Gemius in May 2011. This is the second edition of eKid project regarding online activity of children aged 7 – 15 (<http://www.telix...>). The research shows that 7 – 12 years old children make up 9% of the Polish Internet users, young people aged 13 – 15 contribute to the next 3%, and the rest 88% are the Internet users over 16 years old. In the youngest age group 7 – 12 boys (65%) more frequently than girls (35%) use the Internet, whereas in the age group of 13 – 15-year-old teenagers 60% of boys and 40% of girls are regular Internet users. In case of older children these proportions are similar for girls and boys (Ibid.).

The research reveals that almost 50% of children aged 7 – 15 surf the Internet everyday. There is a significant difference between the youngest Internet users and their older friends who go online several times a week: 27% of children aged 7 – 12 and 46% of teenagers aged 13 – 15 (<http://www.telix...>).

Google.pl, onet.pl and youtube.com are most frequently visited websites among the youngest group of respondents. The other popular websites are google.com, wikipedia.org, wp.pl, allegro.pl, facebook.com and interia.pl. Older children visit similar websites, although their order in terms of popularity is slightly different. The top ten most frequently visited webpages by young people aged 13 – 15 include: google.pl, youtube.com, nk.pl, google.com, wikipedia.org, onet.pl, facebook.com, allegro.pl, mozilla.com and wp.pl (Ibid.).

Children spend most time online visiting radio websites and playing games. The most popular webpages are radiozet.pl (16:19:16), kumik.pl (8:18:01) and pykam.pl (6:44:27). Older children spend less time visiting these websites: radiozet.pl 10:16:56, kurnik.pl 5:32:32 and gram.pl 5:09:19. It is clearly visible that children, depending on their age, spend different amount of time on particular websites. The youngest Internet users primarily seek entertainment, but they also use social networking services (<http://www.telix...>).

The research project “Parents towards online threats to children” involves parents’ attitudes towards children’s online activity. The research was conducted in 2008 by Public Opinion Research Centre (Polish: OBOP) for Nobody’s Children Foundation and involved 500 parents who were asked to answer the questions concerning online threats as well as children’s safety on the Internet. Their responses appear to be important since parents have significant influence on children and their possibilities of using the Internet. It is therefore advisable to become familiar with their opinions concerning online threats and safety as well as enhance parents’ sense of responsibility for this sphere of their children’s life (Wojtasik, 2009, 90-99).

The research shows that over 41% of children use the Internet independently before they are 9 years old and 14% go online before they turn 6. As far as positive aspects of using the Internet are concerned, parents most frequently mentioned educational value of the web (66%) and possibility to develop their children’s interests (53%). Among potential threats to children when they are online parents indicated pornography and violence (67%), disclosure of personal information (60%) and making friends online (51%). When it comes to digital literacy, over 50% of parents claim that their Internet skills are worse than their children’s, whereas only 30% believe that their online skills are better than children’s (Ibid., 90 – 99). Majority of parents assess their online skills as worse than their children’s, which might be perceived negatively because it is parents who are responsible for teaching children how to use the Internet safely. If parents fail to teach children online safety properly, they will not also use the Internet efficiently.

It is important to compare parents’ responses regarding online threats to their children’s answers concerning real online dangers. 19% of parents notice threats from pornographic content, whereas as many as 71% of children admit to have had access to pornography. As far as violence is concerned, only 22% of parents believe that their children are threatened by online violence, whereas 51% of children admit that they have watched violent scenes. Parents are also unaware of online stranger danger. Only 2% of parents realise the risk, whereas 43% children surveyed admitted that they were invited to meet a stranger in reality and 20% of the young Internet users at least once had an actual meeting with a person whom they got to know online (Ibid., 90 – 99).

It is therefore clear that parents are to a great extent unaware of the potential dangers which their children are exposed to online. It is essential to educate parents so that they could protect their kids from online threats.

The research conducted by Hanna Tomaszewska (2012, 169) involved four aspects: “Free time and social life of young people versus new media”, “The use of new media to communicate with peers”, “Emotional attitude of young people towards new media and indirect ways of communication with peers”, “The role and function of new media in communication of high school students with their peers” (Ibid., 167 – 168).

The project covered first year students from 14, including 7 general and 7 vocational high schools in Warsaw. In total 350 high school students took part in the research, 50.6% of which attended general high school and 49.4% vocational school (Ibid., 177). The research was conducted in 2006.

The research findings reveal that students from general high schools are more socially active than their peers from vocational high schools. This tendency refers to both virtual and real world. Teenagers' online activity is determined by sex. Girls are more active users of social networking websites and discussion forums. They value close relationships and want to have friends and boyfriends. Boys devote a lot of time to hobbies and peer groups. It is interesting that young people, although engaged in different media (which results from fashion, convenience or necessity), prefer spending free time with friends whenever possible. This is illustrated by the responses concerning favourite ways of spending free time, the top two of which include meeting friends (27.5%) and going out with a boyfriend / a girlfriend (14.4%), whereas playing computer games (7.7%) and watching TV (3.3%) turned out to be less popular (Ibid., p.205). However, when referred to spending free time at home, the responses are completely different: 21.5% of high school students choose watching TV and 19.6% – using a computer. This means that young people prefer media when they stay at home (Ibid., p.207).

Young people most commonly use the Internet to communicate with others (on average 3.22 for boys and 3.35 for girls; the answers were rated on a four-point scale: 1 – never, 2 – seldom, 3 – often, 4 – very often) and to search for information (3.18 for boys and 3.32 for girls on the same four-point scale). Teenagers frequently use media to communicate with their peers. Face to face contact often appears along with contact through media which have become inherent part of the youth's lives. Those who often communicate directly with others, also communicate with them via media. Girls more frequently than boys feel the need for communication with other people, regardless of the means of communication (Ibid., 209).

## Conclusions

Modern mass media have huge potential in the process of globalisation. Different types of media have beneficial applications to our everyday life. They create favourable conditions for children's development. They also enable children to understand global issues such as wars, nuclear threats, illnesses, hunger, homelessness, poverty etc. What is more, media promote cultural diversity and teach tolerance. They create new possibilities for better education, develop child's creativity and manual skills or improve physical coordination (e.g. quality computer games). Additionally, mass media / multimedia allow children to participate in cultural events, both national and international. It can be said that nowadays media have become, along with school and family, one of important educational environments.

Educators emphasise, however, negative impact of media on children who are unable to select appropriate content from different types of multimedia. The media content, often embellished or exaggerated, become something attractive or even competitive to real things, which may develop "specific media awareness leading to cognitive and moral relativism, and finally to the passive consumerism attitude of blind imitation" (Izdebska, 2003, 23)

Undoubtedly, there are many possibilities and chances, but also threats from electronic media applications. Therefore, it is important to benefit from mass media so as not to become addicted or threatened by them. Parents and teachers, two primary educational environments, should support children in the use of media.

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# Mathematical literacy of pupils with mild intellectual disabilities

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## Abstract

The contribution contains the comparison levels of mathematical literacy of pupils with mild intellectual disabilities and intact pupils. The test tasks of international research TIMSS (Trends in International Mathematics and Science Study) have been used for data collection. There are pupils with mild intellectual disability at the 4th class of the 1st stage of primary school in the research group; the results have been compared with Czech pupils of the same class.

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*Keywords:* Mathematical literacy; mild intellectual disabilities; TIMSS

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## 1. Introduction

In this contribution there are presented results of a research focused on comparison of levels of mathematical literacy of pupils with mild intellectual disabilities and intact pupils.

According to the nature of the disability we had presumed worse results at pupils with mild intellectual disabilities; however the question was if the pupils are able to solve at least some of the same tasks as intact pupils. This knowledge of actual mathematical literacy could help us in school practice when planning suitable didactical advancements, the use of appropriate working methods and setting of adequate educational goals. The results can be used as one of the important background information for the work with an increasing number of integrated pupils with such disability. This research is focused on mathematical literacy however it is a part of a broader plan, which should deepen our knowledge in skills and abilities of children with mild intellectual disability, which we also investigated in previous studies. With the focus on motor skills of this group of pupils, respectively on comparison with intact population (Zikl, P. et al, 2013; Zikl, P. Tomášková, M., Zajíčková, B., 2012; Zikl, P., Maněnová, M., Kalusová, D., 2011).

During research preparation we used published results of international research of mathematical literacy TIMSS - Trends in International Mathematics and Science Study (TIMSS and PIRLS International Study Centre). This research was made in the year 2011 at four classes of primary school and in autumn 2013 the texts of all task was published with detailed results therefore it was possible to use this material in further researches (Janoušková, Tomášek, 2013). The free file contains in total of 69 tasks, where some of them contain more partial questions so that the actual number of tasks is higher. We can divide the tasks into two basic levels. The first group represents the ones which can be focused on the content, i.e. managing the curriculum. There are a number of categories which correspond with individual thematic areas of the curriculum (numbers, geometrical shapes, measurements, data representation etc.). The second part is represented by tasks requiring the application of skills (Hejný, 2013). Out of

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there it was necessary to choose the ones which would correspond with its content of the curriculum of primary practical schools where was also our research provided.

Primary practical school is a type of a special school in the Czech Republic where children with mild intellectual disability can learn. These children can be also integrated into a common school (individual integration into a common school or a special class of a common school); however most of them are educated in primary practical school. The form and a place of education are chosen by parents and they can also use a recommendation of a counselling service. Our research was conducted at primary practical schools where are almost educated only pupils with mild intellectual disabilities and these schools are based on a modified training program (Framework Education Programme for Elementary Education, Annex for education of pupils with mild intellectual disabilities). Successful graduates of primary practical school obtain basic education, as successful graduates of common schools.

## 2. Aims and methodology

The main objective was the comparison of levels of mathematical literacy of pupils with mild intellectual disabilities and intact pupils at the 4th class of Primary school, respectively findings of differences between the results of pupils with mild intellectual disabilities and intact population.

### 2.1. Preparation of a test battery and administration

The selection of appropriate tasks was the basic precondition for obtaining relevant results. It was not possible to use test sets which had been used in the research of TIMSS, because of most tasks contained curriculum that was not taught at the primary practical school at the 4th class or there was the success rate of pupils at common schools very low. Therefore we had to create our own testing battery based on several criteria:

- Comparisons of tasks TIMSS with the curriculum document and textbooks of primary practical school and selection of tasks, which corresponded with the curriculum of primary practical school up to the testing time (the testing was conducted in the second half of the 4th class).
- Out of this group there were chosen tasks with a lower level of difficulty (in TIMSS lists in each task difficulty from 1 – 4; selected level 1 and 2) or such tasks which are although difficult however Czech pupils are good at.
- Selection of tasks according to the curriculum category, to have in the resulting test battery all representing tasks of all basic categories, i.e. numbers, geometrical shapes and measurements, data representation.

The tasks were chosen according to these criteria, and they were consulted with teachers of primary practical schools and they were verified in a pre-research on a group of 8 pupils. The resulting test file was made out of 17 tasks that we divided into two parts for the testing; there was a break in between (each test batteries TIMSS included ca 12 tasks).

According to criteria the selection was quite narrowed down and in some case there was necessary to modify the specified format in order to have a sufficient number of tasks left. The modification had been made on five types of tasks. However it never occurred to change the character of the task and its goal, the change was mainly in the specified format. For example in one task there was used a fraction ( $\frac{1}{2}$ ), which are the pupils of primary practical school taught as (a half, a quarter etc.) without the notice as a fraction. In the task there was an expression “colour  $\frac{1}{2}$  in a triangle“changed into “colour the half of the triangle).

Due to health disabilities of pupils the administration was also had been adapted to their capabilities. Firstly the test was divided into two short parts (always ca 20 min) with a break. Because of pupils with mild intellectual disabilities have in the 4th class often problems with reading comprehension, so that the task was also read to them otherwise there would be a significant reflection of a deficit in literacy which we wanted to avoid. The

administration was made in smaller groups of ca 5 pupils to have a better control and possibly help. It consisted in repeated task reading, explanation of the term (e.g. in one task there is used a term “a caricature“which the pupils very often did not know) or specification how to write or mark an answer.

## 2.2. Research group

Table 1 describes the description of the research group. The whole test file was filled by 48 respondents from the 4th class of primary practical school (9 schools). Their results were compared with the data from investigation of TIMSS, which Czech school inspection provided to us. Data contained answers of individual respondents for all questions in our file (647-664 respondents).

A relatively significant issue was to gain adequate number of respondents because of each primary practical school are mostly small and there are usually only a few 4th grade pupils (there are often associated two grades into one class and the maximum number of pupils is 14). Further restriction was the need to obtain permission for testing that was anonymous from the school management, even though some schools refused. Only pupils with mild intellectual disabilities were included into the research file. Pupils with moderate or border line (mild and moderate) MD were excluded from the research however they attend the school sometimes and also together with pupils with combined disabilities who could not enable to fill the test due to the test administration or understanding of the issues (e.g. children’s autism). Data collection has been still in a process and data will be gradually clarified.

Investigation of TIMSS took place at the 4th class of primary schools where pupils aged around 9 years attend. There is a different situation at primary practical schools because of greater proportion of pupils use so called postponement before a compulsory school attendance (in the Czech Republic from 6 years of age) or they attend a preparatory class and so that they can attend the first class later (the latest when they reach 8 years of age). A part of pupils with MID also repeat the year so that the average age is increasing in our research file. The pupils of the 4th class of primary practical school are therefore a year older than pupils of the 4th class of common primary schools. This fact should be taken into an account during interpretation of all research results.

Table 1. Description of research file.

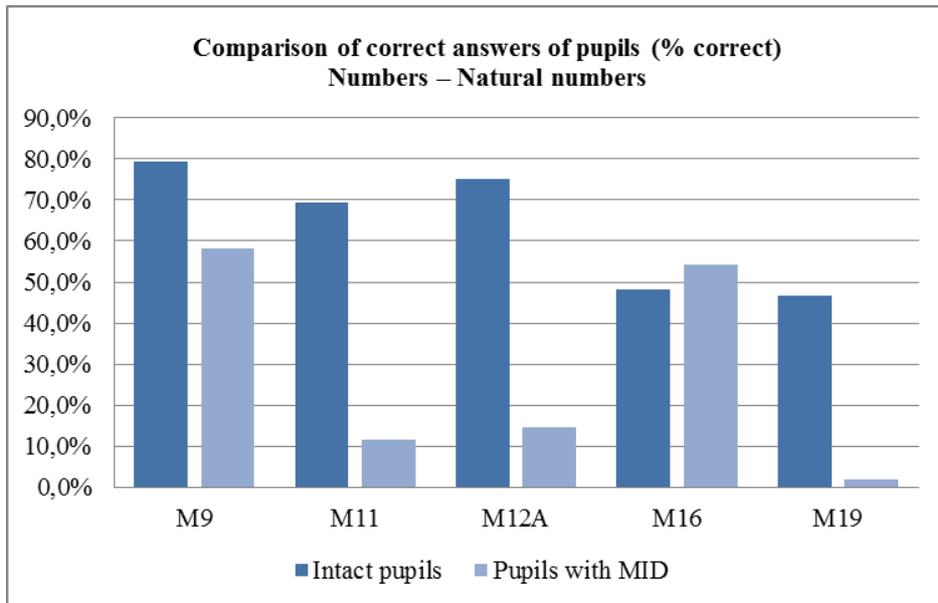
	Pupils with mild intellectual disability	Intact pupils
Number (boys/girls)	48 (25/23) (52%/48%)	647-664* (50,5%/49,5%)
Average age	11,3	10,4
*Questions were arranged in several test batteries and a different number of respondents replied to these.		

## 3. Research results

Obtained data were processed with the help of statistical software NCSS 2007 and software MS Excel. There were determined absolute frequencies, relative frequencies and dependence was tested on the basis of the test Chi-Square Test for a Pivot Table. For testing there was chosen a level of significance  $\alpha = 0,05$ .

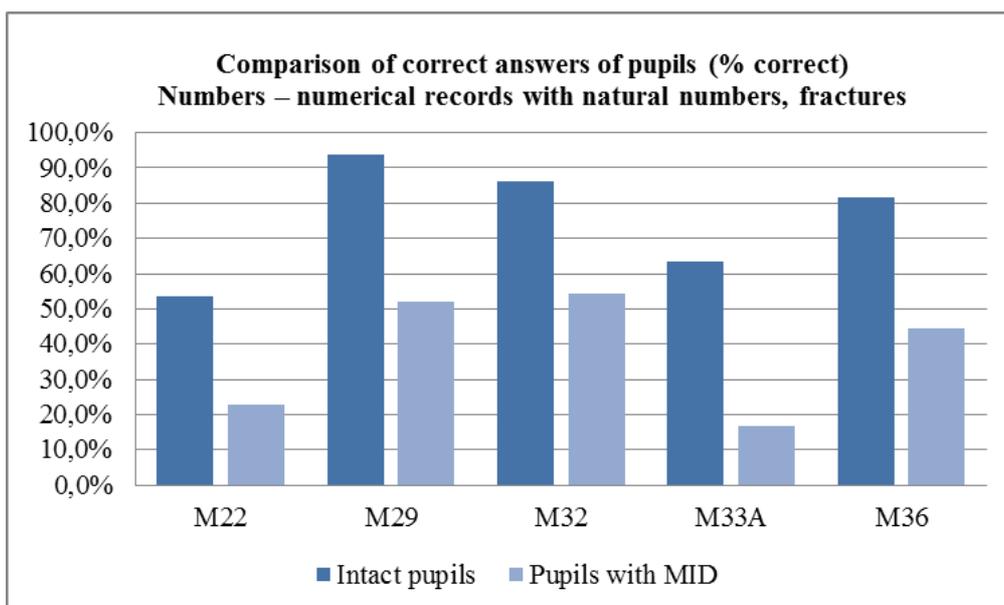
In the following graphs there presented the comparison of pupils results with mild intellectual disability and intact pupils. The results are divided by categories of each task for a better clarity. Graph 1 contains tasks chosen from a chapter “Numbers“, subhead “Natural numbers“ from an investigation of TIMSS. These are tasks focusing mainly on the application of knowledge while solving of tasks from a common life, where for solution the respondent should choose a simple arithmetic operation (counting, multiplication, division with remainder). When solving of

these tasks the pupils with MID were worse at 26,6 % - 95,5 %, the average of all tasks is 54,6 %. In this part of the test only one question appeared, where pupils with MID achieved a better result than other intact pupils (question M16 at 12,9 %).



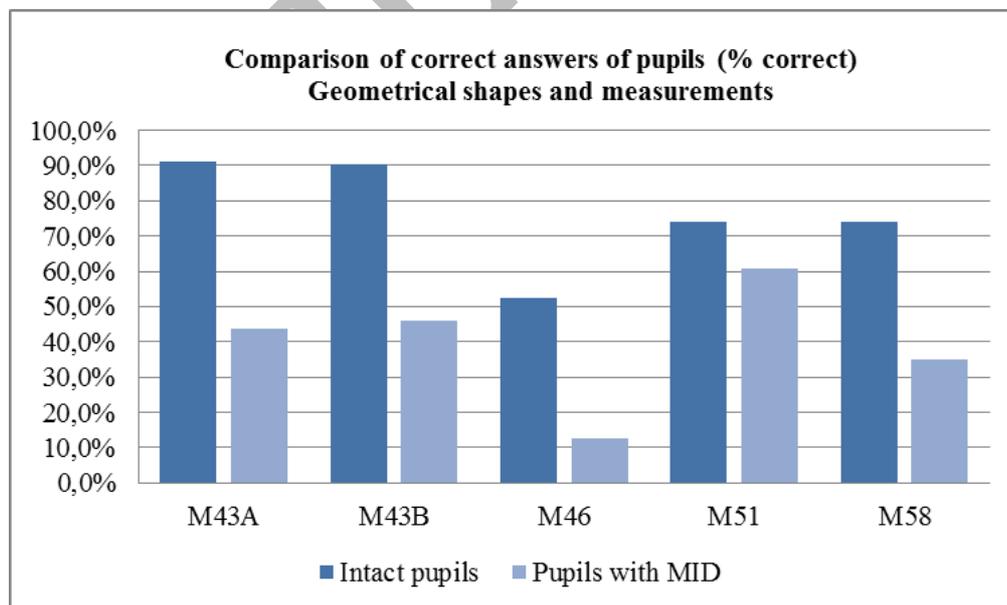
Graph 1. Comparison of correct answers of pupils on questions focused on a category Numbers (natural numbers); marking columns on the axis X these are numbers of tasks in investigation of TIMSS

In the Graph 2 we can see a continuation of tasks from the chapter “Numbers“, this time these are tasks requiring the knowledge of numeric entry and simple operations (determination of a missing number in the arithmetical problem of multiplication, determination of a correct mathematical notation of word problem, continuation of numbers). Only the first question (M22) is focused on fractions, pupils were asked to colour a half of a triangle that was divided inside on four identical parts. The results of pupils with MID were in these arithmetical problems worse by 37,1 % - 73,7 %, on average by 51,6 %.



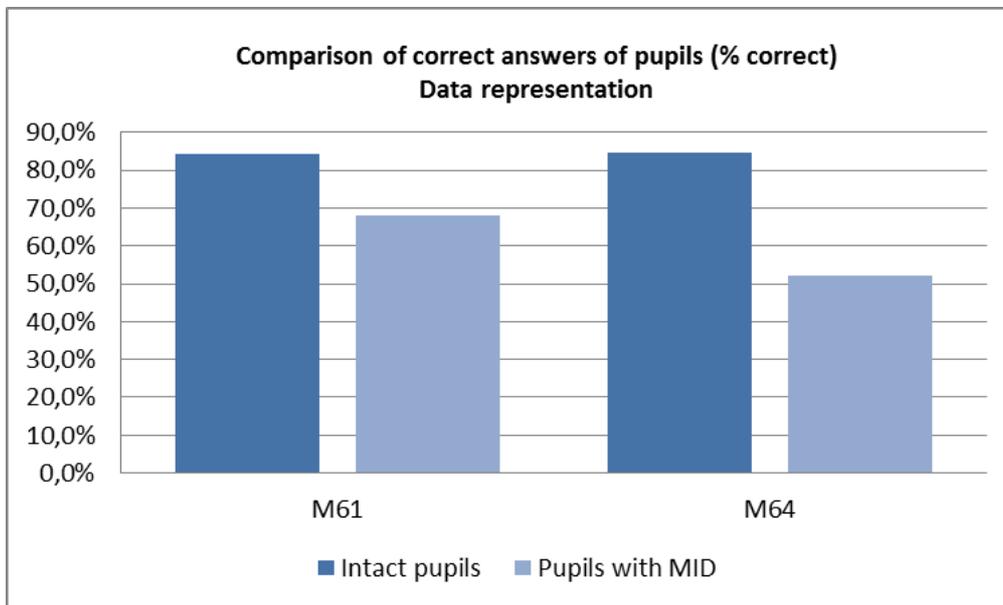
Graph 2. Comparison of correct answers of pupils on questions focused on a category Numbers (numerical records with natural numbers, fractions); marking columns on the axis X there are numbers of tasks in investigation of TIMSS

Graph 3 describes results of five tasks focusing on the knowledge of geometrical shapes and measurements (finding the field in the square by coordinates, knowledge of basic geometrical shapes on common subjects, counting of rectangular boxes placed on each other etc.). Also here is the result very similar as in the previous parts, pupils with MID were worse in average of 49,6 % (17,6 – 76,2 %).



Graph 3. Comparison of correct answers of pupils on questions focused on category Geometrical shapes and measurement; marking columns on the axis X these are numbers of tasks in investigation of TIMSS

In the last Graph 4 we can see two tasks which is one of the questions focused on data representation. This curriculum (reading from tables, graphs, diagrams, comparison of data from there, data representation) is not included in the curriculum of primary practical school and therefore we chose only two very simple tasks (difficulty 1, success rate of intact pupils more than 80 %), whereas pupils with MID were relatively successful, respectively worse only by 19,2 % (reading from a circle diagram) and 38,3 % (finding answer on a simple question in four simple graphs).



Graph 4. Comparison of correct answers of pupils focused on category Data representation; marking of columns on the axis X these are numbers of tasks in investigation of TIMSS

The results show a noticeable worse result of pupils with MID on an average of 49%. The average differences in individual thematic areas are not significant, it was always close to around 50%, with the exception of the last (data representation) where the result was a bit better but there were only two tasks and they were very easy.

We were also interested in if the success rate will differ between the easy and difficult questions. We had presumed that in easy questions there would not such a difference between pupils with MID and intact population, whereas in more difficult questions the difference would be increasing, or pupils with MID would not be able to solve them. We successfully managed to select questions corresponding with the pupils' possibilities because of almost zero success was found on pupils with MID in one task. For results comparison of easy and difficult tasks we had divided them into very easy (6 tasks of difficulty 1 in TIMMS) and difficult (5 tasks of difficulty 3 and 4 in TIMMS). While in the easy tasks were pupils with MID worse by 38,3 %, so the most difficult tasks were by 45,8 %. The only task where pupils with MID were better than the intact population was surprisingly question M16 which has difficulty 4. The greatest difference was seen in the task with difficulty 2 (63%). The worst five results had pupils with MID in tasks with difficulty 2 – 4 (3x2, 1x3, 1x4) and in the best five results we can explore all levels of difficulty practically evenly (2x difficulty 1, 1x2, 1x3, 1x4). We may conclude that the difference between pupils with MID and intact population can vary quite significantly but it was not due to the tasks difficulty, at least not dominantly.

When a more detailed analysis of results (difference between pupils with MID and intact pupils) we have found another factor. This factor was the form of the answer. In some part of the questions the respondents correspond in the form of writing answers and the part has a form of choice of four options. In our task file there were 9 questions

without the choice to choose an answer where pupils with MID were worse on average of 61,7 % and 8 questions with the choice to answer, where the difference was only 35,2 %. We have also compared five questions with the highest difference (73,7 % - 95,5 %) and there were four with a free response. On the contrary in questions with the smallest difference (-12,9 % - 37,1 %) there were four questions with the choice. We can state that the possibility to choose an answer for pupils with MID probably significantly helped with finding the correct answer than in intact population.

We can illustrate this also on one questions where pupils with MID were better. It was a question No.16, where pupils were asked to identify how many cans of paint (each 5 l) is needed to buy when they a buyer need 37 l of paint. There were possibilities to choose 5, 6, 7, 8 cans. In this question we also had to accept the biggest change in the task, because of the pupils from the 4th grade of primary practical school did not learn during the testing period multiples of 5, however they successfully went through multiples of 3. Therefore in the task instruction were cans (each 3l) and a buyer needed to buy 23 l. The choice of answers stayed the same. The correct answer was D and it is likely that pupils with MID almost did not count as it requires division with remainder, but they only estimated the needed number of cans and marked a possibility with the highest number. A similar mechanism could have been applied also in other questions with multiple choices, where pupils chose rather intuitively and relatively correct. In every way the multiple choices of answers enabled them to reduce the gap between them and intact pupils. However to use practical literacy in a common life usually requires accomplishment of a correct result without the multiple choice possibility.

For individual tasks there was made testing of relationship between results of intact population and the results of the research sample. In all 16 tasks there was positive correlation between the results and the selection of pupils (Chi-Square Test).

#### **4. Discussion**

The data collection was provided in the environment of a special school and the question is what would the final results were of pupils with MID who were integrated in common school. Also in this group of pupils there is a significant integration trend, their gradual integration into schools is the main educational stream. This contribution is not confused on the issue of integration of this group pupils, but raises the question what consequences in the field of mathematical literacy will have a joint education of these children with MID who will achieve significantly worse results in comparison with the majority population. Pupils in our research achieved these results in the environment with a small number of pupils, whose teachers have experience of education in the field of special education, they can use services of other experts directly at school, they have special textbooks and workbooks etc.

Unfortunately the reality of the current Czech Republic is very difficult to gain a sufficient number of respondents from the area of integrated pupils with MID, who are scattered (we need extra only 4th grade pupils), there is no data about schools/classes where these pupils are educated and even when they are found it is not easy to get a permission with their testing. However we will try hard to find some other data in the next round of the research.

It should be also reminded that for testing tasks containing curriculum of primary practical school had been chosen which are significantly reduced and the comparison is based on only from this reduced curriculum. If the comparison was set in all tasks of TIMSS than the results of pupils with MID would be substantially worse. Furthermore the pupils with MID had more time to fill in, the instructions were read to them and in total the testing had been adapted to their capabilities, that increased their chance to achieve the task. Such adapted conditions are common also in other types of testing and evaluation at schools.

#### **5. Conclusion**

The research confirmed worse results in the area of mathematical literacy of pupils with mild intellectual disabilities namely ca by 50% in contrast with intact population. For results of pupils with MID had a great impact the multiple choice. In these types of questions the difference between them and intact population was reduced on

35%, whereas in open questions it was 62%. This factor should be taken into an account when further testing and also during results' interpretation. The next factor is the age of pupils which influences the interpretation. The data was collected in both groups in the 4th class but the pupils with MID are in the class a year older than their intact classmates. This difference is likely to impact also their relatively high success rate in solving problems.

The result of pupils with MID was worse than in all types of problems (tasks with number, measurements from a daily life etc.). On the other hand it showed that these pupils are also able to solve relatively complex tasks if are sufficiently familiar with appropriate curriculum. However pupils of the 4th class of primary practical school with MID were taught only a small part of the curriculum in comparison with intact pupil, their curriculum had been significantly reduced (most tasks from the investigation of TIMSS could not be used). To manage the reduced schoolwork the pupils with MID had more time than intact pupils, even though there was still a relatively high difference. That is important to keep in mind and place corresponding demands on pupils with mild intellectual disabilities mainly in case of integrated pupils.

Not only long time enough for practising or extra lessons but it is also necessary to reduce the schoolwork, use appropriate teaching methods, individualization of work and further supportive measure and even so we must reckon with a significant difference in the level of mathematical literacy between pupils with MID and intact pupils.

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# Mathematics in inclusive education of blind students in secondary schools in the Czech Republic

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## Abstract

The paper presents selected aspects of teaching mathematics to pupils with severe visual impairment in secondary schools with integrated environments in the Czech Republic. Theoretical bases for writing mathematical expressions using special tools and editors are supplemented by the results of the research, which was conducted in 11 schools' counseling centers for the visually impaired. We found that only 27% of specialists in counseling centers had knowledge about possibilities of using tools when writing mathematical expressions. In conclusions we define recommendations for practice in order to promote and improve the quality of education of blind students in the subject of mathematics.

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*Keywords:* mathematics; visual impairment; student with visual disabilities; secondary school; secondary education; inclusion

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## Introduction

Access for individuals with visual disabilities to the information in the educational process has been severely limited in the past. Current development of information technologies significantly influences the whole process of making information more accessible and also opens up new possibilities for the transformation of data into new, accessible forms. In many cases this development had eliminated the traditional hurdles, but in many other it created new barriers.

Despite the dynamic development of information technologies, claim that access to the information for healthy and for visually impaired individuals is not equal, remains valid even today. This inequality can be observed especially in multimedia platforms and information or data of technical nature, where technologies and procedures commonly used for transformation of the text into digital form are falling short to make such information accessible, because it often contains a lot of specific symbols and can be found in various formats (Mendelová & Lecký, 2008). One particular example facing abovementioned difficulties is mathematics and math science, where educators and students are confronted with an uneasy challenge.

Glozar et al. (2007) suggest several ways in which mathematical notation can be implemented in an electronic form through special tools. The most common primarily include editor Lambda, InftyEditor and Duxbury Braille Translator. Additional options for creating mathematical notations are based on add-ons and extensions to the already established software products – for example BlindMoose and Math Type for Microsoft Word, odt2braille for Open/Libre Office Writer and the MathML extension of the DAISY format. From the perspective of the users in the Czech Republic, various solutions from abroad lack the implementation of the Czech braille code (in contrast, for example, with Czech-made editor BlindMoose). Their advantage lies however in wider possibilities for data conversions, better support for mathematical notation, broader support of math symbols etc.

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## BlindMoose Editor

Currently in the version 2, BlindMoose editor was created at Masaryk University in Brno in collaboration with the Center Teiresiáš in the year 2004. Originally, this tool was inspired by two bachelor thesis written by Jan Boček and Martin Endl (Glozar a kol., 2007).

BlindMoose was the first tool in the Czech Republic that enabled standard mathematical notation based on the Czech 6-dot national braille code from 1996. It works as a set of macros for Microsoft Word that enable both, sighted and blind users, to create and edit basic mathematical texts. Disadvantage of this tool is absence of automatic conversion into external formats such as TeX or MathML (Glozar a kol., 2007). Because of this we are forced to conclude and agree with Šimek (2008) that the use of BlindMoose, even in the environment of primary and secondary schools, is not always fully satisfactory, because the demands on the software for adequate work with mathematical notation are in some cases much higher than BlindMoose is able to meet.

## Lambda Editor

Lambda represents mathematical editor that has implemented linear Lambda code by which it enables blind users to read, edit and create mathematical expressions. The way of notation was developed under the project named **Linear Access to Mathematics for Braille Device and Audio Synthesis**. Horňanský (2009) states that the Lambda code is input-output convertible to MathML and therefore, indirectly also to LaTeX markup language, which to blind users enables access to the majority of current scientific papers. Lambda code is structured in a compact way which enables both sighted and blind users to easily edit expressions with Lambda Editor and also through braille display.

Lambda Code and Lambda Editor work on top of MathML language (Fig. 1.), displaying the document in the Lambda Code in selected 8-dot code on refreshable braille display. This solution overcomes the largest shortcoming of existing notations – their incompatibility (Šimek, 2008).

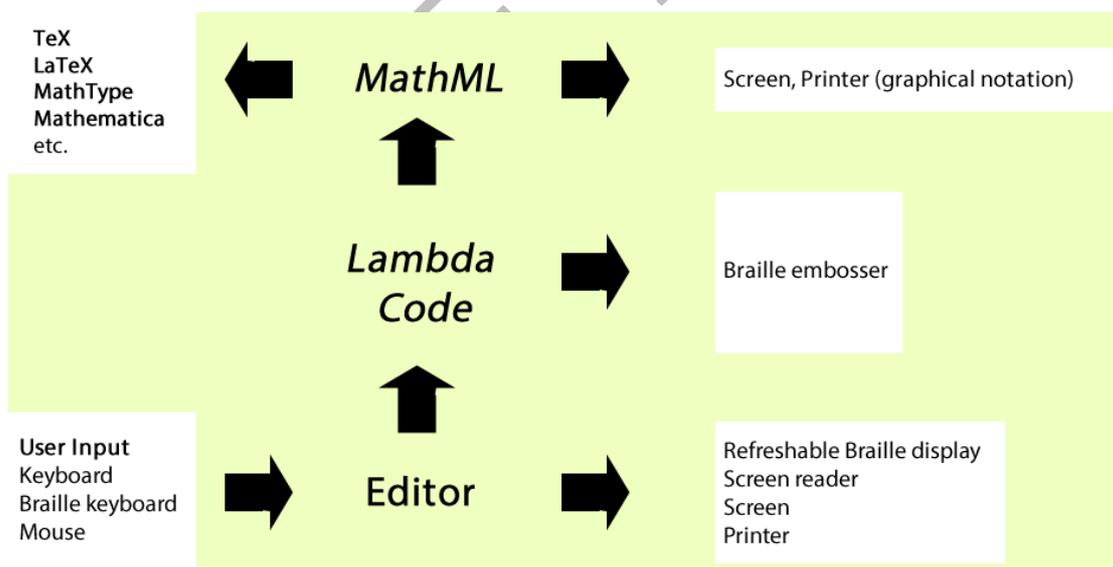


Fig. 1. The structure of the Lambda system (edited according to Hegr, Peňáz, Sklenák In Šimek, 2008).

According to Jašková (2008, p. 93), Lambda Editor is “an excellent tool for the blind students studying in an integrated environment. Regular math teachers have difficulties explaining the curriculum to the blind students,

because Braille mathematical notation used by blind users is totally different than the way of notation used by sighted. Program Lambda offers ideal solution for blind students as well as for sighted teachers and students.”

Lambda Editor automatically distinguishes individual blocks of mathematical formula and provides tools that enable gradual unfolding or folding of individual parts of the notation. This is a great aid that enables blind users to understand internal structure of the formula a lot faster and also, editing notations itself can be more streamlined and precise. Additional features include for example ability to extend the current selection to the entire logical block, autocompleting of tags as well as error prevention when writing an expression. Ability to copy last line with removing unnecessary spaces, built-in calculator as well as matrix editor are also very useful (Šimek, 2008).

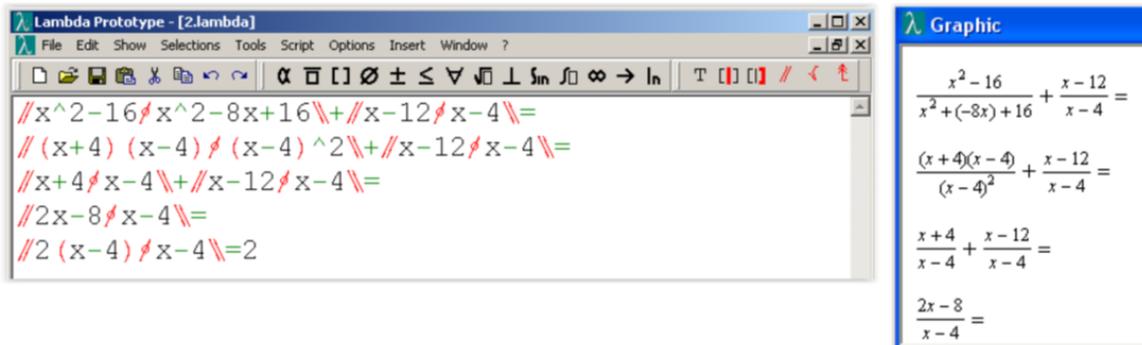


Fig. 2. Main application window with example written in linear Lambda Core and preview showing the example in standard visual notation (Horňanský, 2009, p. 46).

## MathML

MathML (Mathematical Markup Language) is another way how to write mathematical expressions linearly in an electronic form. Language is based on XML (Extensible Markup Language) and released currently in its third version as a recommendation by Worldwide Web Consortium (<http://www.w3.org/Math/>). It was created especially with the purpose of writing mathematical notations and their following presentation on the web pages as well as in other types of digital documents. Essentially, MathML brought mathematics to the web and beyond.

On Fig. 3 we present the source code of a simple fraction written in MathML and its representation in web browser.

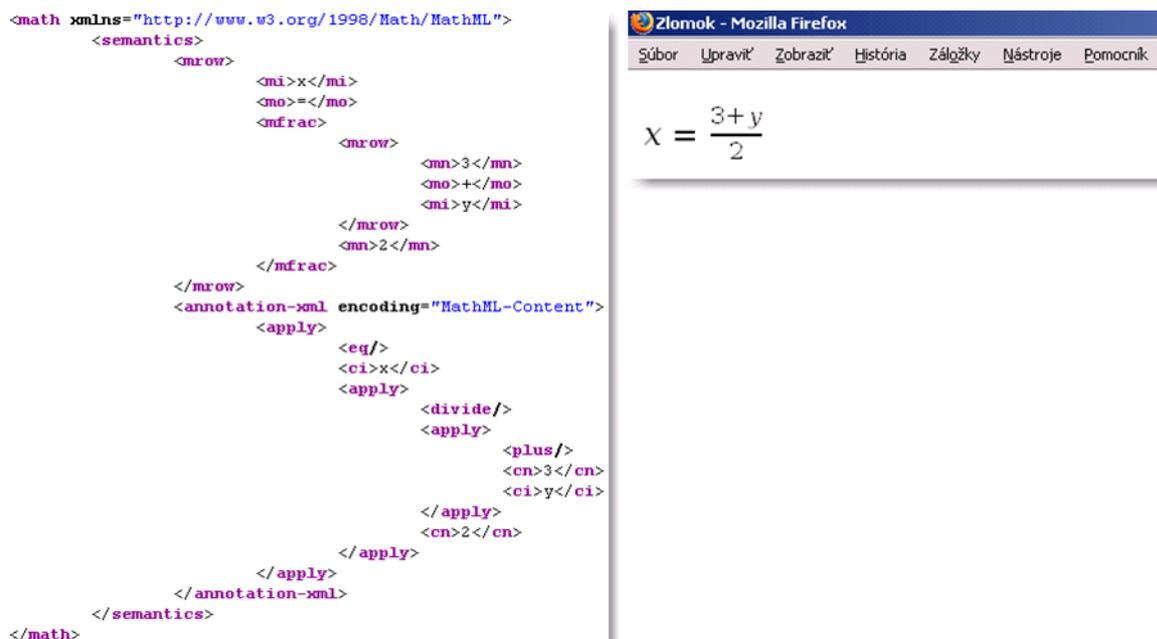


Fig. 3. Source code written in MathML for a simple fraction and its representation in a Mozilla Firefox web browser.

From the picture above it can be seen that the resulting code is very long and its direct editing can become too complicated fairly quickly. We agree with the statement by Šimek (2008) who concludes that the best solution is to use MathML as an internal code, on top of which there is an editor (such as Lambda), which can conveniently interpret the contents of MathML document to the blind user, similarly to the already existing tools that interpret MathML source code in a visual form.

### Description of research

The aim of the research was to determine the level of awareness among the counselors of special education centers for the visually impaired about the possibilities of using special tools for writing mathematical notations. These counselors play a key role in the education of visually impaired students in inclusive environments, because they provide schools with information, diagnostic, methodological and advisory services.

As part of the research we have addressed all of the 14 counseling centers in the Czech Republic and received positive responses from the counselors from 11 centers (Regec, 2010). Data collection took the form of an interview and was executed in 2010.

### Results

In our research we have investigated what information is provided to the schools by the counseling centers in the area of the use of modern technologies to make mathematical notation accessible to the blind users, especially through linearization of expressions in an electronic form. Majority of the counselors (73%) stated, that they are not aware of any special software (such as Lambda Editor and/or similar tools) for this purpose. Despite the fact that all of the counselors were on terms with the 6-dot braille code, their knowledge about the use of the 8-dot braille code were unsatisfactory (Regec, 2010). Based on these findings we can conclude that counselors in praxis do overlook new possibilities for effective notation of mathematical expressions in a digital form.

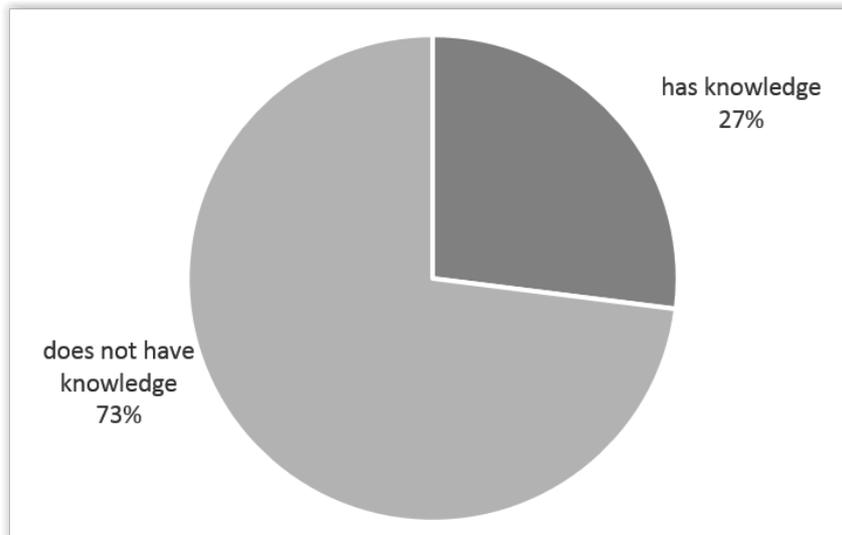


Fig. 4. The percentage of counselors of special education centers for the visually impaired that have knowledge about special editors for linear electronic notation of mathematical expressions.

Only three counselors (27%) were aware about the existence of mathematical editor suitable for linear notation of mathematical expressions, while only one (9%) had a practical experience with its use. These findings are underlined by an alarming statement from one of the respondents on the approach of the math teacher towards his blind student in an inclusive environment:

*„Highschool teachers are somehow not willing to teach these things, such as Lambda Editor etc. Often they go around it by some modification of the curriculum. **So in the end the impaired student learns only those things he can somehow manage independently and those more challenging parts of the subject are not tackled.**“*

Several counselors described in their interviews negative impact of the lack of knowledge among the teachers about the possibilities of writing mathematical notations for the blind students (Fig. 5). This lack of knowledge results into creating own ways of writing math expressions based on the agreement between the teacher and the visually impaired student. The obvious and great shortcoming of this procedure is incompatibility of these individual forms of notations with those student may encounter in his or her future studies, as well as unnecessary reduction of the curriculum.

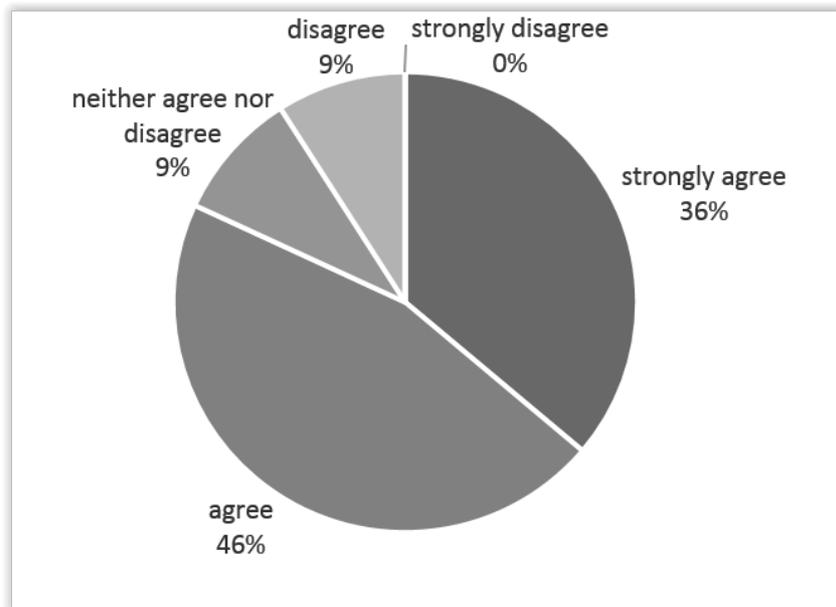


Fig. 5. Rate of approval of the counselors with the statement on negative impact of the insufficient knowledge of the math teachers about possibilities of the linear electronic notation of the math expressions on the teaching of mathematics to the blind students in an integrated environments.

The quality of teaching mathematics determines, in various intensity, also other areas of education. According to the respondents it is most frequently unequal access to the education and limited scope of competencies in mathematics blind students are able to adopt. Attention must also be given to the impact on the future college and career choices. Individual findings are illustrated on the following chart.

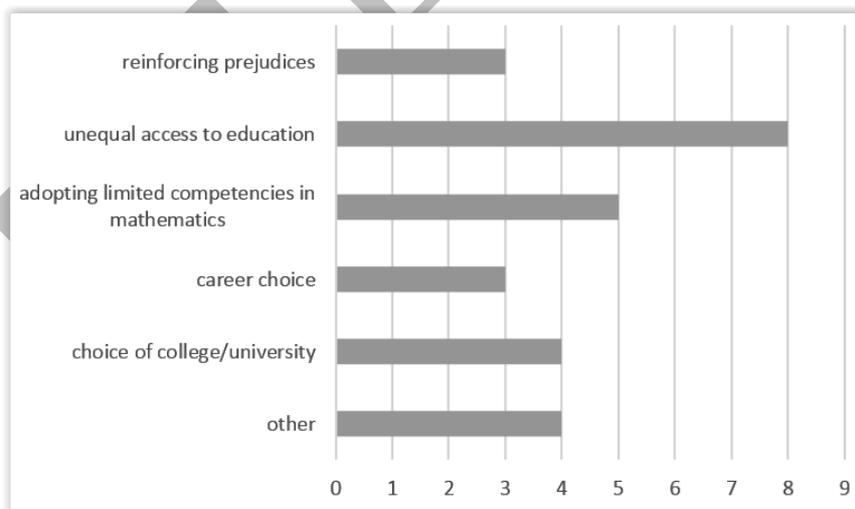


Fig. 6. The quality of teaching mathematics to the blind students and its impact on other selected areas.

In relation to findings of unsatisfactory knowledge of math teachers on the use of mathematical notations in linear electronic form, we also tried to identify probable causes, which determine this inadequate skills level. Counselors most frequently pointed out insufficient undergraduate training of teachers of mathematics in an inclusive environment (64%), lack of methodical support from the special education centers (46%) as well as teachers' limited access to the continuous education (27%).

## Conclusions

Based on the results of the presented research we can conclude, that in education in an inclusive environments there is unsatisfactory access to the information about the electronic form of linear notation of mathematical expressions through specialized software tools. Counselors at schools' counseling centers for the visually impaired as well as teachers do not have sufficient knowledge about these products and often resort to less effective methods of teaching mathematics' curriculum to the blind students. Similar issue in the field of education has been in the long term pointed out also by Peňáz (2002). His interpretation of the principle of special education on individual approach is, however, dangerously misleading, where he talks about omitting those parts of curriculum for the blind students, which are related to the visual perception.

Methodic guidance of schools' staff (teacher, teacher's assistant, special education specialist and counselor) is prerequisite to the improvement of the quality of education of blind students in the area of mathematics. Next important step in the process of creating more effective teaching techniques and procedures is active participation of school's teaching staff in the implementation of 8-dot braille code into praxis, which plays a key role especially when teaching mathematics, because it enables straightforward notation of mathematical expressions.

## Acknowledgements

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# Measuring teachers' fidelity of implementation of the dynamic geometry approach

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## Abstract

In a research project funded by the US National Science Foundation, 64 teachers were randomly assigned to an experimental group and a control group to implement the Dynamic Geometry (DG) approach and a Business-as-Usual instructional approach respectively. As a measure of fidelity of implementation of the DG approach, the DG Implementation Questionnaire was developed and administered to the experimental group teachers six times across a school year. Psychometric analyses were conducted, and established validity and reliability of the questionnaire. A quantitative analysis showed that most of the experimental group teachers were faithful in implementing the DG approach in their classrooms.

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*Keywords:* E-Portfolio

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## Introduction

Dynamic Geometry (DG) is active, exploratory geometry carried out with interactive computer software. Its main features such as dragging and measuring allows users, after a construction is made, to move certain elements of a drawing freely and to observe other elements respond dynamically to the altered conditions. As these elements are moved smoothly over the continuous domain in which they exist, the software maintains all relationships that were specified as essential constraints of the original construction, and all relationships that are mathematical consequences of these (Goldenberg & Cuoco, 1998). Hence the software can be used to help students to engage in both constructive and deductive geometry (Schoenfeld, 1983) as they build, test and verify conjectures using easily constructible models.

A research project funded by the National Science Foundation (NSF) conducted repeated randomized control trials to investigate the efficacy of an approach to high school geometry that utilizes DG software to supplement ordinary instructional practices. This approach was referred to as the DG approach in the project, and the DG software used by the project was the Geometers' Sketchpad (Jackiw, 2001) (GSP).

### **THEORETICAL FRAMEWORK AND RESEARCH QUESTION**

An integrative framework (Olive & Makar, 2009) drawing from Constructivism, Instrumentation Theory and Semiotic Mediation was used to guide the study. Within this framework, as teachers and students interact with, and in, DG environments these interactions with the technology tool influence the next acts by each person, and continue in an interplay between the tool and user. For example, as students "drag" an object and observe outcomes from that

act, the user (teacher or student) adjusts her or his thinking, which in turn influences the next interaction with the tool. Because DG tools allows users to adjust their sketches and the relationships within them, users are transforming the tool, their use of the tool, and their thinking.

This article describes an instrument developed by the project research team to measure the fidelity of DG implementation. The reported study addresses the following research question: How did the teachers implement the DG approach in their classrooms with fidelity?

## **METHOD**

The population from which the participants of the study were sampled was the geometry teachers at high schools in Central Texas school districts. The study followed a randomized cluster design. 64 teachers who were randomly assigned to two groups (an experimental group and a control group) received relevant professional development, implemented the instructional approaches respectively assigned to them, helped the project staff in administering the pre- and post-tests of the participating students, and participated in other data collection activities of the project.

### *Professional Development and the DG Treatment*

In order to effectively implement the DG approach in their classrooms, teachers need to learn the approach first. Without professional development training, “teachers often fail to implement new approaches faithfully” (Clements et al., 2011, p. 133). So teachers’ professional development (PD) was an important component of the project. For our PD to be effective, it had to be long enough, intensive enough, and relevant enough, with substantial support from the school districts. Based on these guiding ideas, a weeklong summer institute was offered to the participating teachers in the DG group, followed by 6 half-day Saturday PD sessions during the school year.

The nature of each PD session for the experimental group was interactive and emphasizing participating teachers' active involvement and conceptual understanding of mathematics. Important geometric concepts, processes, and relationships were presented or revisited through challenging problem situations, which were explored with the DG software as a tool. Teachers learned DG skills in the process of using them to tackle the problems. They came to learn, first hand, as learners of mathematics, how DG environment encourage mathematical investigations by allowing users to manipulate their geometric constructions to answer "why" and "what if" questions, by allowing them to backtrack easily to try different approaches, and by giving them visual feedback that encourages self-assessment.

The PD facilitators’ action of leading the teachers to conduct investigations modeled what teachers were expected to do with students in their classrooms. To further help teachers to consider changes in their instructional strategies, in the relation between them and their students, and in how they facilitate student learning, mathematical explorations were always followed by discussions on questions such as “How will you teach this content in your classrooms using DG software?” and “How will you lead your students in conjecturing and proving using DG software?” The PD facilitators realized the importance of teachers learning from each other and sharing ideas. Therefore, teachers were encouraged to give presentations on their important insights of DG implementation and successful stories, or to describe problems they anticipated with other teachers offering suggestions to address the concern. Teachers also worked in groups of 3 or 4 to prepare lesson plans to share with the entire group.

During the school year (i.e., the second year of the project), the DG teachers applied what they learned in the summer institute to their teaching practice.

### *The DG Implementation Questionnaire*

During the first year of the project, the project team concentrated on developing project needed instruments including the DG Implementation Questionnaire. The DG approach involves using dynamic software intensively in classroom teaching to facilitate students’ geometric learning. The critical features of the DG approach include using the dynamic visualization to foster students’ conjecturing spirit, their habit of testing conjectures, focusing on relationships, and explaining what is observed, their logical reasoning desire and abilities, as well as their

conjecturing-investigating-proving oriented learning style in exploring problem situations. The DG Implementation Questionnaire was adapted from a teacher questionnaire developed by the University of Chicago researchers (Dr. Jeanne Century and her colleagues) in an NSF funded project, based on the critical features of the DG approach.

Serious efforts were made to establish the validity and reliability of the instrument (e.g., the project advisory board carefully reviewed the instrument and provided feedback for revision; the research team conducted psychometric analyses such as an IRT analysis on the measure). The final version of the DG Implementation Questionnaire contains six multiple-choice items and ten open-response questions. An example of the former is: “How many times per week did the students work in a computer lab/classroom using GSP software?” (Response possibilities are *None, One time, Two times, and More than two times* for specific weeks.) An example of an open-response item is, “Please describe how the use of DG tools has helped you improve your understanding of students (via formative assessment of students’ learning). Provide explicit examples.” (See Appendix at the end of the paper for details.)

During the school year following the summer institute (also the second year of the project), the DG Implementation Questionnaire was administered to the experimental group teachers six times.

## DATA ANALYSIS AND FINDINGS

### *Reliability*

Data from each time point (each time of administering the questionnaire) was used to determine the reliability of the instrument using Cronbach’s alpha. Coefficients from each time point are given in Table 1. These suggest internal consistency of the instrument across each of the time points. Each time point consisted of between 43 and 49 items since questions 1-3 required responses for each week, and questions 4-6 required responses for multiple sections. Respondents varied at each time point due to sample size, but ranged from N=25 to N=30.

Table 1

*Cronbach’s Alpha by Time Point*

Time Point	Alpha
1	0.94
2	0.86
3	0.85
4	0.94
5	0.95
6	0.95

### *Validity*

Although the alpha coefficients above are within the acceptable range for reliability, closer analyses are required to determine the degree to which the items measure the same unidimensional construct. As a preliminary analysis, item correlations with total score were examined to make inference regarding the ability of each item to discriminate between low and high fidelity teachers. These correlations were calculated for each time point, and then summarized by taking the mean of the correlations for each item. Mean item correlations with total score are given in Table 2 (iwj represents question i week j,  $1 \leq i \leq 3, 1 \leq j \leq 5$ ).

Table 2

*Mean Item Correlations with Total Score*

Item	Correlation	Item	Correlation	Item	Correlation
1w1	0.34	4MakeCon	0.67	6Drag	0.64
1w2	0.32	4TestCon	0.63	6meas	0.70
1w3	0.46	4UnderRel	0.58	6anim	0.48
1w4	0.33	4Provide	0.56	6tran	0.56
1w5	0.30	4Link	0.63	6obs	0.65
2w1	0.40	4Prompt	0.58	6inv	0.66
2w2	0.37	5Class	0.40	6form	0.68
2w3	0.40	5Ind	0.22	6test	0.68
2w4	0.40	5Group	0.24	6feed	0.60
2w5	0.33	5Demo	0.33	6prove	0.55
3w1	0.38	5Inter	0.25	6Coop	0.49
3w2	0.37	5StudDemo	0.34	6Share	0.50
3w3	0.42			6Conv	0.55
3w4	0.35			6Idea	0.61
3w5	0.28			6Approach	0.66
				6Apply	0.63

This table shows that the mean correlations for the items in questions 1, 2, 3, and 5 are much lower than the correlations in questions 4 and 6. Response patterns indicate that most respondents endorsed items in questions 1, 2, and 3 at one of the lowest two options during the first three time points. However, Table 3 shows that the correlations with total score increase drastically over the last two time points. These results suggest that the items did not discriminate well between high and low fidelity scores at the earlier time points because there was very little variation in responses. That is to say, very few responses were at the higher levels. However, in the last two time points the items did discriminate well between higher and lower fidelity.

These results support the validity of the items in questions 1, 2, and 3 in light of the “on the ground” realities of implementing the DG approach. For example, although the DG software was provided to schools over the summer, in many cases the software did not become operational until later in the school year. In addition, teachers received ongoing support to implement the DG approach to instruction. So, as necessary resources became available, and as teachers received additional support, these items were endorsed at the higher levels more often. Even though there were only modest changes in the frequencies at the higher levels, the items were much higher correlated in the last two time points. This evidence suggests the items adequately discriminate between high and low fidelity teachers in the time points where teachers were most equipped to implement all features of the DG approach.

Table 3  
*Item Correlations with Total by Time Point*

Item	Timepoint					
	1	2	3	4	5	6
1w1	0.24	0.13	0.31	0.23	0.52	0.65

1w2	0.46	0.00	0.41	0.02	0.33	0.64
1w3	0.64	0.17	0.46	0.24	0.56	0.62
1w4	0.11	-0.20	0.19	0.62	0.67	0.56
1w5	-0.30	0.64	0.02	0.71	0.36	0.45
2w1	0.12	0.42	0.55	0.35	0.64	0.49
2w2	0.22	0.58	0.43	0.31	0.35	0.50
2w3	0.22	0.56	0.44	0.22	0.56	0.56
2w4	0.05	0.44	0.33	0.60	0.53	0.56
2w5	-0.40	0.60	0.34	0.57	0.60	0.44
3w1	0.16	0.24	0.45	0.23	0.62	0.54
3w2	0.36	0.11	0.49	0.24	0.40	0.52
3w3	0.42	0.27	0.40	0.24	0.63	0.50
3w4	0.16	-0.11	0.19	0.64	0.62	0.51
3w5	-0.16	0.59	-0.06	0.54	0.35	0.40

Question 5 response patterns are very different than questions 1, 2, and 3. Three of the items had less than 10% respond to the lowest two categories. These items are also qualitatively different than those in questions 1, 2, and 3. Items from the first three questions are very closely aligned with the DG approach. In comparison, items in section 5 are very general. In addition, the correlations did not improve systematically over time. Since this instrument is designed to measure the degree to which the DG approach is being implemented, the correlations suggest the more general question does not have a strong relationship with the total fidelity scores. Because of this, we will consider whether leaving section 5 in or removing it from the instrument. (After removing question 5, the instrument still retained alpha levels within acceptable range at each administration.)

#### A preliminary quantitative analysis

Figure 1 and Figure 2 show how teachers rated themselves when it comes to their effectiveness and comfort in using GSP in teaching of geometry. The results reveal that in terms of the level of effectiveness in using GSP in teaching geometry, from those teachers who completed the questionnaire (total of 31), 29% of the teachers were at the high level, 61% of the teachers were at the middle level, and 10% of the teachers were at the low level. In addition, it seems that more teachers felt more comfortable than effective in using GSP in teaching. Only one teacher did not feel comfortable using GSP in teaching of geometry. An overwhelming majority of teachers (97%) felt very comfortable or somewhat comfortable in using GSP in teaching. 22 teachers felt as effective as they felt comfortable in using GSP in teaching of geometry.

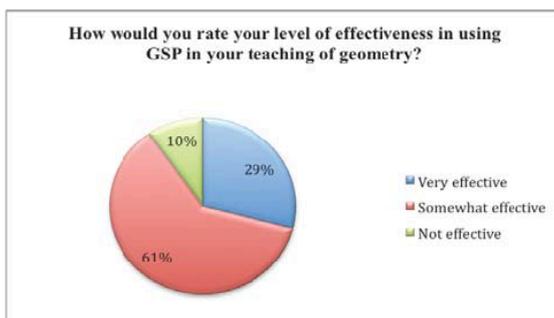


Figure 1. Effectiveness in using GSP

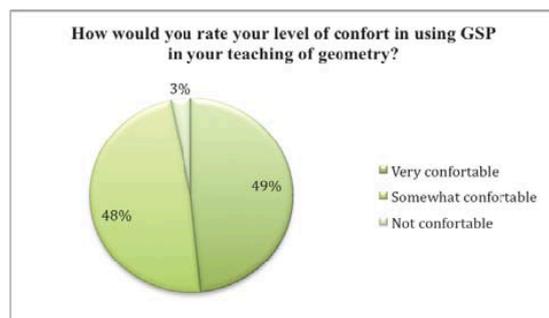


Figure 2. Level of comfort in using GSP

Figures 3 and 4 show average teacher and student use of GSP throughout the school year. Here “average teacher

use of GSP” represents “average times per week the teacher uses the demonstration computer in his/her classroom to do GSP presentations and/or demonstrations to students”. The “average student use of GSP” represents “average times per week students work in a computer lab doing hands-on explorations with GSP”. Among the 31 teachers who completed the questionnaire, on average, 77% of them used GSP on the demonstration computer at least one time each week, and 38% of them at least two times. However, among the 31 teachers who completed the questionnaire, in terms of “taking students to the computer lab to do hands-on activities with GSP,” on average, only 61% of them did so at least one time each week, and only 10% of them did so at least two times each week.

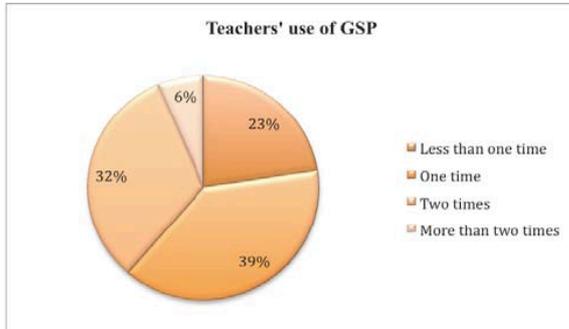


Figure 3. Average teacher use of GSP

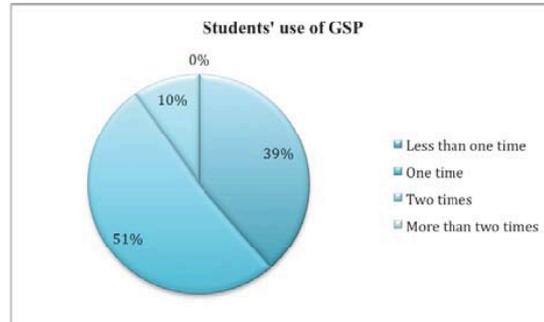


Figure 4. Average student use of GSP

These facts show that overall, and especially in terms of “taking students to the computer lab to do hands-on activities with GSP,” the teachers’ implementation of the DG approach was at the medium intensity level. This finding is consistent with that from the classroom observations. However, almost all teachers were positive or enthusiastic in using GSP in geometry teaching. Considering the challenges (the inaccessibility of a computer lab in the first several weeks, the pressure of the intensive state testing, etc.) that the teachers experienced during the school year, most of them should be regarded as being faithful to the DG approach. (More thorough analysis including qualitative analysis of the Implementation Questionnaire data is ongoing.)

## CONCLUSION

The DG Implementation Questionnaire was developed based on the research and teaching experiences of the project team, a group of mathematics education experts’ (the advisory board members’) careful review and suggestions for revision, and the rigorous reliability and validity testing. An initial quantitative analysis of the Implementation Questionnaire data suggested that most of the experimental group teachers should be regarded as being faithful to the DG approach. As a result of these teachers’ implementation of the DG approach in their geometry classrooms, their students significantly outperformed the students of teachers in the control group in a geometry achievement test (Jiang et al., 2011). As one of project advisory board members indicated, “This scale is clear... I especially like the requests for specific examples—these are often very revealing and in fact may provide a lot of insight about how a teacher is thinking about her instruction.”

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# Médiathèque du Centre d'Enseignement des Langues Étrangères, CELE-UNAM : diversité de ressources, assessorat et le parcours en autonomie.

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Je tiens à vous signaler que ceci n'est pas le titre d'un livre, mais le nom de ma participation comme expériences à partager dans l'apprentissage autonome des langues étrangères et sa relation avec les TIC.

## Keywords

Autoformation, TIC, autonomie, ressources, conseiller pédagogique.

## Abstract

À la médiathèque, on y trouve des ressources physiques, humaines voire virtuelles qui sont associées pour la même cause : l'apprentissage de la langue, lequel contribue à la formation continue du XXI<sup>e</sup> siècle. La médiathèque est un centre d'autoformation qui aide les étudiants universitaires à poursuivre leur formation dans une ample flexibilité de présence ou non. Dans cette présentation de papier, je vais exposer mes expériences comme tuteur dans l'apprentissage autodirigé et sa relation avec les tics étant des ressources en Internet qui contribuent à leur autoformation : ressources dans le site du centre, outils pour des nécessités spécifiques et conseils pour la sélection.

Je dis bien une exposition de mes expériences comme tuteur dans l'apprentissage autodirigé.

Cette confusion affecte énormément ma participation à l'International Conference qui aura lieu à Paris du 25 au 27 juin de l'année en cours.

Par ailleurs, la durée de mon exposition n'a pas été déterminée dans ma lettre d'acceptation, un autre détail que les autorités de l'université veulent savoir.

À l'attente de vous lire bientôt, veuillez agréer, messieurs, mes salutations distinguées.

INTE 2014

# Medya okuryazarlığı

Prof.Dr. Özgür Gönenç<sup>\*\*\*\*\*</sup>

## GİRİŞ

Küreselleşen dünyada gelişen teknolojiyle birlikte kitle iletişim araçlarının ilerlemesi hızlanmıştır. Bu hız, bazı olumlu ve olumsuz sonuçları da beraberinde getirmiştir. Günümüzde gerek yazılı basın gerekse görsel-işitsel medya yaşamımızın çok önemli bir parçası haline gelmiştir. Bu bağlamda medya okuryazarlığı da bugün çok önemli bir kavram haline gelmiştir. Medyayı ve medya tarafından iletilen mesajları doğru okumaya yönelik çalışmaların ürünü olarak ortaya çıkmış ve gitgide karmaşık hale gelen medyayı okumamızda yardımcı bir öge olarak sunulmuştur.

Bilginin tek kaynağı haline gelen medyanın, her yaştaki insanın üzerinde çok önemli yeri ve önemi bulunmaktadır. Bu sebeple halkın medyayı doğru okuyabilmesi gerekiyor. Bilgi kaynaklarının hızla artması nedeniyle dezenformasyon çağı olarak nitelendirilebileceğimiz 20. yüzyılda böyle bir eğitim kanalı bulunmamaktaydı. Böylece bu gereksinime yanıt verecek kanallar ortaya çıkmaya başladı. Bu nedenden ötürü, insanların medyayı doğru okumalarında çok önemli bir kavram olduğuna inandığımız medya okuryazarlığını çalışmamıza konu olarak seçtik.

Çalışmamızda önce okuryazarlık kavramının tanımından söz ettik. Daha sonra okuryazarlık kavramının, tarihsel gelişim süreci içinde ortaya çıkarttığı internet okuryazarlığı, e-okuryazarlık gibi kavramlardan söz ettik. Daha sonra medya okuryazarlığı kavramının tanımından söz ettik.

Medya okuryazarlığı kavramının tanımının yapılmasının ardından, medya okuryazarlığı sürecinden örnekler verdik. Medya okuryazarlığı sürecine değinilmesinin ardından ise medya okuryazarlığı gereksinimi başlığı kapsamında medya okuryazarlığı gerçekten bir gereksinim midir? sorusuna yanıt vermeye çalıştık.

Medya okuryazarlığı gereksinimine değinilmesinin ardından medya okuryazarlığının tarihsel süreç içinde gelişiminden söz ederek medya okuryazarlığının, Amerika Birleşik Devletleri'ndeki, Avrupa Birliği'ne dahil olan kıta Avrupası ülkelerindeki ve Türkiye'deki uygulamalarından söz ettik.

Dünyadaki çeşitli ülkelerdeki ve Türkiye'deki medya okuryazarlığı uygulamalarının anlatılmasının ardından medya okuryazarlığının amacından söz ettik. Medya okuryazarlığının amacı nedir? Medya okuryazarlığı gerçekten olmazsa olmaz bir kavram mıdır? Sorularının yanıtını vermeye çalıştık.

Medya okuryazarlığı kavramı diğer birçok kavram gibi tartışmaları da beraberinde getirmiştir. Biz de bu çalışmamızda medya okuryazarlığı kavramına getirilen itirazları ve bu konuda yapılan tartışmalar da değinerek bu konuda ortaya atılan fikirlere yer verdik.

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## Medya Okuryazarlığı

### Okuryazarlığın Tanımı

Okuryazarlık Türk Dil Kurumu (TDK)'nın sözlüğünde belirtildiği üzere okuryazar olma durumudur. Yani herhangi bir dilde bulunan ideogram, fonogram yada pittogram alfabelerinin karşılığında oluşan yazılı metinleri algılayabilmek ve de değerlendirebilmektir.

Okuryazarlığa akademik yaklaşım; bu yaklaşıma göre klasik literatürün anlaşılmasına, ustalıkla kullanılmasına, okuma-yazma gereçlerinin de kullanılmasına aşırı vurgu yapar. Yararcı yaklaşımın amacı ise, çağdaş toplumun temel okuma gereklerini karşılayan okurlar üretmektir. Mekanik okuma becerilerine vurgu yapar. Bu bakış, teknolojik toplumların gereklerini karşılamak üzere hazırlanan, 'işlevsel okuryazarlar'ın geliştirilmesine yöneltmiştir.

Akademik ve yararcı yaklaşımlar okuma becerilerinin kazanılmasına ve okurlara 'nesnel' olarak bakarken; bilişsel gelişim modeli, okurların, kendileri ile nesnel dünya arasında diyalektik bir etkileşim içine girmesi yoluyla, anlamın kurulmasına bakar. Bilişsel gelişim modeli gibi romantik yaklaşım da, en çok anlam kurma üzerinde odaklanan, etkileşimci bir yaklaşıma dayalıdır; ancak romantik yaklaşım, 'anlam'a, onun okur tarafından üretildiğini ve metin aracılığıyla okur ile yazar arasındaki etkileşim içinde ortaya çıkmadığını düşünerek bakar. Romantik yaklaşım, büyük ölçüde duygusal olanı vurgular ve okumayı benliğin gerçekleştirilmesi olarak ve mutluluk veren bir yaşantı olarak görür. Özünde, okumaya romantik yaklaşım, okurlara 'nesnel' olarak bakan yetkeci eğitim bilimin çeşitleriyle bütünleşen bir ezgi sunmaktadır.

Bu yaklaşımlar okuma-yazma ile ilgili temel varsayımlarında farklılaşabilirken, hepsi de ortak bir özelliği paylaşıyorlar: İnsan öznelliklerinin kurulmasında önemli bir güç olarak dilin rolünü göz ardı ediyor. Dilin, onu kullanan insanların yaşam tarihlerini ve deneyimlerini ya onaylayabileceğini ya da yadsıyabileceğini göz ardı ediyor. §§§§§§§§§§ Buna karşılık okuryazarlık yıllar boyunca çeşitli formlar almıştır. Enformasyon okuryazarlığı, internet okuryazarlığı, e-okuryazarlık ve medya okuryazarlığı gibi yeni isimler teknolojinin gelişimi ile doğru orantılı olarak literatürümüze girmektedir.

### Enformasyon Okuryazarlığı

Enformasyon okuryazarlığı kavramı, ilk kez 1974'de Paul Zurkowski'nin, ABD' inde "National Commission on Libraries and Information Science" a sunduğu raporunda kullanılmıştır. 1980'lerde terimin kullanımı yaygınlaşmıştır. Enformasyon okuryazarlığı, yerli ve yabancı literatürde, zaman zaman bilgisayar ve enformasyon

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Poulo Freire Donaldo Makedo, **Okuryazarlık Sözcükleri ve Dünyayı Okuma**, Çev: Serap Ayhan Ankara: İmge Kitabevi Yayınları, 1998, s.210.

teknolojilerini kullanma becerilerini ihtiva eden “enformasyon teknoloji okuryazarlığı” veya kütüphanedeki bilgi kaynakları ve sunulan bilgi hizmetlerinden yararlanmayı içeren ‘kütüphane okuryazarlığı’ kavramları ile karıştırılmaktadır. Söz konusu kavramlar birbiri ile ilişkilidir ve okuryazarlık kavramı kapsamındadır fakat hiçbir ‘enformasyon okuryazarlığı’ kavramını karşılamaz. Enformasyon okuryazarlığı ya da bilgi okuryazarlığı tüm okuryazarlık türlerinin bileşkesi durumundadır.\*\*\*\*\*

İletişim özgürlüğü açısından enformasyon okuryazarlığı, düşünceleri öğrenmeyi kapsayacak şekilde geniş kapsamlı olarak tanımlanmalıdır. Günümüz koşullarında, insanlar diğer insanların düşüncelerini öğrenmek yani haber almak bakımından özgür olmayı uygun görmekte, hem de olayların gerçek yüzünü de bilmek istemektedirler.††††††††††

Ancak iletişim insanın tek başına başarabileceği bir yetisi değildir. İnsan, iletişim için topluma ihtiyaç duyar. Kişinin iletişim özgürlüğü her ne kadar tanınmış bir hak ise de iletişim özgürlüğümüzün kaynağı olan enformasyonu edinmek için birey çoğu zaman medyaya başvurmaktadır. Kişi bir bakıma iletişim özgürlüğünü kurumsal iletişim örgütlerine devretmektedir. Dolayısıyla kişinin elde ettiği enformasyon, kurumsal örgütlerin ona verdiği kurgulanmış dünyada oluşmaktadır.††††††††††

### **İnternet Okuryazarlığı**

İnternetin hayatımızın içine bu denli girmesi yeni bir kavramı da beraberinde getirmiştir: İnternet Okuryazarlığı. İnternet Okuryazarlığı; milyonlarca cildi barındıran bir kütüphane niteliğinde olan internette gezinirken öğrenmek istediklerine şekil verebilmek, bu kaynaklara hükmedebilmek ve anlamlı bir öğrenmeye varabilmek, internet üzerindeki iletişim platformlarına nasıl dahil olabileceğini bilmek olarak tanımlanabilir. İnternet, bilginin üretilmesi, depolanması, işlenmesi, iletilmesi ve kullanımında olanak sağlamaktadır. İnternet kullanıcılarının sayısı bilgi toplumuna dönüşümünde önemli göstergelerden biridir. 1995 yılında tüm dünyada 16 milyon civarında olan İnternet kullanıcılarının sayısı, 2005 yılında yaklaşık 900 milyon kişidir.§§§§§§§§§§

Günümüzde internet mecraları git gide artmaktadır. Facebook, Twitter ve Instagram gibi popüler sosyal medya platformları kullanıcılarına anında bilgi paylaşımı, paylaşımı yayma ve söylem özgürlüğünü sunmaktadır. 2005 yılından bu yana Türkiye’deki internet kullanımı 2010 yılı için aşağıdaki şekil 2’deki görüldüğü üzere incelenebilir.

Bilişim Teknolojileri Kurumu’nun 2013 yılında hazırladığı rapora göre 20.5 milyon insan Türkiye’de sosyal medya platformlarında en az birinde kullanım sağlıyor. Rakamların fazlalığı da internet okuryazarlığı kavramıyla bizi karşı karşıya getirmektedir.

\*\*\*\*\* Tandoğan, Oya Güral (2013) “Enformasyon Okuryazarlığı: ‘Değer’ Yaratma Fırsatı” **Türkiye’de bilgi hizmetleri ve yaklaşımlar: 42. Kütüphane Haftası bildiri**, <http://acikarsiv.ankara.edu.tr/browse/3359/4218.pdf>

†††††††††† Sevgi Coşkunserçe, “Medya ile yaşamayı öğrenmek Medya Okuryazarlığı”, Ankara: Yıldırım Ajans, 2007, s.24.

†††††††††† Sevim, Fatime, “Medya Okuryazarlığı, Toplumsal Cinsiyet ve Kadının Medyada Temsil”, Yüksek Lisan Tezi, 2013, s.7.

§§§§§§§§§§ Selva Ersöz ve Pınar Seden Meral, “İnternet Okuryazarlığı ve Dijital Uçurum”, Medya okuryazarlığı, Ed:Nurçay Türkoğlu ve Melda Cinman Şimşek, İstanbul:Kalemus Yayınları, 2007, s.251.

## E-Okuryazarlık

Bilgi teknolojileri alanında sürekli artan bir değişim ve gelişim söz konusudur. Güncel bir tanım ile okuryazarlık, toplumun anlamaştırdığı iletişimsel sembeleri etkili bir biçimde kullanabilme konusunda yeterlilik kazanabilmektir. Teknoloji alanında yaşanan hızlı gelişmelerin yaşandığı bu yüzyılda iletişim, bilgi, bilişim ve çoklu ortam uygulamalarının bilgisayar aracılığıyla internet ortamında sunulduğuna tanıklık etmekteyiz. Bilgi çağı olarak adlandırılan ve teknolojiler üzerine kurulu yeni toplum düzeninde toplumsal açılımlar olarak e-devlet, e-ticaret, e-hukuk gibi birçok yeni kavram tanımlanmakta ve uygulama yolları aranmaktadır. Elektronik okuryazarlık, okuryazarlık kavramının algılanmasında bir takım olgulara farklı bakış açıları ile yaklaşmayı gerektirmektedir. Öncelikle okuryazar olmak sadece basılı sembeleri ve bu sembeleri belirli normlar çerçevesinde kağıda dökebilmek değil, bir bağlam, kültür veya toplum içerisindeki değer yargılarını anlayıp uygulayabilmektir.\*\*\*\*\*

## Medya Okuryazarlığı

Medya okuryazarlığı nedir sorusunun birçok yanıtı bulunuyor. Potter'a göre medya okuryazarlığı çok yönlüdür. Görecelidir, kişiye göre değişir. İzleyici odaklıdır. Bilince ve bilinenlere göre değişir. *Herkes* belli bir oranda medya okuryazarıdır, kimse tam medya okuryazarı değildir. Kısaca karmaşık bir kavramdır, yani basit değildir.\*\*\*\*\*

Yani tek bir olgu olarak kavrayamayız. Parmak izi kadar özel bir bakış aralığına sahiptir. Bunun nedeni bilincin kavrayış biçimidir. Her bireyin yaklaşımlarının değişkenliği ile yeni formlar kazanır. Geleneksel anlamda, okuryazarlık cahillikle karşıtık kurularak cahillikten kurtuluyor birey. Geleneksel anlamdaki okuryazarlığa tarihi gelişim süreci içerisinde teknolojik okuryazarlık, görsel okuryazarlık, bilgi okuryazarlığı ve bilgisayar okuryazarlığı gibi değişik kullanımlar eklenmiştir.\*\*\*\*\*1980 yılında Amerika'da çocukları medyadan olumsuz etkilerden korumak amacıyla ders müfredatına giren medya okuryazarlığının tek bir açıklamada bütünleşmesi gerçekten zordur. Medya okuryazarlığının tanımını, Potter'ın çalışmalarında altı farklı madde olarak görüyoruz.

- Medya okuryazarı olma medyayı akıllı ve etkili bir biçimde kullanmaktır.
- Medya endüstrilerinin siyasi görüşü, gelişmesi, ekonomik tabanı ve idari yapısı konusunda bilgi sahibi olmaktır.
- Farklı kaynaklardan gelen bilginin doğruluğunu değerlendirmektir.
- Medyanın bireylerin ve toplumun inanç, tavır, davranışlar ve değerler üzerindeki etkisinin bilincinde olmaktır.
- Demokratik bir biçimde değişik medya kanalları yoluyla etkili iletişim kurmaktır.
- Yeni iletişim ortamları sürekli oluşup toplumun isteği doğrultusunda gelişmektedir. Diğer görüşlerin medya okuryazarlığı için yaptıkları tanımları inceleyebiliriz.

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\*\*\*\*\* Sevim age S: 9

\*\*\*\*\* Potter, J.W. (2001) "Media Literacy", Sage Publications.

\*\*\*\*\* Potter age s: 5

- **Alan Rubin** medya okuryazarlığı hakkında üç tanım yapmaktadır. Bunlar; analiz etme, değerlendirme ve mesajların iletimi yeteneğini içerir.

**Paul Messaris**'in tanımına göre medya okuryazarlığı medyanın toplumdaki işlevselliği ile ilgili bilgileri içermektedir. Kitle iletişim araştırmacılarından **Justin Lewis** ve **Sut Jhally** medya okuryazarlığını mesajların üretimi ve aktarımındaki kültürel, ekonomik, politik ve teknolojik boyutların anlaşılması olarak tanımlamaktadır. Rubin bu tanımlara ek olarak medya okuryazarlığının iletişim teknolojileri ve araçlarının, kullanılan kodların, üretilen mesajların ve bu mesajların seçimi, yorumlanması ve etkisinin anlaşılması ile ilgili olduğunu vurgulamaktadır. §§§§§§§§§§§§§§§§

Özetlemek gerekirse medya okuryazarlığı medyadaki mesajları doğru algılayabilmekten öte subjektiflikten uzaklaşarak objektif bir süzgeçten geçirebilmek, bilginin doğruluğunu ayırt edebilmek ve medya mesajlarını kendi ideolojilerimizden bağımsız bir şekilde değerlendirebilmektir. Aynı zamanda, medyayla karşı karşıya kaldığımızda medya mesajlarını daha iyi anlayabilmek için kullandığımız bir perspektiftir. \*\*\*\*\*

### **Medya Okuryazarlığı süreci**

Bireylerin medya kanalıyla kendilerine ulaşan bilgi karşısında, basit bir tüketici olmaktan öte aktif konuma yerleşmesi, sorumlu yurttaşlara dönüşebilmesi, medya okuryazarlığı sürecinin birincil amacıdır. Bilinçli ve aktif yurttaşlık, birey ve devletin karşılıklı hak ve sorumluluklarına göndermede bulunduğu ölçüde, bireylerin toplumun yetkin birer üyesi olmak için ihtiyaç duydukları pratiklerin bir koleksiyonu olarak tanımlanmaktadır. ++++++

Bu pratiklerin koleksiyonu içinde, bilgilenmiş ve bilgiyi kullanabilen yurttaşlar olabilmenin bir ayağını da medyanın kullanımı oluşturmaktadır. Kurumların demokratikleşmesi ve gerçek katılımcı demokrasiye doğru uzun yürüyüşleri, büyük ölçüde yurttaşların çoğunluğunun kontrolü almalarına, etkili değişimin ajanları olmalarına, rasyonel kararlar alabilmelerine ve muhtemelen medya ile aktif bağları dolayısıyla etkili iletişim kurabilmelerine bağlıdır. ++++++ Bu süreç boyunca kilit anahtar elbet medya okuryazarlığıdır. Doğru bilgiyi kullanabilmemiz adına aracı olan medya üzerinde kendi fikir süzgecimizden bağımsız ve önemlisi verilen ideoloji süzgecinden de bağımsız bir şekilde “saf” haliyle ele alabilmek sahi yurttaşlık görevlerimiz arasında yer alabilir.

§§§§§§§§§§§§§§§§ Baran, S., & Davis, D. (2003) “Mass Communications Theory: Foundations, Ferment, and Future, Thomson/Wadsworth.  
Kutoğlu, Ülfet (2005) “Medya Okuryazarlığı ve Çocuk Eğitimi, I.Uluslararası Medya Okuryazarlığı Konferansı”, Ed: N. Türkoğlu, M. Cinman Şimşek, **Medya Okuryazarlığı**, İstanbul:Kalemus Yayınları, 2007, s.99.  
+++++ Arar, Y. Bezirgan (2005) “Televizyon ve Gazete Haberlerinde ‘1 Mayıs’ Temsilleri: Bir Medya Okuryazarlığı Çalışması”, Ed: N. Türkoğlu, M. Cinman Şimşek, **Medya Okuryazarlığı**, İstanbul:Kalemus Yayınları, 2007.  
+++++ Arar age s: 2



Türk medyasında birçok örneğine rastladığımız gibi bilgi kirliliği dünya medyasında da söylem sorunu yaratmaktadır. Yakın tarihteki bir örneği ABD'nin doksanların başındaki 1.Körfez Savaşı döneminde görülmektedir.

15 yaşındaki Kuveytli bir genç kız ABD Kongre'sinde kürsüye çıkarak Kuveyt'e giren Iraklı askerlerin kuvözdeki erken doğmuş bebekleri katledişini tüm ayrıntılarıyla anlatır. Bu ürkütücü anlatımın Amerikan Kamuoyunda Körfez İşgalini onaylamaya dönük bir haklılık uyandırdığı ve Başkan Bush'un Kongreden savaş için onay almasını kolaylaştırdığı bilinen bir gerçektir. Sonradan bu genç kızın para karşılığı kiralandığı ve konuşmanın içeriğinin tamamen düzmece olduğu, kızın Kuveytli bir diplomatın kızı olduğu anlaşılır. ++++++

İkinci bir örnek olarak ünlü Goebbles Propagandası ele alınabilir. Nazi Almanyası'nda Führer karşıtlarının yaydığı "Führer hasta, ölmek üzere" propagandası çürütmek için önce onları doğrulayan Goebbles, daha sonra Führer'in canlı yayındaki konuşmasıyla dönemin karşıtlarını halk karşısında yalancı konuma düşürmüştür. Dezenformasyonun silah olarak kullanıldığı birçok medya örneği ile karşılaşılabılır. İşte tam da bu sebepler medya okuryazarlığını ihtiyaç olarak doğurmuştur.

Türk Medya Tarihinin en yüz kızartıcı dezenformasyon örneklerinden birisi 6-7 Eylül olaylarını başlatan Atatürk'ün doğduğu evin Selanik'te bombalandığı haberidir. Bu haber bir anda başlayan dalga dalga yayılan, İstanbul'un altını üstüne getiren büyük saldırı ve yağma olaylarının tetikleyicisidir. 6-7 Eylül tarihlerini kapsayan iki günlük toplumsal linçte azınlıklara ait binlerce işyeri ve ev yakılıp yıkılmış, yağmalanmış, sahipleri aileleriyle birlikte ülkeyi terk etmek zorunda kalmıştır.

1993 yılında Halk Ozanı Pir Sultan Abdal'ı anma törenleri için Sivas'ta buluşan bir grup, aydın, yazar-çizer ve yurttaş, yerel medyanın kışkırtmasıyla, iletişim ve koordinasyonu sağlamasıyla gerici odaklar tarafında saldırıya uğramış ve Madımak Otelinde diri diri yakılmışlardır. 40 aydın insanın yok edildiği bu katliamda kışkırtıcı ve dezenformatif yayınlarıyla yerel medyanın olduğu kadar, umarsız ve duygusuz yaklaşımlarıyla Ulusal Medya'nın da payı vardır +++++

Bunlar göze alındığında medya okuryazarlığı gereksinimine yön veren sebeplerle karşılaşıyoruz. Gün içerisinde duraksız bir bilgi akışına maruz kalıyoruz. Bu bilginin doğruluğunu saptayabilmemiz için kısıtlı zamanımız var. Gazeteler, dergiler, TV programları, Radyo, internet ve çeşitli bültenlerden gelen bilgi akışının geldikleri kaynaklara sahip olamıyoruz.

Bunların yansız ve objektif olduğunu kimse söyleyemez. Mesajlar birçok kişinin seçiminden ya da denetiminden geçiyor. Bazı olayları hiç medyaya yansıtıyor, görmezden geliyorlar Bazıları abartılarak ön olana çıkartılıyor

+++++ Cornwell, Rupert, (2002) "Dezenformasyonla Geçen Bir Asır" , www.radikal.com.tr/veriler/2002/01/21/haber  
+++++ Karakaya Serdar age s:4



- b. Yeteneklerin aktif kullanımı
- c. Olgunlaşma

**a. Deneyim / Tecrübe**

Medya mesajları konusunda daha çok tecrübeye sahip olduğumuz zaman onları daha iyi anlarız.

**b. Yeteneklerin aktif kullanımı**

Analiz yeteneğinin kullanılması mesajların yüzeysel anlamlarından daha derin anlamlara geçilmesini sağlar bu da mesajların daha doğru kavranmasına neden olur.

**c. Olgunlaşma**

Bu kavram özellikle çocukluk döneminde önemli bir yere sahiptir. Çocukluk döneminden yetişkinlik dönemine geçişle birlikte bilişsel kapasitemiz de gelişmektedir. Tecrübenin kişide yetenekleri üzerindeki olumlu etkisi yadsınamaz bir gerçektir. Medya okuryazarlığında da tecrübe etmek önemli bir faktördür. Medyayı ne kadar çok takip edersek bilginin doğruluğu konusunda o kadar ayırt edici özelliğe sahip oluruz. Bir diğer yandan kişinin analiz yeteneğini kullanması da bilgiyi süzmesi açısından geliştirilebilir bir açıdır. Analiz yeteneği de bireyin medya tecrübesiyle bağlantılıdır. Olgunlaşma ise bilişsel kapasitemizin gelişmesiyle çocukluk döneminden yetişkinlik dönemine kadar ilerleyen bir ivmeye sahiptir. Tecrübe ve analiz yeteneği ile sıkı bağları vardır. Medya okuryazarlığının genç bireylere yönelik, ders olarak okutulması da bu olgunlaşma sürecini yakalayabilmek adına.

**Medya Okuryazarlığı Uygulamaları**

**Amerika’da Medya Okuryazarlığı**

Amerika, Kanada, Avustralya ve İngiltere Medya Okuryazarlığı Hareketi’nin ilk filizlendiği yerlerdir. 1993 Medya Okuryazarlığı Ulusal Liderlik Konferansı’nda, Amerikalı eğitimciler, medya eğitimi için uygun hedeflerin uzamı ya da uygun öğretim tekniklerinin genişliği konusunda anlaşmaya varamamışlardır. 90’lı yıllardan itibaren medya okuryazarlığı konusu birçok iletişim bilimci tarafından tartışılmış ve bu konuda çeşitli görüşler dile getirilmiştir. Bu gelişmelerin bir sonucu olarak 1993’te Medya Okuryazarlığı Ulusal Liderlik Konferansı, 1995’te Massachusetts Medya Okuryazarlığı Koalisyonu, 1996’da Ulusal Medya Okuryazarlığı Konferansı toplantıları ve irili ufaklı birçok toplantı yapılmıştır.

Özellikle ABD’de gerçekleştirilen çeşitli toplantılarda birçok iletişim bilimci, eleştirmen, halk sağlığı uzmanları ve akademisyen medyaya maruz kalmayı bir risk faktörü olarak belirlemişler ve medya okuryazarlığını da koruyucu faktör olarak önermişlerdir. Özellikle Batı’da gün geçtikçe yoğunlaşan medya okuryazarlığı tartışmaları sonunda,







Birçok üretim etkinliğinin uygulamaya ilişkin kısıtlılıkları, bunların ilk ve orta dereceli okul öğrencilerine önerilmesini önlemektedir. Örneğin, video ve çoklu medya üretimleri, genellikle hali hazırda pek çok okulda sağlanandan daha fazla donanım, ders süresi, personel ve öğretmen eğitimi gerektirmektedir\*\*\*\*\*

Gündelik yaşam metinlerinin, toplumsal bilgi nesnelere olarak kurulduklarında, öğrenci ve öğretmenlere geleneksel disiplinlerin ve konu alanlarının sınırlarının ötesine geçerek metinsel, tarihsel ve ideolojik analizleri birleştirme olanakları sağlayacağı iddia edilmektedir. Medya okuryazarlığı eğitiminde popüler kültür vurgusu, eleştirel düşünme biçimi ile enformasyon okuryazarlığı, bilgisayar okuryazarlığı ve basılı materyal okuryazarlığının dahil olduğu diğer kavramlardan hangi konularda farklılaştığına odaklanmalıdır.\*\*\*\*\*

Eğitimciler, medya okuryazarlığının, devlet okullarındaki katı kurumsal uygulamaları değiştirmek, okullarda ticari sponsorluklarla gerçekleşen medya kullanımını durdurmak, devlet televizyonuna, yerel erişime veya alternatif medya sanatlarına desteği artırmak ve medya sahipliği ile ilgili olarak yayın ve içerik değişiklikleri yapmak gibi bir dizi ilerlemeci politik amacı gerçekleştirmek için hizmet edebileceğini öne sürmüşlerdir. Ancak, bir grup eğitimci ise medya okuryazarlığı uygulamalarını, öğrencilerin ırkçılık, cinsiyetçilik ve şiddete ilişkin tutumlarındaki toplumsal değişimleri hızlandırma aracı olarak kullanmayı amaçlamaktadır. Dewey'in eğitimin sosyal ilerlemenin ve reformun temel yolu olduğuna ilişkin iddiasını kabul eden eğitimciler, hâlâ medya okuryazarlığı ile ilgili bilgi, beceri ve tutumların basit bir biçimde başka amaçlara götüren araçlar olarak değil, bağımsız hedefler olarak anlaşılması gerektiğine inanmaktadırlar.

Bazı eğitimciler medya okuryazarlığı becerilerinin evde ebeveynlerce geliştirilmesi gerektiğini vurgulamışlardır. Medya okuryazarlığından beklenen amaçların, hedeflerin ve sonuçların çeşitliliği, doğal olarak okullardaki çalışmaların etkililiğini sınırlandırmaktadır. Medya okuryazarlığı programları sıklıkla dışarıdan gelen danışmanların yardımıyla sunulur, yöneticiler tarafından okul bölgesi içinde korunur, öğretmenler, öğrencilerin ve ebeveynlerin istekleri doğrultusunda sorumluluklarını basite indirgemeye başladıkça da canlılığını kaybeder\*\*\*\*\*

Medya okuryazarlığı kavramları görüşünü tüm müfredat için ve bütünleştirici bir biçimde öne sürenler, metinleri sorgulama objeleri olarak kullanmanın önemini ve disiplinler ve konular arasındaki bağlantıları değerlendirmek için çok boyutlu fırsatlar olarak medya çözümlemesinin ve üretim etkinliklerinin değerini belirtmektedirler. Medya okuryazarlığının ayrı bir konu olarak öğretilmesi gerektiğini savunanlar ise temelde eğitimcileri gözlemlemenin,

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Fakültesi Dergisi, yıl: 2004, cilt: 37, sayı: 1, ss.127

\*\*\*\*\* Hobbs , Reene (1998) Medya Okuryazarlığı Hareketinde Yedi Büyük Tartışma, Ankara Üniversitesi Eğitim Bilimleri

Fakültesi Dergisi, yıl: 2004, cilt: 37, sayı: 1, ss.128

\*\*\*\*\* Derya Tallen, "Halk Eğitimi Örneği Olarak Medya Okuryazarlığı" (02.05.2008), Atatürk Üniversitesi Kültür Merkezi'nde gerçekleştirilen Konferans Sunumunun Tam Metni

\*\*\*\*\* Hobbs , Reene (1998) Medya Okuryazarlığı Hareketinde Yedi Büyük Tartışma, Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, yıl: 2004, cilt: 37, sayı: 1, ss.130

okullarda çalışmanın ve sınıf pratiği gerçeklerine yakın olmanın bir sonucu olarak, pragmatik bir seçenek olmasından dolayı bu fikre varmaktadırlar.

Geçen zamanla birlikte çok sayıda medya şirketinin, öğretmenler için medya okuryazarlığı uygulamalarını da içerecek biçimde, teknolojinin ve medyanın eğitimde kullanımını ele alan programlar geliştirdiği gözlenmektedir. Amerikan Vakfı Gazeteler Birliği, öğrencilere, yerel gazeteleri medya okuryazarlığı kavramlarını kullanarak analiz etmelerinde yardımcı olmak için müfredat materyalleri üretmiştir. Cable in the Classroom dergisi, sık sık öğretimlerinde medya okuryazarlığı kavramlarından yararlanan öğretmenlerin çabalarını vurgulamaktadır ve bu dergi, okullara, kablolu TV şirketleri tarafından yaygın olarak dağıtılmaktadır. KNOW-TV, basılı ve video halindeki materyallerle birlikte öğretmen eğitimi müfredat kaynağıdır. Bu kaynak, öğretmenlerin, sınıfta, kurgusal olmayan televizyon programcılığını çözümlmelerine yardımcı olmakta ve The Learning Channel tarafından desteklenmektedir. Bu alanda en iyi bilinen kaynak, Ulusal Ebeveyn-Öğretmen Birliği (National Parent-Teacher Association) ve Ulusal Kablolu Televizyoncular Birliği (National Cable Television Association) tarafından desteklenen Aile ve Topluluk Eleştirel İzleme Projesi'dir (Family and Community Critical Viewing Project). Bu proje, medya okuryazarlığının temel kavramlarını medyada şiddetin incelenmesi konusu ile birbirine bağlayan bir ebeveyn eğitim programıdır. Proje kapsamında bugüne değin ABD'de yaklaşık 100.000 ebeveyne ulaşmıştır.  
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### **Medya Okuryazarlığı Hakkında Tartışmalar**

Medya okuryazarlığı kavramı çıkışıyla beraber akademik çevrede ve diğer eğitimci çevrelerinde birçok tartışmaya konu olmuştur. Ancak bu tartışmalar, medya okuryazarlığının kavramına değil de daha çok eğitim alanında kullanılma şekillerine yönelik olmuştur. Bunlar bir takım soruların sorulmasına sebebiyet vermişlerdir. Eğitimciler arasında bakış açılarının çeşitliliği, ortaya çıkan medya okuryazarlığı hareketi için bir güç kaynağı olarak mı hizmet etmektedir, yoksa temel olarak, medya okuryazarlığı gibi genişletici ve istikarsız bir kavramı tanımlama ve yayma çabalarının problematik doğasını mı göstermektedir?++++

1995'de, Massachusetts'den bir grup eğitimci, akademisyen, sanatçı ve eylemci, Massachusetts Medya Okuryazarlığı Koalisyonu'nu (Massachusetts Coalition for Media Literacy) kurmak için bir araya gelmişlerdir. Devlet televizyon istasyonu WGBH'de düzenlenen ve Massachusetts Beşeri Bilimler Vakfı'nın (Massachusetts Foundation for the Humanities) ev sahipliği yaptığı bir dizi toplantıda, çeşitli hedeflerin, güdülerin ve öğretimsel uygulamaların doğurduğu çatışmalar açığa çıkmıştır. Bazı kişiler, bazı katılımcıların yorumlarında dile getirilen

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+++++ Hobbs , Reene (1998) Medya Okuryazarlığı Hareketinde Yedi Büyük Tartışma, Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, yıl: 2004, cilt: 37, sayı: 1, ss.133-134

+++++ Hobbs , Reene (1998) Medya Okuryazarlığı Hareketinde Yedi Büyük Tartışma, Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, yıl: 2004, cilt: 37, sayı: 1, ss.122-140



Popüler ve magazin içerikli habercilik anlayışını benimseyen bir televizyon kanalı bir haberi kamuoyuna sunarken kendi yayın anlayışı, yayın ilkeleri, ticari çıkarları doğrultusunda sunmaktadır. Devlet söyleminin temsilcisi olan bir televizyon kanalının haberlerinde ise hükümet söylemlerinin belirginleştiğini görülebilmektedir.

Medya organları politik duruşu ile bağlantılı olarak kendi olay merkezini oluşturmaktadır. Kendi olay merkezi çerçevesinde de kendi aktörlerini yaratmaktadır. Bu tür bir televizyonculuk anlayışı bilgi saptırmalarına yol açmakta ve insanların kandırıldığı, yanlış yönlendirildiği, yanlış bilgilendirildiği bir kamuoyu ortamı yaratmaktadır.

Böyle bir ortamda medya okuryazarlığı kavramının gelişmesi büyük önem taşımaktadır. Tüm dünyada olduğu gibi Türkiye’de de medya okuryazarlığı kavramının gelişmesi gerekmektedir. Medya okuryazarlığına duyulan gereksinim ve bu gereksinim doğrultusunda insanların eğitilmesi gerekmektedir.

Bireylerin, kitle iletişim araçlarında verilen mesajların olumsuz etkilerinden korunabilmesi ve olayları medyanın gözünden değil de kendi bilinçlerini kullanarak kavrayabilmeleri için medya okuryazarlığı kavramının gelişmesine ciddi biçimde gereksinim duyulmaktadır.

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# Mega Üniversiteli Ülkelerin Benzerliklerine Göre Gruplandırılması

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## Özet

Mega Üniversiteler, öğrenci sayısı yüz binden fazla olan yükseköğretim kurumlarıdır. Dünyada 25 ülkede 57 mega üniversite bulunmaktadır. Bunlardan birisi de Türkiye'dir. Ülkemizde Anadolu Üniversitesi bir mega üniversitedir. Biz bu çalışmamızda Mega Üniversitelerin olduğu 23 ülkeyi, 2011 yılı itibarıyla Bilgi Toplumu, Nüfus ve Bilgi ve İletişim Teknolojileri değişkenlerini ele alarak inceledik. Çok Boyutlu Ölçekleme (Multi Dimensional Scaling) analizini kullanarak bu ülkeleri benzerliklerine göre gruplandırdık. Analizimizin sonucunda ele aldığımız değişkenlere göre Amerika en iyi durumda olan ülkedir. Onu İngiltere ve Güney Kore takip etmektedir. Türkiye'nin en fazla benzerliğinin olduğu ülke Arjantin'dir. Birbirine en uzak ülkeler Nepal ve İngiltere'dir.

Anahtar Kelimeler: Mega Üniversite, Bilgi Toplumu, Population, Bilgi ve İletişim Teknolojileri, Çok Boyutlu Ölçekleme

## Grouping The Mega University Countries According To Their Similarities

### Abstract

The mega Universities are higher education institutions with more than one hundred thousand students. There are 57 mega universities in 25 countries. Anadolu University in Turkey is a mega university. We examined 23 mega university countries as of year 2011, by addressing the variables of Information Society, Population and Information and Communication Technologies. By using Multidimensional Scaling analysis we grouped these countries according to their similarities and we concluded that America is in the best condition and followed by UK and South Korea. Argentina is the country of greatest similarity with Turkey. The most distant countries are Nepal and UK.

Keywords: Mega University, Information Society, Population, Information and Communication Technologies, Multi Dimensional Scaling

### 1. Giriş

John S. Daniel Mega Üniversiteler ve Bilgi Medyası kitabında. "Son yedi günde dünyanın herhangi bir yerinde yeni bir üniversite kampüsü kapılarını öğrencilere açmış olmalı. Gelecek hafta yine farklı bir yerde bir başka üniversite faaliyete geçmiş olmalı" demektedir. Üniversite fikrinin çıkmış olduğu bin yılda dünya genelindeki nüfus artışının üniversitelerin öğrenci alım kapasitelerindeki artıştan daha fazla olduğu önemli bir gerçektir. Böyle bir nüfus artışı karşısında, her hafta oldukça büyük ölçekli bir üniversitenin, yükseköğrenime katılma oranlarını karşılayabilmek için açılmış olması gerekmektedir. Ancak yeni üniversitelerin bu sıklıkla kurulamadığını biliyoruz ve maalesef

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dünya genelinde önümüzde üniversiteye giriş krizi bizleri beklemektedir (Coomb, 1985; Daniel, 1998). Öğrenimin diğer kademelerinde de benzer sorunlar bulunmaktadır.

Nüfus artışı ile birlikte eğitim ve öğrenime olan talep artışı dünyada mega üniversitelerin oluşumuna uygun zemin hazırlamıştır. Hiç kuşkusuz, bu üniversitelerin geniş kitlelere eğitim ve öğretimi ulaştırabilmesi için bilgi ve iletişim teknolojilerinden ne kadar çok yararlanması gerektiği de önemli bir başka konu olarak karşımıza çıkmaktadır.

Bu açıdan çalışmamızda, önce dünyadaki mega üniversiteleri, bu üniversitelerin bulunduğu ülkeleri ve bu ülkelerdeki mega üniversite sayılarını belirledik. Daha sonra, ülkeleri mega üniversiteler dışında nüfus artış oranları, bilgi toplumu, bilgi ve iletişim teknolojileri durumlarını da dikkate alarak değerlendirmeye çalıştık. Bu amaçla, ülkelerin bu değişkenlere göre benzerliklerini ve farklılıklarını ortaya koyabilmek için çok değişkenli istatistiksel tekniklerden biri olan çok boyutlu ölçekleme (ÇBÖ) analizini kullandık. Çalışmamızda kullandığımız 2011 yılı verilerini, Dünya Bankası'nın (World Bank) internet sitesinden elde ettik.

## 2. Mega Üniversiteler, Bilgi Toplumu ve İletişim Teknolojileri

Dünyanın birçok yerinde her tür öğrenim ve eğitime olan talep son yıllarda kararlı bir biçimde artış göstermektedir ve muhtemelen bu talep, gelecekte de artarak devam edecektir (Coombs, 1985; Daniel, 1998). 21. Yüzyılda da dünya nüfusu aynen artmaktadır. Toplumlar ve hükümetler okullaşma oranlarını ve bireylere yeteneklerin kazandırılması konusunda daha yüksek beklentilere girmektedirler. Sanayileşen dünyada orta öğretim sonrası öğrenim ve eğitime olan talep artmaya devam etmektedir. Dünyada özellikle gelişmekte olan ülkelerde, doğum oranlarının yüksek olması bu ülkeleri evrensel ilköğretim imkânlarını sağlamak ve daha büyük oranlarda orta öğretime ve yükseköğretime giriş imkânlarını arttırmak için daha fazla uğraşmak zorunda bırakmaktadır.

Yükseköğrenim bu sorunlar nedeniyle değişmeye başlamıştır. 20. yüzyılın son çeyreğinde yeni bir tür üniversite ortaya çıkmıştır ve bu olgu tüm üniversitelerin yapabilecekleri yenilikler konusunda dersler ortaya koymuştur. Bu yeni tür; uzaktan eğitim yapan üniversitelerdir. Bu yeni üniversitelerin bazıları bugün ancak 10 yıllık olurken çok büyük çaplarda öğrenci sayılarına ulaşmışlardır.

Mega üniversite tanımı, şu üç kriteri bir araya getirmektedir: Uzaktan Eğitim, Yükseköğrenim ve Öğrenci Sayıları. Bu kriterlerin her biri kasıtlı olarak sınırlandırıcıdır.

İlk olarak her ne kadar günümüzde birçok üniversite hem uzaktan öğretimi hem de kampüs öğretimini yürütüyor olsa da, uzaktan öğretimin önceliğe sahip olduğu üniversiteler genellikle büyük öğrenci sayılarına ulaşmakta ve mega üniversitelere dönüşmektedirler. Bu büyüme ile birlikte bu kurumlar, uzaktan öğretim yaparken kullandıkları teknolojileri uygulayabilmek için yönetimle ilgili özel organizasyonları oluşturmak durumunda kalmaktadırlar.

İkinci olarak her ne kadar bir ülkede, orta öğretim ve lise düzeyinde uzaktan eğitim veren kurumlar yükseköğrenim ile aynı özellikleri paylaşıyor olsalar da, öğrenci profili, öğrenimin düzeyi ve üniversitelerin araştırmacılık misyonu bu uzaktan yükseköğretim kurumlarına ayrıcalıklı bir nitelik kazandırmaktadır.

Son olarak mega üniversiteler için, 100.000 öğrencilik bir eşik değer konulmuş olması bunlara ölçek ekonomilerinden yararlanma ve lojistik imkânlarını uzmanlaşmış biçimde kullanabilme yeteneğine sahip kurumları oluşturma imkânlarını da vermektedir.

Mega üniversiteler öğrencilerin üniversiteye girişleri ve maliyetleri konularında ortaya çıkan sorun ve krizlere güçlü bir çözüm sunmaktadır. Bunların her biri kendi ülkelerindeki yükseköğrenim öğrencilerinin büyük bir oranına hizmet sunarken, öteki örgün eğitim yapan üniversitelerin çok altında maliyetlerle bu işi sürdürebilmektedir. Örgün eğitim yapan üniversiteler için sözünü edilebilen öğrenci talepleri karşısında esnek olamama sorunu karşısında, mega üniversitelerin bu sorun ile baş edebilme konusundaki başarıları birleşik bir başarı olmaktadır. Bu kurumlar, ülke çapında yaptıkları eğitimi sıklıkla uluslararası düzeyde sunarken, öğrencilere istedikleri yeri ve istedikleri zamanı seçme şansını da verebilmektedir. Ancak, bu üniversitelerin maliyet yapıları bazen öğrencilerin seçebileceği öğretim programlarının sayılarını sınırlamaktadır.

Mega üniversitelerin tamamı; eğitim biçiminde, öğrenim harçlarında, kampüs dışında ders ve öğretim yürütme konularında bir yenileşme sağlamışlardır. Ancak bu yenileşmeler, yakın zamana kadar birçok ülkede düşük bir statü

olarak algılanmıştı. Nitekim, ülkeden ülkeye mega üniversitelerin itibarı farklı olmaktadır ve bunların hiçbiri henüz uzaktan öğretimin kredibilitesini (prestij ve eşdeğerlik) garanti altına alabilmiş değillerdir. Bu konu günümüzde, mega üniversiteleri yükseköğretimle ilgili iki tartışma konusunun içerisine sokmaktadır. Bunlar eğitimin kalitesi ve teknolojinin potansiyeli konularıdır.

Rekabetçi anlamda, ülke çapında insanların hazır medya ve networklere giriş olanakları açık bir avantaj oluşturmaktadır. Burada hiç kuşkusuz şöyle bir tehlike vardır; mega üniversiteler bu tür medyayı bunların etkinliği yüzünden değil, daha çok ulaşılabilirliği açısından kullanarak yeni teknolojileri keşfetme konusunda yavaş kalabilirler. Her durumda medya ve iletişim ağları katlanarak büyürken, hükümetlerin bu arenaya (alana) müdahalesi azalmaktadır. Bu kurumlar ihtiyaç duydukları medya ağlarına daha güvenli ve bağımsız giriş sağlama konusuna önem vermektedir.

Mega üniversitelerin çoğu kamuya aittir ve kâr amacı gütmeyizler. Ancak rekabet avantajı ve üstün performans kriterleri bu kuruluşlar için özel sektör firmaları kadar önem taşırlar. Aslında bunların çoğu günümüzde kamu fonlarından daha çok öğrenci ücretleri ve öteki gelirlere bağlı hale gelmiştir.

Uzaktan eğitimin teknoloji ile birleştiği bu tür bir eğitime olan ilgi, şimdi yükseköğretim kurumlarını bir araya getirmekte böylece kampüs üniversiteleri ile mega üniversiteler bir değişimin içine girmektedirler. Teknolojinin rekabet avantajı konusundaki rolünü incelerken mega üniversiteler özellikle ilgi çekmektedir. Bunun ilginin nedeni, bu kurumların uzaktan öğretimde teknolojinin zayıf ve güçlü yönleri konusunda edinmiş oldukları tecrübeler olmaktadır. Bu mega üniversiteler, sözü edilen avantajlarının yanında gelecekteki rekabet güçleri konusunda bazı endişeler duymaktadır (Daniel, 1998).

Çalışmamızda yer alan 54 üniversiteden 9'unun adında, açık ve uzaktan eğitim ifadesi yer almaktadır. Bunların bazılarında da açıköğretim fakültesi vardır. Ancak bu üniversitelerin tamamı bilgi ve iletişim teknolojilerinden faydalanmaktadır. Bu nedenle mega üniversitelerde uzaktan eğitim teknolojileri önemli bir yer tutmaktadır.

Tablo 2.1: Mega Üniversiteler ve Ülkeleri

Ülkeler ve Kısaltmaları	Sayısı	Mega Üniversiteler
<b>Arjantin (AR)</b>	2	University of Buenos Aires National University of Cordoba
<b>Brezilya (BR)</b>	2	Estacio de Sa University Norte do Parana University
<b>Çin (CN)</b>	1	Shanghai Open University
<b>Dominik Cumhuriyeti (DO)</b>	1	Autonomous University of Santa Domingo
<b>Mısır (EG)</b>	2	Ain Shams University Cairo University
<b>Fransa (FR)</b>	1	National Centre for Distance Education
<b>Hindistan (IN)</b>	9	Indira Gandhi National Open University University of Pune Andhra Pradesh Open University University of Delhi Sikkim Manipal University Osmania University Rajiv Gandhi Technical University Uttar Pradesh Technical University Madhya Pradesh Bhoj Open University
<b>Endonezya (ID)</b>	1	Universitas Terbuka
<b>İran (IR)</b>	2	Islamic Azad University Payame Noor University
<b>İtalya (IT)</b>	2	Sapienza University of Rome University of Bologna
<b>Güney Kore (KP)</b>	1	Korea National Open University
<b>Malezya (MY)</b>	1	MARA University of Technology
<b>Meksika (MX)</b>	3	National Autonomous University of Mexico University of Guadalajara National Polytechnic Institute
<b>Nepal (NP)</b>	1	Tribhuvan University

<b>Pakistan (PK)</b>	3	Allama Iqbal Open University University of the Punjab University of Karachi
<b>Romanya (RO)</b>	1	Spiru Haret University
<b>Rusya (RU)</b>	1	Modern University for the Humanities
<b>Güney Afrika (ZA)</b>	1	University of South Africa
<b>İspanya (ES)</b>	1	National University of Distance Education
<b>Tayland (TH)</b>	1	Ramkhamhaeng University
<b>Türkiye (TR)</b>	1	Anadolu University
<b>İngiltere (UK)</b>	1	Open University
<b>Amerika (US)</b>	15	University System of Ohio State University of New York California State University University System of Georgia State System of Florida University of California Technical College System of Georgia University of Texas System Utah System of Higher Education University of North Carolina University of Wisconsin System University System of Maryland Texas A&M University System Pennsylvania State System of Higher Education Oregon University System

Kaynak: [http://en.wikipedia.org/wiki/List\\_of\\_largest\\_universities\\_by\\_enrollment](http://en.wikipedia.org/wiki/List_of_largest_universities_by_enrollment)

Uzaktan eğitimin teknolojisinde online (çevrimiçi) öğrenimin önemli bir yeri vardır. Ancak online öğrenimin temel eğitsel rasyonallitesi, öğrencilere geleneksel sınıf eğitimine veya kitap temelli uzaktan eğitime göre farklı bir yolla öğrenme imkanı sunmaktadır.

Bilgi temelli bir toplumda; analiz yapabilme ve bilgiyi uygulayabilme, bağımsız ve yaşam boyu öğrenme, problem çözebilmeye, yaratıcı düşünebilme ve takım çalışmasına uyum gibi yeteneklerin oluşturulmuş olması beklenmektedir. Bilgi temelli işgücünün eğitiminde, bunların hem konvansiyonel yükseköğrenim kurumlarının içinde hem de dışında öğrenmelerine imkân sağlayan bir yaklaşıma gerek duyulmaktadır. Bu tür öğrencilerin, analiz yapma, eleştirilerde bulunma, farklı çözümler ve yaklaşımlar sunma ve risk alabilme konularında cesaretlendirilmesi gerekmektedir. Bu tür bir eğitim, çok sayıda öğrencinin bulunduğu sınıflarda veya yaygın kitle iletişim araçları ile kolaylıkla sağlanamamaktadır (Bates, 2000). Bu nedenle özellikle mega üniversitelerin açık ve uzaktan eğitim olanaklarını geliştirmesi büyük önem kazanmaktadır.

Bilginin ve öğrenmenin doğası ile ilgili inançlar ve bilgi toplumunda ihtiyaç duyulan yetenekler ile teknoloji seçimi arasında önemli bir ilişki vardır. Örneğin, Postman (1993), teknoloji ile düşünme tavırları arasında güçlü bir bağ olduğunu iddia etmektedir. Bilimsel düşünce ağırlıklı; 'objektiflik' ve olgunun tanımlanmasını sağlayan basılı materyal ile argüman'ın analizi ve mantığı arasındaki paralelliğe bağlıdır.

Lineer düşünceden yatay düşünceye doğru hareket edersek, yaratıcılıkta bazı kazanımlar elde edilir, fakat biraz kesin yargı ve öngörü kaybedilebilir. Bu yüzden basılı ve web tabanlı öğrenmeyi aynı anda ve bir arada yürütmekte güçlü avantajlar sağlanabilir (Bates, 2005). Bu bağlamda öğrenme açısından bu güçlü avantajlara sahip olan kurumlar açık ve uzaktan eğitime sahip mega üniversiteler olmaktadır.

Daha da önemlisi; son yıllarda bilgi toplumunda gerekli olan yetenekleri geliştirme konusunda daha yapıcı yaklaşımlara doğru bir hareket başlamıştır. Bu değişim sözel anlatım ve hafızaya kıyasla bilgi yönetimi ve analizini, bilginin oluşturulması ve problem çözümü gibi konuları daha önemli hale getirmiştir. İnternet gibi teknolojiler, bu tür öğrenmeyi basılı materyal teknolojisine oranla daha kolay bir hale getirmiştir (Bates, 2005).

Daha çok hizmet-odaklı ve bilgi tabanlı ekonomilerdeki gelişme, ihtiyaç duyulan yeteneklerin yapısında ve işin organizasyonunda önemli gelişmelere yol açar. Yeni meslekler; girişimci yetenekleri, problem çözme becerisi, müşteri-odaklı iletişim benzer çok sayıda yeni ve yüksek düzeyde özelliklere sahip işgücünü talep etme

eğilimindedir. Bu yeteneklerin kazandırılması ve daha esnek iş organizasyonlarının ortaya çıkması açık bir şekilde teknolojinin gelişimiyle ilişkilendirilebilir.

Politik, ekonomik ve teknolojik gelişmelerin uluslararası paylaşımına karşı bazen güçlü bir rekabet veya karşı duruş oluşabilmektedir. Ulusal ekonomilerin birbirine bağımlı olması ve bütünleşmenin artışı sonucu ortaya çıkan bölgesel düzeyde ekonomik bütünleşmelere karşı gruplar tarafından bu girişimler yakından takip edilir ve sıklıkla eleştirel yaklaşılabilir. Bu, bölgesel düzeyde ekonomik bütünleşmelere; Avrupa, Güneydoğu Asya, Kuzey ve Güney Amerika, Doğu ve Güney Afrika gibi yerlerdeki birleşmeler örnek gösterilebilir. Eğitim ve öğretimde arzulanan ve planlanan uluslararası ve bölgesel iş birlikleri de böyle olguları içermekte ve benzer sıklıkla eleştirilebilmektedir. Ancak eğitim konusunda da başarılı uluslararası organizasyonların kurulabilmesi bilgi ve iletişim teknolojilerinin gelişmesiyle mümkün olabilecektir. Böylece eğitim ve öğretim için uluslararası ve bölgesel pazarlar oluşabilecektir (UNESCO, 2002).

Buraya kadar anlattıklarımıza dayanarak diyebiliriz ki: Bir ülkede mega üniversite, bilgi toplumu ve bilgi ve iletişim teknolojileri kavramları birbirini besleyen, destekleyen ve birbiriyle sıkı bir ilişki içinde olan çok önemli bir kavramlardır. İşte bu yüzden çalışmamızı bu üç ana kavram üzerinde oluşturduk ve analizimizdeki değişkenleri bu çerçevede belirledik.

### 3. Yöntem

Çalışmamızda çok değişkenli istatistiksel analiz tekniklerinden bir algısal haritalama metodu da olan çok boyutlu ölçekleme (ÇBÖ) analizi kullanılmıştır. Bu analizin genel amacı, mümkün olduğunca az boyutla, nesnelere yapıyı (uzaklık değerlerini kullanarak) ifade etmektir. Böylece birimler arası ilişkiler bilinmediğinde birimler arası uzaklıklar kullanılarak bu ilişkiler ortaya konulabilmektedir (Berberoğlu, 2010). Bu analiz tekniği ile çok boyutlu veri matrisindeki nesne veya bireyler arasındaki karmaşık ilişkiler daha kolay anlaşılabilir ve açıklanabilir boyutlara indirgenir. Analiz sonucunda oluşan haritada yakın olan nesnelere birbirine benzer olduklarını, uzak olanların ise benzer olmadıklarını görülmektedir (Lilien & Rangaswamy, 2003; Yenidoğan, 2008).

ÇBÖ kümeleme ve diskriminant analizi gibi Q analiz tekniklerinden biridir. Ayrıca boyut indirgeme özelliğinden dolayı R analiz teknikleri arasında yer almaktadır. ÇBÖ analizi, veriler ile ilgili olarak dağılım varsayımı gerektirmemektedir. Değişkenlerin tipine bağlı olarak hesaplanan nesnelere arasındaki uzaklıkları en az hata ile temsil edecek bir ÇBÖ gösterim uzaklıklarını herhangi bir regresyon yöntemi (linear, polinomial, monotonic) ile belirler (Kalaycı, 2008).

ÇBÖ analizi temel girdi olarak  $n(n-1)/2$  adet benzerlik bilgisini alır. ÇBÖ analizinin temel amaçlarından biri, nesnelere en iyi uyan az boyutlu uzaysal haritayı bulmak olduğu için boyut sayısının belirlenmesi önem taşımaktadır (Akküçük, 2009; Berberoğlu, 2010).

ÇBÖ analizi sonuçlarının güvenilirliği ve geçerliliği test edilmelidir. Güvenilirlik ve geçerliliğin test edilmesinde iki aşama vardır. Bunlardan birincisi,  $R^2$  olarak bilinen uygunluk katsayısının yorumlanmasıdır.  $R^2$  korelasyon katsayısının karesi olup çok boyutlu ölçekleme modelinin nesnelere ne kadar iyi temsil ettiğini göstermektedir.  $R^2$ 'nin %60 ya da üzerinde olması arzu edilmektedir. Bulguların güvenilirlik ve geçerliliğini test etmek için uygulanan ikinci aşama, gerginlik ya da stres değerinin yorumlanmasıdır. Uyumun veya uyum iyiliğinin bir ölçüsü olan, stres katsayısı ÇBÖ analizinin kalitesini göstermektedir ve geniş bir kullanıma sahiptir (Dura, Atik, & Türker, 2004).

ÇBÖ'de gözlemsel uzaklıklar ile konfigürasyon uzaklıklarının uyumluluğunun grafiği Shepard Diagramıdır. Bu Shepard diagramında, gözlenen uzaklıklar Y ekseninde ve farklılıkların değerleri X ekseninde yer alacak biçimde bir dağılım grafiği oluşturulur. Bu dağılım ister doğrusal isterse doğrusal olmayan formlarda olsun, önemli olan dağılım noktalarının birbirine yakınlığıdır. Çünkü yakınlıklar arttıkça modelin daha iyi uyum sağladığı ortaya çıkar (Kalaycı, 2008).

SPSS programı Young ve Kruskal olarak iki stres değeri vermektedir. Bu stres değeri nesnelere arasındaki uzaklıklara göre hesaplanabilmektedir. Analiz sonucunda elde edilecek stres katsayısının değerlendirilmesi, Tablo 3. 1'de yapılmıştır (Özdamar, 2004):

Tablo 3.1: Stres Katsayılarının Değerlendirilmesi

Gerginlik Oranı (stres değeri)	Analizin Kalitesi (uyumluluk)
$\geq 0,20$	Uyumsuz gösterim
0,10-0,20	Düşük uyum
0,05-0,10	İyi uyum
0,025-0,05	Mükemmel uyum
0,00-0,025	Tam uyum

### 3.1. Analizde Kullanılan Değişkenler

Aşağıdaki 2. Değişkenden 12. Değişkene kadar olan değerler Dünya Bankası verilerinden elde edilmiştir. ÇBÖ Analizimizi şu değişkenleri kullanarak gerçekleştirdik:

- Ülkedeki mega üniversite sayısı
- Elektrik iletim ve dağıtımındaki kayıplar (% olarak)
- Aylık sabit telefon ücreti tarifesi (US \$ olarak)
- Aylık mobil telefon ön ödeme (paket) tarifesi (US \$ olarak)
- Aylık sabit geniş bant internet giriş tarifesi (US \$ olarak)
- Bilgi ve İletişim Teknolojileri (BİT) malları ihracatı (Toplam mal ihracatının %'si olarak)
- BİT malları ithalatı (Toplam mal ihracatının %'si olarak)
- Güvenli internet servisleri (1 milyon kişi için)
- İnternet kullanıcıları (100 kişi için)
- Sabit geniş bant internet aboneleri (100 kişi için)
- Bağımlı yaş oranı (15 yaş altı genç nüfusun 15-64 çalışabilir yaş nüfusuna oranı)
- Toplam nüfusun %'si olarak 15-64 yaş nüfusu

### 3.2. Analizde Yer Alan Ülkeler

Analizimizde başta da belirttiğimiz üzere Mega Üniversitelerin olduğu 23 ülke yer almaktadır. Bu ülkeler Arjantin (AR), Brezilya (BR), Çin (CN), Dominik Cumhuriyeti (DO), Mısır (EG), Fransa (FR), Hindistan (IN), Endonezya (ID), İran (IR), İtalya (IT), Güney Kore (KP), Malezya (MY), Meksika (MX), Nepal (NP), Pakistan (PK), Romanya (RO), Rusya (RU), Güney Afrika (ZA), İspanya (ES), Tayland (TH), Türkiye (TR), İngiltere (UK) ve Amerika Birleşik Devletleri (US) olmaktadır. Analizde kullanılan değişkenlerin istatistiksel değerlerine ulaşmada özellikle Dünya Bankası verilerinden yararlanıldı. Ancak Bangladeş ve Guatemala'da mega üniversiteler olsa bile, ele aldığımız diğer değişkenlere ile ilgili çok fazla istatistiksel verilere ulaşılamadığı için analize dâhil edilmemiştir.

## 4. Bulgular

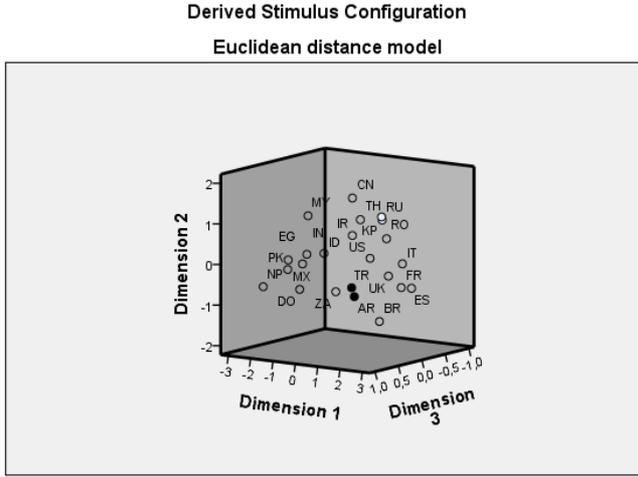
ÇBÖ'de üç veya daha az boyuttaki çözümler arzu edilmektedir. Çünkü nesnelerin ya da birimlerin izlenebilir ve irdelenebilir çözümlerini ortaya koyan grafiksel gösterim genel olarak daha algılanabilir bir gösterimdir. Boyut sayısı arttıkça algılamamın zorlaşacağı gerekçesiyle, ÇBÖ analizinde özellikle boyut sayısını önce 2 ve sonra 3 olarak belirledik. 2 boyutla oluşturulan ÇBÖ modelinin uyumunu belirten stres değerlerine bakılacak olursa, Young'ın stres değerinin 4. İterasyon sonucunda 0,11286 olduğunu görüyoruz. Daha sonra Kruskal'ın stres değerinin 0,96019 gibi yüksek bir  $R^2$  değeriyle 0,12377 olduğunu görüyoruz. Bu da Tablo 3.1'e göre modelimizin oldukça düşük uyuma sahip olduğunu bize göstermektedir. 2 boyutlu uzayda düşük uyum elde ettiğimiz için analizimizi 3 boyut ile sürdürüyoruz. 3 boyutla oluşturulan ÇBÖ modelinin uyumunu belirten stres değerlerine bakılmalıdır. Öncelikle Young'ın stres değerinin 4. İterasyon sonucunda 0,07091 olduğunu görüyoruz. Daha sonra Kruskal'ın stres değerinin 0,97664 gibi yüksek bir  $R^2$  değeriyle 0,07559 olduğunu görüyoruz. Bu da Tablo 3.1'e göre modelimizin iyi uyuma sahip olduğunu bize göstermektedir.

Farklılıklar matrisine bakıldığında, birbirine en yakın iki ülke, Pakistan ve Hindistan'dır. Günümüzde bağımsız Hindistan'ın eğitim konusundaki düzeyini tanımlarken Hint yarımadasında bugünkü Pakistan ve Bangladeş dâhil olmak üzere İngiliz yönetimi altındaki dönemde ve sonrasında eğitimdeki her gelişmenin dikkate alınması gerekmektedir (Panda, Venkaiah, Garg, & Puranik, 2006). Belirtmeliyiz ki, burada Bangladeş örneklemimiz dışındadır.

Türkiye'ye en yakın ülke Arjantin'dir. Türkiye'ye en yakın diğer ülkeler sırasıyla, Romanya, Güney Afrika, Brezilya, Dominik Cumhuriyeti, Meksika, İtalya, Mısır ve Rusya'dır. Berberoğlu (2010), 'Bilgi Toplumu ve Bilgi Ekonomisi Oluşturma Yolunda Türkiye ve Avrupa Birliği' makalesinde AB ülkeleri arasında Türkiye'nin Romanya ile yakınlığının dikkat çekici olduğunu belirtmişti. Ancak bu çalışmada ele alınan değişkenlere göre, Orta ve Güney Amerika'daki ülkelerle olan benzerlik yine dikkat çekicidir.

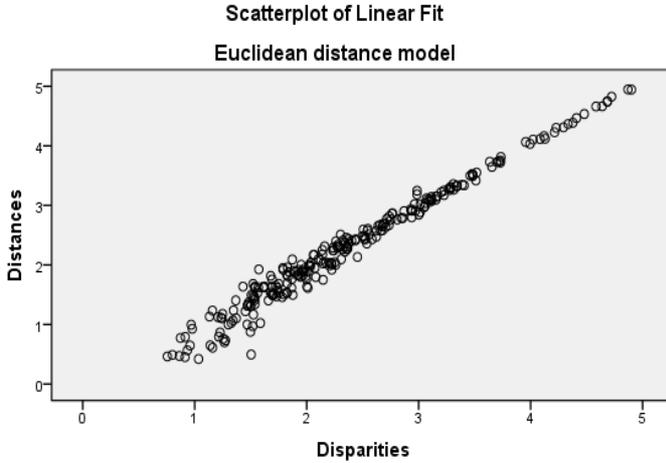
Amerika Birleşik Devletleri (ABD), sahip olduğu değerler ile bu grupta en iyi ülke konumundadır ve gruptaki birçok devletten çok farklılık göstermektedir. Ancak ABD'ye en yakın 1,254 değeriyle İngiltere'dir. Biraz uzaktan da olsa Güney Kore, ABD'yi 1,300 değeriyle ve İngiltere'yi de 1,698 değeriyle takip etmektedir.

Farklılıklar matrisine bakıldığında, birbirine en uzak iki ülke İngiltere ve Nepal'dir. İkinci olarak en uzak iki ülke Fransa ve Nepal'dir.



Grafik 4.1: Öklid Uzaklık (Mesafesi) Modeli

Grafik 4.1 yardımıyla 3 boyutlu uzayda Türkiye ve diğer ülkelerin konumları görülmektedir. Türkiye içi dolu nokta ile belirlenmiştir. Ancak grafikten de anlaşılacağı üzere Türkiye'ye en yakın ülke Arjantin'dir.



Grafik 4.2: Öklid Uzaklıklar Modelinde Lineer Uyumun Serpilme (Shepard) Diagramı

Shepard diagramına göre nesnelere arasındaki farklılıkların uzaklıklara göre doğrusal bir uyum gösterdiği Grafik 4.2'den görülmektedir. ÇBÖ analizinde uzaklık matrisinden elde edilen farklılık matrisine göre oluşturulan tahmini uzaklıkların, doğrudan verilerden elde edilen uzaklık matrisine olan benzerliğinin ölçülmesi temel amaçlardan

biridir. Grafik 4.2’de de doğrusal bir ilişkinin görülmesi, tahmini uzaklıkların gerçek değerlerle uyumlu olduğunu belirtmektedir.

## 5. Sonuç ve Değerlendirmeler

ÇBÖ’de üç veya daha az boyuttaki çözümler arzu edilmektedir. Boyut sayısı arttıkça algılamının zorlaşacağı için önce analizimizi 2 boyut kullanarak gerçekleştirdik. Düşük uyum elde ettiğimiz için boyut sayısını 3 olarak belirledik ve 11 değişkene ait 253 veri girişi yaptık. Analiz yüksek bir  $R^2$  değeriyle iyi uyum gösterdi.

Tablo 5.1: Uzaklık değerlerine göre ülkelerin benzerlikleri

Sıralama	Uzaklık Değeri	Ülkeler
1.	0,755	Pakistan (PK) ve Hindistan (IN)
2.	0,801	Romanya (RO) ve Rusya (RU)
3.	0,862	Türkiye (TR) ve Arjantin (AR)
4.	0,873	Pakistan (PK) ve Endonezya (ID)
5.	0,913	Fransa (FR) ve İngiltere (UK)
6.	0,915	Fransa (FR) ve İspanya (ES)
7.	0,934	Nepal (NP) ve Pakistan (PK)
8.	0,968	Çin (CN) ve Tayland (TH)
9.	0,978	İspanya (ES) ve İtalya (IT)
.	.	.
.	.	.
.	.	.
252.	4,869	Nepal (NP) ve Fransa (FR)
253.	4,901	Nepal (NP) ve İngiltere (UK)

Oluşturulan algısal harita yardımıyla 3 boyutlu uzayda Türkiye’nin en yakınında Arjantin olduğunu gösterdi. Bundan sonra ise, Romanya, Güney Afrika, Brezilya, Dominik Cumhuriyeti ve Meksika gibi ülkelerle Türkiye’nin yakını olduğu görüldü. Farklılıklar matrisine baktığımızda özellikle 1’in altındaki ve 4’ün üzerindeki değerlerin birbirine yakınlık olarak dikkat çekici olduğunu söyleyebiliriz. Bu değerleri de yukarıdaki Tablo 5.1’de özetlemeye çalıştık.

Türkiye’ye en yakın ülke Arjantin’dir. Türkiye’ye en yakın diğer ülkeler sırasıyla, Romanya, Güney Afrika, Brezilya, Dominik Cumhuriyeti, Meksika, İtalya, Mısır ve Rusya’dır.

Tablo 5.2: Uzaklık değerlerine göre Türkiye’nin yakın olduğu ülkeler

Sıralama	Uzaklık Değeri	Ülke
1.	0.862	Arjantin (AR)
2.	1.158	Romanya (RO)
3.	1.159	Güney Afrika (ZA)
4.	1.207	Brezilya (BR)
5.	1.243	Dominik Cumhuriyeti (DO)
6.	1.346	Meksika (MX)
7.	1.501	İtalya (IT)
8.	1.538	Mısır (EG)
9.	1.568	Rusya (RU)

Eğitim ve öğretimde uluslararası ve bölgesel iş birliklerine yönelik çabaları sıklıkla içerdiğinden daha önce söz edilmişti. Burada eğer coğrafi yakınlıklar önemli bir rol oynuyorsa, Türkiye’nin, Romanya ve daha sonra Rusya ile yakınlığı dikkat çekicidir. Dolayısıyla bu ülkelerle iş birlikleri oluşturmak gelecek açısından önemli sonuçlar doğurabilir.

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# Mental models of the school principals on “leadership”

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## Abstract

Mental models are representations of the outside world in individuals' minds. These models represent how we perceive concepts. People's understandings and perceptions of leadership can be defined through the mental models they have developed. The aim of this study is to determine the mental models of the school principals on leadership. In order to collect data, a data collection tool developed by the researchers was used. The study group was asked four open-ended questions and also asked for drawing a picture of a leader and the followers. The study group of the research was 61 school principals who work in the cities of Bursa, Samsun, Trabzon and Istanbul and attend the graduate program in Educational Administration and Supervision department. As a result of the research, the study group expressed the leadership concept mostly "directing", "managing" and "affecting". Behavioral characteristics of the leader associated with the highest rated feature is "innovative", personality traits associated with the highest rated feature is "honesty", the skills associated with the highest rated skills is "communication skills" and physical properties associated with the highest rated feature is the "charismatic". The drawings related to the leader revealed that the principals perceive the leaders mostly male and the one who is positioned in front of his followers to lead them.

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*Keywords:* mental models, leadership, school principals

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## Introduction

Interest in leadership and related research have noticeably increased over the past century. Leadership is regarded as a key for the survival, regeneration, and success of organizations which is reflected in the literature where we can come across numerous definitions of leadership. According to Senge (2000), leader is a person who is at the forefront. Leaders are able to radically change themselves and apply those changes to their organizations. Eren (2001) describes a leader as "a person who influences his or her followers and motivate them in line with their organization's goals." The common point of all those descriptions is that they emphasize the influencing and motivating aspects of leadership and concentrate on the fact that a leader cannot be considered a person isolated from his or her followers.

While different definitions of leadership have common elements, we may come across different leadership expectations if it is analyzed from the social perspective. Leadership may vary culturally and over time. Some cultures want leaders who look down on society and expect respect whereas some other cultures desire modest leaders who are a part of their community (Steer, Sanches & Nardon, 2012; Bass and Bass, 2008). Considering that individuals and their followers are different from each other, expectations and perceptions of a leader also vary. With different perceptions of leadership, people entertain some thoughts about how leadership should be. Such thoughts create a leadership model on a person's mind and he or she compares any person against that model and categorizes him or her as a leader or not (Offermann, John, & Philip 1994: 44). Mental models that people develop permit them to understand and assign a meaning to leadership and a leader just like everything else occurring in

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their surroundings.

The concept of a mental model was first used by Kenneth Craik in his book entitled *The Nature of Explanation* in 1943 (Badke-Schaub, Neumann, Lauche & Mohammed 2007). Mental models are inner notations that individuals create in order to understand the external world (Greca ve Moreira, 2000). We think and act through our mental models. Those models later constitute a basis for our perceptions, analyses, understanding, and actions (Johnson, 2008). People create a small-scale model of facts through mental models (Craik, 1943; cited by Badke-Schaub, 2007). Mental models, which we create in order to interpret our experiences and to make different phenomena more meaningful, are regarded as absolute truths in spite of the fact that it has been created by our senses rather than being facts.

According to Brewer (1987:189), mental models are special information structures which are organized in order to represent a situation by using general information. Coll (2001) says that mental models are used for deriving simpler forms of concepts and to explain scientific phenomena. According to Jansoon, Coll, & Somsook (2009), mental models show phenomena on an individual's mind so that they can be explained and described. Mental models can be categorized as physical and notional. Physical mental models represent the physical world whereas notional mental models represent more abstract situations (Johnson-Laird, 1983, cited by: Jo, 2012). A look at the relevant fields of study indicates that they mostly focus on mental models intended to understand the physical world. Studies about mental models related to leadership in the field of education management are very scarce. The only study was conducted by Ruff & Shoho (2005) in the United States. This qualitative study focused on the mental models of the principals of three primary schools and emphasized that the mental models demonstrated were different from each other. There are some key characteristics shared by mental models. They (McDaniel, 2003): 1) Contain what people believe to be true, not what is actually true; 2) Are similar to the object or notion they represent in terms of their structures; 3) Allow people to predict the consequences of their actions; 4) Are simpler than what is represented by the objects or notions. They only contain sufficient information.

Mental models affect what an individual see, react, and interpret information. These models are road maps allowing an individual to navigate in an environment that he or she perceives and observes. These road maps emphasize certain elements and pieces of information in an environment while others exclude them (Mathieu Heffner, Goodwin, Cannon-Bowers & Cannon-Bowers, 2000). Mental models serve three key objectives: they help individuals to describe, explain, and predict events in their surroundings (Klimoski and Mohammed, 1994; Mathieu et al, 2000).

The mental model of a person may be incomplete in many ways. It may even contain contradictory, unnecessary, and faulty notions (Werhane et al, 2011; Greca and Moreira, 2000; Norman, 1983). Mental models can be modified, expanded, and improved if desired as they are not inherent in our genes and have not become rigid because of past experience (Werhane et al, 2011; Greca and Moreira, 2000; Badke-Schaub, 2007). Thus, mental models can be regarded as dynamic mental structures. According to Senge (1990: 181), we can cure the major diseases of bureaucracy by understanding how mental models function. Ruff & Shoho (2005 :574) believe that the mental model theory can be used for training the managers of educational facilities because this phenomenon has the potential to increase the communication channels of individuals.

While managers do not always practice what they preach, they act in line with their own mental models (Senge, 2002). Managers' mental models regarding leadership determines their perception of leadership and their interpretation of the notion of leadership. In addition, it can serve as a compass to be used for understanding leadership attitudes. There is no way of knowing the shortcomings and faults of a mental model unless it has been described. This may have a negative effect on their subsequent understanding and practicing of leadership.

Some people may think that focusing on leadership is not conducive to understanding leadership and management because this approach is rarely used for the notion of leadership. Changing a person's way of thinking is harder than changing how they handle things. Despite this challenge, changing people's way of thinking about different situations is the most powerful and useful way of changing people's attitudes toward leadership and organizational results (Pfeffer, 2005).

This study has been organized on the theoretical assumption developed by Senge (1990: 8). "Mental models consist of deeply-seated assumptions, generalizations, pictures or images which affect the way we understand the world and how we should act." The purpose of this study is to demonstrate mental models that school principals, who are expected to act as leaders, have about leadership. We believe that the study will be important for the process of

guiding school principals because it may lead to the development of anticipated leadership traits while ensuring the discovery of complicated, incomplete or vague mental models that may be present on the minds of school principals. Thus, the mental models of school principals concerning leadership may be improved by taking the current situation into consideration during the process of mentoring school principals because they can play their leadership roles more effectively and adapt themselves to change more easily and become more empowered to change their environment if they have better mental models. Answers to the following questions were sought in order to achieve the objective of the study:

- 1) How do school principals describe leadership?
- 2) What are the characteristics of a leader from the standpoint of school principals?
- 3) Do school principals believe that leadership can be acquired later?
- 4) How could a leader contribute to a school from the standpoint of school principals?

## 2. Methodology

### 2.1 Research Model

This study has been qualitatively modeled with a view to determining the mental models of school principals regarding the concept of "leadership" and the phenomenologic pattern was used for the study. This pattern focuses on phenomena which people are aware of, but which they do not have comprehensive and detailed information about (Yıldırım and Şimşek, 2004).

### 2.2 Universe of Study

The universe of the study has been selected by using convenience sampling technique, which is among purposive sampling methods. This technique was used in order to ensure rapid collection of data. In addition, the universe of the study was easily accessible (Yıldırım and Şimşek, 2004). The universe consisted of 61 school principals enlisted in the post-graduate program on Educational Administration and Supervision in Bursa, Samsun, Trabzon, and Istanbul. All the respondents received training in leadership which had been completed prior to this study.

### 2.3 Data Collection Tool

Data has been collected by means of a data collection tool consisting of four open-ended questions which has been developed by the researchers. Opinions were received from four experts in order to prove evidence about the validity and reliability of the data collection tool and it was finalized in light of suggestions and then applied to the respondents. In addition, the respondents were asked to draw pictures of a leader and his or her followers and they drew pictures on blank papers distributed to them without any intervention by the researcher.

### 2.4 Data Analysis

The respondents' replies to the questions in the data collection tool were examined and analyzed in order to analyze research data. The purpose of the content analysis was to reach concepts and relationships that could explain the data (Yıldırım and Şimşek, 2004). Data obtained as a result of this analysis was categorized based on their similar characteristics. As regards the analysis of drawings about leaders and their followers, the respondents' drawings were examined based on their common characteristics and similar drawings were brought together and categories were formed. Sample quotes from the respondents' replies and drawings were used for analyzing the data in order to provide evidence about the validity of the study.

## 3. Findings

### 3.1 Findings obtained about the description of a leader

Replies to the question "What is your understanding of the notion of 'leader'?", the first question on the data collection tool, are presented below.

Table 1: School principals' opinions about the concept of 'leader'

Reply	f	%	Reply	f	%
Steers	22	14.37	Improves his/her organization	6	3.92
Manages	21	13.72	Gives positive energy	3	1.96

Influences	20	13.07	Determinant of organizational climate	2	1.3
Visionary	13	8.49	Role model	2	1.3
Motivates	10	6.53	Initiator	2	1.3
Guides	10	6.53	Leads to a goal	2	1.3
Farsighted	10	6.53	Shapes future	2	1.3
Leads	9	5.88	Artist of his/her organization	2	1.3
Followed by others	9	5.88	Creates synergy	1	0.65
Authoritarian	6	3.92	Consulted	1	0.65
			<b>Total</b>	<b>153</b>	<b>100</b>

The replies were analyzed and some statements of the participants about the description of leadership are (Steers (K20): "A leader is a person who steers society."; Manages (K52): "A leader is an individual who ensures that all existing resources are used in the most efficient manner in the best interests of persons receiving services from the agency and that the agency functions without any interruption.")

### 3.2 Findings about the hallmarks of a leader

The school principals' replies to the second question i.e. "What are the characteristics of a leader from your viewpoint" have been categorized under four titles. Replies given by the school principals about leadership characteristics were categorized as "behavioral characteristics", "personality traits", "skills" owned, and "physical characteristics" and each category is presented on different tables.

Table 2: School principals' opinions about leaders "behavioral characteristics"

Sub-category	f	%	Sub-category	f	%
Innovative	15	20.27	Desirous to learn	4	5.40
Takes risks	12	16.21	Open	3	4.05
Solution oriented	10	13.51	Inquisitive	3	4.05
Rational	7	9.45	Democratic	3	4.05
Industrious	5	6.75	Principled	1	1.35
High moral standards	5	6.75	Takes initiative	1	1.35
Tolerant	4	5.40	Recognizes accomplishment	1	1.35
			<b>Total</b>	<b>74</b>	<b>100</b>

A total of 14 characteristics were listed in "behavioral characteristics" category. "Innovative" ranks first with 20.27% among the characteristics in sub-categories. "Takes risks" ranks second with 16.21% and "solution oriented" comes third with 13.51%.

Table 3: The school principals' opinions about leaders "personality traits."

Sub-category	f	%	Sub-category	f	%
Honest	16	20.77	Self-confident	4	5.19
Fair	12	15.58	Resolved	4	5.19
Trustworthy	9	11.68	Open	3	3.9
Intelligent	7	9.09	Coherent	3	3.9
Frank	6	7.79	Idealist	2	2.6
Courageous	5	6.49	Modest	1	1.3
Creative	4	5.19	Perfectionist	1	1.3
			<b>Total</b>	<b>77</b>	<b>100</b>

A total of 14 leadership characteristics were listed in "personality traits" category. Honesty ranks first with 20.77%, one of the characteristics listed in sub-categories. "Fair" ranked second with 15.58% and it was followed by "trustworthy" with 11.68%.

Table 4: The school principals' opinions about "skills" of leaders

Sub-categories	f	%
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Strong communication skills	26	33.33
Strong management skills	21	26.92
Knowledgeable	15	19.23
Visionary	8	10.25
Strong empathy skills	6	7.69
Capable of using technology efficiently	2	2.56
<b>Total</b>	<b>78</b>	<b>100</b>

A total of six leadership characteristics were listed in "skills" category. "Strong communication skills" ranked first with 33.33% among skills in the sub-categories. It was followed by "strong communication skills" with 26.92% and "knowledge" with 19.23%. Based on a review of the responses, some opinions of the respondents about the description of leadership are (Strong communication skills (K18): "A leader is a good orator and can use his voice and body language effectively."; Strong management skills (K31): "He or she can use resources in an effective and efficient manner"; Knowledgeable (K7): "A leader is a wise person who is knowledgeable in his or her field".

Table 5: The school principals' opinions about "physical characteristics" of leaders)

Sub-category	f	%
Charismatic	22	88.0
Good physical appearance	3	12.0
<b>Total</b>	<b>25</b>	<b>100</b>

A total of two leadership characteristics were listed in "physical characteristics" category. "Charismatic" ranked first with 88.0 % among skills in the sub-categories. It was followed by "physical appearance" with 12.0 %.

### 3.3 Findings about the possibility of "acquiring" leadership

Responses to the question "Could everybody become a leader? Why?" which was the third question on the data collection tool.

Table 6: The school principals' opinions about the possibility of acquiring leadership

Responses	Reasons cited	f	%
Possible	Leadership is a phenomenon that can be learned.	7	11,5
	Leadership is situational.	2	3,3
Not possible	Leadership is an innate skill.	31	50,8
	Leadership is a personality trait that only a few people have.	13	21,3
	Leaders have superior skills as compared with other people.	8	13,1
<b>Total</b>		<b>52</b>	<b>100</b>

According to responses to question "Could everybody become a leader?", 14.8 % of the respondents said that everybody could be a leader whereas 85.2 % said it was not possible. Some of the responses to the questions are (Everybody can become a leader because: K (34): "What really matters is the existence of conditions permitting a person to display leadership characteristics."; K (23): "Leadership is a phenomenon which is not innate, but acquired during one's lifetime. A person can become a leader if he or she changes and improves his or her abilities." ) (Every one cannot become a leader because: K (6): "Character is important for leadership and not everyone has a character needed for leadership."; K (27): "Leadership is a qualification which can partly be acquired at birth and turn into a fully-fledged trait by hard work and efforts." )

### 3.4 Findings about a leader's potential contributions to the school

Responses to question "What are a leader's contributions to a school", the fourth one on the data collection tool, are presented below:

Tool 7: The school principal's opinions about a leader's contribution to a school

Statements	f	%	Statements	f	%
He/she will improve the school.	21	15.10	He/she finds rapid solutions to problems.	5	3.60
He/she manages the school in the best manner.	20	14.38	He/she ends conflicts and ensures harmony.	4	2.88

He/she motivates employees.	18	12.95
He/she creates a positive atmosphere in the school.	12	8.63
He/she increases academic achievement.	10	7.19
He/she increases effectiveness and efficiency at the school.	10	7.19
He/she transforms the school.	7	5.03
He/she develops a vision.	6	4.31
He/she creates a culture.	6	4.31

He/she initiates innovations at the school.	4	2.88
He/she guides employees.	4	2.88
He/she ensures that democracy takes root at the school.	4	2.88
He/she serves as a good role model for teachers and students.	3	2.15
He/she ensures that teachers improve their professional skills.	2	1.44
He/she can see the future and takes action before a problem occurs.	2	1.44
He/she transforms the school into a center of gravity.	1	0.71
<b>Total</b>	<b>139</b>	<b>100</b>

In response to the question "How could a leader contribute to a school?", 15.1% of the respondents replied "He/she will improve the school." It was followed by 14.4% who replied "He/she manages the school in the best manner" and 13% who said "He/she motivates employees."

### 3.5 Findings related to drawings about the concept of "leader."

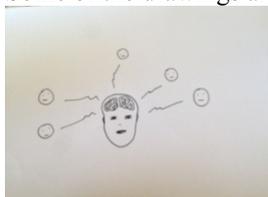
Table 8 shows the categories comprising the school principals' drawings reflecting their mental models about leadership and related distribution of percentages and frequencies.

Table 8: Categories created by the respondents' drawings about the concept of "leader".

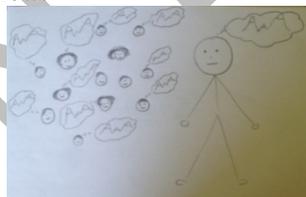
Categories	f	%
Leading and guiding	31	50.82
Wields authority	19	31.15
Brain of the organization	9	14.75
Visionary	2	3.28
<b>Total</b>	<b>61</b>	<b>100</b>

An examination of the table indicates that the drawings made by the school principals in order to explain the concept of "leader" are put into four categories. "Leading and guiding" accounted for 50.8% of the drawings among those categories as compared with "visionary" which was at the bottom of the list with 3.28 %. The percentage of the respondents who pictured the leader as an authoritative person was 31.15 % which is striking.

Some of the drawings are below:



Drawing 1 (K61):  
Brain of the organization



Drawing 2 (K37):  
Visionary



Drawing 3 (K2):  
Leading and guiding



Drawing 4 (K59):  
Wields authority

The common characteristics of the drawings were that the respondents pictured a leader noticeably away from his or her followers and taller and physically stronger than them. Another remarkable characteristic of the drawings was that all the leaders were drawn as men although there were women among their followers. Sample drawings are given below.

## 4. Conclusion and discussion

An examination of the findings pertaining to the description of leadership indicates that the mental models created by the school principals do not focus on a single point and that they consist of different models. According to

Argyris (1993), the accuracy of a mental model created by the members of an organization about the same phenomenon would not be sufficient. The same mental model should be shared among its members. This fact shows the power of non-verbal communication (Ruff & Shoho, 2005 :558). Thus, different mental models observed among the school principals show they have different opinions about the same phenomenon.

One of the key findings of the study is mental models created by the school principals, which we could describe as "inaccurate." One could say that the term "managing", the second most important characteristic among all, and "authoritarian", which ranked tenth, were different from other descriptions because leadership is different from management and it is a phenomenon based on volunteering and influencing by personal skills rather than authority (Ergeneli, 2006; Kirel, 1998: 185; Hass & Tamarkin, 2000: 83; Erdoğan, 1991: 332; Başaran, 1998: 87 & Benis, 1994: 102-110). Considering that all respondents had received training about leadership, it is a noteworthy finding that those concepts are among the descriptions of leadership. It also shows that there are inaccurate mental models regarding leadership among the school principals.

Another key finding of the study is the finding that it is possible to acquire leadership. An examination of those findings indicate that only a small portion of the respondents (14.8 %) believe that leadership is a characteristic that one could acquire later. Aside from what leadership actually is, this is a fairly problematic situation in terms of the development of schools because educational administrators who have this "inaccurate" mental model should not be expected to display leadership attitudes at their schools in the future if they have not regarded themselves as a leader so far. In addition, they would neither be expected to transfer their leadership behavior to teachers assigned to their schools because mental models result from observation, evaluation, design, and application processes (Kim, 1993:39). School principals can switch to the application phase by using those models that they have created during the process of observation and evaluation. They would act according to that mental model that they have and give that impression in their surroundings.

Another interesting aspect of the respondents' drawing is that the leader is pictured away from his followers. The fact that the leader was drawn as an authoritative figure separated from his followers might have originated from the fact that power distance is high in the Turkish culture (Paşa, 2000) where followers may expect autocratic and protective attitudes from their leaders (Hofstede, 1985).

In conclusion, this study analyzes the concept of leadership based on the assumption of the significance of a mental model and it represents the first step in its field. In the future, it will be possible to take a closer look at the concept of leadership by using the mental model theory and to conduct studies on the effectiveness of mental models and to examine the relationship between a school's efficiency and mental models formed by school principals about leadership. Training programs conducted for educating school principals should include educational events to form accurate mental models. In addition, effort should be made to ensure that those mental models are adapted as common models.

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# Metacognitive awareness and its relation to academic achievement and teaching performance of pre-service female teachers in Ajman University in UAE

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## **Abstract:**

This study examined the relationship between metacognitive awareness and academic achievement, and its relation to teaching performance of pre-service female teachers in Ajman University in United Arab of Emirates. The sample consist of (75) pre-service of Professional Diploma Female Students in Ajman University in UAE. A survey used in this study was the metacognitive Awareness inventory (MAI) and Teaching Performance Checklist. Findings assert the importance of metacognition in learning. It recommends that college professor have to adopt teaching technique and strategies in presenting information to students in a way that encourage use of metacognitive skills that has an effective impact on the academic achievement and teaching performance.

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*Keywords:* Metacognitive Awareness, Academic achievement, Teaching performance, Knowledge of cognition, Regulation of cognition.

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## **Metacognition:**

Metacognition has been one of the most concentrated concepts among researches in the field of psychology. Over the last 40 years, many definitions has been proposed for it. Flavell (1979) conceptualized metacognition as “knowledge and cognition about cognitive phenomena” .simply stated metacognition is thinking about thinking. Metacognition refers to one’s ability to know and regulate cognitive processes (Schraw and Moshman, 1995). It also has been described as the ability to calibrate or monitor one’s performance and chart learning plans based on learning and performance estimate (Dunlosky and Thiede, 1998). It can future be defined as what we know about our cognitive processes and how we use these process in order to learn and remember (Ormrod, 2006).

Modern studies discussed metacognition as comprised of two major components: metacognitive knowledge and metacognitive regulation. These two components have been theorized to be related to one another (Brown, 1987; Flavell, 1987; Schraw and Dennison, 1994). Metacognitive knowledge can be described as what we know about our own cognitive processes. It may be considered declarative procedural and conditional knowledge as sub components of metacognitive knowledge (Schraw and Moshman, 1995). Declarative knowledge involves what we know about how we learn and what influences how we learn. Procedural Knowledge is our knowledge about different learning and memory strategies procedures that work best for us. Conditional knowledge is the knowledge we have about the conditions under which we can implement various cognitive strategies. As a whole our knowledge refers to what we know about we learn, what we know about skills and strategies that work best and most effective and how and when to use such skills and strategies (Schraw and Dennison, 1994). Metacognitive regulation can be thought as the actual activities in which we involve in order to facilitate learning and memory, it refers to activities that control one’s thinking and learning. (Schraw and Moshman, 1995). Metacognitive regulation can be divided into three component

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activities that are: planning, monitoring and evaluating. Planning involves just that planning out a cognitive task by selecting appropriate strategies and cognitive resources. Monitoring involves the awareness of our progress through a cognitive task and our ability to determine our performance. Evaluating involves taking a look at the outcome and determining if the learning outcome matches our learning goals and if the regulation processes we used were effective (Schraw and Moshman, 1995).

### *Metacognition and academic achievement*

Metacognition plays an important role in education because it helps learner to be capable of develop a plan, monitor and evaluate how much it's effective, that means metacognition helps the learner to be more involved in learning process (Costa and Kallick, 2001). A lot of studies report that there is difference in the metacognition of effective learners and ineffective learners, the effective users of metacognition are more strategic, more likely to use problem solving heuristics and better at predicating their test score (Garner, R & Alexander, 1989; Pintrich & DeGroot, 1990; Vadhan, V & Stander, P, 1994). Many Researches have examined the relation between metacognition and academic achievement. They show that students with high academic achievement demonstrate high level of metacognitive awareness (Shraw, 1997; Taebee et.al, 1998; Martini and Shore, 2007; Coutinho, 2007; Turan and Demirel, 2010). A variety of studies report that students with good metacognition demonstrate good academic performance compared to students with poor metacognition, they consider metacognition as a strong predictor of academic success (Dunning, Johnson, Ehrlinger and Kruger, 2003; Sperling et.al, 2004; Young, A and Fry, Jan.D, 2008; Uwzurike and Ndidiamake, R, 2010; Kocak & Bayaci, 2011; Al-Jarrah, A and Obeidat, A, 2011). These studies shown there is positive influence for training on metacognitive strategies and students with poor metacognition may benefit from these training to improve their metacognition and academic performance (Ponnusamy, 2002; Rezvan, Ahmadi and Abedi, 2006; Saravanakumar and Mhan, 2007). On the other side many studies shown that negative relation between metacognition and academic achievement (Justice and Dorrان, 2001). Cubukcu (2009) found no difference between control and experimental group (that taught using metacognitive strategies) on students' achievement (Cubukcu, 2009).

#### *1.2. Metacognition and teaching performance*

Variety of studies shown that there is a relation between metacognition and teaching performance for pre-service teachers. Pre- service teachers with high level of metacognitive awareness were more active in teaching process. Most studies in this area using training programs and exam the impact of these programs on teaching performance between two groups ( control group - experimental group which has been taught using metacognitive strategies ), the result shown that experimental group was more active in teaching process, have confidence, more socially with their students, using different and suitable teaching strategies and have tendency to use and practice thinking skills in their class (Crew, T.B, Carpentre, R, 2005 ; Crowther, Cannon, 2004).

### **Problem**

Overall the finding in researches that reviewed above indicate that: while variety of studies shown a positive correlation between metacognition and academic achievement, other studies reported that no correlation between metacognition and academic achievement. Also other studies shown that relationship between metacognition and teaching performance. But most of these studies were in non –Arab countries. Arab countries and Gulf society has special educational and Cultural characteristics, we need to know more information about gulf pre-service female teachers and their learning skills by analyzing level of their metacognitive awareness also skills they have and they need, pre-service female teachers had much to do to their students in the future, for instance effective teachers who

are capable of making their students productive and active learners by helping them to have responsibility on their learning (Williamson, 1996). So the present study aimed to exam the level of metacognition of pre-service female teacher and its relation to academic achievement and teaching performance, and try to answer these questions:

- What is the relationship between metacognitive awareness and students' academic achievement?
- What is the relationship between (knowledge of cognition, regulation of cognition) and GPA?
- What is the relationship between metacognitive awareness and teaching performance?

## Method

### *Participants*

(75) Pre-service of Professional Diploma Female Students in Ajman University in UAE. Divided in two groups Group (1): consist of (30) students who have scientific background (math and science major, information technology major), Group (2): consist of (45) students who have literacy background. The age range for Participants from two groups was between 23-26 years .participants were voluntary in this study.

### *Materials*

- 1- A survey used in this study was the metacognitive Awareness inventory (MAI) designed by Schraw and Dennison (1994). The MAI designed for use with adults this instrument continues to be used in studies of adult metacognition (Hammann& Stevens, 1998; Sperling, 2004) .The MAI consists of 52 statement to which participant respond by making a Likert scale with number from 1(not at all) to 5(very true). The MAI instrument represent two component categories of metacognition: Metacognitive knowledge and Metacognitive regulation. Within the inventory there are 17 questions related to knowledge of cognition for possible point total 85. There are 35 questions related to regulation of cognition for a possible point total 175.
- 2- Pre-service teachers' checklist: which is used to evaluate teaching performance for pre-service teachers.

### *Validation and reliability of MAI*

The MAI was subject to content validity by its submission to experts in psychology and experts in measurement and evaluation for their input and necessary corrections .these experts ensured the face and content validity of MAI. The MAI was subjected to cronbach alpha reliability measure where study were used .the MAI knowledge: 0.78, MAI regulation: 0.81, MAI total 0.79.

## Results

### *Descriptive statistics for the two samples*

Table .1.Descriptive statistics for the two groups

	Mean	Std Deviation
Group (1) :(N=30)		
• Average of GPA	79.8	10.2
• Teaching performance	16.5	1.9
• MAI knowledge	70.3	7.6

• MAI Regulation	117.8	14.3
• Total	183.4	20.2
Group (2) :(N=45)		
• Average of GPA	77.4	8.8
• Teaching performance	15.1	1.4
• MAI knowledge	75.4	6.4
• MAI Regulation	133.2	17.9
• Total	198.3	18.1

#### 4.2. Correlation of students' GPA with MAI scores

Table.2. Correlation of students' GPA with MAI scores

	MAI knowledge	MAI Regulation	MAI Total
GPA	R	r	r
Group (1) /N=30	0.23	0.54*	0.69**
Group (2) / N= 45	0.31	0.70**	0.73**
Total participants /N=75	0.67*	0.78*	0.81*

\*\* Correlation is significant at the 0.01 level

\*correlation is significant at the 0.05 level

In both groups the pattern of results was similar significant correlations of total average of GPA with metacognitive regulation scores and MAI total score for group(1) who has scientific background and group(2) who has literacy background, but not with metacognitive knowledge. Students' academic achievement (GPA) appeared to be highly related to MAI total scores from group (1) ( $r = 0.69$ ,  $p < 0.001$ ), and for group (2) ( $r = 0.73$ ,  $p < 0.001$ ). Students' achievement was also positively related to metacognitive regulation for group (1) ( $r = 0.54$ ,  $p < 0.05$ ), and for group (2) ( $r = 0.70$ ,  $p < 0.001$ ). For the total groups of 75 students (pre-service teachers) students' academic achievement was correlation with each metacognitive knowledge ( $r = 0.67$ ,  $p < 0.05$ ), metacognitive regulation ( $r = 0.78$ ,  $p < 0.05$ ), and total MAI score ( $r = 0.81$ ,  $p < 0.05$ ).

#### Correlation of teaching performance with MAI scores

Table.3 .Correlation of teaching performance with MAI scores

	MAI knowledge	MAI regulation	MAI Total
Teaching performance	R	r	r
Group (1) /N=30	0.23	0.68**	0.54*
Group (2) / N= 45	0.31	0.71**	0.58*
Total participants /N=75	0.59*	0.73**	0.79**

\*\* Correlation is significant at the 0.01 level

\*correlation is significant at the 0.05 level

In both groups the pattern of results was similar significant correlations of teaching performance score with metacognitive regulation scores and MAI total score for group(1)(who has scientific background) and group(2) (who has literacy background), but not with metacognitive knowledge. Teaching performance of per-service teachers appeared (to be highly related to metacognitive regulation scores from group (1) ( $r = 0.68$ ,  $p < 0.001$ ), and for group (2) ( $r = 0.71$ ,  $p < 0.001$ ), teaching performance of per-service teachers was also positively related to MAI total for group(1)( $r=0.54$ ,  $p < 0.05$ ), and for group(2) ( $r = 0.58$ ,  $p < 0.001$ ). For the total groups of 75 students teaching performance of per-service teacher was correlation with each metacognitive knowledge ( $r=0.59$ ,  $p < 0.05$ ), metacognitive regulation( $r = 0.73$ ,  $p < 0.001$ ), and total MAI score ( $r = 0.7$ ,  $p < 0.001$ ).

#### *Correlation of Metacognitive knowledge and metacognitive regulation scores*

The correlation between metacognitive knowledge and metacognitive regulation was no significant ( $r = 0.17$ ,  $p = 0.301$ )

#### *Comparison of (academic achievement ,teaching performance ,MAI score) between group (1) and group(2)*

Table.4 Comparison of (Academic achievement, Teaching performance, MAI score) between Group (1), Group (2)

Variables	T(73)	Sig
	group(1)-group(2)	
Academic achievement	1.152	0.19
Teaching performance	1.230	0.311
MAI total	1.172	0.124

The independent t-test was used to find any significant differences between group (1) and group (2) in their (academic achievement, teaching performance and MAI total score). No Significant different was found between group (1) and group (2) in academic achievement ( $t(73) = 1.152$ ), teaching performance ( $t(73) = 1.230$ ), and MAI total score ( $t(73) = 1.172$ ).

#### **Discussion**

The present study was to further explore the level of metacognitive awareness for pre-service female teachers, and its relation to their academic achievement and their teaching performance. Additionally it compared metacognitive awareness in per-service teachers according to their education background [scientific background (math, science and information technology), or literacy background (Arabic and Islamic studies)].

Results indicate that a positive relationship between metacognitive awareness and academic achievement as it measured by their (GPA) for pre-service female teachers. It seems the students who get a high (GPA) are better metacognitions measures. This result also provides support for the validity of (MAI) as it relates to academic achievement, this results agree with the finding of studies by (Ndidiama, 2010; Young & Fry, 2008; Coutinhu, 2007).

Interestingly, the results observed from individual Groups (1) and (2) show that students' academic achievement seems to correlate positively with metacognitive regulation, but not with metacognitive knowledge. This finding

supports that of Schraw (1994) who found that adult learners tend to differ with regards to the use of metacognitive regulation skills and not so with regard to metacognitive knowledge skills. Moreover, no significant relationship was found between metacognitive knowledge and metacognitive regulation. Maybe metacognitive regulation, the knowledge about one's learning strategies' rather than metacognitive knowledge is more dominate in students as significant factor in academic success. As emphasized in the MAI, regulation of cognition including the following five aspects namely planning, information management strategies, comprehension, monitoring and evaluation.

Result indicate that a highly correlation between metacognitive awareness and teaching performance for pre-service female teachers. Students who get high score in MAI total and metacognitive regulation were highly level of teaching performance, they were very good at planning and organizing their teaching materials, more socially with their students, using different teaching strategies and capable of controlling their lesson time, and these finding is agree with the research of studies by (Crew, 2005 ; Crowther, 2004 ).

On the attempt to seek any differences between Group (1) and Group (2) in all aspects (academic achievement, teaching performance and metacognitive awareness).The results show no significant difference between the two groups in academic achievement and teaching performance and also there is no significant difference between two groups in metacognitive knowledge, metacognitive regulation and MAI total. Not much is known about any previous literature that showed clear evidence on specialist or educational background difference in metacognition.

## Conclusion

According to the above we can conclude that:

1. Metacognition refers to higher order thinking which involves active control over the cognitive processes engaged in learning. Activities such as planning how to approach a given learning task, monitoring comprehension, and evaluating progress towards the completion of a task are metacognitive in nature. Metacognition plays an significant role in successful learning, so it is very important to develop metacognition in students, and that is not the role of teachers only or to be developed at school only, but it has to be expanded to be developed and encouraged to use everywhere include home, schools, universities, clubs... etc.
2. The results of this study are promising. It pointed to that the gulf pre-service female teachers have a fine level of metacognitive awareness which is measured be (MAI), and that is an indicator to the good level of the education in Gulf region.
3. The results of this study emphasize the positive correlation between the MAI and academic achievement as well as teaching performance, it can be a tool for professors to use to screen students in need of direct instruction related to metacognition, this may become especially important in large classes, they can use MAI as a mean to determine what type of metacognitive knowledge and regulation skills their student reportedly utilize while learning.
4. Results of this study recommend that college professor have to adopt teaching technique and strategies in presenting information to students in a way that encourage use of metacognitive skills which has an effective impact on the academic achievement and teaching performance.
5. Results of this study support the inclusion of metacognitive courses in collage teacher training programs and in a variety of other field.
6. Results of this study may support training programs instructing students on how to adopt effective metacognitive skills and strategies especially for students who will be a teacher and responsible for many new generation.

## Future research

In the future the goal will be to future examine the training programs for students on how to adopt and use effective metacognitive strategies and skills and its impact on different variables like (academic performance- teaching performance – mastery goals).

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2010). Thus, reading comprehension will depend on the individual's ability to quickly decode and recognize individual words automatically and fluently, this comprehension ability may be very impaired when the student has some difficulty recognizing words (FLETCHER, LYONS, FUCHS, BARNES, 2009; SILVA, CAPELLINI, 2010).

Based on the above, this study is guided by the hypothesis that the basic processes of reading, the so called metalinguistic skills interfere somehow in the reading comprehension of students.

The objectives of this study were to characterize the metalinguistic skills, reading and reading comprehension in students aged from ten to eleven years and 11 months old, both genders, from the 5th year of elementary school at a public school in the city of Marília - São Paulo - Brazil.

## 2. Method

### 2.1 Participants

29 students from 5th grade of elementary school, both genders, being 19 females and 10 males, aged from ten years old to eleven years and 11 months old participated in the study. These students were chosen by their teachers because they have a good academic performance, i.e., they had a score higher than five points in Portuguese Language subject.

### 2.2 Methodological Procedure

This study was conducted after approval by the Research Ethics Committee from the Philosophy and Sciences College, Universidade Estadual Paulista "Julio de Mesquita Filho" - FFC-UNESP, Marília, Sao Paulo, Brazil, under protocol number 836/2013.

The students in this study underwent the application of the following assessment:

a) Metalinguistic skills and reading tests - PROHMELE (Cunha & CAPELLINI, 2009): This protocol consists of the following tests:

- Syllabic and phonemic identification tests: Identification of the initial syllable (ISI), initial phoneme identification (IFIs), Identification of the final syllable (ISF), final phoneme identification (IFF), Identification of medial syllable (ISM), Identification of medial phoneme (IFM).

- Syllabic and phonemic manipulation tests: Segmentation (Seg Sil), Segmentation (Seg Fon), Addition (Ad Sil), Addition (Ad Fon), Substitution (Subs Sil), Substitution (Subs Fon), Subtraction (Subt Sil), Subtraction (Subt Fon), Combination of syllables (Com Sil), Combination of phonemes (Com Fon).

- Reading Tests: Reading of real words: it was presented a list of isolated real words (133 words); Reading of pseudo words: it was presented a list of pseudo words (27 pseudo words)

The application of the tests of metalinguistic abilities was done so that the student had no visual clue of the articulation of sounds produced by the examiner. The students' answers were recorded in the PROHMELE answer sheet. The student was previously instructed and trained through similar examples to the test so that they knew beforehand what they were supposed to do. The application of the procedure had an average duration of 30 minutes and was conducted individually.

The reading tests were performed aloud and filmed for later analysis of reading. Each student received instruction as how they should read the lists of words presented in Arial font format size 14, double space, divided into columns by extension of words (monosyllabic, disyllabic, trissyllabic and polysyllabic – 4 to 7 syllables) and pseudo words (monosyllabic, disyllabic, trissyllabic). In pseudo words reading test, it was clarified to the students that they would perform the reading of words that do not exist and were not part of our vocabulary. The tests were given individually in a session of about 50 minutes.

Both reading real words and pseudo words from the PROHMELE were recorded with the aid of a microphone, the researcher conducted the recording in a notebook for later analysis of the material. The equipment used for recording was a head, unidirectional (cardioid) karsect microphone.

b) Assessment Protocol of Reading Comprehension - PROCOMLE (Cunha, 2012): This procedure was used to characterize the profile of reading comprehension for every participant in this study. This procedure consists of four texts, two narrative and two expository, each containing eight comprehension multiple choice questions, four related to the microstructure of the text (two literal and two inferential) and four related to the macrostructure of the text (two literal and two inferential). For this preliminary evaluation the narrative text "The umbrella" and the essay "The lice" were the ones in the evaluation protocol that was applied. The application of the procedure had an average duration of 30 minutes and was conducted individually.

## Results

Statistical analysis was performed by SPSS program (Statistical Package for Social Sciences), version 22.0, based on the number of errors presented by the students. The applied tests were the *chi-square test for proportions* and the *Wilcoxon Signed-Rank test*. The results were statistically analyzed at a significance level of 5% (0.050), broken with an asterisk in the tables related to the results.

Table 1 shows the average error, standard deviation and p value regarding the performance of students in this study on metalinguistic evidence. The results revealed a statistically significant difference when comparing the evidence of identification of Initial Syllable and Initial Phoneme and from the evidence of Syllable and Phonemic Segmentation, indicating that the students had lower performance on phonemic tasks than syllabic ones. The literature refers that the syllabic skills are part of school activities, while phonemic skills are not part of systematic instruction, which may explain the difficulty in dealing with children's ability to manipulate phonemes (GRINDRI, KESKE, MOTA, 2007; MCQUISTON, O'SHEA, MCCOLLIN, 2008; GERMANO, CAPELLINI, 2011).

Table 1 - Distribution of average, standard deviation and p-value of the performance of students in metalinguistic abilities

Abilities	Average	Standard deviation	p value
ISI	0,28	0,65	0,024*
IFI	0,69	0,93	
ISF	1,07	1,03	0,053
IFF	1,48	1,24	
ISM	1,69	1,95	0,090
IFM	2,28	1,67	
SS	0,21	0,56	0,019*
SF	1,10	1,68	
AS	0,55	0,87	0,058
AF	1,31	1,67	
SS	1,72	1,44	0,154
SF	1,21	1,40	
SBS	0,72	0,96	0,281
SBF	0,90	1,08	
CS	1,93	1,62	0,580
CF	2,07	1,73	

Legend: ISI\_ identification of initial syllable; IFI\_ identification of initial phoneme; ISF\_ identification of the final syllable; IFF\_ identification of final phoneme; ISM\_ identification of medial syllable; IFM\_ identification of medial phoneme; SS\_ segmentation of syllables; SF\_ segmentation of phonemes; AS\_ addition of syllables; AF\_ addition of phonemes; SS\_ Substitution of syllables; SF\_ substitution of phonemes; SBS\_ subtracting syllables; SBF\_ subtraction phonemes; CS\_ combination of syllables; CF - combination of phonemes.

As for the performance of students on tests of reading words and nomwords, in this study we found an average time for reading real words of 204.9 words per minute and for nomwords of 37.83 words per minute. Thus, the comparison between the reading times between real and pseudo words was not possible to be performed because the number of real words is higher than the pseudo words therefore the reading time would be higher (CUNHA, CAPELLINI 2010). However, as the use of phonological route required in reading nomwords is most common in school children in early literacy, it is expected that older students in literacy to use this route with higher reading speed than real words.

Table 2 shows the frequency of correct answers, percentage and p value regarding the performance of students in this study on tests of reading comprehension. The results revealed a statistically significant difference in regards to the comparison of the performance in literal questions in macro and textual microstructure and inferential questions of macro and microstructure in narrative texts, indicating that the students had lower performance on inferential questions of macro and textual microstructure when compared to the literal questions.

The results found in this study confirms the literature that reported a bigger difficulty for elementary students in inferential questions due to how comprehension is a constructed and integrated process, students showed trouble linking ideas and obtaining information that are only implicit in the text (CUNHA, 2012).

Table 2 - Distribution of the frequency of errors in narrative and expository texts, in literal questions and inferences of macro and microstructure.

	NLmi	NLma	NImi	NIma	p value
	48	36	40	32	0,049*
	82,76%	62,07%	68,97%	55,17%	
	ELmi	ELma	EImi	EIma	p value
	41	43	38	42	0,850
	70,69%	74,14%	65,52%	72,41%	
p value	0,178	0,250	0,746	0,123	

**Legend:** NLmi: narrative text, literal questions of microstructure; NLma: narrative text, literal questions of macro structure; NImi: narrative text, inferential questions of microstructure; NIma: narrative text, inferential questions of macro structure; ELmi: expository text, literal questions of microstructure; ELma: expository text, literal questions of macro structure; EImi: expository text, inferential questions of microstructure; EIma: expository text, inferential questions of macro structure.

## Conclusion

We conclude that the 5<sup>th</sup> year students in the study had lower performance on tests of phonemic segmentation and manipulation. In regards to reading comprehension, the students obtained lower performance on inferential questions of macro and micro structure when associated with their correspondents in the literal questions. These findings suggest that altered metalinguistic skills in these students may influence the decoding recognition of words in an automatic and fluent way compromising the reading comprehension.

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# Metaphoric perceptions of school of physical education and sport students to the concept “computers education”

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## Abstract

The purpose of this study is to perceptions of the School of Physical Education and Sport students related to the concept of “computer education” through metaphor. This study was conducted with the participation of 118 (mean age:  $19.92 \pm 1.54$ ) students from School of Physical Education and Sport. In order to collect data participants, students were asked to fill the gaps in the phrase of “computer education is like.....; because.....”. SPSS package program was used for statistical analyses. According to the results, overall, participants produced 73 valid metaphors. These metaphors are collected based 8 different catagories in terms of common features. Findings of this study, metaphors can be used as a powerful research tool in the understanding of personel perceptions of computer education concept has been concluded.

*Keywords:* computer; education; metaphor; technique

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## 1. INTRODUCTION

Today, the first thing that comes to mind when you speak of technology is computer technology and education. Computers constitute an indispensable part in human life. Usage area of computers has grown to such an extent that they confront human beings everywhere they step on. The rapid development of today’s technology, especially the use of computers in every sector and in every working area, has led office-style working to increase considerably (Colak, 2004).

For these reasons, computer training gains importance in every stage of education. The purpose of this study is to find out the perceptions the Physical Education and Sports School students have about the concept of “Computer Training” through metaphor. Thus, the viewpoints of students about computers, which have an important place in their lives, will also be revealed.

The word metaphor was derived from the Greek word “Metapherein” (Soysal, 2012). In fact, it is formed from two separate words, one of which is ‘Meta’ meaning “to change” and the other of which is ‘Pherein’ meaning “to bear” (Levine, 2005).

Direct Turkish equivalent of the word metaphor is “simile and analogy”. Metaphors include information transfer

to a new and mainly unknown area from a mainly similar area (Soysal, 2012). Metaphors are one of the strong intellectual means which configure, orient and control our thoughts about people and occurrence of incidents without our being aware of it (Soysal, 2012; Miller, 1987 & Tsoukas,1991).

In addition, metaphors are expressions that we frequently use to comprehend the world we live in, to express ourselves in a different way in the society, in bilateral dialogues and to convey our thoughts in a different way but we do not notice much while using (Kalyoncu, 2012).

We have observed in the literature study we carried out that metaphors are used in the fields of education and training (Kalyoncu, 2012; Saban et al., 2006; Saban, 2004; Öztürk, 2007; Guerrero and Villamil, 2002 & Saban, 2008). Starting from this point of view, the answer to the question “What are the metaphors of Physical Education and Sports School students about computer training?” has been searched for.

## 2. Method

The method used in the study is the screening model method. Screening models are research methods aiming to describe a past or presently existing situation as it exists (Soysal, 2012; Karasar, 2002). The method used in our study reveals the perceptions the Physical Education and Sports School students have about the concept of computer education and computer course through metaphors.

### 2.1. Research Group

118 students of Physical Education and Sports School of Kocaeli University participated in the study. Four (4) of these students were excluded from the study later.

### 2.2. Data Collection

While conducting the research on the students of Physical Education and Sports School, the students were primarily informed about the metaphor technique. While collecting the data from the students, each student was posed the statement “computer education is like.....; because.....” and their opinions were asked. The metaphors in the answers given by the students constituted the data source (Kalyoncu, 2012).

### 2.3. Data analysis

The answers of the participant students being able to make meaningful metaphors were evaluated. The metaphors were first sorted out and then categorized and statistically evaluated. In our study, there were 73 valid metaphors about the concept of computer training made by the students of Physical Education and Sports School. These metaphors are collected based 8 different categories in terms of common features (Aktekin, 2010), (Table 1).

**Table 1:** The metaphor categories the students of Physical Education and Sports School have about the concept of computer education.

Classification	Metaphor	Frequency (F)	Percentage (%)
1. Dissipation/Unknown	Dissipation (1) Hero(1) Puzzle (3) Life (5) Sport(2) Surf (1) Walking(2) Swimming (1) Water(1) Mixer (1)	18	%15.78
2. Hopeless struggle	Complexity (3) Perplexity(1) Running(2) Infant(1) Ladder(1) Shopping(1)	13	%11.40

	Machine(1) Ocean (1) Urgency(2)		
3.Bitter&Sweet	Love (1) Football(1) Match (1) Sociability (1) Training (1) Game (1) Confound (1) Day(1) Freedom(1) Soup(1) Sweetheart(1)	11	%9.64
4.Discovery-Detection	Meal (7) Bicycle(2) Innovation(2) Step(1) Handwork(1) Respiration(1) Mathematics (3) Human(1) Cooking (1) Growing(2) Discover (4) Anatomy(1) Drafting (1) Existence (1) Dance(1) Eye(1) Artistry(1) Trip(1) Recognizance (5) School (2) Crawling (3) Debenture(1) Book(1)	36	%31.57
5.Lead-Intelligence	Writing(1) Billiards (1) Pie(1) Flower(1) Chess (1) Washing machine (1)	14	%12.28
6.Scope out	Road(1) Robot(1) Convalesce (1) Language(4) Problem -Solving( 2) Intelligence(1) Boxing(1)	11	%9.64
7.Distress	Aware(1)	1	%0.87
8.Stoned sense-	Unhealthy gratification Car(4) Bird(1) Phone(1) Addiction (1) Chocolate(2) Football club(1)	10	%8.77
<b>Total</b>	<b>73</b>	<b>114</b>	

### 3. Discussion and conclusion

In our study, it was aimed to find out the metaphors of the Physical Education and Sports School students based on their experience related to computer training during their education and to categorize those metaphors conceptually.

Several studies on education have been conducted on university students and different occupational groups through metaphor(Kalyoncu, 2012; Döş, 2010; Soysal, 2012; Öztürk, 2007; & Gillis and Johnson, 2002). For example, Kalyoncu (2012) studied on the metaphors related to the concept of teaching on the prospective teachers of Fine Arts. In addition, there are metaphor studies related to the training programs conducted on the prospective teachers of primary education and graduate students (Gultekin, 2013 & Dündar, 2013).

Consequently, the findings of our study can be used as a research tool to find out the personal perceptions and mental images the students of Physical Education and Sports School have about computer training. Metaphors assist people on the issues they have difficulty in understanding. We are of the opinion that the metaphors the students of Physical Education and Sports School have about the phenomenon of computer training will make contributions to other branches and educators.

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# Mezun oldukları lise türüne göre müzik öğretmeni adaylarının piyano dersine yönelik değerlendirmeleri ve başarı durumları

Music teacher candidates' evaluations for the piano lessons and achievement levels with respect to type of graduated high school

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## Özet

Müzik öğretmeni adayları güzel sanatlar liselerinden ya da diğer liselerden mezun olmakta ve çeşitli düzeylerde müzikal altyapı ile müzik öğretmenliği eğitimine başlamaktadır. Bu durum müzik öğretmenliği programında yer alan çeşitli derslerde öğrenci başarısı açısından farklı etkilere yol açmaktadır. Bu derslerden biri de müzik öğretmenliği programında sekiz yarıyıl boyunca zorunlu olarak okutulan ve birçok alan dersi ile ilişkisi bulunan piyano eğitimidir. Bu çalışmanın amacı birinci sınıfta okuyan müzik öğretmeni adaylarının piyano eğitimine ilişkin görüşlerinin ve ders başarı durumlarının mezun oldukları lise türüne göre farklılık gösterip göstermediğini ortaya koymaktır.

*Anahtar Kelimeler:* müzik eğitimi; piyano eğitimi; mezun olunan lise türleri

## Abstract

Music teacher candidates graduate fine arts high schools or other high schools and start music teaching education with various levels of musical backgrounds. This condition leads to different effects in various courses in terms of student achievement in music teaching programme. One of these courses is piano education that taught compulsory during eight semester and has relationships with many branch courses. The purpose of this study is to find out whether the first year music teacher candidates' views on piano education and their course achievement levels have differences with respect to type of graduated high school.

*Keywords:* music education; piano education; type of graduated high schools

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## 1.Giriş

Müzik eğitimi anabilim dallarına (MEABD) yükseköğretim kurumlarınca yapılan özel yetenek sınavları ile öğrenci alınmaktadır. Özel yetenek gerektiren programlara başvurular doğrudan programın bağlı bulunduğu yükseköğretim kurumuna yapılır. Sınav ve değerlendirme işlemleri ilgili yükseköğretim kurumu tarafından yürütülür (ÖSYM, 2014). Bu sınavlara başvurabilmek için adayların Yükseköğretime Geçiş Sınavından (YGS) belirlenen baraj puanı almaları gerekmektedir. Yerleştirmeye esas olan puanın hesaplanması için ise yetenek sınavı

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puanı, ortaöğretim başarı puanı ve YGS puanı belli ağırlıklarla çarpılıp toplamı alınmaktadır. Dolayısıyla bu programa yerleşmek isteyen öğrencilerin hem YGS'den mümkün olduğu kadar yüksek puan almaları hem de yetenek sınavlarına belli bir müzikal altyapı ile hazırlanmaları gerekmektedir. Ayrıca yerleştirme puanlarında uygulanan katsayılar lise eğitimini müzik alanında tamamlayan öğrencilere avantaj getirebilmektedir. Buna rağmen konuyla ilgili bir çalışmada özel yetenek sınavı ile yerleştirme puanları üzerinde en fazla ağırlığın YGS puanında olduğu ve yetenek puanları yüksek, YGS puanları düşük bazı adayların sınavı kazanamadıkları ya da yüksek YGS ve düşük yetenek puanı ile sınavı kazanabildikleri belirlenmiştir (Arapgirlioğlu & Tankız, 2013).

Bu durumda öğrencilerin lise eğitimleri önem kazanmaktadır. Müzik eğitimi bölümleri yetenek sınavlarına başvuran öğrenci profilini büyük oranda Güzel Sanatlar Liseleri (GSL) ve genel liselerden mezun olan öğrenciler oluşturmaktadır. Ece (2007), 2003, 2004 ve 2005 yıllarında Abant İzzet Baysal Üniversitesi özel yetenek sınavına başvuran adaylardan %49,1'inin Genel Liseler ve %30,5'inin GSL mezunu olduğunu, çok küçük oranlarda diğer lise türlerinden gelen adaylar da bulunduğunu belirlemiştir. Tufan, Kılıç ve Bulut (2008) 2006-2007 eğitim öğretim yılında Gazi Üniversitesi MEABD özel yetenek sınavına başvuran öğrencilerin %60,3'ünün müzik alanlı lise geri kalanların ise diğer liselerden mezun olduğunu belirtmişlerdir. Konuyla ilgili kapsamlı bir diğer çalışmada 22 üniversitenin müzik bölümlerinde okuyan öğrencilerden 3 yıllık ortalama alınmış ve %56,97 genel ortalama ile kontenjanların yarısından fazlasının güzel sanatlar lisesi çıkışlı öğrencilerden oluştuğu belirlenmiştir (Bozkaya, 2006).

Güzel sanatlar liseleri ilk kez "Anadolu Güzel Sanatlar Lisesi" adıyla İstanbul'da 1989-1990 eğitim öğretim yılında açılmıştır. Takip eden 1990-1991 eğitim öğretim yılında ise Ankara, İzmir, Bursa ve Eskişehir'de açılarak sayıları artmaya başlamıştır. Bu dönemde 1 yıl İngilizce hazırlık olmak üzere 4 yıllık eğitim verilmektedir. Ancak zorunlu eğitimin 12 yıla çıkması ve "Orta Öğretimin Yeniden Yapılandırılması" kapsamında; Talim ve Terbiye Kurulunun 07 Haziran 2005 tarih ve 184 sayılı kararıyla, 2005-2006 öğretim yılından itibaren hazırlık sınıfları kaldırılmış ve öğrenim süreleri 4 yıla göre yeniden düzenlenmiştir. Temmuz 2009/2622 sayılı Tebliğler Dergisinde yayınlanan 20.04.2009 tarih ve 58 karar sayılı yönetmelikle bu okullar Güzel Sanatlar ve Spor Lisesi adı altında eğitim öğretime devam etmiştir. 2013-2014 eğitim öğretim yılında yeniden yapılandırılmış ve "Millî Eğitim Bakanlığı Ortaöğretim Kurumları Yönetmeliği" kapsamında spor liselerinden ayrılarak "Güzel Sanatlar Lisesi" adıyla eğitime devam etmektedir. 2013-2014 eğitim öğretim yılına ait Millî Eğitim Bakanlığı istatistiklerine göre günümüzde sayıları 71'e ulaşmıştır (MEB, 2014).

Güzel sanatlar liseleri, öğrencilere güzel sanatlarla ilgili temel bilgi ve beceriler kazandırmayı ve güzel sanatlar alanında nitelikli insan yetiştirilmesine kaynaklık etmeyi amaçlar (Millî Eğitim Bakanlığı Ortaöğretim Kurumları Yönetmeliği). Öğretim süreleri 4 yıl olup sınıf mevcutları 30 kişidir. Resim ve müzik olmak üzere iki ayrı bölüm bulunmaktadır. Ortaokulu bitiren öğrenciler arasından yetenek sınavı ile öğrenci alımı yapılmaktadır. Güzel Sanatlar Liseleri müzik bölümlerinde okuyan öğrencilerin büyük çoğunluğu ilköğretim müzik öğretmenlerinin etkisi ve yönlendirmesiyle bu okulları tercih etmiştir (Yılmaz, 2006; Özyoğurtçu, 2007; Topal, 2008) ve yine büyük bir kısmı bu okullara Eğitim fakülteleri müzik öğretmenliği bölümlerine girmek amacıyla gelmektedir (Sülün, 2007; Alim, 2007; Sumbüllü, 2013). Sınavı kazanan öğrencilere 4 yıl boyunca normal lise derslerinin yanı sıra alan eğitimi dersleri de yoğun bir şekilde verilmektedir.

Bu derslerden biri de piyano eğitimidir. Piyano, müzik eğitiminde temel çalgı olmakla birlikte, müzik öğretiminde de vazgeçilmezdir. Bu nedenle piyano dersi, hem GSL'de hem de müzik eğitimi bölümlerinde 4 yıl boyunca tüm öğrencilere zorunlu olarak okutulmaktadır.

Aldıkları eğitim GSL öğrencilerine üniversite eğitimleri için altyapı oluşturmakta ve yetenek sınavlarına hazırlık sürecinde avantaj sağlamaktadır. Yetenek sınavlarına diğer lise türlerinden mezun olarak hazırlanan öğrenciler ise okudukları okullarda çalgı veya işitme eğitimi olmadığından sınavlara kısıtlı sürelerde özel dersler alarak hazırlanmaktadırlar. Gün (2007), genel lise mezunu, daha önce piyano eğitimi almamış bir yetişkinin belli bir yaştan sonra piyano eğitimine başlamasının başarı süreci üzerinde etkili olacağını, çeşitli teknik ve psikolojik problemleri de beraberinde getireceğini; öte yandan GSL öğrencilerinin de daha önce öğrenilmiş yanlış davranışları beraberinde getirebilecekleri, piyano eğitimi almış olmanın dezavantajlarını da yaşayabileceğinin göz önünde bulundurulması gerektiğini belirtmektedir.

Kurumsal anlamda müzik eğitimi almış öğrenciler ile, bir kuruma bağlı olmadan müzik eğitimi almış öğrencilerin hazır bulunuşluk düzeylerinin farklı olması doğaldır. Bu durumda, hazır bulunuşluk düzeyi yüksek olan öğrenciler, bildikleri konuları tekrar işlemek durumunda kalabilirken, diğer öğrenciler de konuların hızlı geçilmesinden kaynaklı dersle ilgili önemli noktaları kaçırap zorluk çekebilmektedirler (Ece & Bilgin, 2007). Bu

noktadan hareketle yapılan bazı çalışmalarda farklı sonuçlar dikkati çekmektedir. Ece ve Kaplan (2008), GSL mezunu öğrencilerin özel yetenek sınavının iştirme ve çalgı boyutlarında diğer liselerden mezun adaylara göre daha başarılı olduklarını ortaya koymuşlardır. Ergün (2006) ise çalışmasında GSL mezunu öğrencilerin giriş sınavında çok başarılı olamadıklarını ve derslerde de gereken başarıyı gösteremediklerini belirlemişlerdir. Bu öğrencilerin genel lise mezunu öğrenciler ile seviyelerinin neredeyse aynı olmasını şaşırtıcı olarak değerlendirmiş, bu durumu GSL mezunu öğrencilerin aldıkları eğitimin kalitesinin akıllarda soru işareti bırakmasına neden olduğunu belirtmiştir. Ayrıca farklı liselerden farklı seviyelerde gelen öğrencilerin eğitim fakültesindeki 4 yıllık eğitim süresince bu seviye farkını koruyamadıkları ve neredeyse aynı seviyede mezun oldukları görülmektedir (Ergün, 2006). Ece ve Bilgin (2007) ise yalnızca yetenek sınavını değil, lisans eğitimi sürecini de kapsayan çalışmalarında hem yetenek sınavlarında hem de lisans öğrenimi boyunca aldıkları alana yönelik derslerde başarı yönünden iki lise türü arasında anlamlı farklılık bulunmadığını ortaya koymuşlardır. Yazarlar bu durumun GSL’de verilen eğitimin niteliği üzerine bir takım soru işaretleri uyandırdığını ifade etmişlerdir. Küçüksüleymanoğlu ve Eğilmez (2013), genel liselerden mezun olan müzik eğitimi anabilim dalı öğrencilerinin GSL mezunu öğrencilere göre daha yoğun tükenmişlik yaşadığını belirlemişlerdir. Bu duruma mesleki müzik eğitimi almamış genel lise öğrencilerinin anabilim dalındaki derslerde zorlanabilmelerinin neden olabileceği üzerinde durulmuştur.

Bu çalışmanın amacı MEABD 1.sınıf öğrencilerinin piyano dersi başarı durumlarının mezun oldukları lise türüne göre anlamlı farklılık gösterip göstermediğini belirlemek ve farklı lise türlerinden mezun olan öğrencilerin piyano eğitimine yönelik görüşlerini ortaya koymaktır.

## **2.Yöntem**

### **2.1.Çalışma grubu**

Araştırmanın çalışma grubunu, 2013-2014 eğitim öğretim yılında Balıkesir Üniversitesi Necatibey Eğitim Fakültesi Müzik Eğitimi Anabilim Dalı’nda öğrenim görmekte olan birinci sınıf öğrencileri ( $n=32$ , 11 kadın, 21 erkek) oluşturmaktadır. Mezun oldukları lise türüne göre, %37,5’i Güzel Sanatlar Lisesi’nden ( $n=12$ ), %62,5’i diğer liselerden ( $n=20$ ) mezundur. Çalışmanın nitel verilerini öğrenciler arasında amaçlı örnekleme yöntemlerinden ölçüt örnekleme yöntemi ile seçilen toplam 16 öğrenci (8 kadın, 8 erkek) ile sınav sonrasında yapılan yarı yapılandırılmış görüşme kayıtları oluşturmaktadır. Görüşme yapılan öğrencilerin seçiminde katılımcıların gönüllü olmaları ve piyano dersini araştırmacı ile yürüten öğrenciler olmamaları temel ölçüt olarak belirlenmiştir (Araştırmacı, çalışmanın yürütüldüğü müzik bölümünde piyano dersi veren bir öğretim elemanıdır). Katılımcıların 8’i Güzel Sanatlar Lisesi, 8’i diğer lise türlerinden mezun öğrencilerdir. Diğer liselerden mezun olan öğrencilerin 4 tanesi daha önce 2 ile 5 ay arasında değişen sürelerle özel piyano dersi almışlardır. Diğer 4’ü ise daha önce hiç piyano eğitimi almamış, eğitimlerine üniversite öğrenimleri ile birlikte başlamışlardır.

### **2.2.Veri toplama araçları**

Piyano dersine yönelik başarı düzeylerinin mezun olunan lise türüne göre farklılık gösterip göstermediğinin belirlenmesi amacıyla öğrencilerin 2013-2014 eğitim öğretim yılı güz ve bahar döneminde almış oldukları yarıyıl sonu harf notları kullanılmıştır.

Çalışmanın nitel verilerini toplam 16 öğrenci ile sınav sonrasında yapılan yarı yapılandırılmış görüşme kayıtları oluşturmaktadır. Bu görüşme tekniği ensek olup, konuları önceden belirlenmiştir. Bununla birlikte, görüşmecinin konunun dışına çıkabileceği bir görüşme türüdür. Yani, yarı yapılandırılmış görüşme tekniğinde, araştırmacı görüşme sorularını önceden hazırlar. Görüşme esnasında ise görüşme yapılan kişilere esneklik sağlamak amacı ile soruların yeniden düzenlenmesine ve başka konuların tartışılmasına izin vermektedir (Ekiz, 2003). Bu doğrultuda araştırmacı tarafından hazırlanan taslak form iki öğretim üyesine verilmiş ve uzman görüşleri doğrultusunda gerekli düzenlemeler yapılmıştır. Daha sonra ölçütleri sağlayan, örneklem grubu dışındaki iki öğrenci ile pilot test çalışması yapılmıştır. Bu uygulamaların ses kayıtları yazıya dökülmüştür. Bir uzmandan dökümleri inceleyerek soruların açık ve anlaşılır olup olmadığını, ele alınan konuyu kapsayıp kapsamadığını, verilen yanıtların sorulan soruların yanıtlarını yansıtmayı yansıtmadığını kontrol etmesi istenmiştir. Bu çalışma sonucunda maddelerin iç geçerliği saptanmış ve soruların istenen verileri sağladığı kanısına varıldıktan sonra veri toplama sürecine geçilmiştir.

### 2.3. Verilerin toplanması ve çözümü

Öğrencilerin harf başarı notları, AA (4), BA(3,5), BB(3), CB(2,5), CC(2), DC(1,5), DD(1) ve FF(0) olmak üzere katsayılar verilerek sayısal değerlere çevrilmiştir. Devamsızlık nedeni ile başarısız olan öğrenciler değerlendirmeye alınmamıştır. Elde edilen sayısal verilerin çözümlenmesi için SPSS 21.0 paket programı kullanılmıştır. Sayısal veriler, bağımsız gruplar için t testi kullanılarak, görüşme verileri ise içerik analizi teknikleri kullanılarak çözümlenmiştir. Öğrencilerle yapılan görüşmelerde şu sorular yöneltilmiştir: 1. İlerdeki meslek yaşantınızla bağlantılı olarak, piyano dersinin müzik öğretmenliği eğitimi içerisindeki önemi sizce nedir? 2.a. Müzik öğretmenliği eğitiminize başlarken piyano dersine yönelik hedefleriniz nelerdir? b. Hedeflerinizi gerçekleştirdiğinize inanıyor musunuz? Cevabınız “evet” ise bu konuda size yardımcı olan unsurlar nelerdir? Cevabınız “hayır” ise nedenleri sizce nelerdir? 3. Piyano eğitimi sürecinizde mezun olduğunuz lise türünün avantajları ve dezavantajları size göre nelerdir? 4. Müzik öğretmenliği eğitimine başlamadan önceki piyano eğitiminiz nasıldı?

Görüşmelerin samimi bir ortamda gerçekleştirilmesine önem verilmiştir. Görüşmelerin hepsi araştırmacı tarafından gerçekleştirilmiştir. Görüşme anında odada sadece araştırmacı ve görüşülen öğretmen adayı yer almıştır. Her görüşme ortalama 10-15 dakika sürmüştür ve katılımcıların verdiği yanıtlar ses kayıt cihazına kaydedilmiştir. Bu görüşmelerden elde edilen ses kayıtları içerik analizi yöntemi ile çözümlenmiştir. İçerik analizinde temel amaç birbirine benzeyen verileri belirli kavramlar ve temalar çerçevesinde bir araya getirmek ve bunları okuyucunun anlayacağı biçimde düzenleyerek yorumlamaktır (Yıldırım ve Şimşek, 2008). Bu doğrultuda, katılımcıların her bir soruya verdikleri yanıtlar, kavramlar ve temalar çerçevesinde bir araya getirilmiş, görüşlerden doğrudan alıntılar da yapılmıştır. Görüşme verileri araştırmacı dışında iki öğretim elemanı tarafından ayrı ayrı okunarak analiz edilmiştir. Hem araştırmacının hem de diğer uzmanların analizleri için “görüş birliği” ve “görüş ayrılığı” olan konular tartışılarak gerekli düzenlemeler yapılmıştır. Verilerin güvenilirliğinin hesaplanması için Miles ve Huberman (1994)’ın önerdiği güvenilirlik formülü (Güvenirlik=Görüş Birliği/Görüş Birliği+Görüş Ayrılığı) kullanılmıştır. Yapılan araştırma sonucunda araştırmanın güvenilirliği %89 olarak belirlenmiştir. Güvenirlik hesaplarının %70’ in üzerinde çıkması, araştırma için güvenilir kabul edilmektedir (Miles & Huberman, 1994).

### 3. Bulgular ve yorum

Tablo 1. Piyano I ve Piyano-II dersleri başarı notlarının öğrencilerin mezun oldukları okul türüne göre dağılımı

Okul Türü	PIYANO-I						PIYANO-II					
	N	M	SD	df	t	p	M	SD	df	t	p	
GSL	12	2.16	1.43	30	-1.79	.083	2.04	1.63	30	-.820	.418	
Diğer	20	2.92	.96				2.50	1.46				
Toplam	32	2.64					2.32					

Tablo 1’de görüldüğü gibi öğrencilerin 2013-1014 eğitim öğretim yılında güz döneminde aldıkları Piyano-I ( $t(30)=-1.79, p=.083$ ) ve bahar döneminde aldıkları Piyano-II ( $t(30)=-.820, p=.418$ ) dersleri başarı puanları arasında mezun olunan okul türüne göre anlamlı farklılık bulunmamaktadır. Bununla birlikte her iki dönem ortalamaları incelendiğinde diğer liselerden gelen öğrencilerin piyano dersi başarı ortalamalarının GSL mezunu öğrencilerden daha yüksek olduğu görülmektedir. Ayrıca, her iki grubunda başarı ortalamalarının bahar döneminde güz dönemine göre daha düşük olması da dikkati çekmektedir.

Tablo 2. Öğrencilerin piyano dersinin müzik öğretmenliği eğitimi içerisindeki önemine ilişkin görüşleri

Görüşler	GSL	Diğer
İşitme becerilerini geliştirme	5	1
Parça öğretimi	3	-
Ders verme	2	5
Çokseslilik	2	1
Eşlik	1	3

Tablo 2’de görüldüğü gibi GSL öğrencilerinin piyano dersinin önemine ilişkin olarak en çok dile getirdikleri görüş “işitme becerilerini geliştirme” dir. Bir öğrenci piyanonun bu özelliğini “öğrencilerin müzik

kulağını keşfedebilmek” şeklinde ifade ederken diğer öğrencilerin kendi işitme becerilerini geliştirme açısından yaklaştığı görüşmektedir. Bir öğrenci “ben ileride akademik anlamda bir şeyler yapmak istiyorum. Bunun için işitmemizin de çok iyi olması gerekiyor”, bir başka öğrenci “ben keman çalarken bile piyanonun tuşlarını gözümün önüne getirerek aralıkları düşünerek yapıyorum bazı şeyleri” şeklinde ifade etmiştir. GSL öğrencilerinin diğer görüşleri ise piyanoyu parça öğretiminde, piyano dersleri vererek, çok seslilik becerilerinin geliştirilmesinde ve eşlik faaliyetlerinde kullanabilecekleri yönündedir. Diğer lise türlerinden mezun olan öğrenciler ise piyanoyu genellikle ileride piyano dersi verebileceklerini düşünerek önemsemektedirler. Bir öğrenci “ileride bunu belki öğrencilere göstermek için kullanabilirim, mutlaka eğitim almak isteyen olacaktır”, başka bir öğrenci “üniversiteye öğrenci yetiştirme açısından faydası olur. Piyano olan bir okulda isem sınıfta ders verebilirim” şeklinde ifade etmişlerdir. Bunun dışında GSL öğrencilerine benzer şekilde eşlik, işitme becerilerini geliştirme ve çok seslilik faaliyetlerinde kullanabileceklerini belirtmişlerdir. Her iki lise türünden mezun olan öğrenciler değerlendirildiğinde GSL öğrencilerinin daha çok kendi müzikal becerilerini geliştirme, diğer liselerden mezun olan öğrencilerin ise öğretmenlik mesleğinde kullanabilme açısından piyano derslerini önemsedikleri söylenebilir.

Tablo 3.a. Öğrencilerin müzik öğretmenliği eğitimlerine başlarken piyano dersine yönelik hedefleri

Görüşler	GSL	Diğer
Piyano benim için ikinci planda	4	1
Yapabileceğim en iyisini yapmak	2	2
Piyano öğretmeni olmak	1	-
Öğretmenlikte gerekli becerileri kazanmak	1	5

Tablo 3.a’da görüldüğü gibi GSL mezunu öğrencilerin görüşleri arasında piyanonun ikinci planda olması öne çıkmaktadır. Bu görüşü belirten öğrenciler “benim için elektrogitar ve klasik gitar birinci planda. Piyanoya hiçbir zaman hayatımın anlamı şeklinde çalışmadım. Daha çok caz piyanistlerinin bastığı akorları daha rahat anlayabilirim diye piyanoyu düşünüyorum”, “Hedefimde kemanda ilerlemek var. Yüksek lisans yapmak veya GSL’de keman öğretmeni olmak istiyorum. Piyanoda öyle bir hedefim yok” ifadelerini kullanmışlardır. Bunun dışında yapabileceğim en iyisini yapmak, piyano öğretmeni olmak ve öğretmenlikte gerekli becerileri kazanmak şeklinde hedefleri olduğu görülmektedir. Diğer liselerden gelen öğrencilerin ise piyanoya yönelik hedefleri çoğunlukla “öğretmenlikte gerekli becerileri kazanmak” yönündedir. Bu becerileri “öğretmen olursam çocuklara eşlik yapabilirim”, “öğrencilerimi yetenek sınavına hazırlayabilirim”, “piyano öğretmek isterim açıkçası” gibi ifadelerle ortaya koymuşlardır. İki öğrenci piyano dersine yönelik hedeflerini “yapabileceğim en iyisini yapmak”, şeklinde belirtirken bir öğrenci piyanonun kendisi için ikinci planda olduğunu belirtmektedir. Bir önceki soruda olduğu gibi GSL mezunu öğrenciler, piyanoda üst seviyelere gelmekten çok piyanoyu müzikle ilgili farklı hedeflerine ulaşmak için yardımcı olarak görmektedirler, diğer liselerden mezun olan öğrenciler ise piyano dersinden öğretmenlik mesleğinde kullanabilecekleri becerileri kazanabilmek için yararlanmayı hedeflemektedir.

Tablo 3.b. Öğrencilerin piyano dersine yönelik hedeflerinin gerçekleşip gerçekleşmeme durumu ve nedenleri

Görüşler	GSL	Nedenleri	Diğer	Nedenleri
Gerçekleşiyor	8	Öğretmenim(5) Kendi çalışmam(1) Vaktimin bolluğu(1) Kendimi zorlamam(1)	6	Öğretmenim(5) Kendi çalışmam(1)
Gerçekleşmiyor	-		2	Kendi tembelliğim(1) Arkadaş ortamı(1)

Tablo 3.b’de görüldüğü gibi GSL mezunu öğrencilerin tamamı piyano eğitimine yönelik hedeflerine ulaştıklarını belirtmişlerdir. Bunda kendilerine en çok yardımcı olan unsurun ise piyano öğretmenleri olduğu görülmektedir. Öğretmenleri sayesinde “nüansları, incelikleri, bilek hareketlerini” öğrendiklerini, “teknik ve müzikal olarak çok şey öğrendiklerini”, öğretmenlerinin “çok anlayışlı” olduğunu, “öğretmek için çabaladığını” ifade etmektedirler. Diğer unsurların ise kendi çalışmaları, vakit bolluğu ve kendilerini zorlamaları olduğu görülmektedir. Diğer liselerden mezun olan öğrencilerin çoğunluğu da benzer şekilde öğretmenleri sayesinde

hedeflerine ulaştıklarını belirtmişlerdir. Bir öğrenci “öğretmenimden dolayı bu derse çalışmadan gelmek olmuyor. Biraz mecburiyet, biraz istek, biraz sempati”, bir diğer öğrenci “hocayla disiplinli dersimizden dolayı kendimi geliştirebiliyorum” ifadelerini kullanırken bir öğrenci “hedefimi gerçekleştirebiliyorum. Bunu biraz hocamın kasmaına, biraz azarlamasına borçluyum” demektedir. Hedefini gerçekleştiremeyen iki öğrenciden biri vize sınavları iyi geçtiği için rahatladığını ve çalışmadığını belirtirken diğeri “ben piyanoda üst seviyelere ulaşmayı düşünüyordum. Fakat evdeki hesap çarşıya uymadı. Üniversite yaşantısı, arkadaş ortamı başarımızı olumsuz olarak etkiledi” ifadelerini kullanmıştır. Her iki lise türünden mezun olan öğrencilerin görüşleri karşılaştırıldığında her iki grubun da çoğunluğunun hedeflerini gerçekleştirdikleri ve başarıya ulaşmada öğretmenlerini en önemli unsur olarak gördükleri anlaşılmaktadır. Ancak GSL mezunları öğretmenlerinin müzikal gelişimlerine katkıları ve anlayışlı olmaları üzerinde dururken diğer lise mezunlarının öğretmenlerin disiplinli ve daha sert yönlerini ele almaları dikkat çekicidir.

Tablo 4. Öğrencilerin piyano eğitimi sürecinde mezun oldukları lise türünün avantajları ve dezavantajlarına yönelik görüşleri

Okul türü	Avantaj	N	Dezavantaj	N
GSL	Çabuk deşifre yapabiliyoruz	5	GSL mezunlarından beklenti daha çok oluyor	1
	Piyanoda daha ileri seviyeye gelebiliyoruz	3	Burada sıfırdan başlasam daha çok geliştirdim	1
Diğer	GSL mezunu olanlar daha bilinçsiz	4	Seviye olarak çok gerideyiz	4
	Biz daha hırslıyız	2	Sınav sistemine alışık değiliz	1
			Parmak kaslarım daha çok gelişmiş olurdu	1
			Müzik algım daha geniş olurdu	1

Tablo 4’te görüldüğü gibi GSL mezunu öğrenciler lisede almış oldukları piyano eğitimi sayesinde daha çabuk deşifre yapabildiklerini belirtmişlerdir. Bir öğrenci “arkadaşlarım dört saat ya da haftanın her gününü piyanoya ayırırken ben sadece bir kere bakarak deşifre yapıyorum. İki kere çaldığımda da parça çıkmış oluyor. Bu şekilde kolay oluyor” derken bir diğeri “el yatkınlığımız daha fazla olduğu için fazla zorlanmıyorum. Çalışırken biraz deşifre ediyorum, daha kolay oluyor bizim için” demektedir. Öğrencilerin bir kısmı ise GSL’deki eğitimlerine yeni beceriler katarak piyanoda daha üst seviyeye gelebileceklerini şu ifadelerle belirtmiştir: “GSL’den olmak çalgıyı daha detaylı tanımamızı sağlıyor”, “bir acelemiz olmadığı için daha sindirerek, teknik açıdan bazı şeyleri daha iyi oturttuk ilerliyoruz”. İki öğrenci ise GSL mezunu olmanın dezavantajlarından bahsetmişlerdir. Bir öğrenci lise yıllarında aldığı piyano eğitiminin düzensiz olmasından bahsederek, “burada sıfırdan başlasaydım daha iyi olacaktı” şeklinde görüş belirtmiştir. Bir diğer öğrenci ise öğretmenlerin GSL mezunlarından daha fazla beklenti içerisinde olduğunu belirtmiş ve lise öğreniminden sonra üniversiteye hemen giremediği için ara verdiğini, bu nedenle öğretmenlerin beklentisini karşılayamadığını belirtmiştir. Diğer liselerden mezun olan öğrenciler ise GSL mezunu öğrencilerin daha bilinçsiz olduğunu, bu durumda kendilerini avantajlı gördüklerini belirtmişlerdir. Bu öğrencilere göre “GSL mezunu öğrenciler ben zaten müzikçiyim, zaten yapıyorum diye düşünüyorlar, boşluyorlar”, “GSL mezunu arkadaşlarımızda bu konuda sahte bir bilinç var. Müziği öğrenip de geldiklerini zannediyorlar. Bu çok kötü bir şey aslında”. Öğrencilere göre, GSL mezunlarının bu tutumu diğer liselerden gelen öğrencilerin daha hırslı olmasına neden olmaktadır. GSL olmamanın dezavantajlarını ise “Seviye olarak çok gerideyiz”, “Sınav sistemine alışık değiliz”, “Parmak kaslarım daha çok gelişmiş olurdu”, “Müzik algım daha geniş olurdu” şeklinde belirtmektedirler. Bu durumda GSL mezunu öğrencilerin büyük bir kısmının mezun oldukları okulu avantajlı bulduğu, ancak çoğunun bu avantajı piyanoda daha üst seviyelere gelebilmek yönünde değil, verilen ödevleri çok çalışmadan yerine getirebilmek açısından değerlendirdikleri anlaşılmaktadır. Bu durum, diğer liselerden mezun olan öğrencilerin dile getirdiği görüşleri destekler görünmektedir.

Bu görüşlerin yanı sıra, GSL mezunu öğrencilerden 1 kişi ve diğer lise mezunlarından 3 kişi GSL mezunu öğrencilerin YGS puanlarının düşük olduğunu, bu durumun müzik öğretmenliği giriş sınavlarında diğer liselerden gelen öğrencilere avantaj sağladığını belirtmişlerdir. Diğer liselerden mezun olan bir öğrenci bu durumu “Ben

Anadolu Lisesi'ni kazandım. Babam GSL'ye göndermedi. Yine müzikle ilgilen ama ikinci bir şansın olsun dedi. Derslerim ve YGS'm çok iyiydi. YGS'nin önemini de çok iyi biliyordum" sözleriyle ifade etmiştir.

Tablo 5. Öğrencilerin müzik öğretmenliği eğitimine başlamadan önceki piyano eğitimlerinin nasıl olduğuna ilişkin görüşleri

<i>GSL</i>	<i>N</i>	<i>Diğer</i>	<i>N</i>
<i>Düzenli bir eğitimim vardı</i>	3	<i>Bir müzik evinde müzik öğretmeni ile sadece sınav parçamı çalıştım</i>	2
<i>Düzenli bir eğitimim yoktu</i>	5	<i>Bir müzik evinde müzik bölümü öğrencisi ile sadece sınav parçamı çalıştım</i>	2

Tablo 5'te görüldüğü gibi GSL mezunu öğrencilerin yarıdan fazlası lisede düzenli bir piyano eğitimi almadıklarını belirtmişlerdir. Düzenli eğitim almadıklarını belirtmelerinin nedeni aynı öğretmenle 4 yıl kesintisiz eğitim alamamalarıdır. Bazı öğrenciler lise öğrenimleri boyunca 4-5 öğretmen değiştirdiklerini ve bu öğretmenlerini bazılarının asıl branşlarının piyano olmadığını belirtmişlerdir. Bir öğrenci bu durumun piyanodan soğumasına yol açtığını, bir diğeri öğretmenlerin bireysel olarak ilgilenmediklerini ifade etmiştir. Diğer liselerden mezun olan ve daha önce eğitim almış öğrenciler bu dersleri müzik evlerinde aldıklarını belirtmişlerdir. 2 öğrenci müzik öğretmeni ile, 2 öğrenci ise müzik bölümünde okuyan öğrenciler ile çalışmıştır. Öğrencilerin aldıkları eğitim yalnızca yetenek sınavına girecekleri parça ile sınırlıdır. Bir öğrenci sınavda Bach menuet çaldığını belirtmiş ve "hocadan tek isteğim o parçayı yetenek sınavı için güzelce öğretmesiydi" demiştir. Bir diğer öğrenci Bach prelüd çaldığını ifade etmiş ve "daha temelim oturmadan yüklediler bana parçayı" şeklinde görüş belirtmiştir. Bu öğrencilerin hepsi daha önce aldıkları eğitimin nota okuma açısından faydası olsa da müzik eğitimi bölümünde piyano eğitimine sıfırdan başladıklarını belirtmişlerdir. Öğrencilerin üzerinde durduğu bir diğer konu da sınavdan önce yaptıkları işitme dersleridir. Öğrencilerin bir kısmı işitme becerileri konusunda GSL mezunlarından geride olmadıklarını ve özellikle ikinci dönemden sonra aynı seviyeye geldiklerini, hatta daha ileride olduklarını ifade etmiştir.

#### 4. Sonuç ve tartışma

Araştırma sonuçlarına göre öğrencilerin piyano dersleri başarı puanları arasında mezun olunan okul türüne göre anlamlı farklılık bulunmamaktadır. Bununla birlikte her iki dönem ortalamaları incelendiğinde diğer liselerden gelen öğrencilerin piyano dersi başarı ortalamalarının GSL mezunu öğrencilerden daha yüksek olduğu görülmektedir. Bir başka çalışmada GSL mezunu öğrencilerin piyano dersi başarı puanlarının diğer liselerden mezun öğrencilere göre daha yüksek olduğu ifade edilmiştir (Gün, 2007). İki çalışmanın sonuçları farklılık göstermektedir. Bu farklılığın nedeni 2007 yılında yapılmış olan çalışmadan günümüze geçen süre içinde GSL sayılarının oldukça artması, buna rağmen bu okulların nitelik açısından bazı eksikliklerinin de giderek artması olabilir. 2006 yılında yayımlanan ve günümüzde yürürlükten kalkmış olan güzel sanatlar liseleri yönetmeliğinde bu okulların öncelikle güzel sanatlarla ilgili yükseköğretim kurumlarının bulunduğu yerlerde açılacağı ifadesi bulunmaktadır. Ece (2007)'ye göre bu uygulamanın gerçekleşmemesi söz konusu okulları bazı sorunlarla karşı karşıya bırakmıştır ve öğretmen eksikliği bu sorunlar arasında ilk sırayı almaktadır. Öğretmen eksikliği mezun adayların lise eğitimlerinin donanımlı tamamlanamamasına, dolayısıyla öğrencilerin yetenek sınavlarında da beklenen başarıları gösterememesine neden olmaktadır (Ece, 2007). Mevcut çalışmada da GSL mezunu öğrencilerin yarıdan fazlasının lisede düzenli bir piyano eğitimi almadıkları belirlenmiştir. Sümbüllü (2013), Erzurum Güzel Sanatlar Lisesinde yürüttüğü çalışmada bölgenin sosyal, ekonomik ve iklim şartları ve ayrıca eş durumuna bağlı yer değiştirmelerden dolayı kadrolu öğretmen sayısının azaldığını, buna bağlı olarak ortaya çıkan öğretmen açığının sözleşmeli öğretmen görevlendirilmesi ile çözülmeye çalışıldığını belirtmektedir.

GSL öğrencilerinin daha çok kendi müzikal becerilerini geliştirme, diğer liselerden mezun olan öğrencilerin ise öğretmenlik mesleğinde kullanabilme açısından piyano derslerini önemsedikleri görülmektedir. GSL mezunu öğrenciler, piyanoda üst seviyelere gelmekten çok piyanoyu müzikle ilgili farklı hedeflerine ulaşmak için yardımcı olarak görmektedirler, diğer liselerden mezun olan öğrenciler ise piyano dersinden öğretmenlik mesleğinde kullanabilecekleri becerileri kazanabilmek için yararlanmayı hedeflemektedir. Öğretmenlik mesleğine yönelik tutumlar incelendiğinde literatürde yer alan çalışmalar arasında farklılıklar gözlenmektedir. Bazı çalışmalarda güzel sanatlar lisesinden mezun öğrencilerin (Sağlam, 2008; Bulut, 2011) bazı çalışmalarda ise diğer liselerden mezun

olan öğrencilerin (Küçük, 2013) öğretmenlik mesleğine yönelik tutumlarının daha olumlu olduğu görülmektedir. Bazı çalışmalarda ise öğretmenlik mesleğine yönelik tutumların mezun olunan lise türüne göre anlamlı farklılık göstermediği belirtilmiştir (Güdek, 2007; Küçükosmanoğlu & Can, 2013). Kılınçer (2009), GSL de okuyan öğrencilerin piyano dersine yönelik tutumlarının olumlu olduğunu belirtmektedirler. Gün ve Köse (2013) ise benzer şekilde GSL’de okuyan öğrencilerin piyano dersine yönelik tutumlarının Müzik eğitimi anabilim dalı öğrencilerinden daha olumlu olduğunu; ayrıca MEABD son sınıf öğrencileri arasında, aralarında anlamlı farklılık olmasa da GSL mezunu öğrencilerin tutumlarının daha olumlu olduğunu ortaya koymuşlardır.

Her iki lise türünden mezun olan öğrencilerin görüşleri karşılaştırıldığında her iki grubun da çoğunluğunun hedeflerini gerçekleştirdikleri ve başarıya ulaşmada öğretmenlerini en önemli unsur olarak gördükleri anlaşılmaktadır. Ancak GSL mezunları öğretmenlerinin müzikal gelişimlerine katkıları ve anlayışlı olmaları üzerinde durulmuş diğer lise mezunlarının öğretmenlerinin disiplinli ve daha sert yönlerini ele almaları dikkat çekicidir. Gün (2007), çalışmasında her iki lise mezunu öğrencilerin de piyano öğretmenlerinin çalışmaları konusunda kendilerine yeterli motivasyonu sağlayamadıklarını düşündüklerini ortaya koymaktadır (Gün, 2007).

Diğer liselerden mezun olan öğrenciler GSL mezunu öğrencilerin daha bilinçsiz olduğunu, bu durumda kendilerini avantajlı gördüklerini belirtmişlerdir. GSL mezunu öğrenciler ise mezun oldukları okulu avantajlı bulduğu, ancak çoğunun bu avantajı piyanoda daha üst seviyelere gelebilmek yönünde değil, verilen ödevleri çok çalışmadan yerine getirebilmek açısından değerlendirdikleri anlaşılmaktadır. Yılmaz (2006), GSL’lerde eğitim gören öğrencilerin buldukları yaş itibarıyla ergenlik dönemi özelliklerinin tümünü yapılarında barındırmaları nedeniyle bu öğrencilerin piyano eğitimlerinin çok hassas ve ciddi bir yol olduğunu belirtmektedir. Ayrıca bu öğrencilerin müzik eğitimi bölümlerine ana kaynak oluşturması sebebiyle GSL’lerdeki çalgı eğitiminin niteliği önem kazanmaktadır. Jelen (2013), çalışmasında piyano eğitimine erken yaşlarda başlanmasına rağmen GSL öğrencilerinin ciddi teknik ve müzikal altyapı eksikliklerinin bulunduğu sonucuna ulaşmıştır. Öğretim elemanları bu durumu genellikle öğretmenlerin donanımsız olmasına bağlamaktadırlar (Jelen, 2013).

Güzel Sanatlar Liseleri, öğrencileri ilköğretimden alıp yükseköğretime hazır hale getiren kurumlardır. Ancak günümüzde güzel sanatlar lisesi sayılarının 70’in üzerinde, müzik öğretmenliği bölümlerinin sayılarının ise bu sayının ancak üçte biri civarında olduğu düşünüldüğünde GSL’den mezun olan öğrencilerin yükseköğretime yerleşmelerinde sorunlar yaşayacağı açıktır. Bazı öğrenciler yetenek sınavlarında birkaç sene başarılı olamamakta ve mecburen öğrenime ara vermekte, tekrar başladıklarında adapte olmakta zorluk çekebilmektedirler. Bu durumda müzik eğitimi anabilim dallarına genel liselerden mezun olarak sıkı bir şekilde hazırlanan öğrenciler ile yaklaşık aynı konuma gelmektedirler. Yine GSL’lerde bulunan öğretmen sayısının yetersizliği, buna bağlı olarak farklı branşlardan ya da dışarıdan öğretmen görevlendirilmesi de verilen eğitimin niteliğini olumsuz etkilemektedir. Bu nedenle GSL’lere öğretmen alınmasına önem verilmesi, araç-gereç ve bina konularında eksikliklerin giderilmesi önerilmektedir. Ayrıca farklı düzeylerde yükseköğretime başlayan öğrencilerin tümünün kaliteli bir eğitimden geçmesini sağlayabilmek amacıyla MEABD’da yürütülen alan ders programları gözden geçirilmeli, farklı düzeylerdeki öğrencilere uygun düzenlemeler yapılmalıdır.

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# Migration and identities of “indigenous” socio-cultural groups in French Guiana: a case study of students along the Oyapock and Maroni Rivers

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## Abstract

This article focuses on the contemporary identity of young people living in French Guiana qualified as “indigenous”, pupils of Amerindian and Maroon origin. First, we describe the historical context that led to the emergence of this identity and the research methods we employed. In our longitudinal study, 65 semi-structured interviews and 105 questionnaires were conducted over a period of three years. In the second section, we present a comprehensive analysis of this corpus allowed us to model these young people’s representations (based on their migratory trajectories, family organization, schooling, attitudes towards multilingualism and visions of the future). In the conclusion section, we propose a model of the interactive dynamics of identity which best characterizes these young people. Finally, in the discussion, we highlight the contradictions of a concept of “indigeneness” constructed from a Western viewpoint that no longer corresponds to the reality of these peoples, whose lifestyles are as modern, dynamic and influenced by interactions as those of any other population.

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*Keywords:* Identity, Indigenous Youth, Amerindian, Maroon, History, French Guiana

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## Introduction

Like many other Western countries, French Guiana regularly receives migrants from all over the world. Today, French Guiana’s population is made up of the following nationalities and socio-cultural groups. Under the influence of these migratory flows, the population doubles every 20 years. The foreign population represents 29.7% of the total population and 45.63% of inhabitants were not born in French Guiana (Insee -French National Institute for Statistics and Economic). That population growth has numerous economic, health and social consequences, but we will not address those subjects here, since what interests us in the present article are the assertions of identity that emerge from those socio-cultural contacts. Over time, a characterized French Guianese society has developed in which each socio-cultural group is convinced of its internal homogeneity. And yet, at the same time, the presentation of those designations or ideological discourses on the representations of Self and Other highlight identity issues between groups, but also within groups. In order to clarify the subject, surveys were carried out in several towns located on the Surinamese and Brazilian borders. Over a period of three years, 65 semi-directed interviews in elementary schools, and 105 questionnaires in middle schools were carried out in order to complete the analysis. The aim of these surveys was to retrace the subjects’ migratory trajectories, describe their family organization, give

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an account of their schooling, understand their attitudes towards multilingualism and describe their visions of the future. The study presented here focuses on the identity of students of Amerindian and Maroon descent. They alone are qualified as “indigenous”. The purpose of this work is not to retrace the genesis of that designation, but rather to understand the historical context that promoted the emergence of those identities and how the students view them and lay claim to them. But before presenting the results of those surveys, it seems important to provide a brief summary of the history of these socio-cultural groups in order to examine their political claims.

### History and Identities

Currently, there are six Amerindian groups whose distribution according to linguistic affiliation and geographic location is shown below (Table 1). According to estimates, they currently represent 4% of the total population of the department, or roughly 6000 individuals.

Table 1: Amerindian Sociocultural Groups

Names	Lokono Palikuyene	Kali'na (Tilewuyu) Wayana	Teko Wayāpi
Language family	Arawak	Karib	Tupi-Guarani

Table 2: Maroon Sociocultural Groups

Names	Aluku / Ndyuka / Paramaka	Saamaka
Language Designated by Linguists	<i>Nenge tongo</i> : English-based language	<i>Saamaccan</i> : Anglo- Portuguese-based language

There are four groups of Maroons living on French Guianese territory (Table 2). Today there are 37,200 Maroons in French Guiana: “roughly 14,500 Saamaka, 14,000 Ndyuka, 5,900 Aluku and 2,800 Paamaka” (Price, 2003, p. 69). These four groups “formed in Dutch Guiana (Suriname) in the 17th and 18th centuries. In that French colony, “bands of Maroons did not form long-lasting communities”. Some of them mixed with the general population and others fled to Brazil (Price, 2003, p. 15). The first Maroons, the Aluku, who escaped from Dutch plantations to settle on French soil, sought political affiliation with the colonial government and, as of the late 19th century, all the main Aluku villages were located in French Guiana and not in Suriname.

#### *The Inini Territory*

In 1931, the French created the Inini territory and transferred the management of land in the interior of the country to local authorities: On the coast, municipalities were managed by a Creole elite according to the rules of the colonial administration; in the interior, the “native” or “tribal” populations, according to the terminology of the time, found themselves in the situation of a protectorate. They were not obliged to declare births nor subject to civil law, and they were not required to prove their nationality in order to circulate from one end to the other of the territories of French Guiana, Dutch Guiana or Brazil. They were governed by customary laws, in particular with regard to marriages, the occupation and sharing of land and the settling of private disputes. They were only subject to penal law if a crime was committed. (Réginensi, 1996, p. 15). It was in this context, inherited mainly from the colonial period, that French Guiana’s status was changed by the Law of March 19, 1946, voted by Parliament, and it became a French department. Becoming a department strengthened the patriotism of the inhabitants on the coast: they were French citizens who belonged to French culture, and in their schools, they learned that their ancestors were the Gauls (Hidair, 2003). Consequently, the Amerindians and descendants of the Maroons in the interior were presented as populations “to civilize”. Thus the Amerindian and Maroon populations (like the Creoles before them) were affected by the assimilationist policies adopted by France. Referred to as “savages” or “primitive”, the prefect Vignon (in office from 1947/1955) declared in 1985 that “these populations must be brought out of their dangerous isolation, led, of course very gradually and with great care, to integrate and participate in economic and social life” (p. 215). In this vast integration campaign, Vignon undertook to group, sometimes under pressure, several Amerindian families in order to form large villages near towns and facilitate the setting up of health and social facilities.

### *The end of the Inini Territory*

The decree of March 17, 1969 (n°69-261) marked the end of the Inini territory. The former “ethnic” villages now shared the legal status of French municipalities, which meant that the populations of the interior also had to choose a nationality and an official place of residence. Little by little, the Amerindians and the Maroons acquired the attributes of French citizenship and became subject to its obligations, but the choice of whether or not to perform military service was left up to the men (Mam-Lam-Fouck, 1992). While certain Amerindians such as the Wayana refused French citizenship, others accepted it or submitted to it (ibid.). Decree n° 1845/c of October 3, 1977 issued by the prefecture of French Guiana concerns regulations pertaining to expeditions within the department. More recently, the decree of February 27, 2006 (277-266) pertaining to the creation of the French Guiana National Park, known as the “Amazonian Park” (which covers a total area of 3.39 million hectares), restates regulations concerning access for tourism activities or scientific research by nonresidents. Thus once again, a cultural relativist approach presents indigenous ways of life in living museums that must remain unchanged. However, we should point out that most of the Amerindians we met in the park’s territory expressed the wish to be employed by this public establishment. They adopted the Western lifestyle long ago and dream of becoming civil servants, just like many inhabitants of the coast. Price & Price (2003) recall that “Invoking constitutional reasons, France has never signed Convention 169 of the International Labor Organization (UN, 1989) pertaining to “the protection of indigenous and tribal peoples in independent countries [...]” That position goes against the European parliamentary resolution adopted in 1994, which recognizes the right of indigenous [and Maroon] peoples to be masters of their own fate (...)” (p. 93). To complete this analysis, it can be observed that Amerindian populations borrow from the conventions, resolutions and declarations that correspond to their interests, since they themselves have never demanded the independence of the country where they were colonized, whereas in Resolution n° 1514 drafted following the general assembly of December 14, 1960, the UN declared that “the subjugation, domination and exploitation constitutes a denial of fundamental human rights, is contrary to the Charter of the United Nations”. As for the Maroons, until the 1970s, Ndjuka and Paramaka villages were only found on Surinamese soil. “Around 1970, French Guiana only [had] 7500 Maroons, roughly 3000 Saamaka (men who [work] there for several years) and 2000 Aluku (...) as well as 2000 Ndyuka and 500 Paramaka who [have] agricultural plots on the French.” (Price & Price, 2003, pp. 65-69). In 1986, “three districts in Eastern Suriname witnessed a rebellion that would rapidly destabilize the national economy” (Bougarel, 1990, p. 43). In December, after a massacre of civilians, the exodus of the population began in earnest. At this time, the migrants were absorbed into the Maroon population of the area, taken in by relatives or friends who had been living in French Guiana for several years. Since then, demographic growth has continued. In 1999, Insee revealed that in French Guiana, “24% of births (in French Guiana) are to Surinamese women” (Charrier, 2002, p. 16).

### *Amerindian and Maroon Political Emergence*

Collomb et Tiouka (2000) state that the changes experienced by Kali’na society during the 1960s and 1970s were destabilizing for the men and women who underwent them but “in return, they gave rise among younger generations to new questions about their cultural roots and to the expression of a strong feeling of identity, which led to the development of the Amerindian movement in French Guiana” (p. 117). Thus, in the mid-1970s, the Mana Association of Amerindian Families began reflecting on such issues and then, in 1981, the “Association of French Guianese Amerindians” (A.A.G.F.) was created by the youth of Awala-Yalimapo. On December 8 and 9, 1984, they organized the first Gathering of Amerindians. The president of the AAGF vigorously criticized French policy pertaining to Amerindian communities (p. 115). The French Guiana Federation of Amerindian Organizations (FOAG), which replaced the AAGF en 1992, has since become a fixture of French Guiana’s political landscape. It is also very present in the working group on indigenous peoples at the United Nations and in the Coordination of Indigenous Organizations of the Amazon Basin (COICA), which is one of the major indigenous organizations in Latin America.” However, “beyond the official organization chart of the FOAG, the Amerindian movement remains

weakly institutionalized and only involves a minority of players within a group which is itself a small minority. Moreover, since 2001, the FOAG has been weakened by numerous disaffections and divisions” (Guyon, 2009).

Analysis of designations of Amerindian and Maroon populations shows that the vocabulary has changed over time. First “savages” then “primitive populations”, the term went on to change from “tribal populations” to “forest-dwelling populations” (Jolivet, 1997). Paradoxically, the latter term was also used for coastal Amerindian populations who subsisted mainly on marine products, then the term “ethnic group” gained ground. Jolivet highlights the fact that “ethnic group”, a term used by anthropologists, was first used to qualify the Maroons and Amerindians of French Guiana and was then adopted by the general population, so that all the groups present in French Guiana became “ethnic” (p. 819). Currently, in French Guiana, as a result of the process of revalorization, the descendants of runaway slaves are designated by the terms “Noirs Marrons” (Maroons) or “Businenge”<sup>#####</sup> or more recently, “indigenous people”. Businenge, which was first highlighted by researchers, is a generic term by which these populations refer to themselves and is currently being adopted by the entire population. As for the designation “indigenous”, it can be observed that, paradoxically, whereas the formation of Maroon groups resulted from creolization, they are presented as indigenous people alongside the Amerindians. Moreover, we should point out that the French Guianese Creoles and continental French have always refused to grant such recognition (as indigenous) to Haitian Creoles, who arrived in the early 1960s, although they are descendants of slaves. Chalifoux (1989) points out that the stereotypes surrounding Maroons make them “living symbols of the original resistance and of ancestral magical power, they [represent] the ‘other possible civilization’ since ‘they know where they come from’ (...)”. Maroons, through their past as runaway slaves, are the living symbol of anticolonial pride (p. 22). Still, the place of Maroons remains spiritual. It is idealized during commemorations of the abolition of slavery, in the speeches of politicians or intellectuals, but in concrete terms, they have not been fully integrated into French Guianese society. Their status as foreign immigrants, black-skinned, poor, polygamous, at the head of large families, and who in many cases entered French territory illegally, confers to the descendants of Maroons quite a negative image in French Guianese society, which inherited the socio-racial classifications of the colonial period. Thus, despite the development of the afro-centrist school of thought in the 1970s initiated by the Creoles (Hidair, 2003), today valorization of Maroon populations remains symbolic, since it is restricted to cultural aspects.

### **The “Indigenous” Identity in the European Psyche**

It is important to show that the ideology of indigenous roots originated in the European psyche which, since the discovery of the Amerindian populations, has viewed the latter as having the natural qualities that Europeans supposedly have lost (Chalifoux, 1989, p.19). In French Guiana, in the early 1970s, the Amerindian way of life was idealized, non-Western cultures were valued. Thus, the “good Amerindian”, the model Amerindian, was one who showed signs of being integrated in nature. If an Amerindian was in step with modernity, or integrated the elements of Creole culture, they were perceived as being the victim of a scheme and as being acculturated (Chalifoux, pp. 18-19). The presence of Amerindians in the city was viewed as incongruous. On that theme, the anthropologist Vincke (1995) developed the concept of “rate of incongruity” by studying urban iconic signs, whose ideology assigns precise places to non-whites in several Western cities. Thus, by swapping the figures present in public spaces (monuments, place names, posters, graffiti, stickers, etc.), if it appears that individuals are in the wrong spot, it is because ideology has assigned them a specific place (p. 253). Although there has been considerable progress made in recognizing “indigenous” populations, their being locked into tourist attraction stereotypes and the use of their cultural specificities to serve electoral ends hamper their full integration into French Guianese society. These “indigenous” populations are associated with images of “biological and cultural purity” that they struggle to rid themselves of (Chalifoux, 1989, p. 12). Moreover, young Amerindians and Maroons themselves have integrated these evolutionist ideologies that originated in the colonial period. Thus, they in turn dream of leaving for Europe or

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##### Businenge is derived from the English Bush Negroes or the Dutch Bos Negers.

the United States and overvalue the Western lifestyle. Towards a Tri-Dimensional Approach to Identity Among Amerindian and Maroon Adolescents.

### **Towards a Tri-Dimensional Approach to Identity Among Amerindian and Maroon Adolescents**

Adolescents are influenced by a tri-dimensional identity and juggle with socio-cultural contributions which we will call “traditional”, “French Guianese” and “European, according to circumstances. This approach to identity is demonstrated, for example, by the Wayana singer David Khana. Born in 1980 in Aloike (on the banks of the Maroni river), he presents himself as “an original Wayana, a genuine one”. Still, he has just recorded a reggae album which includes six songs sung in French as well as in Nenge Tongo and Wayana. Similarly, the Maroon singer Léon Tooy, from Grand-Santi, has also recorded songs whose music was influenced by Haitian Kompa and French West Indian Zouk, with words written in the Nenge language. “Traditional” influences are the idealized ancestral origins, the “French Guianese” contributions relate to the stereotypes constructed through interactions with other socio-cultural groups and the “European” influence shows itself through the Western values interiorized by every generation of Amerindians and Maroons and transmitted in particular through schooling and the media. The statements of the students we met were revelatory of this triptych that constitutes the “indigenous French Guianese identity”. These adolescents integrated the stances of their elders, which they later adapted to meet the expectations of the contemporary world. Thus, among many of them, contradictory views emerge:

- On the one hand, they value “indigenous culture” while at the same time adopting Western values (50% would like to leave French Guiana to go and live in continental France); for the majority of young people, the definition of “indigenous culture” is limited to its “folkloric” aspects: The surveys carried out in Maripasoula, Grand-Santi, and Saint-Georges-de-l’Oyapock revealed that for 80% of the students questioned about their cultural and family environment, their knowledge was limited to tourist clichés (in decreasing order: hunting, canoe, art).

- On the other hand, they seek to differentiate themselves from foreign indigenous people, as in the case of the Maroons, for example, where the difference will be emphasized between people of Surinamese nationality and French citizens (In keeping with the rejection-integration dialectic of identity construction, within the community designated as being indigenous, different types of relationships exist between the groups that make it up: conflicts, cooperation, competition, exclusion).

Similarly, they will claim that ancestry while refusing the color of their skin, which they consider to be too dark-an attitude observed among Maroons— or while preferring to transmit the French language to the detriment of their mother tongue- as we observed among the Amerindians we met. All of these paradoxes emerged after analysis of the field data. A summary of the results confirmed, for more than half the young people interviewed, a contradictory stance concerning *the question of the future*: while wanting to continue living in their village (89%), these students want to live in Saint-Georges or in Cayenne (87%); also, while they like the daily way of life in the village, they also consider living *in the city*. Similarly, some will emphasize the positive aspects of the Amerindian or Businenge way of life at the same time as they want to see artifacts of “*the other civilization*” in the village (television, MP3 player, Western clothing) – an attitude most often observed among Maroons but also among Amerindians. 83% of the young people are attached to the concerns of the community (helping their parents, going to work in their agricultural plot, fishing, hunting - even girls listed these same concerns). Analyses revealed certain factors that seemed decisive in their choice to leave the village: the opinion of the mother regarding the future of the child, the departure and “success” in the city of a family member, or the status of employee within the village (for example, the Amerindians or Maroons who worked for the school or the health center or the Amazonian Park, etc.). With regard to *the linguistic question*, the survey found that all the students interviewed are bilingual (mother tongue/French). In addition, a large majority of them (87%) mentioned a third language (some of them say “they know it”, others just that “they understand it”); the students were referring to other languages spoken in their village. The languages mentioned, depending on where their village is located, were: Brazilian Portuguese, French Guianese Creole, or another English-based Creole language or another Amerindian language. We observed that the young people did not refer to the foreign language studied at school. That language is considered by the majority of them



Fig. 1: Identity Dynamics of Young People of Amerindian and Maroon Descent. Model proposed by the authors

Other recent studies on the educational practices of Amerindian populations state that, in spite of the geographic isolation of these populations, the interactional dynamics of the different socio-political systems (school, government agencies, other socio-cultural groups, languages, etc.) influence traditional functioning, producing a dynamic identity process (Ailincăi & al., 2012; Ailincăi & Jund, 2012; Ali & Ailincăi, 2013). The study by Ailincăi et al. (2012) highlights the gap between actual parental educational practices (observed by researchers) and their expectations in terms of the social success of their child (expectations stated during interviews). This contradiction supports our findings relating to the contradictory attitudes observed among the young people interviewed.

### **Discussion: The Question of the Future**

The main objective of this article was to present the historical context that fostered the emergence of a tridimensional identity dynamic among young people of Amerindian and Maroon descent. Secondly, based on our analysis of the interviews and questionnaires carried out among middle and elementary school students, we proposed a model of that identity. The examples presented revealed an evolving identity, open to the dynamics of change and the acceptance of novelty. This research shows the permeability of “ethnic boundaries” (Barth, 1969) and highlights the contradictions of an “indigenosity” constructed from a Western viewpoint, which attempts to classify it in pre-established categories. However, the latter do not correspond to the reality of these peoples, whose ways of life are as modern, dynamic and influenced by interactions as those of any other population. Moreover, the growing “indigenous” share of the population strongly suggests that they will not remain on the sidelines for long, locked into clichés about “traditionally rural populations”, but that the question of their integration will have to be addressed. On that subject, Price & Price (2003) state that: “*The fact of being Aluku, Ndyuka, Saamaka or Paamaka determines, for every Maroon in French Guiana, not only an identity linked to the history and culture of their people, but also the ambitions that they can reasonably cherish for their future. A young Aluku can dream of a job in a government agency or a seat on the Regional Council, whereas a Saamaka of the same age is most often reduced to the eventuality of obtaining a residency permit that will allow them to look, for example, for a salaried job in construction*” (p. 93). To complete our analysis, we should point out that Price & Price’s observation is also valid for Amerindian populations. The Kali’na and Lokono enjoy a privileged political situation compared to the Wayãpi or Teko of the interior. Aware of the impossibility for them to singlehandedly wage, with assurance, a battle over economic and political issues, “indigenous” populations are forced to group together in order to demand recognition of their existence before the French government, while at the same time ensuring that they remain in the Republic. Thus, the decree of October 14, 2008 established the list of organizations and non-profit groups representative of the Amerindian and Maroon populations, who were expected to designate their representatives to an advisory council, and appointed the qualified public figures chosen to be members of that council. However, we have to ask ourselves whether these requests for protection, these demands for legal advantages, these claims to receive recognition of their specificity and these arbitrarily applied postulations of exceptionality will solve the issue of the discrimination targeting these peoples. Won’t recommendations to grant privileges based on ethnic criteria widen the gap

separating French Guianese socio-cultural groups? On this point, Laplantine and Nouss (1997) emphasize the fact that “*the unkept promises of abstract universalism have led to particularist tensions (...): the absoluteness of religious purity, exclusive cultural affirmation through restrictive rootedness in the land or in memory, the thesis of ethnicity which often covertly vehicles racism*” (p. 74). Multiculturalism, as it is viewed in our societies, “is based on the cohabitation and co-existence of separate and juxtaposed groups resolutely turned towards the past, which should be protected from encounters with others” (p. 75). To pursue that point, we can conclude that most of the perceptions of Amerindians and Maroons in French Guiana ignore the fact that contacts have always existed and will continue, because they contribute to the identity of peoples who construct themselves through exchanges, encounters, sharing, conflicts. That selective blindness lends support to a form of cultural relativism which consists in considering any change as abnormal. Wouldn't it be more fruitful to support these changes, to teach this migratory history which is often taboo (Hidair & Éliville, 2010), to explain how cultural identity is comprehended from a multitude of heritages? It seems that attributing qualities, but also flaws, to cultures masks individual potential and complicates any attempt to develop a concept of a “French Guianese identity” based on territory instead of on racial divisions.

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# Mindfulness as an intervention for improving academic success among students with executive functioning disorders.

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## Abstract

College attendance has increasingly become a seemingly mandatory next step following high school: employment, promotion, and career-related skills frequently demand post-secondary training. As the college attendance rate has increased, the rate of college attendees with diagnosed learning disabilities or learning challenges has followed suit (Connor, 2012). Time management, including the abilities to focus attention and reach incremental goals, are critical to college success (Al-Harthy, Qaboos, & Was, 2013). This paper attempts to analyze the role of mindfulness and self-awareness in relation to the etiology of executive functioning disorders. Recent literature supports the use of mindfulness and meta-cognitive awareness as tools to help students with executive functioning deficits succeed in high-stress academic environments.

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*Keywords:* Mindfulness; time management; executive functioning; college students; academic success

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## Introduction: mindfulness as an intervention for executive functioning disorders.

The role of mindfulness as a key component of psychological counseling has been widely studied, but little attention has been paid to the potential benefits of mindfulness in relationship to improving academic performance. This paper addresses the relationship between time management skill-building and mindfulness practices leading to increased beliefs of self-efficacy in college students. Citing Aud, et al. (2012) Watson (2013) discusses the cause for concern regarding university retention and completion rates: "Among those who enrolled in 4-year institutions during the 2004 fall semester, only 58% completed a bachelor's degree within 6 years." While there are numerous reasons why students do not finish a degree, Vandenberg and Emery (2009) report that only 28% of students with a diagnosed learning disability finish an undergraduate degree program. The retention and graduation rate for this population is thus especially important to address in a timely manner. Through the synthesis of current research into time management deficits in individuals with executive functioning difficulties, strategies for time management-tracking and self-reflection are posited. While this paper does not propose to be a definitive source regarding the relevance or effectiveness of mindfulness for these purposes, it does fill a gap in research regarding ameliorating executive functioning disorders in college students. It is hoped that this initial inquiry can be a first step into more pronounced analysis and study of interventions to support college attendance, success, and retention for individuals with learning disabilities or challenges.

### *1.1. Background: College-aged students with executive functioning difficulties.*

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The transition from high school to college is often complicated with the predictable life transitions of leaving home, establishing a new peer group, and reaching emerging self-actualization in the adult world. College students, especially those that have lived with executive functioning difficulties, may encounter the additional step of whether to self-advocate for disability accommodations on campus, to receive updated testing to reconfirm their diagnosis, or even begin to grapple with the potential adult diagnosis of a learning disability (Connor, 2012). Broadly, executive functioning relates to the mind's ability to organize, prioritize, and manage details that aid in daily functioning (Barkley, 2012). Barkley (2012) additionally points out that a reliable and agreed upon definition of exactly what executive functioning entails has yet to be created; this is largely due to a need for more precise neuropsychological understanding of the volitional and automatic control centres in the brain. Attention Deficit Hyperactivity Disorder (ADHD) is widely accepted as the leading example of executive functioning disorders (The National Center for Learning Disabilities, 2014). The Centers for Disease Control and Prevention (2012) estimate the United States ADHD diagnosis rate to be 9.5% of all children between the ages of three to seventeen. Thus, the number of students entering college with either a current or past ADHD diagnosis is potentially very high. A diagnosis of ADHD includes either a combined presentation or categories of "predominantly inattentive presentation" or "predominantly hyperactive-impulsive presentation" (DSM-V, 2013). The inattentive symptoms of the disorder manifest as (but are not limited to) a persistent inability to maintain focus, chronic forgetfulness, difficulty maintaining attention on tasks that require sustained cognitive endurance, and distractibility (DSM-V, 2013). Hyperactive-impulsive symptoms include a need to fidget or not sit still for long periods of time, lack of patience, and difficulty sticking to schedules (DSM-V, 2013). Not surprisingly, all of these components are essential in order to pace one's self and succeed in rigorous college-level coursework: deficits in attention and impulse-control could potentially lead to lack of academic achievement or degree persistence towards graduation.

### *1.2. Background and usefulness of mindfulness in college populations.*

Mindfulness-based Cognitive Behavioural Therapy (MBCT) and Mindfulness-based Stress Reduction (MBSR) are therapeutic interventions that hinge upon an individual learning and practicing a form of meditation in addition to receiving cognitive behavioural interventions to handle any distressing emotions that may emerge during therapy (Barnett, Shale, Elkins, & Fisher, 2014). Barnett, et. al (2014) cite Kabat-Zinn's definition of the informal practice of mindfulness as one of the many facets of MBCT, MBSR, and related therapies: "Mindfulness meditation is commonly defined as paying attention in a particular way—with intention, in the present moment, and nonjudgmentally (Kabat-Zinn, 1994)." Barnett, et. al (2014) continue with a very clear example of what the practice of informal mindfulness could look like: "Because the important part of mindfulness meditation is the meditator's state of mind rather than a specific posture or procedure, it can take many forms, including sitting and focusing on the sensations of breathing or walking slowly and paying attention to the sensations of locomotion." Focusing on the client's (in this case, student's) state of mind could help individuals recognize feeling states and problem-solve ways to manage those emotions without letting them divert attention or lead to impulsivity. Additionally, MBCT has been shown in preliminary studies to provide patients with some long-term skills to reduce relapses of anxiety and depression (Coelho, Canter, & Ernst, 2013). Supporting this research, practicing mindfulness has been shown to increase monitoring of internal mental states (Tang, Ma, Wang, Fan, Feng, & Lu, 2007). Thus, promoting metacognitive awareness through intentional reflection upon both positive and negative emotional states could very easily translate from the personal to academic realms: encouraging students to be purposely selective in their actions. Furthermore, mindfulness has also been shown to decrease neuroticism and increase harm avoidance while supporting increases in openness, agreeableness, and conscientiousness (Baer, Smith, & Allen, 2004; Brown & Ryan, 2003). In these ways, mindfulness has the potential to help individuals achieve more balance in their lives, especially during stressful times or when dealing with overwhelming emotional states.

## **2. Self-Regulation and self-efficacy as components of time management.**

While motivation is a critical component of academic performance, self-regulation and perceptions of self-efficacy are the larger drivers of many of the factors teachers often consider when grading student performance. Related to executive functioning, self-regulation can be seen in a number of areas, such as appropriately pacing or

planning assignments given a timeframe or deadline. Perceptions of self-efficacy are tied to self-esteem and fuel motivation: pre-assignment "I feel confident that I can do well on this assignment" and post-assignment "I prepared myself to do well on my assignment and I received a good grade." A review of relevant literature explains these concepts in more detail and helps support the use of mindfulness and time-tracking as therapeutic interventions for executive functioning disorders.

### 2.1. Internal factors.

Bembenutty (2009) reports that self-regulation leads to motivation to succeed at a task and is divided into three components: forethought, volitional control, and self-reflection. As students age, they become more adept at following through with each of these steps and Bembenutty (2009) posits that this in turn leads to self-efficacy (feelings that one is capable and able to create a goal and achieve it). Joët, Bressoux, and Usher (2011) took this theory a step further and implemented a self-reflection Likert scale: they measured perception of self-efficacy within a given content area, social factors within the classroom, and previous and current grades. They found that self-efficacy was the core predictor of academic performance for their target group (elementary-aged students in France), however their study did not offer strategies to promote self-efficacy. Martin (2004), took a different approach to this topic and explored the Piagetian concept of self as cognitive constructivist (student's interactions and engagement in the learning process) versus the Vygotskian approach to self within a sociocultural framework (learning and self-regulation are a part of the specific social framework in which instruction is provided). Avci (2013) explored the role of delayed gratification in academic environments and found that students' ability to understand that effort put forth before an assignment translated into better grades over time. Avci (2013) employed a "proximal sub-goal system" in which students were instructed to longitudinally reflect upon their goals. Students in Avci's (2013) study were also given a self-inventory Likert scale with questions designed to probe academic strategy use within and outside of the classroom. Use of a calendar system as a time management strategy could potentially mirror the proximal goal system which could translate into student gains in both self-efficacy and self-regulation. Ruban, McCoach, McGuire, and Reis (2003) explored student performance on the Learning and Study Strategies Inventory (LASSI) in a student population with diagnosed learning disabilities; they discovered that students with learning disabilities scored lower in terms of self-perception of strategy use. Additionally, students who were simply told to "study harder" or to remember to take notes, use a calendar, etc. did poorly in comparison with their peers because they lacked understanding of exactly how using study strategies translated directly into grade point gains (Ruban, et al., 2003). This study suggests that students with executive functioning disorders may do best if learning strategies are modelled for them, with explanations for the potential helpfulness of the strategies clearly articulated by a knowledgeable practitioner.

### 2.2. External factors.

This area represents a relative gap in knowledge in regards to the most highly cited literature that was reviewed on the topic and suggests that further study is needed to enhance the field. Kitsantis and Zimmerman (2009) explored the relationship between quality and quantity of homework completion in high school and early college students, since homework completion must be accomplished in a limited timeframe outside of class (when teacher intervention is likely not present). They administered a reflective inventory called the *SELF* to measure perceptions of self-efficacy in relation to their homework assignments. Kitsantis and Zimmerman (2009) were able to conclude that encouraging students to do their homework (and assigning homework at all) positively correlates with improvement in self-regulation and self-efficacy, however they did not delineate specific classroom interventions.

## 3. Support strategies.

While Joët et al. (2011) were able to show that self-efficacy improves academic performance, they did not address their methodology for coming to the conclusion that "individual-level, not classroom-level, factors best explain how capable students feel of managing and organizing their work": this is an area where this paper and

further research can potentially provide important data to inform teacher practices. Zumbrunn and Bruning (2013) used Self-Regulation Strategy Development (SRSD), which reinforces goal-setting and pre-planning before, during, and after the writing process: they discovered that students were able to better articulate their goals, follow-through with plans, and score higher on their assignments. In this study, Zumbrunn and Bruning (2013) taught students component steps in goal-setting and metacognition through six lessons spread out over a week. This approach is similar to lesson planning for a week or more of lessons in a middle school or college environment and could be easily employed in classroom settings. Lee, Kim, and Grabowski (2011) employed two-tiered scaffolding of explicit strategy instruction: "generative learning strategy prompts and metacognitive feedback" to undergraduate science students and discovered that this improved students' self-perceptions of both self-regulation and self-efficacy. Specifically, generative learning strategies included highlighting main ideas in textbook and creating summaries of main ideas; metacognitive tasks included paraphrasing and synthesis of one concept in relation to another. Lee et al. (2011) concluded that both activities are required in order to increase self-efficacy and self-regulation: eliminating one or the other did not produce any gains in these areas; this suggests that when faculty are creating strategies or interventions, it may be essential to scaffold both in terms of the strategy itself as well as metacognitive awareness.

### *3.1. Evidence supporting the practice of mindfulness in improving academic functioning.*

The benefits of mindfulness on improving self-regulation and perceptions of self-efficacy transfer directly to standard measures of academic success. Students who engage in mindfulness have been shown to score higher on standardized tests and college course exams (Docksai, 2013). Docksai (2013) conducted a study at the University of California, Los Angeles to determine if mindfulness helped students prepare for the Graduate Records Examination (GRE): students who engaged in mindfulness scored a full 16% higher between their first (pre-mindfulness) and second (post-mindfulness) attempts than the control group. High-stakes testing such as the GRE are unlikely to disappear in the near future: strategies to prepare students to do well on these macro-level tests could easily be applied to micro-level testing within disciplines on the regular college campus. Indeed, many universities have initiated mindfulness practices (typically within a counselling centre) as a way to lower exam anxiety, improve overall classroom attention, and foster an environment of sensitivity and awareness within and outside the classroom (Docksai, 2013). Greenfield (cited within Docksai, 2013) notes: "We can help our students learn to focus their attention on the task at hand, to be more sensitive to others' needs, and to manage natural feelings of anxiousness or worry." While this can seem at first glance to be a rather hefty burden to place solely on the practice of mindfulness, initial evidence into the effectiveness of mindfulness on college campuses is optimistic.

Practitioners of mindfulness have exhibited limited improvements in both short- and long-term memory free recall (Lykins, Baer, & Gottlob, 2012). Additionally, practicing mindfulness appears to enhance working memory capacity (Chambers, et al., 2007). Freeing up availability in short- and long-term memory stores could allow students to more efficiently retain information from class to class: a necessity for all students, but of primary importance to those already suffering from attentional deficits. Further, mindfulness has been found to increase both sustained attention and attention switching (Chambers, Lo, & Allen, 2007). This is significant because improving attentional control leads to greater cognitive flexibility and more metacognitive insight (Roemer & Orsillo, 2003; Bishop, Lau, Shapiro, Carlson, Anderson, & Carmody 2004; Mason & Hargreaves, 2001; Teasdale, 1999; Teasdale, Segal, & Williams, 1995). As previously discussed, these factors are essential to improving student motivation for learning and achievement within and outside of the classroom. Empowering students with skills to improve attention and memory may help students already struggling with executive functioning disorders feel better equipped to take ownership over the learning process.

Considering executive functioning disorders specifically, mindfulness practice in individuals with ADHD can lead to increases in conflict attention, more self-directedness, and increased self-transcendence: all are associated with improvements in self-regulation (Smalley, Loo, Hale, Shrestha, McGough, Flook, & Reise, 2009). Howell and Buro (2010) note that: "In the academic domain, it appears that mindfulness is an indirect predictor of achievement emotions via its relationship with achievement-related self-regulation." Improvements in achievement-related self-regulation are critical to seeing marked shifts in actual performance in individuals with executive functioning disorders. Thus, mindfulness practice has proven implications for both academic and personal

functioning: in fact, the two realms seem inextricably intertwined in both research and practice.

#### 4. Discussion and further research

While mindfulness should not be considered a panacea for deficits in interpersonal relationships or executive functioning difficulties, recent research strongly supports the idea that practicing mindfulness results in empirically proven benefits in numerous areas of personal and academic functioning. In an age when universities are frequently seeking ways to enhance student well-being while concurrently improving graduation and retention rates, intentional mindfulness practice appears to have the potential to provide significant benefits in all of these areas. It is essential for universities to be aware of the needs and challenges of all students enrolled on campus: using mindfulness practice to foster academic success and self-awareness in students with learning disabilities, particularly executive functioning disorders, could reduce student stress and improve academic achievement. Further research into the practical application of mindfulness programs on college campuses and the subsequent effect of these programs on student functioning and persistence to graduation is needed.

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# Modern tools in education used within the technical mechanics lessons

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## Abstract

The article deals with the using of modern tools in education within the Technical mechanics lessons, especially in the scope of kinematic and dynamic analysis of mechanism. It is focused on the possibility to solve the same problem by three various approaches. Students are firstly acquainted with basic mechanical principles and after problem solution they can compare not only achieved results but also the advantages and disadvantages of individual methods. It can be said that most popular technique is solution using computer aid, because traditional methods require numerical computation and students have the limitations in math. On the other hand the teacher's task is to show to students that the modern tools help us to simplify and shorten the problem solving but the know-how has to provide user of software. So the theoretical base and traditional methods used in education process have in some cases their justification.

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a) *Keywords:* mechanics; mechanism; analytical, graphical and computer aided solution

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## Introduction

The quality of academic study in complex form is based on the knowledge of high and grammar-school leavers, which usually aren't on the same level. Most of the leavers come at the technical universities without the idea about terms connected with the application of mechanics in practice. Students are already forced to work with these terms and theories in 1st year of academic study. In the scope of education it is very important for student to understand the merits of task which has to be solved. That's why the lecturer should explain mechanical laws step by step. It also holds at kinematic and dynamic analysis of mechanisms what are the topics which students meet during their studies at Faculty of Manufacturing Technologies TU Kosice with a seat in Presov. The theoretical knowledge within the mechanics is for student basement for next lessons related to e.g. parts of machines, technical devices design, elastic body analysis and other.

In despite of the fact that working out and understanding of theoretical basis of mechanics laws is essential assumptions of education today, on the other hand the demonstration of practical application of obtained theoretical knowledge is missing. There are not used available instruments and computer aid in education process in the regard to the visualization of problems and achieving results of research. Some types of problem solving (for example graphical solution) are inaccurate and non-actual in today digital age. Therefore it is necessary the classical well-tested approaches to supplement, to update and adapt to modern trends or possibilities. (Senderska et al. 2013)

The comparison of traditional and modern approach to study of mechanism within the Technical mechanics lessons is presented on the kinematic and dynamic analysis of slider-crank mechanism. It can be considered as most commonly used mechanism in real practice. It is a part of various machines and almost every car. The slider-crank mechanism consists of crank shaft, slider block and connecting rod. The crankshaft performs the rotational motion;

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piston translational motion in one direction and connecting rod performs general motion and the joints between the bodies have to be defined so to allow these motions. The mechanism has one degree of freedom. (Panda, 2012) Figure 1 shows the real slider-crank mechanism of minibike Jawa 90 which students can take in your hands.

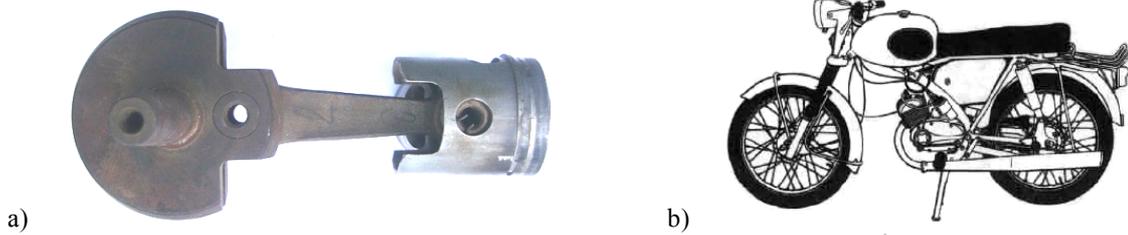


Fig. 1. Real slider-crank mechanism (a) of minibike Jawa 90 (b).

### Kinematic analysis

The aim of the kinematic analysis is to investigate the motion of individual components (or their choices points) in dependence on the motion of drivers. To investigate of the motion means to determine the dependency of the position, velocity and acceleration of the examined members and important points on the motion of driven members or on the time. (Lukovics, 2013)

Let the input values of the mechanism for kinematic analyses are:

- crank shaft length  $r = 24 \text{ mm};$
- connecting rod length  $l = 90,25 \text{ mm} = 0,09025 \text{ m};$
- angular position of crank 2  $\varphi_{21} = 35^\circ;$
- angular velocity of crank 2  $\omega_{21} = 31,416 \text{ rad.s}^{-1};$

The kinematic analysis can be done by several manners such as analytical, graphical and computer aided solution.

#### Analytical solution

There are several types of analytical solution that is usually concerned on the task of the position. Most often analytical method uses the trigonometric rules and mathematical definitions as are functions, differentiation, equations, etc. The simple representation of real mechanism that serves as the basis for next processing is the kinematic scheme. (Andrejevic et al. 2013) The individual components of mechanism in this scheme are numbered due to the numerical solution limpidity. The frame is numbered 1, the driver is the crank with number 2 that rotates with angular speed  $\omega_{21}$ . The goal of task is to define the motion of the slider (component 4), which all points describe line path. The kinematic scheme of crank-slider mechanism is shown in the Fig. 2.

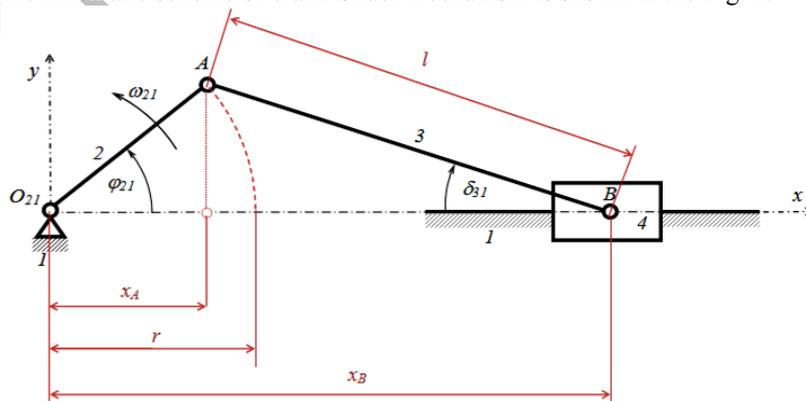


Fig. 2. Kinematic scheme of mechanism

Angle position of the crank 2 is determined by angle  $\varphi_{21}$  that changes in time. Kinematic dependency of angle  $\varphi_{21}$  on time, if angular speed  $\omega_{21}$  is constant can be expressed:

$$\varphi_{21} = \omega_{21}t \quad (1)$$

The origin of coordinate system of mechanism was for numerical solution located into the point  $O_{21}$ . It can be said, that the kinematic values of component 4 is determined by kinematic characteristics of point B, because slider 4 executes the linear motion in axis  $x$  direction and all its points do the same move. All kinematical characteristics in  $y$  direction therefore are zero. The dependency of searched  $x$ -coordinate on the angle  $\varphi_{21(t)}$  is defined by trigonometric method. For point B holds

$$x_B = r \cos \varphi_{21} + l \cos \delta_{31} = r \cos \omega_{21}t + l \sqrt{1 - \left(\frac{r}{l}\right)^2 \sin^2 \omega_{21}t} \quad (2)$$

By the first and second differentiation of the equations mentioned above with respect to time students can obtain the components of corresponding velocity and acceleration:

$$v_{Bx} = v_B = -r\omega_{21} \sin \omega_{21}t - \frac{r^2 \omega_{21} \sin 2\omega_{21}t}{2 \cdot \sqrt{l^2 - r^2 \sin^2 \omega_{21}t}} \quad (3)$$

$$a_{Bx} = a_B = -r\omega_{21}^2 \cos \omega_{21}t - \frac{r^2 \omega_{21}^2}{4 \cdot (l^2 - r^2 \sin^2 \omega_{21}t)^{3/2}} \left[ 4 \cdot (l^2 - r^2 \sin^2 \omega_{21}t) \cos(2\omega_{21}t) + r^2 \cdot \sin^2(2\omega_{21}t) \right] \quad (4)$$

After substitution of concrete values  $r$ ,  $l$ ,  $\varphi_{21}$  and  $\omega_{21}$  into the equations (3) and (4), the values of velocity and acceleration are:

$$v_B = v_{Bx} = -0,528644964 \text{ m.s}^{-1} \quad a_B = a_{Bx} = -21,37024049 \text{ m.s}^{-2}$$

#### Graphical solution

Graphical solution is suitable only for planar mechanism analysis and come out from the kinematic scheme of mechanism sketched in the selected scale with the scaled input parameters in vector form. After graphical solution it is needed to measure the obtained vectors of kinematic parameters and consequently to calculate the real obtained values of kinematic analysis. Students can use the colour lines for the higher limpidity of solution.

The example of graphical solution of mechanism is shown in the Fig. 3.

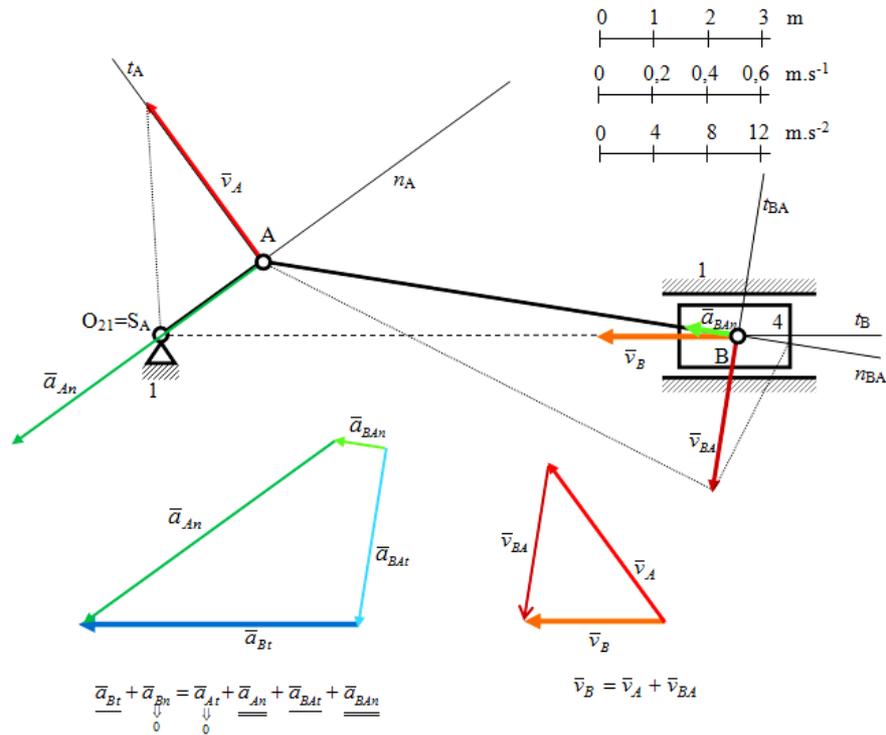


Fig. 3. Kinematic analysis - graphical solution

### Computer aided solution

Computer aided solution use the special software dedicated for it. Today there are very interactive and user friendly 3D software in the market, which can simulate not only the motion of the mechanism, but they can define the position, velocity, acceleration, forces, moments and other parameters in every moments of time in graph or vector version, for example. (Krehel & Rimar, 2014) Pro/Engineer is one of the software, which is suitable for the analysis and the control rationalization of complex processes. It provides students to perform the kinematic motion simulation and behavioural insight into the assembly through the easy definition and animation of connections. Once assembled, students can observe how their mechanism designs will behave geometrically through interactive part dragging and user-defined motion simulations. Predefined motion simulations, using drivers to simulate motors or actuators, also provide animation.

Inside computer application primarily it is necessary to create the 3D models of individual components of mechanism, secondary to join them by kinematic linkage which removes needed degrees of freedom. The virtual model of slider-crank mechanism was created in software PTC Creo and it is showed on the Fig.4.

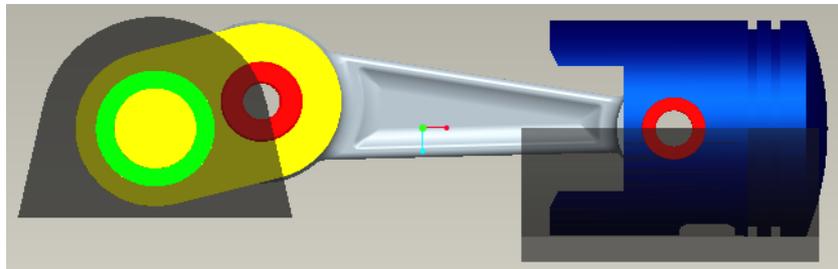


Fig. 4 Virtual model of real slider-crank mechanism

After the modelling mechanism, joints and input parameter definition, it was possible to provide the kinematic analysis. Output data could be designed direct in software PTC Creo as values or as graphs or it can be sent to other software for the next processing.

Fig. 5 shows the velocity [mm.s<sup>-1</sup>] and the acceleration [mm.s<sup>-2</sup>] profile of the slider 4 after analysis has been executed depending up the angle position crank 2 measured in Deg [°].

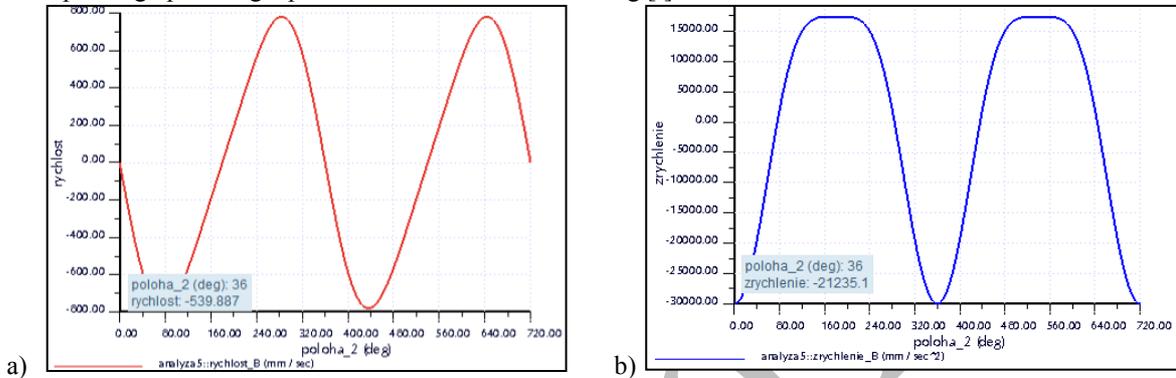


Fig. 5 Output data of kinematic analysis (a) velocity; (b) acceleration

Table 1 Kinematic analysis results

Kinematic analysis – point B Values for $\varphi_{21}=35^\circ$		Methods		
		Graphical solution	Analytical	Computer aided
Speed	$v_B$ [m.s <sup>-1</sup> ]	- 0,53	-0,5286	- 0,52864496
Acceleration	$a_B$ [m.s <sup>-2</sup> ]	- 21,45	-21,3702	- 21,37024049

### Dynamics analysis

Let the mechanism shown in Fig. 6, at which the length  $l = 0,08$  m, is loaded by initial moment  $M = 0,3$  Nm applied at the body 2 and by two forces  $F_1 = 50$  N and  $F_2$  according to the Fig. 1. The force  $F_2$  is unknown and it is necessary to specify it so to be a mechanism in equilibrium position given by the angle  $\varphi = 45^\circ$ . To simplify the solution, the gravity of bodies and the friction are not considered in this case.

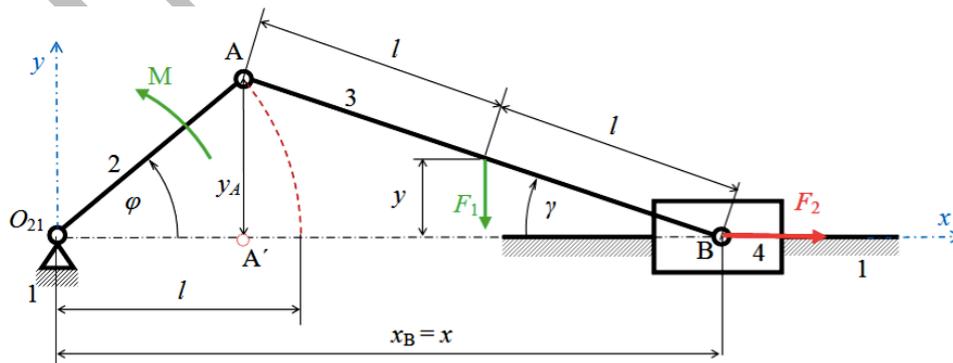


Fig. 6 Kinematic scheme of mechanism

### Analytical solution

For calculating of imposed motion without friction is especially well suited the principle of virtual work. Since the reactive forces do not exert any work during displacement, the principle of virtual work follows in the Lagrange formulation: A mechanical system moves so that the virtual work of effective forces (external and inertia) on virtual displacement equals zero. (Orlovsky, 2014) In general expression, the virtual work is given by the formula:

$$\delta A = \sum_i (Q_i - Q_{Di}) \delta q_i = 0, \quad (10)$$

where  $Q_i$  - general work force acting on the  $i$ -th rigid body,  
 $Q_{Di}$  - general d'Alambert inertia force acting on the  $i$ -th rigid body,  
 $\delta q_i$  - general coordinate of elementary displacement of the  $i$ -th rigid body.

The equation of virtual work for this concrete mechanism is

$$M\delta\varphi - F_1\delta y + F_2\delta x = 0, \quad (11)$$

where  $y = l \sin \varphi$  and  $x = l \cos \varphi + 2l \cos \gamma$ .

From triangles  $\Delta (O_2AB)$  and  $\Delta (ABA')$  in the Figure 6 follows

$$y = 0,5l \sin \varphi \quad \Rightarrow \quad \delta y = 0,5l \cos \varphi \delta \varphi$$

$$x = l \cos \varphi + l\sqrt{4 - \sin^2 \varphi} \quad \Rightarrow \quad \delta x = \left( -l \sin \varphi - l \frac{\sin 2\varphi}{2\sqrt{4 - \sin^2 \varphi}} \right) \delta \varphi.$$

After substitution  $\delta x$  and  $\delta y$  into (11)

$$M\delta\varphi - F_1 0,5l \cos \varphi \delta \varphi + F_2 \left( -l \sin \varphi - l \frac{\sin 2\varphi}{2\sqrt{4 - \sin^2 \varphi}} \right) \delta \varphi = 0$$

$$F_2 = \frac{M - F_1 0,5l \cos \varphi}{l \left( \sin \varphi + \frac{\sin 2\varphi}{2\sqrt{4 - \sin^2 \varphi}} \right)} = \frac{0,3 - 50 \cdot 0,5 \cdot 0,08 \cdot \cos 45}{0,08 \cdot \left( \sin 45 + \frac{\sin 90}{2\sqrt{4 - \sin^2 45}} \right)} = 14,2940547 \text{ [N]}$$

### Graphical solution

For graphical solution it is necessary to substitute the momentum  $M$  by the couple of forces  $F_{M1}$  and  $F_{M2}$  that are equal as for the strength of couple, but they are antagonistic oriented. It holds

$$M = pF_{M1} = pF_{M2},$$

where  $p$  is the distance between the forces  $F_{M1}$  and  $F_{M2}$ . If students choose the distance  $p$ , they can count the value

of the force. So, if the  $p$  is 0,01 m, the forces  $F_{M1} = F_{M2} = 30$  N.

For next graphical solution it was used the principle of superposition. At this principle the bodies are loaded step by step. The force  $F_2$  is unknown so it can be considered as one of the reactions. The specific graphical solution of this problem in the scale is presented in the Fig. 7.

After measuring of vector  $F_2$  (14 mm) and its recounting by means of the scale, it can be said that the force  $F_2$  approximately equals 14 N.

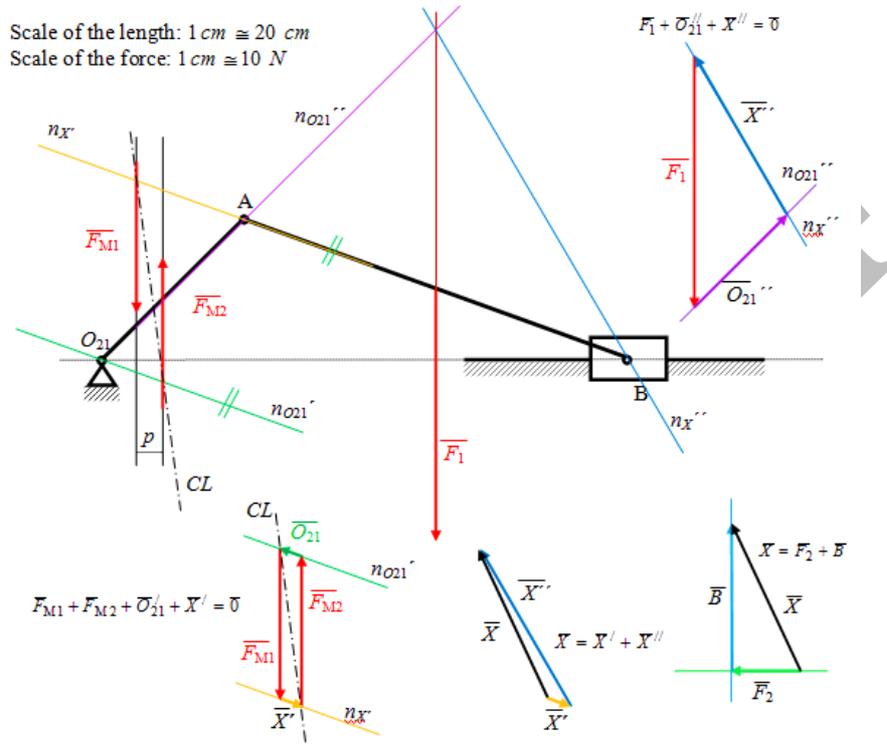


Fig. 7

### Computer aided solution

Dynamic simulation is more complex than kinematic analysis, because the problem needs to be further defined and more data is needed to account for the forces. But dynamics are often required to accurately simulate the actual motion of a mechanical system. Generally, kinematic simulations help evaluate form, while dynamic simulations assists in analyzing function. (Patel et al., 2013) If the input parameters are the same, then once prepared mechanism for kinematic analysis is possible to use for dynamic analysis, too. In this situation the dimensions of mechanism were very quickly modified to respond to the input values of slider crank mechanism for dynamic analysis.

From the results achieved by means of software PTC Creo it is possible to specify the value of force  $F_2$ , that is 14, 29410 N. (Fig. 8)

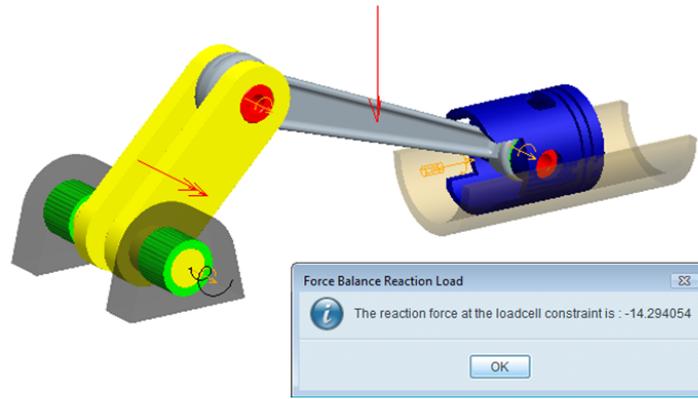


Fig. 8 Virtual model of mechanism

The values obtained by three various approaches within the dynamics analysis are presented in Tab.2.

Table 2 Acquired values of the unknown force

Dynamic analysis – force $F_2$ Values for $\varphi_{21}=45^\circ$		Methods		
		Numerical	Graphical	Computer aided
$F_2$	[N]	14,2940547	14	14,294054

#### 4. Summary

Whereas all three solutions use the same principles, students have to understand them. The design of a machine, mechanism or any moving mechanical system always starts with a consideration of kinematics because kinematics is the study of the geometry of motion. Actually before engineers can start to use a computer for synthesis or analysis of a machine, they have to develop some initial concept of how the machine will operate.

Each of presented solutions has their self advantages and disadvantages. It is clear that the using of graphical method enables faster solution of the problem, but in less precision. It can be said that the results of analyses are the same. Students can compare achieved values. If one of them is different, they have to look for the mistake.

Even though the virtual simulation of mechanism has fixed place in engineering practice, it seldom satisfy to real conditions due to outside and inside influences, which can be predicted and defined very difficult. Therefore it is necessary to deliberate influences and results multiply by surety factor. (Modrak et al., 2003).

Fortunately, today, the ready availability of very powerful personal computers and the associated software allows synthesis and analysis of simulation, which were formerly laborious, to be performed quickly and cheaply. Because of the availability of these computer aids and the consequent incentives to apply kinematic and dynamic principles in design, it is becoming increasingly important for the practicing engineer to have a good understanding of those mechanical principles. (Dostal et al., 2012)

On the other hand, simulation is not "panacea" for all problems. There are difficulties, when it is better to apply other, cheaper tool of problem solution, when the simulation appears as few effective. Therefore it is the teacher's task to show to students that the modern computer tools help us to simplify and shorten the problem solving but the user of software has to provide his know-how. So the theoretical base and traditional methods used in education process have in some cases their justification.

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# Motor performance of students with learning difficulties

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## Abstract

This study aims to characterize and compare the motor performance of students with learning difficulties in relation to students with good academic performance. A total of 20 students were divided into: GI – 10 students with learning difficulties and GII – 10 students with good academic performance. Bruininks-Oseretsky Test of Motor Proficiency was applied. The students of GI had inferior performance when compared with GII in the motor areas and motor subtests. The findings can assist in the identification of motor alterations that influence their performance in learning, allowing an educational conduct focused towards minimizing the impact of behavioral and academic manifestations.

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*Keywords:* Learning Difficulties. Motor Skills. Assessment.

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## Introduction

Motor skills are considered basic components of domain for both, motor learning and for the activities of school formation. This means that, when conquering a good motor control, the children will be building the basics for their intellectual development, indicating a direct relationship between what one is capable of learning (cognitive) with which one is able to execute (motor) (Rosa Neto et al., 2010).

The motor development is considered a sequential process, continuous and related to the chronological age by which humans acquire an enormous amount of motor skills, which progress from simple and disorganized movements to the implementation of highly organized and complex motor skills (Willrich, Azevedo & Fernandes, 2009; Siqueira & Gurgel-Giannetti, 2011).

The motor learning, as well as any other learning, is a process which occurs through the integration of various functions of the central nervous system (planning, sequencing and execution of the motor act) together with the higher cortical functions (memory and attention) and the emotional and behavioral development of individuals and their participation in appropriate motor experiences, promoting their adaptation to the environment. As children mature cortical and perceptual and motor functions, they become more functional and able to perform increasingly complex skills. Therefore, for a "successful" learning, several cognitive skills associated with adequate opportunities are necessary (Amaro et al., 2010; Siqueira & Gurgel-Giannetti, 2011).

Studies such as Willrich, Azevedo & Fernandes (2009) and Okuda & Pinheiro (2012), indicate that in students with learning difficulties, the motor alterations can occur due to a number of environmental factors which contribute to the delay in the development of the central nervous system and its higher cortical functions, increasing the probability of deficits in the motor development.

In the presence of learning difficulties, there is greater likelihood of motor and gnosis functions being altered and compromising the dexterity, the speed of objects manipulation, the accuracy of motion, spatial and temporal

organization, body schema, hand posture, among others, thus, compromising the ability of learning the reading and writing skills and also functional tasks, such as buttoning, using scissors, handling coins, pencils and glue (Gabbard & Caçola, 2010; Martin, Piek, Baynam, Levy, & Hay, 2010; Okuda, 2013).

The specialized literature indicates that at least 50% of the students with learning problems are identified concomitantly with a developmental disorder of motor coordination, and these motor abnormalities are found between 5% and 7% of school-age children in the general population (Rosenblum, Aloni, & Josman, 2010).

These alterations in motor development, when associated with students with learning difficulties, are consistent with the framework of the Developmental Coordination Disorder (DCD) which, according to the Diagnostic and Statistical Manual of Mental Disorders - DSM-V (APA, 2013) is described between neurodevelopmental disorders and is classified as a motor disorder, condition characterized by motor performance that is substantially below expected levels, given the person's chronologic age and previous opportunities for skill acquisition. The poor motor performance may manifest as: coordination problems, poor balance, clumsiness, dropping or bumping into things; marked delays in achieving developmental motor milestones (e.g., walking, crawling, sitting) or in the acquisition of basic motor skills (e.g., catching, throwing, kicking, running, jumping, hopping, cutting, coloring, printing, writing). This disturbance, without accommodations, interferes significantly in daily life activities or academic achievement.

Given the above, this study aims to characterize and compare the motor performance of students with learning difficulties in relation to students with good academic performance.

## Research Methods

As a resolution from the National Health Council 196/96, prior to the beginning of the assessments, parents or guardians of the selected participants signed an Informed Consent Form authorizing the study. After signing the consent form, the students were assessed individually, by the researchers in charge of this study, which was approved by the Research Ethics Committee of Faculty of Philosophy and Sciences - REC / FFC / UNESP under protocol number 517/2010.

A total of 20 students participated in these research, from 8 years and 2 months to 11 years and 6 months, both genders, from public municipal elementary schools, divided into:

Group I (GI): composed of 10 students with learning difficulties, selected by their teachers on the basis of unsatisfactory academic performance (grades inferior than 5) in two consecutive marking periods. These students had no prenatal, perinatal and postnatal complications, nor neuropsychomotor development and language delays described in school records.

Group II (GII): composed of 10 students with good academic performance, both genders, matched according to age, gender and schooling, with GI. This group was composed for students selected by their teachers, on the basis of satisfactory academic performance (grades higher than 5) in two consecutive marking periods on. These students also had no prenatal, perinatal and postnatal complications, nor neuropsychomotor development and language delays described in school records.

For motor skill measure, the Bruininks–Oseretsky Test of Motor Proficiency 2 – BOT-2 (Bruininks; Bruininks, 2005) was employed. The procedure is an internationally accepted test and provides an indication of gross and fine motor functioning for individuals from 4 to 21 years. The procedure is composed by four motor areas and a total motor composite (TMC). Each motor area includes two subtests and the total motor composite comprises the sum of all subtests. Thus, the structure of the test is as follows:

- Fine Manual Control (FMC): fine motor precision (FMP) and fine motor integration (FMI).

- Manual Coordination (MC): manual dexterity (MD) and upper-limb coordination (UC).
- Body Coordination (BC): bilateral coordination (BC) and balance (B).
- Strength and Agility (SA): running speed and agility (RSA) and Strength (S).

The scores obtained in each subtest, in each motor area and in the total motor composite are converted into equivalent motor age and into descriptive category (classification) of motor performance.

### 2.1. Data Analysis

The results were statistically analyzed using the *Likelihood Ratio Test* to verify categorical differences between groups; *Friedman Test* for detecting differences in performance between groups in motor areas and motor subtests compared concurrently; *Mann-Whitney Test* for detecting differences in motor performance according to chronological age and age equivalent between GI and GII; *Wilcoxon Signed Posts Test*, adjusted by *Bonferroni correction*, to verify which areas and motor subtests differ from the others, when compared pairwise.

The significance level (p value) adopted was 5% (0.050) and is marked with asterisk. For data analysis, Statistical Package for Social Sciences (SPSS) was employed, version 19.0.

## Results and Discussion

Table 1 shows the distribution of the performance classifications in the motor areas of the students of groups I and II. Through data analysis by the Likelihood Ratio Test, there is a statistically significant difference in motor performance among students in groups I and II in the areas of fine motor manual control and body coordination, showing that GI showed lower performance in these areas, when compared to GII.

These results indicate that students of GI have greater difficulty in body coordinating, ie, the movements coordination of upper and lower limbs simultaneously, which can interfere with performance in activities requiring fine manual control, such as writing or playing ball or brushing teeth (Okuda & Pinheiro, 2012).

Table 1 - Comparison of the performance classification in motor areas, between groups I and II.

Variable	Category	Group				P value
		I		II		
		Freq.	Perc.	Freq.	Perc.	
FMC Class	Well Below Average	3	15,0%	2	10,0%	0,045*
	Below average	16	80,0%	11	55,0%	
	Average	1	5,0%	7	35,0%	

MC Class	Well Below Average	2	10,0%	0	0,0%	0,148
	Below average	15	75,0%	14	70,0%	
	Average	3	15,0%	6	30,0%	
BC Class	Well Below Average	3	15,0%	0	0,0%	0,032*
	Below average	12	60,0%	9	45,0%	
	Average	5	25,0%	11	55,0%	
SA Class	Well Below Average	2	10,0%	0	0,0%	0,196
	Below average	9	45,0%	8	40,0%	
	Average	9	45,0%	12	60,0%	
TMC Class	Well Below Average	4	20,0%	1	5,0%	0,323
	Below average	14	70,0%	16	80,0%	
	Average	2	10,0%	3	15,0%	

Caption: I – students with learning difficulties; II- control group; class – classification; FMC: fine manual control, CM: manual coordination, BC: body coordination, SA: strength and agility, TMC: total motor composite.

The results in Table 2, analyzed by Friedman Test showed a statistically significant difference intragroups, for students of GI and GII when compared to the motor areas concurrently. These findings demonstrate that both for the GI as for GII presented the highest average of performance in the motor areas of body coordination and strength and agility, which are more global activities, and lower average of performance in the motor areas of fine manual control and manual coordination that are more refined activities.

Students with learning difficulties presented a superior performance in global motor activities (Strength and Agility and Body Coordination) and lower performance in the refined motor activities (Fine Manual Control and Manual Coordination), indicating that the motor development of these students follows the typical pattern described in the literature, ie, global activities for the refined activities (Willrich, Azevedo, & Fernandes, 2009; Zanatti et al., 2010; Siqueira & Gurgel-Giannetti, 2011). Although the results point to the typical motor development of students with learning difficulties (GI), their motor performance was lower than students without learning difficulties (GII), indicating the necessity of attention to the development of activities to motor stimulation by health and education professionals who work daily with those students.

Table 2 – Intra-groups comparison of the performance of GI and GII in the motor areas.

Group	Variable Block	n	Mean	Standard Deviation	Median	P Value
I	FMC	20	35,55	4,42	36,50	0,001*
	MC	20	35,20	5,14	33,00	

	BC	20	36,65	6,67	34,50	
	SA	20	39,90	7,10	39,00	
	TMC	20	34,20	5,12	33,00	
	FMC	20	38,3	5,74	38	
	MC	20	38,15	6,92	35	
II	BC	20	39,95	5,79	42	0,014*
	SA	20	42,5	5,38	43	
	TMC	20	37,1	4,32	37	

Caption: I – students with learning difficulties; II- control group; class – classification; FMC: fine manual control, CM: manual coordination, BC: body coordination, SA: strength and agility, TMC: total motor composite.

Table 3 shows the comparison between GI and GII related to motor performance regarding to age in each motor subtest. With the application of the Mann-Whitney Test, it was observed statistically significant difference between the groups regarding Fine Motor Integration, Balance, and in Running Speed and Agility, showing lower performance of GI, in comparison to GII.

The discrepancy between chronological age and developmental age of motor skills (AE), mainly for GI, indicate that there is a delay in the development of motor skills, which characterizes the altered motor profile of these students (Chen et al. 2009; Amaro et al, 2010; Okuda & Pinheiro, 2012).

The equivalent age, lower than expected for chronological age, indicates that students with learning difficulties in this study, can present in their motor behavior clumsiness and inconsistency in task performance, poor motor coordination, rhythm problems and transfer learning, decline performance with repetition, body tension and excessive muscle activity in motor tasks (Rosenblum, Aloni, & Josman, 2010; Gabbard & Caçola, 2010).

Table 3 - Comparison between GI and GII for chronological age and age equivalent.

Variable	Group	n	Mean	Standard Dviation	Median	P Value
CA	I	20	9,47	0,91	9,54	0,968
	II	20	9,47	0,88	9,38	
	Total	40	9,47	0,89	9,46	
AE1	I	20	7,48	1,06	7,42	0,523
	II	20	7,67	1,21	7,79	
	Total	40	7,57	1,13	7,67	
AE2	I	20	5,87	0,61	5,75	0,004*
	II	20	6,50	0,61	6,42	
	Total	40	6,19	0,68	6,17	
AE3	I	20	6,62	1,45	6,17	0,342
	II	20	6,92	1,22	6,67	
	Total	40	6,77	1,33	6,42	
AE4	I	20	8,17	1,31	8,17	0,776

	II	20	8,70	2,64	8,29	
	Total	40	8,43	2,07	8,17	
AE5	I	20	6,94	2,18	6,79	
	II	20	7,24	2,22	6,42	0,704
	Total	40	7,09	2,18	6,54	
AE6	I	20	6,70	3,77	5,42	
	II	20	7,86	3,67	6,42	0,024*
	Total	40	7,28	3,71	5,92	
AE7	I	20	6,25	1,06	6,29	
	II	20	7,23	1,45	7,17	0,043*
	Total	40	6,74	1,35	6,67	
AE8	I	20	8,15	2,75	7,17	
	II	20	8,77	1,95	8,42	0,189
	Total	40	8,46	2,37	7,67	

Caption: AC: chronological age, AE1: age equivalent to fine motor precision, AE2: age equivalent to fine motor integration, AE3: age equivalent to manual dexterity, AE4: age equivalent to upper-limb coordination, AE5: age equivalent to bilateral coordination, AE6: age equivalent to balance, AE7: age equivalent to running speed and agility, AE8: age equivalent to strength.

Table 4 shows the comparison of motor subtests regarding the performance in relation to chronological age, conducted by the Wilcoxon Signed Posts Test, adjusted by Bonferroni correction.

In this table, it was observed that GI showed statistically significant differences in the age equivalent for Fine Motor precision, Fine Motor Integration, Manual Dexterity, Upper-limb Coordination, and in Running speed, when compared to the chronological age.

Regarding the comparison between the age equivalent of motor subtests, it was verified that the students of GI presented statistically significant difference in performance on fine motor integration and running speed and agility, when compared to the performance in fine motor precision; difference in performance in the upper-limb coordination and strength, when compared to fine motor integration; difference in performance in the upper-limb coordination, when compared to manual dexterity; difference in performance in running speed and agility, when compared to the upper-limb coordination and difference in performance in strength, compared to the running speed and agility.

The students of GII showed statistically significant differences in age equivalent of Fine Motor Precision, Fine Motor Integration, Manual Dexterity, Bilateral Coordination and in Running Speed and Agility when compared to chronological age.

Regarding the comparison between the age equivalent of motor subtests, it was verified that the students of GI I presented statistically significant difference in performance on Fine Manual Integration, when compared to Fine Motor Precision; difference in performance in the upper-limb coordination, when compared to Fine Motor Integration; and difference in performance in strength, when compared to Fine Motor Integration.

These results indicate that students with learning difficulties have a greater number of motor subtests with lower performance, when compared to students without learning difficulties, corroborating the literature (Bruininks & Bruininks, 2005; Polatajko & Cantin, 2006; Chen et al. 2009; Capellini, Copedde, & Valle, 2010; Rosa Neto et al., 2010; Okuda & Pinheiro, 2012).

These characteristics further impair the academic performance of these students, because as there is a direct relationship between what is capable to learning (cognitive) with which is able to execute (motor), the alteration in one of these capacities affect the other, as in the case of the group of students with learning difficulties, in which the ability to execute can impair the ability to learn (Rosa Neto et al., 2010).

Table 4 - Comparison between chronological age and equivalent age of the groups I and II.

Pair of Variables	Group	
	I	II
AE1 – CA	< 0,001*	< 0,001*
AE2 – CA	< 0,001*	< 0,001*
AE3 – CA	< 0,001*	< 0,001*
AE4 – CA	0,001*	0,005
AE5 – CA	0,002	0,001*
AE6 – CA	0,014	0,025
AE7 – CA	< 0,001*	< 0,001*
AE8 – CA	0,035	0,135
AE2 - AE1	< 0,001*	0,001*
AE3 - AE1	0,021	0,028
AE4 - AE1	0,011	0,108
AE5 - AE1	0,153	0,468
AE6 - AE1	0,082	0,654
AE7 - AE1	< 0,001*	0,254
AE8 - AE1	0,390	0,040
AE3 - AE2	0,040	0,276
AE4 - AE2	< 0,001*	< 0,001*
AE5 - AE2	0,057	0,372

Pair of Variables	Group	
	I	II
AE6 - AE2	0,331	0,286
AE7 - AE2	0,125	0,107
AE8 - AE2	0,001*	< 0,001*
AE4 - AE3	< 0,001*	0,003
AE5 - AE3	0,667	0,970
AE6 - AE3	0,099	0,881
AE7 - AE3	0,257	0,219
AE8 - AE3	0,017	0,011
AE5 - AE4	0,033	0,076
AE6 - AE4	0,017	0,217
AE7 - AE4	< 0,001*	0,014
AE8 - AE4	0,856	0,532
AE6 - AE5	0,251	0,828
AE7 - AE5	0,131	0,667
AE8 - AE5	0,054	0,059
AE7 - AE6	0,205	0,825
AE8 - AE6	0,005	0,117

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AE8 - AE7	0,001*	0,011
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(*alfa de Bonferroni = 0,001424*)

Caption: AC: chronological age, AE1: age equivalent to fine motor precision, AE2: age equivalent to fine motor integration, AE3: age equivalent to manual dexterity, AE4: age equivalent to upper-limb coordination, AE5: age equivalent to bilateral coordination, AE6: age equivalent to balance, AE7: age equivalent to running speed and agility, AE8: age equivalent to strength.

## Conclusions

The results of this study show that the motor profile of students with learning difficulties is altered when compared to students with good academic performance, indicating that the motor performance in academic, recreational and social activities of these students may be impaired.

As the motor assessment is an important element in overall health examining of children, it becomes necessary that quantitative and qualitative aspects of fine and global motor functions be investigated, once these may reflect the integrity and maturity of the central nervous system and can probably provide evidence of alterations in motor development, as presented by students with learning difficulties in this study.

The determination of the motor profile of students with learning difficulties can assist in the identification of motor alterations which influence their performance in learning, allowing a therapeutic and educational conduct focused towards minimizing the impact of behavioral and academic manifestations.

The motor alterations are not the only factor, but overlapping the other factors responsible for learning difficulties, it is the one which may trigger or exacerbate these difficulties, impairing school performance. Thus, an important aspect to be highlighted, is the necessity of providing motor activities to minimize the impact on the academic performance of these students, since the beginning of literacy.

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# Multicultural education in a Korean early childhood classroom : based on the educational community perspective

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## Abstract

The purpose of this study was to examine the multicultural education in a Korean early childhood classroom based on the educational community perspective. The study participants included a teacher in charge of the Sunshine classroom for age 5 and 21 preschoolers at a child-care center located in the city of Pusan, South Korea. Data were gathered by observing their classroom and by interviewing the preschoolers and the teacher, and the collected data were analyzed. The results were as follows; The situation of the class as a place of multicultural education, that was largely categorized into two: the reality of multicultural education and the limited contextual classroom factors both internally and externally. The multicultural education was subcategorized into three: the prior understanding of the teacher, the implementation of multicultural education, and the difficulties of the teacher. As for the limited internal and external factors of the classroom context, the preschoolers looked at their peers from multicultural families in a negative way, and there was lack of interaction between internal and external classroom components. Based on these results, the implications were also discussed.

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*Keywords:* Multicultural education, Korean early childhood classroom, Educational community

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## 1. INTRODUCTION

Lots of research efforts have been directed into multicultural education in the field of early childhood education, probably because of a growing concern for multicultural education in Korean society. Specifically, there are heated discussions on the reality of multicultural education in the classroom and on the right directions for that. According to the statistics annual report of the Ministry of Security and Public Administration (2012), one of the government agencies of Korea, the number of foreign residents stood at 1,409,577 as of 2012, which accounted for 2.8 percent of the entire Korean population. The number of marriage immigrants stood at 140 thousand people or more, and there is a steady increase in the number every year. The ministry mentioned that Korean society already turned into a multicultural society. Obviously, Korea is a multicultural society, and the number of preschoolers from multicultural families who attend early childhood education institutions is gradually on the rise. Under the circumstances, it seems necessary to find out how multicultural education is conducted in the early childhood classroom.

In general, the early childhood classroom is one of the community and the first place for the community life of human beings. That is a place where education is conducted, a space of living where teachers and preschoolers build their network through mutual social interaction (Im, Yang & Song, 2012), and a place where they undergo changes under the influence of classroom contexts. The community is necessary in order to keep the society go on. When the

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people understand each other in community, they can compose an open relationship and as a subject (Suh, 2005). When young children first come to school, they tend to bring with a potential to explore their range of responses (Darlene, Witte-Townsend, Anne, 2006). That is, there may be different shifts in the classroom depending on the concept, objects and content of multicultural education, teachers, preschoolers, their personal, relational and contextual characteristics, and the interaction of all these variables. Therefore the reality of multicultural education in the Korean early childhood classroom should accurately be grasped to determine the state of current early childhood multicultural education and to discuss the right directions for that.

The purpose of this study was to examine the reality of multicultural education in the early childhood classroom that based on the educational community perspective. The research question was posed: What is the state of multicultural education in the Sunshine classroom from an educational community perspective?

## **2.METHODOLOGY**

### *2.1.Participants*

The study participants included a teacher in charge of the Sunshine classroom for age 5 and 21 preschoolers at a child-care center located in the city of Pusan, South Korea.

### *2.1.Data Collection*

The data were selected with the permission of the child-care center and with the consent of the parents of the preschoolers on February 17, 2012, and were gathered from then onto April 6 by observing their classroom and by interviewing the teacher and the preschoolers to determine the state of the classroom as a place for multicultural education. The classroom was observed two or three times a week, and what the preschoolers did while they stayed at the preschool from 9 a.m. to 3 p.m. was all observed. The teacher was interviewed three times, and the preschoolers were interviewed once or twice. All the interviews were semi-structured and were recorded with the permission of the teacher and the parents of the preschoolers.

### *2.2.Data Analysis*

As for data analysis, Kim (2006)'s inductive data analysis method for qualitative research was utilized to address the research question. In this study, the data were collected by observation, interviews and discussions, reflective journals, test results and results of classroom activities. And they were analyzed using triangulation with regard to ensuring validity and reliability for qualitative.

To avoid bias in interpretation of data, the data were reviewed from research process to the end of the last review process by the teacher of Sunshine class through member checking. Peer debriefing were used to review research methods, interpretation, and analysis by two experts in early childhood education.

## **3.RESULTS**

The situation of the classroom as a multicultural early childhood classroom, that was largely categorized into two: the reality of multicultural education and the limited contextual classroom factors both internally and externally. The reality of multicultural education was subcategorized into three: the prior understanding of the teacher, the implementation of multicultural education, and the difficulties of the teacher.

The aspects of multicultural education that was conducted in class "Sunshine classroom" were as follows: First, the teacher who was in charge of this class thought that there was much more to be desired in Nayoung and Yeona

than their peers, and that they had many problems. And she thought she needed to resolve their problems. Thus, she looked at the preschoolers from multicultural families from a standpoint of cultural deficit model. It implies that the teacher provided individualized acculturation education. Second, she wanted the two children from multicultural families to settle down in Korean culture as soon as possible, and she thought they were in need of assimilation to grow into well-adjusted, eligible Koreans. Third, the teacher accepted the cultural specificity of the preschoolers from multicultural families sometimes, and sometimes she didn't. It signifies that early childhood teachers should provide multicultural education in a coherent manner according to their belief and philosophy. Fourth, the teacher firmly believed that multicultural education was to let preschoolers understand food, language, play or traditional costume of other countries, and she failed to link with multicultural education what happened in the classroom due to that idea. Fifth, she taught misconceptions to preschoolers without knowing well about other cultures and countries. In fact, it's not actually possible for teachers to be knowledgeable about weather, topography or geographical features of different countries that they have never been to, and it's not advisable to blame them for lack of knowledge, either. The problem is, however, that they often convey wrong knowledge or information to preschoolers as if it was true. Sixth, the teacher just focused on differences between cultures and their diversity when she provided multicultural education.

There were several aspects in multicultural education provided in the classroom: individualized adjustment education based on a cultural deficit model, generalized assimilative approach, the teacher's confusion of cultural specificity, inadequate approach toward daily routine life, teaching misconceptions about foreign countries and culture, and limited content.

Next, concerning the difficulties of the teacher, she was at a loss about how to practice multicultural education, and she felt the lack of a supportive system. The difficulties that the teacher faced were about the content of education, namely what to teach, and about educational methods. She wasn't sure about how to conduct multicultural education, and she was sorry about the absence of support from the principal, colleagues and parents whom she worked together. In addition, she was pressed for time due to heavy workload, and she didn't have any breadth of mind at the same time.

As for internal and external contextual restrictions in the classroom, the way the peers looked at the preschoolers from multicultural families was negative. They teased or neglected them because of their different skin color, appearance or harsh household economy. For instance, they said to Nayoung whose skin color was a little dark, "Why is your skin so black?" Or they made sport of her, saying that she looked like African, or that she didn't need to put on sunscreen because her face was already black. Thus, there was utterance of racial discrimination. Furthermore, they neglected Nayoung because her family couldn't afford to go to a family restaurant or amusement center on weekends. As a consequence, she became intimidated, ashamed or behaved as if she had lost confidence.

On the other hand, there were out-of-classroom restrictions such as lack of interaction with the principal, colleagues, parents and local organizations. Her colleagues weren't well aware of the importance of multicultural education as there weren't many preschoolers from multicultural families in their classes. They believed that it would be more important to adjust oneself to mainstream culture, and that there would be no need to worry about if preschoolers of multicultural families adapted themselves well to that. Accordingly, there wasn't active interchange between her and her colleagues in relation to this matter, and that was also the case for her relationships with the other ecological environmental factors such as the principal, parents and local institutions.

#### **4.CONCLUSIONS**

As there is a continuing change in early childhood classrooms under the influence of personal, relational and contextual characteristics, not only the major elements of the classrooms such as teachers, preschoolers and

instruction but social interaction with principals, other teachers, families and local institutions are all important. An ideal community called 'educational community' is one in which people not only belong together but also become together (Jo & Suh, 2004). But the social interaction of the Sunshine classroom was quite insufficient, and that may not be the only case for this classroom. Early childhood teachers should have the right understanding of multicultural education, and accurate awareness and reflective thinking of their own teaching are both necessary as well so that they could provide quality multicultural education in their classrooms. Moreover, they should try to collaborate with everybody concerned in diverse ways to create a supportive system, and research institutions should provide them with information on how to practice multicultural education in various contexts of the educational community.

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# Multicultural education practice in Malaysia

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## Abstract

The primary goal of multicultural education is towards offering fair opportunity to all children with different cultural background and simultaneously enable them to interact with the community of various background, hence, producing a quality and unwavering future generation integrating physical, emotional, spiritual and intellectual element. Therefore, Islamic Education teachers must be committed to the realization of multi-cultural education and must understand the concept of cultural differences through distinction of ethnicity, language, and cultural practices. To promote cultural diversity, teachers should be using methods that are appropriate to the cultural diversity of the students so that they will not fall behind in their learning process. This study is aimed to explore the practice of Islamic education teachers in implementing multicultural education in the teaching of Islam. This is a qualitative study using case study design. Data were obtained through semi-structure interviews and analysed using Nvivo 8. Five Islamic Education participants have been chosen through a purposive sampling technique. The study found that teachers have been using various methods of strategies in implementing multicultural education. Such methods are the methods of advice, explanation, flashback, drilling, talk, storytelling, contextual, lectures, and discussions. It is hoped that this study can serve as a guide for the teaching of Islamic Education in a classroom with students from various backgrounds and stimulate peaceful interaction and integration.

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*Keywords:* multicultural education, Islamic education, teacher practice, secondary schools

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## 1. Introduction

The Quran specifically mentions that the concept of human diversity is a *sunnahtullah*. Differences of color, race, appearance, religion and belief are proofs of authority and wisdom of Allah as stated in chapter 30 verses 22. The Quran urges Muslims to help each other, greet and mingle regardless of skin color, culture and race to create interaction between humanity and justice between fellow human beings, as stated in in Quran chapter 4 verses 58. These differences are not causes of conflict among humans. However they are blessings for mankind.

In terms of Islamic education' role, intelligence, and appearance of Islamic Education teachers in teaching is necessary because their role is not only to be a teacher or instructor, but also as *da'i* (preacher) (Ab.Halim 2005). Implementation of cultural values could also be carried out by co-curricular activities (Syed Ismail et al. 2010). Cultural values diversity such as respect, cooperation, tolerance, unity of interest, can be implemented indirectly. Similarly, the importance of tolerance, solidarity, and cooperation regardless of ethnicity could be emphasized especially in maintaining the peace and prosperity of the nation (Najeemah 2005; Syed Ismail and Ahmad Subki 2010). The understanding of diversity is not solely for the purpose of academic achievement but also to promote unity among students from different races (Abdul Razaq et al., 2010). It is hoped that this understanding would

prevent stuff that will cause conflict and misunderstanding among citizens, especially Malaysian citizens which comprise of different ethnicity.

The diverse backgrounds of students in Malaysia's education system requires citizens to understand others, ethnics and stay united in hope of creating a harmonious society (Shamsul Amri 2012). Therefore, the need to celebrate the diversity of students was enshrined as one of the five aspirations of the Malaysian education system, which is "an education system that offers a shared experience and values to children by appreciating diversity" (National Education Development Plan 2013-2025:p: 21). This is consistent with the composition of Malaysian population which was 28.3 million in 2010, comprising of 67.4% Malay, 24.6% Chinese, 7.3% Indians, and 0.7% other. Thus students' and young generations' understanding and awareness of cultural diversity since school help ensure the survival of the nation and country. For example, through implicit and explicit curriculum, the Ministry of Education sought to create a united and mutually accepted cultural differences between races (Ahmad Ali Seman, 2010).

### 1.1 Concept Of Cultural Diversity In Islamic Education

Islam provides for freedom of religion for mankind as stated in Quran verses 256 chapter 2. Cultural diversity of nations such as language, way of life, religion and dress habits and practical values are indicators of civilization for a human (Ibn Khaldun 2000). The existence of race or nationality, culture and the variety way of life have recognized in Islamic teaching. Whereas in language, it also has a relationship with the socio-culture. This means an ethnic language is influenced by cultural factors. The prophets for example, received a revelation in their own ethnic languages as stated in chapters 14 verses 4. The existence of multiple languages is also a sign of the greatness of Allah. Muslims have recognized any languages in the world. The essence of Islamic teachings are suitable to be incorporated into any language. More ever it is an advantage for teacher who serves as preachers if he or she skilled more than one language, as recounted in the Quran about the superiority and advantage of the prophet Sulaiman who is proficient the language of animals and spirits. The ability and skillfull of many languages would help preacher in culture of people and nation.

Cultural diversity in education is possible through a variety of dimensions including intellectual intelligence, gender, race, ethnicity, and family background. Thus, it has implications on student's learning style and culture. Dealing with diversity, teachers need to be wise in giving fair education (equity education) to students. Indeed, teachers' wisdom are to manage the learning situation and provide activities that foster an appreciation of the values of solidarity, create understanding, reduce polarization, and change students' perceptions about race relations, especially in this era of globalization (Ali Seman (2011)).

As stated above, therefore such question should be raise, are the Islamic Education teachers has the competence in teaching classroom which consist of diverse cultures?. The study provided some views of Western scholars in the success of multicultural education. According to Banks (2001) and Ladson & Billing (2000), as the curriculum implementer, teachers should have two skills in multicultural teaching. Firstly, awareness and the complex sensitivity of the students. This means that teachers should have sensitivity to the diversity in the classroom, including self-awareness and awareness to the others as civilized human, whether the diversity are in terms of religion, culture, ethnicity, language, economic status of the students and their background .

Prophet Muhammad as the greatest teachers, accomplished these principles to celebrate the diversity of the students when providing education to their new friends and learn about Islam to (Abu Ghudah, 2009). The Prophet enough to celebrate the differences of each individual learn whether those who served the missionary call or to ask (Abu Guddah, 2009). He interacts with each individual based on his understanding and appropriate position. He also takes care of the feelings of the new study, the Prophet did not teach them what is being taught to those who have been long. The methods used by the priests As-Syafae, Malik, Ahmad bin Hanbal, Abu Hanifah and Al-Ghazali, all based on the methods used by the Prophet Muhammad (Abu Guddah, 2009). Prophet Muhammad had accomplished some techniques in controlling and that celebrates the diversity of students while educating the others and who were new to Islam during his time (Abu Gudah, 2009). He interacted with every individuals based on the and capability of knowledge.

Sociologists such as Linton (1936), Emile Durkheim (1956) view that the education system acts as a disseminator of culture. According to Linton (1936), each of the similarities and differences communities need to be studied. School is not only seen as an agent that only emphasize teaching skills and knowledge, but it also strives to

indoctrinate the community values. Teachers also have a set role in the classroom, and in order to achieve their role as teachers, knowledge communicators, consultants, evaluators, and subject specialists in the classroom, factors such as experience in teacher training, social class origins, work experience, skills in subjects, teaching experience, and subject specialization influence their practices and expectations. Sharifah Alwiah (1986) added, the basic concepts of sociology that are related to education are the concepts of race, ethnicity, nation, society, class, and social status and role. If not managed properly, these differences will be a source of conflict. This usually happens because of human relation is usually based on the differences between groups; rarely it is based on their similarities.

Ab.Halim (2005) asserts that, as a teacher of Islamic education, the task of the educator is to be missionaries but if possible they should be the best preachers to students and the community. The role of teaching of multicultural education was played by teachers as purveyor of knowledge. Consequently, the expertise of Islamic education as preachers to students who are not yet Muslims is indispensable. In this case, the teacher plays an important role in ensuring that all ethnic groups are adequately represented in teaching materials in schools (MOE 2012), especially in the selection of teaching aids so that multicultural education can be delivered effectively (Ali Seman, 2011; Najeemah, 2005; Syed Ismail & Ahmad Subki, 2010). Teaching Islamic education should also emphasize education across the curriculum by focusing on various aspects of culture, whether directly or indirectly, or as aspects of absorption (Sidek, 2006).

Shamsul Amri (2007) emphasized the importance of implementing multicultural education and national identity in school, but the implemented ineffectively. Najeemah (2005) previously study concluded that most teachers do not realize or accept their responsibility as educators to the realization of multi-cultural education. This is because some of them have not much knowledge and do not understand the concept of multicultural education. Therefore, to implement the curriculum, they should understand the culture from every student for teaching and learning Ladson-Billing (2000). Moreover, teaching based on cultural diversity is actually capable of forming socialization among students towards national integration (Mansor Mohd Nor, 2006).

Ali Seman (2011) stressed that educational issues which are static, outdated, stereotypical, and does not reflect the multi-ethnic culture and more of a Malay Centris (using the example of the Malays) will not happen if the Islamic education teachers have a solid understanding of multicultural education. Usage of variety of examples and involves all pupils should exist so that learning will be more effective (Najeemah 2006 dan Syed Ismail & Ahmad Subki, 2010). By the usage of appropriate methods, it will not only help teachers to deliver their subject matter. The variety of cultures among students can be used as a way to attract students to study Islamic education and as a means of propagation. We do not want the misconceptions of non-Muslims against Muslims to be due to the weakness of the Muslims themselves who are not effectively convey the message of Islam and could not give a good example to non-Muslims (Mohd Ridhuan Tee Abdullah, 2010; Zainab Ismail et al., 2009).

Islamic Education therefore been seen as a medium to bringing diverse culture of the students. This is because the goals of Islamic education is to produce students who have the following characteristics: strong and steadfast faith and devotion as a bastion of endurance, master knowledge of *fardu 'ain* and *fardu kifayah* as a guide and a way of life, observing the *fardu 'ain* and *fardu kifayah* to meet the religious and moral responsibility as complementary pillars of self and culture (Islamic Education Syllabus ICSS 2002, the Department of Islamic and Moral Education, Ministry of Education). This coincided with the resolution achieved in Islamic Studies at the National Level seminar from 2 to 5 October 1995, which reads:

*“Islamic education should be at the core of the national education system in the implementation of integrated education system which is based on the integration of science, reason and revelation, towards eliminating the dichotomy and dualism in education”.*

Thus, the curriculum of Islamic education have supported the ideals of pure and superior ambition in line with the national education philosophy. This is because the goals, philosophy, and values brought by the Islamic Education are sourced from the Quran and Sunnah. Goals, philosophy, and values in Islamic education are derived from the Quran and Sunnah is the basis of culture and civilization. Therefore its functions to develop behaviours, skills, personality, and outlook on life as a servant of Allah for self, society, the environment, and the country should be appreciated and understood by educators so that this goal can be nourished in the hearts of students. Thus, in order to achieve the philosophy of Islamic education, the concept of Islamic education is covering the theoretical and practical aspects of the combination of various teaching methods and teaching approaches in imparting Islamic education.

## 1.2 Concept Of Teaching And Learning Islamic Education

In particular, Islamic education curriculum will not be complete and perfect if teaching and learning methods are not emphasized. A perfect acquisition of knowledge and character building are not only from the stature and personality of the teacher, but also due to a comprehensive curriculum and supported by a perfect teaching methods. Similarly, the effectiveness of teaching and learning Islamic education, should include some aspects which are motivation, knowing the level of maturity of the students, knowing the individual differences, observing the understanding level of students, integration of existing knowledge with original knowledge, and make the process of education as students 'exciting experience. However, Mohd Aderi (2008) found that teachers' teaching practice in Malaysia is still at a moderate level. They are still using an old and simple approach which is delivering information to students in a one way communication. The approach by using teaching aids and practical works are less practiced (Suhaimi, 2008). In other words, learning strategies are more focused and centered on the teacher.

Atan (1978) has highlighted three important aspects in shaping the effectiveness of a teacher; teacher's personality, background of the knowledge to be taught, and the methods or means of delivery. While Al Syaibani (1979) thinks that a good teaching and learning method is the one that is able to help students acquire the knowledge and skills, improve attitudes and behaviours, and instil the values desired. Educators are also encouraged to deliver their teaching according to their students' thinking level (al-Ghazali 1998; IbnKhaldun2000; Syaibani 1979). Usually students' existing skills and knowledge will become blurred and more complex when the teacher delivers a lesson without taking into account the students' level of thought and achievement.

For example the Quran has and uses a comprehensive methodology or approach in shaping human behavior. It is appropriate to its function as a major source of Islamic values and morals. The methodological approach to morals and values in the Quran are like (i) *uswahhasanah* approach (a good example) by displaying admirable character of the prophets and apostles to be followed by human beings, (ii) the approach of storytelling and narrative, the Qur'an uses approach to storytelling and narrative style that is beautiful, interesting, and really bring good teaching and affect the individual soul of Islam, (iii) teaching and advice.

The use of this approach in the Quran is to educate people in the pursuit of truth, goodness and patience to be able to raise awareness and confidence in the teachings of Islam, (iv) reward and punishment approach, used to warn people to follow Islamic law in everyday life, (v) comparative and equative approach. The aim is to educate and develop human character. The Quran expresses this beautifully it can leave an impression in the psyche of those who think, (vi) the causal approach. There are many verses in the Quran that outlines the causes and consequences of an act or behavior, noble and well-being, certainly yielded good results. On the other hand if the behavior is bad, unethical and immoral then the effect is devastating. People live and make a difference and be alert to the effects of all actions.

Examples of approaches in al-Quran present us with the theoretical models of teaching and the teaching of values and morals. For researchers, in the aspect of implementing multicultural values, these approaches are very suitable to be used as they include learning theories that are not only dominated by the west, but also Islamic scholars. The appreciation of the contents of the Quran and the wisdom usage of the common sense that God gave, can make man as the vicegerent of Allah on earth and deserves to be the heirs of the prophets, especially in teaching their students.

It can be concluded that the priority and importance of choosing strategies and methods of teaching and learning is an important factor for the effectiveness of the teaching imparted to the students. The need for a diversity of strategies, methods and approaches will be able to attract and motivate their students to a subject that can push their academic achievement.

## 2. Research Methodology

This study applied a qualitative approach and case study. Data collection is through teaching observation and interview technique. Interview method is to examine the methodology of teaching in education based on cultural diversity. The sample is a purposive sampling based on criteria set by the researchers. Data were analyzed using NVivo 8, then formation themes were derived from interviews and observation data.

### 3. Findings of the Study

The results below were obtained through interviews and observations conducted to answer the research questions that have been proposed. Findings from interviews and observations of teaching are used to answer how cultural elements are embedded in the teaching of Islamic education.

#### 3.1 *How process of teaching Islamic education based on cultural diversity?*

##### 3.1.2 *Teacher-centred strategy*

Teacher-centred strategy is teaching and learning by actively involving teachers in the delivery, while the students just listen and accept only medium presented by the teacher. This teacher-centred strategy contain various methods. In total there are 9 methods used. Such methods are the methods of advice, explanation, flash back, drilling, lectures, storytelling, contextual, lectures, and discussions.

For P1 teacher-centred strategy will be used when dealing with students who learn new term. This was done by using repetition accompanied by explanation method when students are faced with the problem to master a new term for them such as *fasakh* term. Similarly, this also applies when teachers teach verses. This assertion is supported by the following statement; "For example when we teach comprehension of the Quran, when we give an explanation to a relatively new student, we use the method of repetition. This means that if there is something that is not clear, or there's lack of understanding, we will repeat. Also for another instance, in secondary 5 we use new terms like '*fasakh*'. Student will be blurred. So when we give explanations and they do not understand the first time, we will give an explanation for the second or third time".

In an example of the practice of tattooing among the Iban P1 explain; Iban has repented and believe in Islam, complete with their machete, complete with everything, prayer, but how? According to Islam it does not burden, just according to affordability, Islam is not a burden. The one that is not possible is the Muslims.

Based on the P1 statement it is clear that the repetition method needs to be used for students to learn new terms. The use of inappropriate methods will cause difficulty for the students to understand the true meaning of the term. P1 also celebrate each level of students in his classes. He will attempt to use appropriate methods so students can follow the lesson of the day. He took example in the Jawi script, in which he would use contextual method. Each student has different words according to ability and level respectively. This is explained in the following passage; "During direct teaching in the classroom, I give, every word she teaching and learning, a simple, easy level, medium level and high level. So all students according to the level will be observed".

On the other hand P2 uses the lecture method in the teaching of Islamic education. However, she does not state the techniques used in applying the elements of culture since the application of elements from various cultures is carried out indirectly. For example, when he describes the culture of Arab society and Malay community in dyeing; "Manners of the Arabs does not matter, it does not hinder for prayers. Dyeing is possible.

Contextual method is also used by P2 in her teaching. She gives many examples to relate what they have learned during the day and its relation to the daily lives of students. As stated in the following passage; "If at home, what would it be? For example manners, manners with parents, how would one enters the home? Okay, what if meeting with relatives. Usually I would do something like this". This approach is taken when teachers teach about topics related to manners. This is because the method of contextual will indirectly help students practice what they have learned in the classroom in their daily lives.

According to P2 and P3 if teachers just explain something without associating it with their lives and without associating with students' prior knowledge, students are less interested to learn Islamic education. Therefore teachers need to diversify methods by including question and answer and provide examples that can be associated with their daily lives. This is explained through the following interview excerpts; "... Sometimes when we describe something, we only describe without associating or without touching a sensitive, existing knowledge of students. If we just deliver it plainly, students are not interested ..." and this is attracting students. Based on the observation of P2 teaching and learning Islamic education process, P2 often questioned the students about their everyday experiences and for example answer questions related to the experience of slaughtering chickens. The combination of question

and answer method, discussion and explanation are often practiced in his teaching.

For P3, a description method is normally implemented during the development stage of teaching. This is because at this stage the relevant facts of the lesson content should be presented and explained in detail with students. This is his explanation; "The development of education, which they have, usually the fact, objective that I want to present, I will explain". Even in terms of the implementation of the multicultural elements, he will continue to relate examples of cultural elements that can be associated with the topic. However, the achievement will be the main objective of his teaching. For example, in explaining the situation of social practice that still carry out superstitious activity; "For examples the sorts of things that invalidate faith. For the superstitions, we know that our students believe in birds chirp. Indirectly, I can say that this kind of superstitions is being practice in our culture".

#### **4. Discussion**

The use of indirect approach by giving examples and current issues and relate it to everyday life could develop good values from diverse culture within the student which could be practiced in daily lives. This approach provides awareness to students about the importance of unity in life and avoid doing things that could cause separation among students. This is explained by the following interview. The use of teacher-centred strategies in implementing various educational elements, and the usage of question and answer method asks students about the needs of the diverse cultures such as keeping values of solidarity among students and the concept of unity. This description method is also used on students in the lower class. Through this description method, he was actually giving a lot of examples to his pupils.

Teacher-centred teaching and learning strategy is actively involving teachers in the delivery, and the students only listen and accept information presented by the teacher. This teacher-centred strategy contains various methods. In total there are 10 methods used in S1-S6. Such methods are the methods of advice, explanation, glance back, gradually, talk, storytelling, contextual, lectures, and discussions. Teachers should choose a teaching method, and modify it to suit the goals of education (al-Syaibani 1979).

Through the explanation method, teacher explains the importance of multicultural values such as keeping the values of solidarity among students and the concept of unity. For example, in explaining the hadith material teachers have explained in detail about the responsibility of a Muslim to another Muslim which is not to oppress them and not to let them be in contempt. The usage of this description method is to give awareness to students about the importance of unity in life and avoid doing things that could cause separation among students. The sensitivity of teachers to relate current issues with the life of students and associate them with different cultural values is to strengthen the understanding of students. This has been found to increase the effectiveness of their teaching. According to research participants this effort could develop good multicultural values into students which can be practiced in their daily lives.

This description method is also used in explaining the meaning of hadith material which requires in depth explanation such as to explain the meaning of piety found in the hadith. Through the use of explanation, teachers can help students to improve their comprehension and thus enables them to understand the true meaning of the concept being taught and eventually achieve the specified objectives. The tendency of teachers to use the method of description in teaching and implementing the multicultural values is in line with Ahmad Munawar (2009), Ab. Halim (2003), in which the use of centralized teacher is the most preferred trend, consistent with previous studies.

However, in researchers' view the use of this method should be primarily to provide clarity and understanding for a concept. Similarly, in other topics such as explaining the difference between the act of cheating and lying, small sins and big sins, culture and laws and especially topics related to faith. A descriptive method is used in order to explain to the students about the things that need further clarification. This is because there are students who do not have a strong foundation in Islamic education for. Example students whom their parents just converted to Muslim.

#### *4.1 Conclusion*

Excellent teachers of Islamic education in this research adopt elements of various cultures briefly and indirectly through the methods, techniques, and activities they use when delivering teaching and learning Islamic education. Usage of appropriate approach in teaching to produce a balance in all dimensions of physical, emotional, spiritual,

intellectual, and social and strive to produce students who are able to appreciate good values as intended.

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# Multidimensional perfectionism and humor styles the predictors of life satisfaction

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## Abstract

The person that has the biggest value and importance after family is the child's first teacher in his/her life. While the child met the teacher at the beginning of the primary school in the period when pre-school education did not become widespread, now the situation has changed and the importance of pre-school education has expanded, too. Consequently, teachers of pre-school education have important tasks and responsibilities in this stage. The main purpose of this research is to reveal whether there is a relationship between multidimensional perfectionism, humor styles and life satisfaction and the extent to which the variables of multidimensional perfectionism, humor styles contribute to the prediction of subjective well-being. The inputs of the research have been obtained from totally 287 Pre-school Teacher Training students of Mehmet Akif Ersoy University. Life Satisfaction Scale that was developed by Diener, Emmons, Larsen and Griffin (1985) and adapted in Turkish by Köker and Yetim (1991) has been used to determine the students' life satisfaction levels. Besides this scale, the inputs of the study have been obtained by using Multi-Dimensional Perfectionism Scale that was developed by Hewitt and Flett (1989) and adapted in Turkish by Oral (1999) and "Humor Style Scale" that was developed by Weir (2003) and adapted in Turkish by Yerlikaya (2003). Standard multi regression analysis has been used to reveal predictive powers of their perfectionism levels' and their styles of humor's life satisfaction levels of the candidates for pre-school teaching in the research.

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## 1. Introduction

As the importance of and necessity for education in early childhood goes up, teachers and candidate teachers who are supposed to give that education become more and more important as well. In particular, candidate teachers should be educated and well-equipped with the required qualities in terms of their professional field knowledge as well as their physical attributes and characteristics. It is considered that the higher education rendered for four years provides the pre-requisites sufficiently for a candidate teacher to have required qualities and qualifications. Furthermore, it is also important to know whether the candidate teachers possess the required qualities and qualifications in terms of personal attributes and to make them acquire such qualities sufficiently.

Life satisfaction represents the cognitive aspect of the subjective well-being which is a concept concerning human happiness (Diener, 1984) and is defined as evaluation of her life by an individual herself positively in accordance with the criteria which the individual himself defines (Diener, Emmons, Larsen and Griffin, 1985). Life satisfaction and positive affect are among the subjects on which researchers in the field of subjective well-being conduct studies (Diener, 1984). Despite the fact that it is known that there is a correlation between life satisfaction and positive affect, it is yet to be fully understood. Life satisfaction distinguishes the period of positive affect conceptually and plays a role in theoretical measurement of subjective well-being (Larsen, Diener & Emmons,

1985). Subjective well-being examines the ways and reasons of positive experiences of an individual containing her cognitive evaluations and emotional reactions (Diener, 1984).

An analysis of the researches on life satisfaction shows us studies on the correlations between life satisfaction and self-esteem (Chow, 2005; Zhank, 2005, Bartoletti, 2006, Kapıkıran, 2013), socioeconomic level (Darai and Mohajery, 2013), humour styles (Findıklı, 2013) and problem-solving skills (Kabasakal and Uz-Baş, 2013) of an individual. In candidate teachers, particularly humour and perfectionism are among important personal attributes. Both humour and perfectionism have some dimensions containing both desired and non-desired characteristics.

Humour is a comprehensive concept that contains comic things people say or do, that are perceived as comic by others as well tending to make them laugh, and that requires using cognitive and emotional processes when thus doing (Öner, 2012). Sense of humour is a personal attribute and is only specific to humans, and this feeling is expressed through behaviours such as finding something funny, smiling or bursting into laughter (Deckers and Ruch, 1992).

According to positive and negative characteristics, humour has four dimensions as affiliative, self-enhancing, aggressive and self-defeating. Affiliative humour is a harmonious style that supports and develops interpersonal relations. Self-enhancing humour represents exerting efforts to develop effective strategies in coping with stress by taking into account the needs of the individual and others. Aggressive humour is utilization of humour by an individual about others in a socially inappropriate fashion to accommodate only his/her own needs. Such a style of humour does give harm to interpersonal relations, and is inharmonious and unhealthy. Self-defeating humour, on the other hand, includes one's self-criticism and self-disparaging in a humorous way in order to make others laugh. Such a style of humour is also inharmonious and unhealthy because of giving harm to subjective well-being and self-acceptance, creating a lower self-perception and creating barriers to interpersonal relations (Martin, Puhlik-Doris, Larsen, Gray & Weir, 2003). Benefits of humour are considered in a multi-dimensional manner with the special emphasis being given to physiological, social, psychological and cognitive benefits (Aydın, 2005). Looking at the events from an optimist point of view against unpleasant developments and keeping away from stress is only possible through humour. The contribution that humour can make against unpleasant and stressful events can make individuals more resilient against both psychological and physiological illnesses (Sayar, 2012).

The concept of perfectionism was considered *prima facie* by some researchers with a negative perspective that was interested only in one's perfectionism only towards himself or herself and seen to be a pathological personal characteristic. Nevertheless, Adler was one of those who first pointed out that perfectionism had two dimensions, one being negative and the other positive (Altun and Yazıcı, 2010). Adler (2004) suggested that it is the impulse of excellence that exists in all human beings and lies in the background of the entire creative action. (Ref: Çepikurt, 2011).

This study was conducted with a view to finding whether the level of excellence and humour styles of candidate preschool teachers predicts their university life satisfaction levels. Differences of individuals in their experience and perceptions also lead to different personalities among candidate teachers. Some attributes of candidate teachers such as being positive towards life, witty, happy and healthy play an utmost important role for them to teach and educate healthy individuals. Teachers, who are supposed to facilitate children to know themselves, should first know themselves. It is extremely important for a teacher to know what her personality characteristics are and how they influence her, and to educate herself in this field. Before they start their career, and even before they select their profession, it is very important for candidate teachers to know themselves in these aspects. Identifying the factors that improve life satisfaction of youngsters can serve as a tool of prevention and intervention for professionals who provide psychological help. It is therefore considered that this study would contribute significantly in researchers and practitioners not only in the field of preschool education but also in psychological consultation and guidance areas.

## 2. Method

In this study, we used standard multiple regression analysis in order to find out how predictive the humour styles and levels of perfectionism of students preschool teachers are on their life satisfaction levels. Moreover, we used one-way analysis of variance to examine life satisfaction levels of students of preschool education departments according to the grade variable.

### a. Research Group

Research group of the study was composed of a total of 287 students (248 (86.4%) females and 39 (13.6%)

males) attending the grade 1, 2, 3 and 4 in Department of Preschool Education in Mehmet Akif Ersoy University. 84 (29.3%) students in the research group attended the grade 1 while 104 students (36,2%) were in grade 2; 54 students (18,8%) were in grade 3 and 45 students (15,7%) were in grade 4.

*b. Data Collection Tools*

The study used the Life Satisfaction Scale, developed by Diener, Emmons, Larsen and Griffin (1985) in order to measure the overall life satisfaction levels and adapted into Turkish by Köker and Yetim (1991) as well as the Humour Styles Scale, developed by Martin, Puhlik-Doris, Larsen, Gray and Weir (2003) and adapted into Turkish by Yerlikaya (2003) and the Multidimensional Perfectionism Scale developed by Hewitt and Flett (1989) in order to measure the levels of perfectionism and put into Turkish by Oral (1999) (MDPS). In the Humour Styles Scale; sub-scales of the Scale, “Affiliative Humour” and “Self-Enhancing Humour”, were harmonious while the subscales of “aggressive humour” and “self-defeating humour” were inharmonious. The MDPS consists of three sub-scales such as “self-oriented”, “other-oriented” and “socially-prescribed perfectionism”. Self-oriented perfectionism sub-scale consists of items about determination of unrealistically strict standards by the individual for himself while the other-oriented perfectionism sub-scale is composed of items about determination of unrealistically strict standards by the individual for others, and the socially-prescribed perfectionism sub-scale has items concerning perceptions of an individual about the expectations of his environment.

**3. Findings**

Descriptive statistics of the scores of levels of life satisfaction, humour styles and perfection levels of students of the Preschool Education Department can be seen in Table 1.

**Table 1** Descriptive statistics of the scores of levels of life satisfaction, humour styles and perfection levels of students of the Preschool Education Department

Variables	Alpha	n	Min.	Max.	Mean	Std. Deviation
1.Life Satisfaction	.82	287	7.00	35.00	23,54	5,58
2.Self-Enhancing Humour	.79	287	8.00	56.00	33,41	9,36
3.Affiliative Humour	.61	287	8.00	56.00	43,03	8,57
4. Aggressive Humour	.62	287	8.00	56.00	20,56	7,06
5.Self-Defeating Humour	.69	287	8.00	56.00	24,93	8,11
6.Self-Oriented Perfectionism	.87	287	15.00	105.00	71,47	15,54
7.Other-Oriented Perfectionism	.54	287	15.00	105.00	60,75	9,67
8.Socially-Prescribed Perfectionism	.65	287	15.00	105.00	55,12	10,45

It was observed that the alpha reliability levels of all scales used in the analyses conducted on the data collected throughout the study varied between .54 and .87. Table 1 shows that the life satisfaction scores varied from 7 to 35 and the scores of humour styles varied between 8 and 56 while the perfectionism scores varied from 15 to 105.

**Table 2** Descriptive statistics about variables and correlation coefficients between variables

	1	2	3	4	5	6	7	8
1. Life Satisfaction	-							
2. Self-Enhancing Humour	,176**	-						
3. Affiliative Humour	,078	,357**	-					
4. Aggressive Humour	,-241**	,040	,-103	-				
5. Self - Defeating Humour	,-118**	,234**	,123*	,254**	-			
6. Self-Oriented Perfectionism	,052	,-019	,-026	,-273**	,-155**	-		
7. Other-Oriented Perfectionism	,135*	,-007	,077	,-055	,-093	,481**	-	
8. Socially-Prescribed Perfectionism	,-168**	,-126*	,-134*	,046	,220**	,201**	,170**	-

\*\*P<0.01

\*P<0.05

Table 2 shows us positive and significant correlations between “self-enhancing humour” and life satisfaction ( $r=0,176$ ,  $p<0.01$ ) and between “affiliative humour” and “self-enhancing humour” ( $r=0,357$ ,  $p<0.01$ ). A significant and inverse correlation was found between “Aggressive Humour” and life satisfaction ( $r= -0,241$ ,  $p<0.01$ ) and “self-defeating humour” and life satisfaction ( $r= -0,118$ ,  $p<0.01$ ). Furthermore, there are significant and positive correlations between “self-defeating humour” and “self-enhancing humour” ( $r=0,234$ ,  $p<0.01$ ); “self-defeating humour” and “affiliative humour” ( $r=0,123$ ,  $p<0.05$ ), and “self-defeating humour” and “aggressive humour” ( $r=0,254$ ,  $p<0.01$ ). When we examine the subgroups for perfectionism, we observe significant and inverse correlations between “self-oriented perfectionism” and “aggressive humour” ( $r= -0,273$ ,  $p<0.01$ ), and “self-oriented perfectionism” and “self-defeating humour” ( $r= -0,155$ ,  $p<0.01$ ). Furthermore, there are significant and positive correlations between “other-oriented perfectionism” and life satisfaction ( $r=0,135$ ,  $p<0.05$ ), and “other-oriented perfectionism” and “self-oriented perfectionism” ( $r=0,481$ ,  $p<0.01$ ). We can also observe significant and inverse correlations between “socially-prescribed perfectionism” and life satisfaction ( $r= -0,168$ ,  $p<0.01$ ); “socially-prescribed perfectionism” and “self-enhancing humour” ( $r= -0,126$ ,  $p<0.05$ ); and “socially-prescribed perfectionism” and “affiliative humour” ( $r= -0,134$ ,  $p<0.05$ ). Moreover, there are significant and positive correlations between “socially-prescribed perfectionism” and “self-defeating humour” ( $r=0,220$ ,  $p<0.01$ ), “socially-prescribed perfectionism” and “self-oriented perfectionism” ( $r=0,201$ ,  $p<0.01$ ), and “socially-prescribed perfectionism” and “other-oriented perfectionism” ( $r=0,170$ ,  $p<0.01$ ).

**Table 3** Multiple Regression Analysis Scores concerning predictability of Life Satisfaction Levels by Humour Styles and Perfectionism Levels

Variables	B	Sh	$\beta$	t	p
1. Life Satisfaction					
2. Self-Enhancing Humour	,122	,037	,205	3,338	,001
3. Affiliative Humour	-,026	,040	-,040	-,650	,516
4. Aggressive Humour	-,189	,048	-,239	-3,964	,000
5. Self-Defeating Humour	-,047	,043	-,068	-1,092	,276
6. Self-Oriented Perfectionism	-,029	,024	-,081	-1,204	,230
7. Other-Oriented Perfectionism	,106	,037	,184	2,847	,005
8. Socially-Prescribed Perfectionism	-,076	,032	-,142	-2,344	,020

$R= ,380$   $R^2= ,145$   $F_{(7-285)}= 6,720$ ,  $p < .01$

According to Table 3, self-enhancing humour, aggressive humour, other-oriented perfectionism and socially-prescribed perfectionism explain 15% of the total variance of life satisfaction ( $R= ,380$   $R^2= ,145$   $F_{(7-285)}= 6.720$ ,  $p<0.01$ ). The t-test results for significance of regression coefficients show that the self-enhancing humour ( $t =3,338$ ,  $p<0.01$ ) and other-oriented perfectionism ( $t =2,847$ ,  $p<0.01$ ) significantly predict life satisfaction in a positive manner. It is also observed that aggressive humour ( $t=-3,964$ ,  $p<0.01$ ) and socially-prescribed perfectionism ( $t=-2.344$ ,  $p<0.05$ ) significantly predict life satisfaction in an inverse direction. Furthermore, affiliative humour ( $t=-,650$ ,  $p>.05$ ), self-defeating humour ( $t=-1,092$ ,  $p>.05$ ) and self-oriented perfectionism ( $t=-1,204$ ,  $p>.05$ ) do not significantly predict life satisfaction. According to standardized regression coefficients, significant predictors of life satisfaction are as follows respectively: aggressive humour ( $\beta =-.239$ ), self-enhancing humour ( $\beta =.205$ ), other-oriented perfectionism ( $\beta =.184$ ) and socially-prescribed perfectionism ( $\beta =-.142$ ). To summarize the findings obtained through standard multiple regression analysis; life satisfaction is predicted positively by self-enhancing humour and other-oriented perfectionism whereas inversely by aggressive humour and socially-prescribed perfectionism.

One-way analysis of variance was conducted in order to examine whether life satisfaction of students of preschool education departments differ significantly according to their grade levels. M Test of Box was conducted in order to examine the homogeneity of variance-covariance matrixes as a premise of MANOVA. Findings have shown that variance and covariance among dependant variables are the same for each level of factors and there is not any significant difference between them [Box’s  $M:3,283$ ,  $F(6,499)=,513$ ,  $p>.05$ ].

**Table 4** Variance Analysis Results according to Grade Levels

	Variance Source (Grade Level)	N	$\bar{x}$	s	F	P	$\eta^2$	Significant difference
Life Satisfaction	1. Grade (A)	84	25,11	6,83	3,941	,009	,04	A-C
	2. Grade (B)	104	23,14	4,91				
	3. Grade (C)	54	21,96	4,83				
	4. Grade (D)	45	23,60	4,78				

According to Table 4, average scores for life satisfaction vary significantly according to grade levels. Average scores of the first graders for life satisfaction are significantly higher than those of the third graders. In this study, the impact size of the variable of grade level on life satisfaction scores was measured by means of partial eta square.

Based on the recommendation of Stevens (1992), partial eta square values were taken as small for  $\eta^2 \leq 0.01$ , medium for  $\eta^2 = 0.06$  and large for  $\eta^2 = 0.14$ . The partial eta square value concerning the impact of grade level was found to be  $\eta^2 = 0.04$  for life satisfaction. According to this value, the impact of grade level is lower than medium.

#### 4. Conclusion and Discussion

It was observed that the self-enhancing humour levels and other-oriented perfectionism of students of preschool education departments significantly predict their life satisfactions in a positive direction. There are four different styles in which people use humour. Self-enhancing and affiliative humours represent harmonious and positive aspects of humour whereas self-defeating and aggressive humours express inharmonious and negative aspects of humour. Self-enhancing humour represents looking at the life through a humorous perspective even in challenging circumstances and utilizing humour as a coping-with strategy (Yerlikaya, 2007; Yılmaz, 2011). When we look at the literature, we see some studies suggesting that positive and harmonious humour styles have positive correlations with life quality (Kuiper, Martin, Dance, 1992), optimist and self-confident coping-with styles (Durmuş and Tezer, 2001), harmony in marriages (Fidanoğlu, 2006) and emotional intelligence skills (Tümekaya, Hamarta, Deniz, Çelik and Aybek 2008). Life satisfaction is in a general sense accommodation of needs, desires and wishes, and represents the cognitive aspect of the subjective well-being (Ünal, Karlıdağ and Yoloğlu, 2001). It is expected that positive and harmonious humour styles such as self-enhancing humour have a positive correlation with life satisfaction of the individual.

Other-oriented perfectionism contains beliefs and expectation concerning what other can do. It also entails blaming others and feeding negative feelings about others. Therefore, when there is other-oriented perfectionism, the individual sets high standards for others and expect them to follow those standards. There are researchers who consider perfectionism negatively while others consider it as something merely positive. Today, researchers handle perfectionism both positively and negatively (Hewitt and Flett, 1991; Kırđök, 2004; Gül, Yılmaz and Berksun, 2009; Uz Bař, 2010). Bilge et al. (2010) found in a study on multidimensional relationships that other-oriented perfectionism was a significant variable in predicting the relationship satisfaction. In this study, we found that other-oriented perfectionism predicts life satisfaction significantly in a positive direction. As other-oriented perfectionism represents one's doing his best and expecting the others to do the same, it is safe to consider that it significantly predicts life satisfaction in a positive direction.

Another finding of the study suggests that aggressive humour and socially-prescribed perfectionism significantly predicts life satisfaction in an inverse manner. As mentioned before, aggressive humour represents the negative and inharmonious aspects of humour. Humour can vary according to the environmental circumstances and social conditions and can create anger in an individual by making a negative impact (Öner, 2012). Yerlikaya (2003) suggests that aggressive humour contains insulting and mocking others. Therefore, one can suggest that any individual who often applies to such a humour style is in pursuit of meeting his need to exhibit himself as superior. There are some studies suggesting that the aggressive humour and expression of anger (Soyaldın, 2007) is associated with being neurotic, angry and aggressive (İlhan, 2005) as well as the submissive coping-with method as a way to cope with stress (Yerlikaya, 2007). As aggressive humour is an inharmonious and negative humour style, it is an

expected result that there is a significant inverse correlation between humour and life satisfaction. In socially-prescribed perfection, an individual believes that others have high expectations from him and he must achieve those standards to be approved by others (Gül, Yılmaz and Berksun, 2009; Kırdök, 2004), which is believed to have negative impact on life satisfaction because it increases self-expectations of the individual and turns down his self-confidence.

The last finding of the study suggests that average scores of life satisfaction vary significantly according to the grade levels. Average scores of the first graders for life satisfaction are significantly higher than those of the third graders. It is an expected finding that life satisfaction level increases as the grade level goes up. Nevertheless, the reason why this difference is between the first and third grader students may be the job-finding concerns of last graders or they get prepared for post-graduation exams. Moreover, the fact that third-graders have a busier content of courses in various fields in both semesters compared to other grades and they have more applied classes than other grades might have an impact on this situation.

## Recommendations

Studies on different variables have an impact on life satisfaction of candidate teachers should be examined in future research. Furthermore, similar studies can be conducted in larger groups. Also further studies should be planned in which can be tested theoretical models to explain life satisfaction.

Psychological counselling and guidance centres of universities should form psychological counselling groups in line with the needs of students to carry out psycho-educational workshops in order to promote positive perfectionism, positive humour and life satisfaction. Promote studies and works to develop and improve humour skills of candidate teachers and also promote development of their personality characteristics by making them know their strong and weak points should be planned.

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# Multilingual primary education initiative in French Polynesia

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## Abstract

Multilingual education is receiving remarkable attention in language policy planning efforts of many countries, and aiming at providing culturally responsive education. French Polynesia, which is an overseas territory of France, represents a fine example for its efforts towards maintaining and revaluing multilingual education. The foreign and local language teaching initiative in French Polynesian primary education is the extension of the early childhood foreign and regional language education policy started in the 2000s in France. The first part of this paper describes the French Polynesian educational context and the second part provides a succinct review of the research activities conducted on multilingual practices at French Polynesian elementary schools. The final part discusses the forthcoming research activities and further directions in multilingual education projects in French Polynesia.

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*Keywords:* language diversity; multilingualism; foreign language learning; Language Policy and Planning; Content and Language Integrated Learning

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## 1. Introduction

For the last decade, multilingual education has received remarkable attention in Language Policy and Planning (LPP) efforts in numerous countries, notably in the European Union (EU) member states. Today many nations and communities are recognizing the linguistic diversity as cultural heritage and working towards maintaining, revaluing and revitalizing indigenous languages (Ricento, 2009). French Polynesia, which is an overseas collectivity of France

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(COM-- *collectivités d'outre-mer*) with a population of approximately three hundred thousand people, is a good example for its LPP efforts towards maintaining and revaluing multilingualism. Today improving the quality of local language and English language learning practices at schools is one of the educational priorities in French Polynesia. The local and foreign language teaching (i.e. English) initiative in French Polynesian primary education is the extension of the early childhood foreign and regional language education policy started in France in the 2000s, as part of the EU's multilingual education movement. The language education movement is based on the belief that learning languages could contribute to developing a sense of global citizenship and could increase competitiveness of the EU economy (Council conclusions on the European Indicator of Language Competence 2006/C 172/01).

In French Polynesia, struggles to revitalize and gain recognition for the indigenous languages had always subsisted within the local community yet had not received any formal attention from the central government until the 1980s (see the review by Paia & Vernaoudon, 2002). Since the beginning of the early 2000s both regional and foreign language teaching practices have gained a significant impetus in France (Deyrich, 2007; Tardieu, 2006). This

revolutionary change in language learning policies in France gave the long awaited impetus to the teaching of local and foreign languages in French Polynesia. From 2005 onwards, the local education department, some researchers at the University of French Polynesia, and the National Research Agency launched several research projects on multilingual-learning in pre-primary and primary education levels (see Gabillon & Ailincal 2013; Nocus *et al*, 2012a; Nocus *et al*, 2012b; Salaün, 2012).

## **2. French Polynesian educational context**

In French Polynesia, education is under the responsibility of both local authorities and central government. French Polynesian primary and secondary education implement French National Curriculum except for some adjustments to adapt for local needs. The *Vice-Recteur* (Vice Chancellor), who is an appointed government official, represents the Ministry of National Education, Youth, and Sport, (fr: *Ministère de l'Éducation nationale, de la Jeunesse et de la Vie associative*), and the Ministry of Higher Education and research. The *Vice-Rectorat* ensures the administration of the national education in French Polynesia and undertakes some key responsibilities such as the financial control of the educational budget, management of the government employees, certification of state examinations (e.g. teacher certification examinations) and organization of competitive state exams (e.g. baccalauréat: the high-school leaving exam taken at the end of the secondary education in France).

Since 2004, the local authorities have gained more independence in issues concerning education. The organic law of 2004, about self-government, (organic law no 2004-192) ordains the transfer of several competences that were previously reserved for the French State to French Polynesia. This law about self-government and some official texts about education [The Charter of Education, 05/09/2011, the state-territory convention on education n° HC 56-07, 04/04/2012] assign responsibility and authority to the local educational institution to tailor the national curriculum to meet the needs of their local community. These official texts recommend that the historical, geographic, social, economic, natural and cultural realities of the country be taken into account when implementing the local school curricula.

French is the only official language and the medium of instruction in French Polynesia. The primary education includes both pre-school and elementary school education and schooling is compulsory from five to sixteen years of age. French Polynesia is comprised of one hundred and eighteen islands and covers an area as large as Europe. Sixty-seven of these islands and atolls are inhabited and almost all have elementary schools. There are a hundred and seventy two elementary schools on five archipelagos and the fact that these schools are spread across huge geographical areas in the Pacific Ocean makes them difficult to manage. In French Polynesia elementary school teachers are generalist teachers and they do not receive specialized primary level foreign language teacher education as part of their qualification. However, it is possible for some elementary school teachers to have a bachelor's degree in modern foreign languages or in Tahitian. In French Polynesia a competitive exam [*Concours de Recrutement de Professeurs des Ecoles (CRPE)*] is used as part of the selection procedure for elementary school teaching positions in both the state and private sectors. A university diploma is a prerequisite in order to qualify to take the *CRPE* exam. All elementary school teachers are expected to have competence level B2 (upper-intermediate level) in English and in Tahitian that corresponds to the Common European Framework of Reference for Languages (CEFRL). However, not many elementary school teachers have the required level of language competence either in English or in Tahitian. In French Polynesia, the new teacher education system *Ecoles Supérieures du Professorat et de l'Éducation (ESPE)*, which will be put in practice in effect from 2014-2015 (2015-2016 for elementary school teacher education), will require obtainment of a Master degree and will integrate compulsory foreign and local language learning modules in teachers pre-service training. In this new system, the attainment of the level B2 of CEFRL, both in Tahitian and in a foreign language, will be a prerequisite for all primary school to start their teaching profession.

## **3. Teaching of the local and foreign languages at pre-elementary and elementary levels**

### *3.1. Learning local languages at French Polynesian elementary schools*

In 1980, a decision taken by the French Polynesian Council (*L'Assemblée de la Polynésie Française*) acknowledged Tahitian as the second official language (Decision No. 2036 of 28 November 1980 article 1). However, the decision of the French Polynesian Council has never received any legal recognition by the French Government. The legal government documents and official texts recognize the local languages as fundamental elements of cultural identity, a means of daily communication, cultural heritage and wealth of French Polynesia (the Organic Law n° 2004-192 2004 article 57; the State-Territory Convention on Education n° HC 56-07 of the 04/04/2012). Tahitian was introduced in French Polynesian schools pursuant to the decree n° 81-553 about “teaching of languages and dialects” in 1981. With effect from 1982, Tahitian language was incorporated into the local school curricula and from this date onwards all children from pre-elementary through secondary school level received instruction in Tahitian with teaching hours varying from two to two and a half per week (The organic law n° 2004-192 of the 27/02/2004). Since 2005, the teaching hours allocated for Polynesian language practices have been benefiting from the flexibility of reaching up to five hours per week, in experimental settings at elementary school level (e.g. academic research projects or pedagogical school projects). A recent report that has been issued by the management of assessment, forecasting and performance department, (*L'état de l'Ecole Primaire de Polynésie, DEPP, 2013*) announced that at kindergarten level, teaching of the local languages will gradually increase up to 5 hours by the academic year 2015-2016.

French Polynesia has always been a multilingual society where five local languages have co-existed throughout five French Polynesian archipelagos. However, *Reo Mā'ohi (Reo Tahiti)*, the native language of the Society Islands, is the main local language used throughout French Polynesia (Paia & Veraudon 2002). Many French Polynesians speak these five local languages and dialectal variants of these languages, as their main language at home. These languages are Tahitian (*Reo Mā'ohi* or *Reo Tahiti*), spoken in Society Islands; Pa'umotu (*Reo Pa'umotu*), spoken in Tuamotu archipelagos; Marquesan (*Reo Nu'uhiva* or *Reo'enana*), spoken in the Marquesas Islands; Austral, spoken in the Austral Islands; and Mangareva, spoken in the Gambier Islands (Peltzer 2009).

### 3.2. Learning English as a foreign language at French Polynesian elementary schools

English as a foreign language (EFL) was first introduced in French Polynesian elementary schools in 2006 as part of a pilot project. With effect from 2010, the French Polynesian government incorporated EFL as an integral part of the elementary school curriculum. Currently all elementary schools are involved in the project and all CM2 (10 year-olds) (since 2010), CM1 (9 year-olds) (since 2011), CE2 (8 year-olds) (since 2012), and CE1 (7 year-olds) (since 2013) students have been receiving English classes regularly. The targeted English level of the primary education is to attain A1 level on the scale provided by the CEFRL.

The English Language Unit (*Cellule d'Anglais*) is in charge of the implementation of EFL classes in French Polynesia. The unit comprises a director, two language advisors and fourteen colleague mentors. The French Polynesian Primary Education Department (PED) [*fr. Direction d'Enseignement Primaire (DEP)*] has a group of language advisors and colleague mentors working for the ELU. This unit is responsible for the preparation of pedagogical materials for the classroom use. After the materials are devised, they are tested by the teachers and the teachers are observed while using these materials in class. Then the feedback is obtained both from the class teacher and the colleague mentor who observed the teacher. This feedback is then utilised to make the necessary adjustments to elaborate the material and the modality of the pedagogical practice. After some adjustments, these materials are re-implemented, observed, and fine-tuned until the materials development unit confirms that they have attained the expected standard. The four members of the ELU are based at the Department of Primary Education headquarters, and they keep a constant contact with the other members. These ELU members are also responsible for student evaluation procedures and in-service training.

## 4. Research on Bilingualism

### 4.1. School success and research on child bilingual education

In French Polynesia, majority of the children are bilingual speakers (e.g. a local Polynesian language and French as the language of schooling), and there are many children who are multilingual speakers (i.e. French as the language of schooling, a local Polynesian language, and a heritage language i.e. Chinese *Haka dialect*). Although French is the language of schooling, often a Polynesian language (e.g. *Reo Tahiti, Nu'uhiva or Reo'enana etc.*) is spoken at home and this local language, which is used in the child's immediate environment, remains as the language of socialization. Although, the majority of Polynesian children understand and speak standard French, many among them speak a form of non-standard French, integrating local words and expressions, or alternating linguistic code when communicating.

The French National Education Department employs a national assessment procedure to help ascertain how well pupils are performing. The statistical data supplied by the national educational authorities regularly demonstrate that the school success of the Polynesian elementary school children is significantly lower compared to general school success at national level (i.e. school success in Metropolitan France) (see Pastor & Taetua 2008; Poirine, 1991, 1992 for overall statistical data). This deficiency in school success is considered to be linked to the socio-linguistic context (Nocus *et al* 2012b) and the educational authorities called for research to investigate and provide answers to the problem.

Research on child learning and bilingual education has consistently reported significant advantages offered by bilingual or multilingual education compared to monolingual education (Baker 2007, 2011; Bialystok 2010; Bialystok, Luk & Kwan 2005, Cenoz, 2003; Cummins 1998, 2014; Cummins & Swain 1986) Kovelman, Baker, & Petitto 2008). International research data on bilingualism and bilingual learning methods, which make use of children's native language, indicate positive impact on children's language development and academic success. Numerous studies have suggested that a child who has had a bilingual schooling compared to a child who has had only monolingual schooling benefits from significant pedagogical advantages (see reviews in Baker 2011; Cummins 1978, 1998). Some of these studies have also shown that bilingual children have more advanced cognitive processing abilities than monolingual children who are at about the same developmental stage. This advantage in cognitive processing has been observed on a wide range of cognitive tasks, including both verbal and nonverbal domains (Bialystok 2010; Bialystok, Luk & Kwan 2005). Several studies have also suggested that there is an additive effect of bilingualism on third language acquisition (see reviews in Cenoz, 2003).

#### *4.2. Recent trends and research on child foreign language learning*

Recent trends and research on foreign/second language learning advocate use of approaches that enable fostering naturalistic learning environments and developing academic and social skills, as well as, foreign language competence. Content and Language Integrated Learning (hereafter CLIL) is an approach that includes the principal elements which are regarded as requisite for successful language acquisition. CLIL is an approach with two main educational focuses: to develop target language skills and to acquire disciplinary content knowledge. The approach is employed to teach a school subject via a foreign, indigenous, heritage, regional or another official language in bi/multilingual educational contexts (European Commission document, 2002). The term CLIL was introduced to the educational and foreign language learning literature in the early 1990s by a group of linguists and experts in education who collaborated in the bilingual/multilingual education provision prompted by the European Commission (European Commission document, 2002).

Today CLIL is a one of the main issues of the Council of Europe's language policy and planning agenda and the EU state schools are encouraged to incorporate CLIL practices into their national school curriculum. The CLIL approach does not only target at teaching language skills and the disciplinary subject content but it also aims at building up academic cognitive skills and learner strategies that learners can transfer and use in other learning contexts. The CLIL practices make use of natural learning situations and target at authentic language use, real-life situations, gestures, and artifacts to facilitate natural foreign/indigenous/regional language acquisition in classroom settings. This type of naturalistic way of learning is particularly considered to be suitable for young language learners (Edelenbos, Johnstone, & Kubanek, 2006). CLIL also aims at enhancing skills (e.g. social, academic, cognitive etc) and learner strategies that learners can transfer and use in other similar learning contexts.

### 4.3. Research activities and pilot-projects on multilingualism in French Polynesia

The positive research outcomes, which scholars obtained in various bilingual/multilingual educational contexts, prompted the local authorities, some researchers (i.e. experts in education, socio-linguists, psychologists, and sociologists) to conduct parallel research activities in French Polynesian elementary schools. Since the year 2005, several French Polynesian elementary schools have participated in various experimental studies and pilot projects both in bilingual and foreign language education programs.

Between the years 2005-2012, two research projects investigated the effects of bilingual education (French and the Tahitian language) on Polynesian children's speaking, reading and writing skills at French Polynesian elementary school level. These two research projects, ECOLPOM (*Ecole Plurilingue Outre-Mer*), which means 'Multilingual Overseas Schools', were funded by the National Agency for Research (*L'Agence Nationale de la Recherche*) (Nocus, Vernaudon, & Paia, 2014). The first project took place from 2005 to 2008 (Nocus *et al* 2014) and the second phase of the project was implemented between 2009-2012 (Nocus, Vernaudon, & Paia, 2014). The ECOLPOM project is currently undergoing an extension as part of a new research program entitled RéoC3, which focuses exclusively on French Polynesian languages and their teaching at the primary education level.

The aim of the ECOLPOM project was to measure the possible impact of a partial bilingual education (i.e. Tahitian and French) on the psychological development of the participant children, their school success and language learning (Nocus *et al* 2012b). The project primarily examined the effects of this partial bilingual education program on the learners' (6-8 year-olds) oral and reading skill development in both French and Tahitian (Nocus *et al* 2012a). This experimental research activity involved 212 pupils: a) an experimental group with 120 children (60 girls & 60 boys) and b) a control group with 92 children (43 girls & 49 boys) (Nocus *et al*, 2014). The results of this experimental study revealed that this partial bilingual education program (Tahitian/French): a) did not hinder the acquisition of the children's schooling language (French); b) the program had a positive effect on the learners' proficiency in Tahitian but produced neither positive nor a negative effect on the learners' proficiency in French.

The ECOLPOM project coupled the psycholinguistic component with a sociolinguistic research module. This second research module, which took place after obtaining positive results from the first phase, sought to determine whether strengthening the teaching of local languages, had modified the representations and practices of the teachers, educational authorities and the families about the local languages. The sociolinguistic research component used interviews and observations as research instruments that particularly looked into family bilingual language practices and representations and the family and school relationships (Salaün, 2014).

In addition to the research projects that examined bilingual programs (Tahitian/French), French Polynesian elementary schools also participated in other national school projects and experimental and exploratory research activities that focused on learning English as a foreign language (EFL) at the primary education level.

The first pedagogical pilot project in EFL was initiated by the local educational authorities in 2006 in six schools at pre-school level (5 year-olds) and involved seven teachers. During this pedagogical EFL project the same pupils were taught and their EFL performances were observed for three years until they reached the CE1 level (*Cours Élémentaire 1*= 7 year olds) age eight. The pilot phase employed a progressive scheme moving from pre-school level (5 year-olds) in 2007 to a higher-grade to CP level (*Cours Préparatoire*= 6 year-olds) in 2008, CE1-CE2 (7year-olds and 8 year-olds) in 2009, and finally CM1-CM2 (*Cours Moyenne 1*= 9 year-olds and *Cours Moyenne 2* =10 year-olds) in 2009. The project ended in 2009. During these three years of experimentation, language-learning tools were tested and fine-tuned, and the teaching was adjusted to answer the pedagogical needs of the pupils. During this period, many elementary school teachers attended in service-programs and were informed about the recent developments in foreign/second language teaching [interview with the head of the English Language Unit (ELU--*fr Cellule d'Anglais*), May 2011].

Since 2012, as part of the EFL provision, another longitudinal research study has been conducted by the researchers from the EASTCO research laboratory (*Equip d'Acceuil Sociétés Traditionnelles et Contemporaines en Océanie*), University of French Polynesia, at the primary education level. The first phase of the study employed the CLIL approach to teach science lessons through the medium of English. The teaching sessions and the activities used for this study were designed considering the following principles:

- select the school subject content taking into account their ability in the L2;

- provide instructional scaffolding to support learning of both the L2 and the disciplinary content;
- support the use of learner strategies and cognitive skills;
- provide the learners with experiential learning and hands-on experience to help them learn by doing;
- provide learners with authentic learning settings[e.g. doing a science experiment using lab equipments and everyday substances];
- enable the learners to learn skills that they can transfer and use in other similar contexts (e.g. know-how skills to complete tasks and solve problems which involve cognitive skills) and practical skills (e.g. employment of manual skills and methods, materials, tools and instruments). (Gabillon & Ailincal 2013, p. 171)

The preliminary results obtained at the end of the first phase of this longitudinal classroom-based research suggested that the CLIL approach could be effectively implemented with beginner level young foreign language learners. The examined data also indicated that: a) the use of gestures and artifacts facilitate content learning and improve the quality of dialogical exchanges; b) dialogic classroom exchanges (student ↔ student or teacher ↔ students) can be used as both a means for scaffolding content learning and language learning (Gabillon & Ailincal, 2013). The CLIL project is an ongoing project and at present, the researchers are investigating the role gestures and artifacts play on the length and the quality of classroom exchanges in experiential pedagogical activities (e.g. in CLIL science lessons).

## 5. Conclusion

For the past decade, the teaching of EFL and Polynesian languages has undergone an enormous expansion in French Polynesian elementary schools. During this period of growth, both multilingual pedagogical tools and modalities of teaching languages have been progressively assessed and reviewed. The research activities conducted in French Polynesian elementary schools have provided the local authorities with useful information on Polynesian children's academic, cognitive, social and conational skills in multilingual elementary school setting.

The future research intends to complement the experimental research projects that particularly invested in partial bilingual education programs (i.e. ECOLPOM) and exploratory and experimental research projects, which investigated the CLIL practices in English as a foreign language setting in French Polynesian elementary schools. Future research projects aim at collecting a representative corpus on existing multilingual educational practices across the five archipelagos of French Polynesia. The future projects also aim to go beyond the school and teaching context and widen their scope to include the family in these multilingual educational programs. In these forthcoming projects both group of researchers; that is, the researchers who work on bilingual education (Tahitian/French), and the researchers who work on CLIL, intend to join their efforts and act in close cooperation.

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# Music as a resource to develop cognition

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## Abstract

The paper focuses on cognition as an element for human development and application of musical language resources in order to stimulate and strengthen neural connections favorable for learning. The study relies on research and analysis of current researches in neuroscience on scientific evidences dealing with the effects of music on the brain and the reflection on human behavior.

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*Keywords:* music; cognition; neuroscience.

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## Introduction

This article presents considerations on the use of musical language resources to contribute to human development. It approaches the necessary care during the intrauterine stage and its consequences for the future being and the importance of maternal (or from the person who takes part as a mother) participation and investment for a proper biopsychosocial development of the baby and its effects on future behavior. It conceives music as a resource to interfere favorably on stimulation to enhance and contribute to the process of the child's development and it focuses on the use of musical language resources to stimulate the cognitive process and learning. During its preparation it was taken as study material scientific articles and updated references on the subject.

## Human development and cognition

Since its origin the human has tried to assert its supremacy by exercising mastery over nature and the other beings. Genetic researches have already concluded that the difference between the human being and the other inhabitants of the universe is minimal, overcoming on the expression of creative potential, on cognitive ability and sociability, on the manual skills, among others.

Analyzing the structure of the human brain compared to other animals it is possible to clearly see the evolutionary differences that stand out for the condition of the human being able to express himself in a more evolved way on social behavior. Due to the neocortex, the human distinguishes from the animal through conditions of rationality, intellect, affection and emotional expression, allowing the expansion of feelings related to family and offspring, to the environment and other beings. "However, this powerful organic structure can (from its own power) as much as create destroy, if it is not well used and preserved" (Oliveira, 1997, p. 27). But unlike other creatures, such as animals that are already born with survival instincts and reaction conditions to the environment in their genetics, none of this would be possible with the human being and it would be fated to succumb and die without the

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intervention of another human being. It is due to the support and interference from a more mature being that humanization, the development of the human baby and its insertion on society become possible.

Neuroscientists and researchers (Consenza & Guerra, 2011) have studied a lot about the brain structure and its relation to the acquisition of essential functions for survival and for human development. It is from fertilization that the great mystery of life begins with the development of a new being, that will have its growth initially influenced by the intrauterine environment and later by the social and cultural environment in which it will be inserted.

The stimuli received from the environment through interpersonal relationships and the social environment in which it is inserted will play a fundamental role to the physical and emotional health of the being. The human baby requires essentially the intermediation of another similar being to become human. It is the mother and the family that constantly investing to provide basic needs and when stimulating learning, mediated by social context, will contribute to proper growth and physical, emotional and cognitive maturation of the future subject. Such investments will result in acquisitions that become expressed through the behavior of the subject and others that are invisible, but it does not mean that they are less important, because they are factors that allow the expression of learning obtained, considering that the brain structure has its development enhanced through stimuli obtained in the relation with the environment and the social context. "In fact, most of the processes occurring in the brain is unconscious, even those that depend on the action of the cerebral cortex." (Consenza & Guerra, 2011, p. 20) When relating to a newborn it is known that limiting the service only to nutritional aspects does not ensure its survival, since it is essential to invest in a humanization process expressed through affection, protection, care, guidance, education, affording the basic needs of hygiene and health, and the constant increase of new information. With humans, even if all precautions are taken to meet these needs, it is known that other interferences may mediate its maturation and development. Researches indicate that "the environment in which children grow up has a decisive influence on their brain development and intellectual capacity" (Wolf, 2014, p. 47) and even the learning that involves our interaction with the environment can occur in a way that we are not aware." (Consenza & Guerra, 2011, p. 20)

### **Music in human development**

Elaborated from an aesthetic need of the human being, the music is present in all known cultures. "Scholars who study the lives of people around the world tell us that music is present in all known cultures." (Gfeller, 1992, p 42) Since its origin, the music was used to meet different human interests, as a therapeutic resource to chase away demons, to promote energy, providing physical and mental balance, to praise and establish communication with the gods, to brighten civic and religious ceremonies, to create emotional impact when facing an episode, to motivate desired behavior. "Primitive man explained natural phenomena in terms of magic, and thought that the sound would have a supernatural origin." (Alvin, 1967, p 16)

Plato and Aristotle, 380 B.C., believed that music had the power to modify the behavior, and that "it was possible to produce "good" people through a public education system whose two fundamental elements were gymnastics and music, aiming with the first one the discipline body and with the second one the discipline spirit." (Grout & Palisca 2005, p.21)

Plato 380 B.C. already pointed out the influence of music on human behavior when considering: "let me make the songs of a nation, that I do not care who makes its laws" (Grout & Palisca, 2005, p 21).

It is in the womb that the baby will have the first contact with the elements of the music. The heartbeats, first information confirming the existence of life on the tiny being that was generated, find its analogy in the pulse and rhythm of music. The heartbeats also inform the continuity of life during the lifetime.

During pregnancy the future being gets other information as its brain functions are structured and developed. Besides that, at this moment, it has the records that detect the existence of life, expressed in pulse and heartbeat. From the sixth month on the organs of the ear are able to receive information from the environment and the baby starts to hear the voice and the external sounds to the placental environment. Considering a proper and healthy development, the mother's voice is perceived and the baby starts to create memory traces which will later involve the recognition, even if she is not seen.

The environment is full of sound, which although it is not possible to be symbolized by the baby in the

formation, noises, sounds, melodies impregnate existence even before birth. Even if there is no possibility to decode and translate the range of information to which the baby is submitted to in the womb, these information will become important unconscious elements that somehow will influence in some way the future behavior.

After birth, the baby is inserted into culture through the parents' intermediation, mostly the mother or surrogate. This way, the development happens when other adults are present and available to share their knowledge and information that will contribute to build the chain of symbolic acquisitions and the insertion in the great social web.

And nature is prodigious in contemplating the universe of the human being with an incalculable range of different sounds, rhythms, tones and nuances of its fantastic orchestra of sounds. We are sonorous subjects.

### **The musical language as an element to enhance cognition and development**

Considering the intrauterine environment characterized as the ideal environment to the being in development, in favorable and normal conditions, is a consensus. It must provide all and any nutritional need and maturation to the embryo formation and to the developing fetus. It is in the intrauterine environment that the great boost for neuronal development responsible for the health of the future being happens. Like a sponge, this period of development absorbs everything, and researches show the negative impacts resulting from the influence of drugs, alcohol, stimulants, medicines, chemicals, and radiation for its maturity and health.

The future baby, sensitive to all and any interference, will have the mnemonics records of the sound exposure experienced earlier. This will be reference for physical and emotional responses later. It is a condition of development initially obtained by the brain which will influence the baby's reaction to stimuli from the environment and acquisitions abilities.

After birth, the brain development is enhanced in the early childhood, depending largely on the stimuli received from the environment and cultural context in which the child is inserted. Thus, the social and cultural conditions will play a fundamental role for the brain instrumentalization and as a consequence for mental, physical, emotional and cognitive development of the child. Psychologists Martha Farah and Daniel Hackman (Wolf, 2014), in a survey from the education area, point to the fact that children living without proper nutrition, sanitation and stimuli conditions will have negative effects on their learning ability and intellectual development. It will be reflected in their future life because they suffer from a deprivation in their development of structural aspects of the brain. In short, a child placed in a precarious and lacking of stimuli environment will have great chances of having cognitive deficits and difficulties in different areas of interaction involving the biopsychosocial context. That is why the use of music is considered an important element that contributes to the child's development, besides its necessary skills to the learning process.

It is known that many needs arising from the family environment can be turned into a soft and easier situation with the child's attending to the school environment and this beginning has happened increasingly earlier, no matter what is the social status. It is in this context that the use of music is of a great importance and it is indicated to enhance neuronal connections that are necessary to stimulate cognition, increase skills and consequently allow overcoming deficiencies and promote better conditions for the development as a whole. Nowadays the possibility of developing brain areas to compensate others that have become inactive due to lack of stimulation or damage is a consensus.

The music is an element of culture and connects and rescues primordial memories of the life experience and becomes an important factor influencing human behavior. In addition to unique aspects, the music mobilizes "necessarily, in its performance, various brain functions." (Barbizet, 1985, p. 59) "The interdependence of each hemisphere is particularly evident in the processing of music." (Ratey, 2002, p. 97)

"At its most basic level, music is a form of energy perceived by the auditory and tactile senses". (Gfeller, 1992, p 42) According to Gfeller (1992, p 44): "At this most basic level, music as auditory and tactile stimulation can control attention and promote learning." Findings in neuroscience note that music "requires both halves of the brain". (Levitin, 2007, p. 136) "It is interesting to note that the music is recognized by brain circuits that are similar to those that recognized language, and the music centers, like language centers, are distributed throughout the brain."(Ratey, 2002, p 265)

Besides activating the brain as a whole, music makes connections with areas responsible for emotion and memory and it is an important resource to stimulate dopamine, the neurotransmitter responsible for the production of pleasure. "The hypothesis that basic musical emotions exhibit universality and innateness is important from a neuropsychological perspective." (Peretz, 2009, p.5) Surveys show that music stimulates the same areas of the brain where emotions are set, considering that "different brain regions are involved in emotional reactions." (Weinberger, nd, 47-53) On the other hand, "memory affects the music-listening experience so profoundly that it would be not be hyperbole to say that without memory there would be no music." (Levitin, 2007, p. 166)

"Music and speech are fundamentally similar, since they use the sound material, which are received and analyzed in the same organ." (Pederiva & Tristan, 2006, 83-90) Thus, the use of music can contribute to brain plasticity and stimulating compensatory areas that are no longer activated in a needy or poor development of stimuli.

The training and learning can lead to the creation of information flow within a neural circuit. This is the case of a pianist, who daily becomes more expert because the constant training promotes changes in his cognitive and motor circuits, allowing greater control and expression in his musical performance. On the other hand, disuse, or a disease can make connections be undone, impoverishing the communication of achieved circuits. (Consenza & Guerra, 2011, p. 36)

When it comes to education, the use of different proposals through music allows interfere in the recovery of aspects of the child's biopsychosocial development and creates favorable environment for her development in the cognitive area and reflects on her development as a whole.

According to Ilari (2003, p.14):

It is important that educators use a wide variety of activities and types of music. Singing songs in class, hitting rhythms, jogging, dancing, swinging parts of the body with the music, listening to various types of melodies and rhythms, handling musical objects and instruments, recognizing songs, developing spontaneous notations even before learning to read music, participating in musical games, following rhymes and gesture rhymes, playing musical scenes, playing games of instruments and sounds mime, learning and creating musical stories, writing songs, inventing songs, singing spontaneously, building musical instruments; these are some of the activities that must necessarily be part of children's musicalization. All these activities are beneficial and can contribute to the proper development of the child's brain.

This researcher believes that proposals using song associated with gestures and body movements allow participants to activate at least six brain systems. She states the use of musical games in a playful manner and without competitive focus, as a motivational resource, important for learning and for the neurodevelopment.

Memory games of tones, notes and instruments, dominoes of rhythmic cells or musical instruments and solfa games can activate the systems of attention control, memory, language, sequential ordering and higher thinking. (Ilari, 2003 p.15)

Ilari (2003) believes that stimulating the memory system, the spatial orientation, the motor aspects and the social thinking can be done through the use of games involving the body, as in the case of nursery rhymes, musical performances and small dances.

The author points out the instrumental learning as helpful in developing functions such as attention, memory, spatial orientation, sequential and motor ordering and higher thinking .

The act of composing music involves experimentation with sounds, the use of the inner ear and solving problems. When composing a song, the child may be activating the systems of attention control, memory, language, sequential ordering and higher thinking, among others. Being represented graphically or not, songs and works composed by the children appear to be beneficial to neurodevelopment. Among these compositions there are spontaneous and improvised songs of young children. Musical improvisation, with or without gestures and body movements, can also serve to activate the motor and spatial orientation systems. (Ilari, 2003, p. 15)

The functions of spatial development, sequential ordering and higher thinking are also stimulated by the use of traditional and invented notations.

According to Ilari (2003, p. 15):

When building an instrument, children experience the sounds produced by different types of materials, learn about the various types of instruments "practicing", discuss some physical issues (proportion of instruments sizes and heights of musical notes, materials and tones, among others). Everything leads to the construction of musical instruments as being something beneficial to the development of systems of higher thought, sequential and motor ordering and control of attention. The construction of musical instruments, among others, is another example of a fun and enriching musical activity.

It can be seen that the potential exists in the musical activities and contributes to stimulate the brain development of children. Educators should plan carefully and with attention the activities so that these will produce the desired effects on neurodevelopment of the child and as a consequence they will contribute to stimulate cognition and learning.

## Conclusion

Providing conditions for the satisfactory development of the child is a primordial commitment of parents and tutors; however it is known that these act reproducing a received education from their own parents and many times it has a lack in investment and it is needy. After women started to work outside their homes, it is known that schools are responsible for taking care of children when they are still babies. That is why education and early generation of the subject are no longer a family mastery, but an educator issue.

It is through education that it is possible to form sensible, coherent, aware, evolved and acting subjects. All possible investment to be done with a child for its development and qualification will revert to a more educated, balanced and healthy society and that it will be reproduced in its social context.

Investing in education and putting together different resources that were possible due to the music inclusion, besides stimulating sensitivity and aesthetics, allows the rescue of conditions to emerge potentialities and promote a healthier development, considering that the "great plasticity in doing and undoing the associations existed between nerve cells is the basis of learning and fortunately remains throughout life." (Consenza & Guerra, 2011, p. 36)

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# Musicians educated at the music school of Sultan III. Selim

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## Abstract

Turkish music reached the highest success in the period of Sultan III. Selim of Ottoman Empire. Sultan III Selim was a composer, a Ney player, a Tanbur player as a musician. As a result of Turkish music education named “Meshk” given in Enderun, important composers were educated in this period and so, the music school of the Sultan III. Selim was appeared. In our research, III Selim’s view on music, the specialities of the school of his music and participations of the musicians, educated at the music school on Turkish music education will be analysed.

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*Keywords:* Music School of III. Selim, Turkish Music, III. Selim, Music Education.

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## 1. Introduction

In Ottoman Empire, The Sultan III. Selim, played an important role in education of the best composers and performers, and also protected these musicians of term. The Turkish music environment that the protected functioned by reflecting the style and performance of the Turkish music, called his name in his period. His music school represented the view of the Turkish music art of the term. III Selim, who got the music education, especially in his principedom, learned to play the tanbur by Tanburî İsak, to play Ney by Ali Nutki Dede with his music school, accepted as a school, III Selim became a very important person in Turkish music and he gave the important musicians like Hamâmîzâde İsmâil Dede, Küçük Mehmed Ağa, Tanburî İsak, Şakir Ağa and Hacı Sadullah Ağa a chance to educate with this art school, many music forms and Turkish music maqams from Mevlevî Ayin to köçekçe, were developed with the help of his music school. III Selim, also, improved his music information and art with his works and composed maqams.

In our research, we will talk about the life of III Selim and his musicianship, analyse his music school, as the main subject and give information about the composers educated at this music school.

## 2. The Life of The Sultan III. Selim and His Musicianship

### *2.1. The Life of the Sultan III. Selim*

III Selim was the 28 th ruler of Ottoman Empire. His grandmother was III. Ahmet, his father was III. Mustafa and his mother was Mihrişâh Vâlide Sultan (S. Ahmed Efendi, 1993:13). He was born on 24 th December, 1761 (Şen, 1996:83). At his father’s request, he began to get Qur’an education at the age of 5. Then, he took Arabic, Persian, Turkish, Kirâat, Kavâid-i Ottoman, History and Geography in the princes classroom of Topkapı Palace (Uluçay, 1992:86). III. Selim, who lost his father at the age of 13, became worried so much about his father’s death, but his uncle, I. Abdülhamid, didn’t make him feel his father’s absence. After the difficult period which was given him worldly and otherworldly education, named “cage life), he was the only heir of Ottoman Empire at the end of

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this period. III. Selim, who succeeded at distressful period of Ottoman Empire on 7<sup>th</sup> April, 1789, was educated well with the state management education both by his uncle I. Abdülhamid and “Cage Life” and he programmed what to do during his sultanate. That he directed England and Russia to France in Egypt war, and used France in Ottoman-Russia war was one of good examples of his policy. The main works of III. Selim became on reforms and changes at state system.

Nizam-ı Cedid organization was an organized form of the state structure. But, the people didn't believe that reforms, called Nizam-ı Cedid, were necessary (Beşiroğlu, 1993:13). The Janissary Corps began to rebel as an opportunity. The rebels condemned the members of Nizam-ı Cedid organization and asked this organization to be abolished. Although III. Selim had all the abilities for reforms and changes, he didn't use Nizam-ı Cedid, which he organized with difficulty, against the rebels. And then he abolished it. The rebels said that they were worried about the life of Şehzade Mustafa and Mahmud and asked Şeyhülislam to tell the Sultan this matter by imposing that III. Selim had to be deposed anymore on the people (Ayverdi, 1999:527). So, III. Selim, an sensual person, left the throne on 29<sup>th</sup> May, 1807 (Şen, 1996:121). III. Selim, who worked for the peace and presence of Ottoman empire at his sultanate for 18 years, continuously, was condemned to “cage life” again. By the way, IV. Mustafa became the sultan but the state management really was under the control of Köse Musa Paşa, Topal Atâullah Efendi and Kabakçı Mustafa. Alemdar Mustafa Paşa opposed to the in effectiveness of the Sultan and commanded that IV. Mustafa should be deposed. Then, IV. Mustafa commanded that Şehzade Mahmud and III. Selim should be killed. Şehzade Mahmud could be saved by Alemdar Mustafa Paşa but III. Selim couldn't be saved III. Selim, who became the sultan for 18 years died in battle for his country on 28<sup>th</sup> July, 1808 (Gökalp, 1980:362-363). It was said that he defended himself with his Ney instead of sword.

## *2.2.The Musicianship of Sultan III. Selim*

III. Selim, who adopted the music as a life philosophy became much busier with the music in the period of his principdom. Sûz-i Dilârâ was the most famoust maqam of III. Selim, who was a very good musician with his 18 maqam and 117 compositions. Mevlevî Âyin, which he composed at this maqam is his best work (Yekta, 1917:309). We understand from this point that III. Selim was very interested in Mevlevî. The other feature of Mevlevî Ayin is the first one that Nasır Dede wrote in notes with his note system.

III. Selim took music and tanbur lessons by Müezzınbaşı Kırımlı Hafız Ahmed Kâmil Efendi and Tanbûri İsak during cage life and joined his ability from birth with his education (Kam, 1949:4). He was affected by the Neys played in Mevlevî Lodges and took Ney lessons by Çallı Derviş Mehmed and Ali Nutkî Dede. As a result of this education he got, III. Selim started maqam composing and he composed 18 maqams; Acem-bûselik, Arazbar-bûselik, Dilnevâz, Evcârâ, Gerdâniye-kürdî, Hicazeyn, Hüseyinî-zemzeme, Hüzâm-ı cedîd, İsfahânek, Muhayyer-sünbûle, Nevâ-bûselik, Nevâ-kürdî, Pesendîde, Rast-ı cedîd, Sûz-i dilârâ, Şevk-i dil, Şevkefzâ ve Şevkutarab (Koç, 2003:61-84). Moreover, III. Selim composed 117 works at various maqams but it was reached to only 83 works. Musicians classified the 117 works he composed according to their religious, musical, instrumental music forms.

In the period of III. Selim's principdom, the musicians who he protected were being educated in two classes in Enderun, as being “Küme Faslı” and religious music classes. Also, Harem Music and Dance Committee was formed for the women in Harem. The lessons were being given here by the teachers. Hacı Sadullah Ağa, a composer, gave lessons here (Elgin, 1962:83). III. Selim would make the palace musicians perform the group performances in Serdâp Kasr, which he had done for his mother, at some nights of the week. At other nights, III. Selim would listen to the performance of the female slaves at Hünkar Sofrası of Harem Music and Dance Committee (Özalp, 2000:501).

III. Selim, who became interested in military band music too, had Kös (big drums) put for the first time in Galata and İstanbul Nevbethâne (Sanal, 1967:38) and had drum band organized, called “Vekaiyi-i Hayriyye” after Janissary Corps was abolished in 1826 (Cemil, 1947:44).

### 3.Sultan III. Selim's Music Scholl and Educated Musicians At This School

#### 3.1.Sultan III. Selim's Music Scholl

In the history of the Turkish music, The music scholl of III. Selim consists of not only the period of III. Selim for 18 years, between 1789 and 1807, but also it continued until 1825 as it began in 1785 when we pay attention to the musicians educated at this school. The main importance of the school is that III. Selim made the classical repertory of the term written in notes with Abdülbaki Nasır Dede and Hampartzum Notes. Thus, the repertory of the Turkish classical music of today became free for being forgotten. At the end of the westernized movements of the term, the music school composers composed works similar to the style of western music. "Yine bir gülnihal", the work in style of western music vals, by Dede Efendi, is the most important example of this.

It's possible to analyse the musicians educated at music school of III. Selim in three classes as time. The first of them is the musicians like Hacı Sadullah, Küçük Mehmed Ağa, who lived before the period of III. Selim and were qualified to speak at this music school. The second class is the artists like dede Efendi and Şakir Ağa, who became famous at the music school term and kept the classical line. The third one is the artists who were affected by the west at the last term of the music school and couldn't keep the high level of the classical music. The music performance and pleasure of these musicians are at present. The musicians who became effective in every period and passed beyond the genius line of the music school are the artists like Dede Efendi, Hacı Sadullah Ağa and Şakir Ağa. A lot of musicians were educated at the music school of III. Selim and it was examined 23 musicians, the most popular ones educated at the music school of III. Selim.

#### 3.2.Educated Musicians At Sultan III. Selim's Music School

##### 3.2.1.Abdi Efendi (Basmacı, Hânende)

Abdi Efendi was born in İstanbul, 1787, in December. He was the son of Kadı Halil Efendi. That he worked in a shop of one of the goods sellers in Grand Bazaar caused to be named "Basmacı", "Basmacızade" was wrong (Aksüt, 1994:128). He began music education in Enderun in 1805 (İnal, 1958:15). In two years, he was promoted among the muezzins of the sultan and was on duty for 30 years. In his last two years, he began to teach in Mızıkâ-i Humayun and he worked here for 5 year. He died in 1851 (Özcan, 1988:73).

##### 3.2.2.Abdullah Ağa (Kömürcüzâde, Hânende, Şehlevendim Şehlâ Hafız)

Abdullah Ağa, not known his birth and death date, was taken to the palace of III. Selim when he was a child. Because of his beautiful face, he became famous for his nicknames; Hafız Şehlâ and Abdullah Ağa, besides his nickname, Şehlevendim. He was educated at the music school of III. Selim and attracted attention with the beauty of his voice. He was taken firstly among 'Hânende's, and then 'Musahib-i Şehriyâri's. It was said that he found 'Şevkâver' maqam (Aksüt, 1994:96).

##### 3.2.3.Abdülhalim Ağa

Abdülhalim Ağa was one of the sergeants of Enderûn-i Humayun and one of the musicians of the music school of III.Selim, but not known his birth and death dates. But it was reported in Mr. Esad Bookshelf, Number 3307, of Süleymaniye Library that he died in 1810 (Ezgi, 1933:124). He found Sûz-i dil maqam and composed instrumental and verbal works. His 17 works could be reached today (Karabey, 1950:22).

##### 3.2.4.Abdürrahîm Dede Efendi (Kudümzenbaşı, Neyzen Hâfız Şeydâ)

Abdürrahîm Dede was mostly known as Hafız Şeyda Dede. He was one of the musicians of III. Selim's music school, lost his eyes at early age. Mevlevî Hafız Şeydâ, who played Ney and Kudum, was one of the musicians near

III. Selim and also made the pilgrimage, under the protection of III. Selim. He composed Kâr at Tahir Maqam with Hafız Şeydâ, Küçük Mehmed Ağa and Vardakosta Mehmed Ağa. Isfahânek and Hicazeyn Ayin of Hafız Şeydâ, who also was the composer of Irak Mevlevî Ayin, was forgotten. His 8 works could be reached today (Akdeniz, 2000:74).

### 3.2.5. Ahmed Ağa (Seyyid, Vardakosta)

Seyyid Ahmed Ağa, one of the masters in Enderûn, was known as Guardacosta in Italian, Vardakosta in Ottoman Turkish. In this term, the bodyguards of pirate ship, strong women and men named Vardakosta (Özcan, 1989:41). Ahmed Ağa, born in a town of Amasya, was a musician educated in Enderûn and a Mevlevî Derwish. Ahmed Ağa and Şeyh Galib became close friends. He attended to Yenikapı and Galata Mevlevî Lodges and he reached to companionship in the period of III. Selim. Tanbûrî and Hânende Ahmed Ağa, was a good composer of III. Selim's music school, found Ferahfezâ maqam and Darb-ı Hüner Rythm (Aksüt, 1994:74). He composed totally 32 works; 2 Mevlevî Ayin, 11 Instrumental Works and 19 Verbal Works. He died in 1794, at the age of 66 (Özcan, 1989:42).

### 3.2.6. Ali Ağa (Kemânî)

Ali Ağa, lived in years of 1770-1830, was born in İstanbul (Aksüt, 1994:99). He was a companion of III. Selim and the main sergeant of treasury. He was educated at the music school of III. Selim in Enderun and he was a very good Sinekeman (chest-violin) performer. He composed beautiful songs and instrumental works and he attracted II. Mahmud's attention. Şehnaz Peşrev was his most famous work. His 11 Peşrev, 8 Saz Semai, and 33 Songs could be reached today. All his works are 52 (Öztuna, 1990:44).

### 3.2.7. Ali Nutkî Dede Efendi (Şeyh)

Ali Nutki Dede, Ney teacher of III. Selim and one of the important Ney players of his music school was born in the neighbourhood of Yenikapı Mevlevî Lodge. He completed his education by mastering lessons by his uncle, Sahih Ahmed Dede, his father Şeyh Ebu Bekir Dede and the other artists (Öztuna, 1990:50-51). He learned Arabic and Persian.

After his father's death, he became sheikh (şeyh) in Yenikapı Mevlevihanesi at the age of 14. He was sheikh in the periods of I. Abdülhamid (1774-1789) and III. Selim (1789-1807). In his period, he wrote the ones related to Yenikapı Mevlevî Lodge in the magazine called Defter-i Dervişan. This continued with Tedkik u Tahkik by Abdülbaki Nasır Dede, his brother, the sheikh one (Özcan, 1989:(2),423). Ali Nutki Dede, who was the owner of the notation system, a very good composer and calligrapher, became the teacher of Galib Dede, Dede Efendi, III. Selim and Abdülbaki Nasır Dede. Only Şevkutarab Mevlevî Ayin reached today. The first ritual music performance of this Ayin was made before the day he died. He died 1804 (Akdeniz, 2000:79).

### 3.2.8. Abdülbâki Nâsır Dede

Abdülbaki Nasır Dede, who was born in İstanbul Yenikapı in 1765, completed his first education with the help of his father Ebubekir Dede, are of the sheiks of Yenikapı Mevlevihane. Then he gave the religious and music education by dervishes and trainers of Yenikapı Mevlevî Lodge. He became sheik of Yenikapı Lodge after Ali Nutki Dede who was both his brother and teacher died in 1804 (Özcan, 1988:(1),199). Nasır Dede, who was protected by III. Selim and II. Mahmud, talked about III. Selim kindly with the words "Hoş eda sahibi, Maden-i marifet, Kan-ı Hüner, Kenz-i Hüner" in his work called "Tedkik Tahkik" (Başer, 1996:178,212). He was encouraged by III. Selim to write the work "Tedkik" and "Tahririyye". Nasır Dede, a good composer of the music school of III. Selim, used evcara maqam masterly. "Peşrev" and "Saz Semaisi" were his most famous works at this maqam. His works, about more than 100 in the the forms of saz semaisi, peşrev, kâr, beste, semai and şarkı could be reached to our time

(Yenigün, 1972:(10),10).

### 3.2.9. Emin Ağa (Tanbûrî Denizoğlu)

Emin Ağa, an instrumental music composer of the music school of III. Selim, was educated in Enderun, became a Tanbur teacher, was promoted to the main müezzîn of the sultan and died at the age of 64 on this duty in İstanbul. Emin Ağa, a singer and a very well Tanbur player, became a man of great wisdom in the music school. We can see that he was affected by western music in his works. His compositions are at the high art level. Emin Ağa, whose 18 works were available now, died in the first years of that II. Mahmud come to the throne (Öztuna, 1990:(1),255).

### 3.2.10. Hâfız Mehmed Efendi (Kömürcüzâde)

Hafız Mehmed Efendi, who lived in the periods of III. Selim and II. Mahmud, became famous for his musicianship in III. Selim's music school, especially his work "Hüzzam Beste (Aldım hayâl-i perçemin ey mâh dîdeme)" increased his fame (Akdeniz, 2000:83). Hafız Mehmed was a sensual musician who used the maqams a his compositions very well. He was a traditional musician who attracted the music school of III. Selim. His 15 works could be reached in our time. His birth date is not known, but it is supposed that he died in the years of 1835 (Öztuna, 1990:(1),318).

### 3.2.11. İsak (Tanbûrî)

İsak, born in 1745 and Jewish, became one of the most important representatives of the classical tanbur music school. He became a tanbur player in Enderun and taught III. Selim to play the tanbur. He educated the teachers like III. Selim, Kuyumcu Oskiyam, Zeki Mehmed Ağa and Tanbûrî Mehmed Ağa. He was a sensual and traditional artist of the music school (İnal, 1958:206). After III. Selim was dethroned he died in 1814 at the age of 69 in İstanbul. İsak, who was a composer, qualified to speak at the music school, composed beste, semai and şarkı, besides the classical instrumental works (Aksüt, 1994:90). His 109 work could be reached to our time (Öztuna, 1990:(1),391-392).

### 3.2.12. İsmail Dede Efendi (Hamâmîzade)

İsmail Dede Efendi, known as a genius composer of the music school of III. Selim, was born on 9 th January, 1778 in Şehzadebaşı, İstanbul (Özcan, 2001:(23),93). He taught music by Uncuzade Mehmed during 7 years. When his work in buselik maqam became famous, he was called to the palace by III. Selim, with a permission by his sheik, and composed his compositions. He participated in the orchestra in Enderun, with named "Dede". He began to be a genius at III. Selim's music school. He became 'musahibi şehriyari' in the period of III. Selim. He continued to work as main müezzîn in the palace in the period of II. Mahmud (1808-1839) and I. Abdulmecid (1839-1861). He died in 1846 while he was making the pilgrimage in Mina in Saudi Arabia (Kam, 1946:(56), 20-21). Besides his hanende, na'than and composer, he was also Ney player. He dedicated some of his works to III. Selim and II. Mahmud. Dede Efendi, an inventor of arabân-kürdî, hicaz-bûselik, sabâ-bûselik, neveser ve sultânîyegâh, composed the works in the lots of forms like Mevlevî ayini, köçekçe, ilahî, şarkı (Avni, 1971:(15),12).

### 3.2.13. İsmail Efendi (*Dellâlzâde, Hacı Hâfız*)

İsmail Efendi, one of the last composers of the music school of III. Selim, was born in Sarıgözel, İstanbul in 1797. He learned the Qur'an by heart when he was a child. He had a beautiful voice (Özcan, 2001:(23),95). Firstly Dede efendi, he made use of a lot of musicians of the music school of III. Selim. He was one of the most important heirs of Dede Efendi (İnal, 1958:172), in composing. His 86 work could be reached to our time. He made the pilgrimage with Dede Efendi and Mutafzede Ahmed. He became the main muezzin in the palace after Mutafzede died. He died in Nişantaşı, İstanbul in 1869 (Kam, 1946:(59),8).

### 3.2.14. Mehmed Ağa (*Küçük*)

Mehmed Ağa, whose birth date is not known exactly was a classical musician of the music school of III. Selim. We can see his kâr, beste, and semâî more than 100, in the magazines of lyrics. But, his only 37 could be reached to our time. Mehmet Ağa composed works in the classical sensual and traditional style. His classical common Fasıls are famous. He died in 1800 (Aksüt, 1994:80).

### 3.2.15. Münir Mustafa Ağa

We have a little information about Münir Mustafa Ağa. He composed "İsfahanek Fasil" with Küçük Mehmed Ağa at the music school of III. Selim in Enderûn (Öztuna, 1990:(2),89). His only work which could be reached to our time, is "yürük semai", beginning with the words "Sevdimse seni fikr-i visal eylemedim" in İsfahanek maqam.

### 3.2.16. Numân Ağa

Numan Ağa, whose birth and death dates are not known exactly, was one of the composers and tanbur players of the music school of III. Selim in the palace. He was educated in Enderun and then, he educated the tanbur players like Zeki Mahmud Ağa and his grand-child Büyük Osman Bey (Ezgi, 1933:(1)133). He died at the age of 84, in İstanbul. His 80 works could be reached to our time. He composed "Rast-ı Cedid Fasil" with Dede Efendi (Öztuna, 1990:(2),146-147).

### 3.2.17. Oskiyam (*Tanbûrî and Neyzen, Kuyumcu from Samatya*)

Tanburi Oskiyam, whose birth and death dates are not known exactly, was from Samatya, İstanbul. He learned to play the tanbur by İsak, the tanbur player and performed instrumental works by Zeki Mehmed Ağa (İnal, 1958:238). His playing tanbur was better than his playing Ney. He was a tanbur virtuoso of the music school. He composed mostly the instrumental works. He taught famous Neyzen Salim Bey to play Ney, Armenian Karabet to play the tanbur, Şeyh Abdülhalim Efendi (a virtuoso of tanbur and ney) to play Tanbur and Ney. His only "Bayatî Saz Semâî" could be reached to our time (Öztuna, 1990:(2),166).

### 3.2.18. Rızâ Efendi (*Kemânî, from Üsküdar*)

Rıza Efendi, born in Beşiktaş, İstanbul, is known that he was from Üsküdar because he lived in Üsküdar. Rıza Efendi, who played the violin very well, was taken to the palace in the music school of III. Selim and learned music. He was a composer and used "şarkı" form so much. We can see that he was affected by the western music in his works. He became the teacher of Tanburi Ali Efendi and Nevres Paşa. His 43 works could be reached to our time. He died in 1847 (Öztuna, 1990:(2), 230).

### 3.2.19. Sadullah Ağa (*Hacı*)

Sadullah Ağa, one of the important representatives in the classical style of the music school of III. Selim (Ekmen,

1996:(14), 496-497), was born in İstanbul (İnal, 1958:248). He learned literature and music by very good artists. When III. Selim came to the throne, he was a well-known composer and singer. He was protected by III. Selim and became a music teacher in Enderun. His 24 works could be reached to our time. He was one of the leaders in the classical style of the music school of III. Selim. He died in İstanbul in 1810 (Karabey, 1950:(32),23).

### 3.2.20. Sadullah Efendi

Sadullah Efendi, whose birth and death dates are not known exactly, was the teacher of III. Selim (when he was a prince) and the brother of Enderûnî Vâsîf who was a famous poet of the term. He became the second leader (imam) when III. Selim (1789-1807) came to the throne and became main leader of the palace when II. Mahmud came to the throne in 1808. He had lots of songs and compositions in the classical form of the music school of III. Selim. But, most of his works were lost. His only 16 works could be reached to our time (Akdeniz, 2000:107). He died in İstanbul, in the years of 1850 (Öztuna, 1990:(2),249).

### 3.2.21. Şakir Ağa (Sermüezzîn, Tanbûrî, Kemânî ve Hânende)

Şakir Ağa, the son of a Crimean family, was born in Samsun or İstanbul in 1769 (İnal, 1958:268). He was taken to Enderun in the period of III. Selim and educated at this music school. Şakir Ağa, who played the violin and the tanbur, was very good at singing and composing (Ezgi, 1933: (1),57). His songs are famous and has the features of the music school of III. Selim. His 69 works could be reached to our time. His 66 works are in "Şarkî" form (Akdeniz, 2000:108). He died at the age of 62 (Kam, 1946: (58),3).

### 3.2.22. Tâhir Ağa (Kemençe)vi

Tahir Ağa, whose birth date is not known exactly, lived in the second part of 18. century. He was educated in Enderun and he became famous for playing kemençe (a kind of violin) in a short time. He participated in "Huzur Fasil" of III. Selim and II. Mahmud in Enderun Has Oda. He is known especially as a song composer of the music school of III. Selim. His works are similar to Tanbûrî Mustafa Çavuş's works. His all works are in "Şarkî" form. His 16 works are available (Öztuna, 1990:(2),368). He died in 1828 (Aksüt, 1994:98).

### 3.2.23. Zeki Mehmed Ağa (Tanbûrî)

Zeki Mehmed Ağa, the son of Numan Ağa, tanbur player, was born in İstanbul in 1776. He learned to play tanbur by his father and "Tanburi İsak" (Ezgi, 1933: (1),214). He was qualified to speak as a palace instrument player and music teacher at the music school of III. Selim. He didn't teach anybody to play the tanbur. He was an instrumental work composer and didn't have many compositions (Aksüt, 1994:127). His 21 works could be reached to our time. He died at the age of 70 (Öztuna, 1990:(2),519).

## Conclusion

The Sultan III. Selim, gave very importance to music in Ottoman History, by setting up the art school. When we see the participations of the musicians educated at this school to music art and culture, we understand that he was an art man and statesman who does his duty very well and lovingly. III. Selim was appeared as an important person, as a musician and statesman in the history of Ottoman Empire.

In our research, we can conclude these points about "The musicians educated at the music school of III. Selim":

1. The musicians educated at the music school which III. Selim set up, increased our classical music culture at the highest levels. This was produced with maqam, rhythm, repertory and composing. III. Selim, who knew the music theory and practice very well, proved this with his 18 maqam compositions and 117 works.
2. In the period of III. Selim, every musician proved himself about voice, instrument and composing. The musicians dealt with different kinds of Turkish music were educated at the high level. These musicians, who kept

the classical style completely; were affected by the western music and good at instrument playing and singing, were differently classified at composing.

3. Turkish music was developed with various maqams, rhythms and repertoires at the music school of III. Selim.

4. Hamamizade İsmail Dede, Şakir Ağa and Hacı Sadullah Ağa, who were very important composers of Turkish music, were educated at this music school. The notation systems were developed by Ali Nutki and Abdülbaki Nâsır Dede, who were educated at the music school of III. Selim and the musicians made use of this.

5. Dede Efendi, Hacı Sadullah Ağa, Şakir Ağa, Kemânî Ali Ağa, Tanbûrî İsak, Ali Nutkî Dede, Zeki Mehmed Ağa, Küçük Mehmed Ağa, Kömürçüzâde Hafız Mehmed and Dellâl-zâde, educated at this music school, are very important artists who were educated very well at composing, singing and musical performance.

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# Neuro-phenomenology and neuro- physiology of learning in education

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## Abstract

Contemporary research on neuroscience and neuro-phenomenology opens in new and more complex models of interpretation regarding the phenomena that govern the development of knowledge and consciousness. In an interview with "Le Monde" in February 1999, Varela said, "from the age of 9 or 10, just one question nagged at me: how to understand the relationship between the body, so physical, so heavy, and the mind perceived as ephemeral, almost atmospheric". This question is still recurrent and is expressed as a new paradigmatic model, able to explain, in terms of knowledge, the connection and the relation between the neuronal structure and the procedural knowledge; in other words, between neurophysiology and neuro-phenomenology. Which are, in this prospective, the interpretative approaches and the speculative developments?

Besides, moving from these approaches, what kind of problem we will have to consider from a didactic point of view? Which relationship exists between the encephalic reality and the phenomenological living body?

These considerations, that investigate about the understanding of the relational nature of neural processes which regulate the evolution of human consciousness/knowledge, find their roots and justification in the studies of J. Z. Tsien (in the neuro-physiological field) and of Varela & Thompson (in the neuro-phenomenological field).

Tsien and his team, in a biomedical field and through combined and complex experiments, have developed an interesting theory on the basic mechanism by which the brain would be able to transform experience into memory. Clans of neurons involved in coding, they say, make a selection of experiences stored, giving a sense at the experience and transforming it into knowledge.

From a different perspective, called Radical Embodiment, the problem of the relational nature of consciousness/knowledge is investigated by Thompson and Varela. Their position is considered as a new approach to the study of neuroscience.

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Keywords: Neuro-phenomenology, Neuro-physiology of learning, Radical Embodiment, Neural code, Memory code.

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## 1. Introduction

Many seem to be the points of contact that relate the analysis of studies on the neuro-phenomenological vision of knowledge (and the occurrence of states of consciousness in relation to the act of knowing) and further studies phenomena related to bio physical and neuro-logical that govern and influence the physiology of learning. A study conducted by several parties on the subject show that individual neurons are able to recognize people, landscapes, objects and even written and names. The finding suggests the existence of a consistent and explicit code that could play a role in the transformation of complex visual representations into long-term memories.

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This conception of individual neurons as 'thinking cells' - says the neuro-surgeon Itzhak Fried - represents an important step toward deciphering the code of the cognitive brain. If we can understand this process, maybe one day we will be able to build cognitive prostheses to replace functions lost due to brain injury or disease, and perhaps even to improve memory. The theory developed by Itzhak Fried and his research group at the University of California in Los Angeles is based on a new conception of the mode of storage of memories, stating that encode memories are small sets of neurons located in specific regions of the brain. These small clusters of neural cells simultaneously represent many aspects of the same thing.

This statement leads to the conclusion that each neuron has its own memory and that groups of neurons fire selectively to images of faces, animals, objects or scenes. In this perspective are here analyzed two different areas of research that are based on two different approaches: one referring to the neuro-phenomenological studies (total embodiment of Varela and Thompson), and the other in reference to the neuro-physiological and bio-medical studies (neuro-physiology of learning of Zhuo Joseph Tsien).

But as you can remember the mental states activated by past perceptions and refer back to an object in the world, even when it is not present or does not exist? How is it that a model of external reality emerges in the physical system, which is the brain? What role has the intentionality and the emergence of consciousness in this process? The answers to these problems are numerous and controversial and detection of connection points difficult and problematic (hampered by the differentiation of the areas of inquiry: Philosophy of mind, Philosophy of language, Cognitive science, Neuroscience, etc.). This basically means that "Philosophy" speaks little of "Biology" and "Biology" of "Philosophy" speaks even less.

## **2. Comparative Analysis of Two Models Of Research in Neuroscience: A Meuro-Physiological Analysis of The Thought of J. Z. Tsien and The Radical Embodiment Of E. Thompson And F. Varela.**

2.1 The Neuro-physiological Analysis of Thought of Joseph Zhuo Tsien

Tsien founded the Shanghai Institute of Brain Functional Genomics at East China Normal University and is now director of the Center for Systems Neurobiology at Boston University. His studies are focused on the search for a neural code that can explain the experience phenomenologically lived through the observation of specific biological processes.

For a long time research of the neural mechanisms by which memories are stored in the brain has been studied by neuroscientists. Learning and memory are very important in the structuring of knowledge: learning is the process by which one acquires knowledge and memory is the process by which knowledge is preserved in time. For many years we have tried, therefore, to investigate the intricacies of cellular memory and to understand the functional basis for action at the neural level.

Tsien and his team, in a biomedical field and through combined and complex experiments, have developed an interesting theory on the basic mechanism by which the brain would be able to transform experience into memory. Clans of neurons involved in coding, they say, make a selection of experiences stored, giving a sense of the experience and transforming it into knowledge. This extraordinary research could allow, in the near future, to decipher the neural universal code allowing the reading of the memories of a human being by monitoring brain activity.

Interesting observations are:

- a) the nature of the mechanisms of action and the behavior of neural cells,
- b) the sophisticated mechanism of action research (covering the area CA1 of the hippocampus).

In this theoretical model each event is represented by a group of neuronal clans that encode different characteristics; a clan is represented by a set of neurons that responds in a similar manner to each stimulus, working in harmony in the encoding of events. It is believed, therefore, that it is the clan to generate neural memories, acting in unison on the information conveyed phenomenal experience. Does this mean that behavior is also the derivation of genetic relational nature of man and his predisposition to the "lineage"? (Maturana Dávila, 2006)

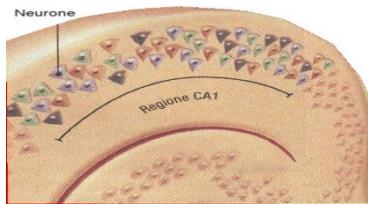


Fig 1. Schematic view of cliques encoding the earthquake experience (each color represents one clique)



Fig 2. Startling event polyhedron. Any given pyramid can be a component of a polyhedron representing all events of a given category, such as "all startling events."

The brain is, in this perspective, the clan for neural discrimination of events encoded in memory. In a three-dimensional view, each experience is represented on a pyramid at various levels; each pyramid is considered an integral part of a polyhedron which, in turn, represents the category common to all the pyramids. This model represents a consolidation of memories in a clear and inconceivable way and demonstrate the dynamic nature of the human brain and its extraordinary ability.

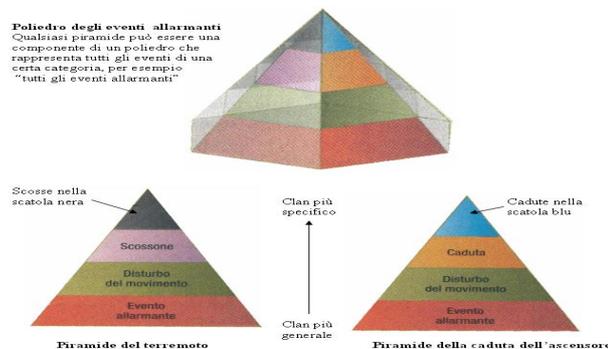


Fig. 3. This analyses showed that each clique encodes a different aspect of an experience, ranging from the general to the specific. The author conceives of this hierarchical organization as a pyramid with the most general clique at bottom, as is shown below for two events. (The sizes of the pyramid "layers" do not signify the number of neurons in the cliques.)

The idea that the action patterns of perception and memory are regulated and controlled by neuronal clan is not new for neuroscientific research, Tsien has provided, for the first time, corroborated experimental data on the hierarchical organization and on the categorization as universal principles of the functioning of our brain. In the case of memory these properties allow you to create an unlimited number of patterns of neuronal activation (corresponding to the number of experiences that an organism can live).

In this perspective, Tsien and his research team in a recent article say "The ability to learn and remember conspecifics is essential for the establishment and maintenance of social groups. Many animals, including humans, primates and rodents, depend on stable social relationships for survival. Social learning and social recognition have become emerging areas of interest for neuroscientists but are still not well understood. It has been established that several hormones play a role in the modulation of social recognition including estrogen, oxytocin and arginine vasopressin. Relatively few studies have investigated how social recognition might be improved or enhanced. In this study, we investigate the role of the NMDA receptor in social recognition memory, specifically the consequences of altering the ratio of the NR2B:NR2A subunits in the forebrain regions in social behavior. We produced transgenic mice in which the NR2B subunit of the NMDA receptor was overexpressed postnatally in the excitatory neurons of the forebrain areas including the cortex, amygdala and hippocampus. We investigated the ability of both our transgenic animals and their wild-type littermate to learn and remember juvenile conspecifics using both 1-hr and 24-hr memory tests. Our experiments show that the wild-type animals and NR2B transgenic mice performed similarly in the 1-hr test. However, transgenic mice showed better performances in 24-hr tests of recognizing animals of a different strain or animals of a different species. We conclude that NR2B overexpression in the forebrain enhances social recognition memory for different strains and animal species"(Jacobs, Tsien, 2012).

## 2.2. *The Radical Embodiment - E. Thompson e F. Varela*

From a different perspective, the problem of the relational nature of consciousness/knowledge is investigated by Thompson and Varela, as neuro-phenomenological approach called "Radical Embodiment". Their position is placed as a new approach to neuroscience.

Here, neuro-phenomenology becomes "methodological proposal" that seeks to study, to observe, to understand and to analyze brain activity (description in the third-person) without neglecting the subjective experience (first-person).

What is, in this perspective, the relationship between neuronal structure and lived experiential? How to put together the subjective knowledge and objective knowledge? Varela and Thompson explain it in terms of enactive emergentism highlighting the presence of a twofold action of causality (bottom-up and top-down), which is clearly evident from the resonance that is established between groups of cortical cells in some given moments of the life of consciousness.

The consciousness identity has, in this perspective, a relational meaning and exists only as a relational pattern (consciousness is not smoke coming out of the brain). That is shown through a synchronized rhythmic discharges synaptic well highlighted in the dual pattern of causation. If mapped to the level of individual neurons, the electrical-chemical interactions do not occur in a precise direction and do not have an overview of organic and represent, however, the minimal units necessary for the emergence of a higher level of organization, expression of a state of consciousness that are well-defined and organized and that, once emerged, conditions the functioning of each single neuron synchronizing and ordering the action.

The emergence determines the crystallization of a circle of local-global causal dependencies. For Varela this circle of dependency is found in a neuro-physio-anatomical level, where to each bio-chemical and physiological structure corresponds another structure in the opposite circle. This approach, therefore, aims at mapping the neural

substrates of knowledge/consciousness as emerging dynamic patterns and transient brain activity on a large scale, rather than at the level of particular circuits or classes of neurons. Varela's theory is fascinating and considers the emergentism positions as co-determination of reciprocal causes, including, in a auto-referentiality circle, "mind, body, world".

Our identity, says Varela, has a peculiar nature, although there is a kind of interface connection with the world, which gives the impression of a certain level of identity and existence at the same time (like all emergent processes) this identity can not be placed in a specific location; its existence has no locus or a specific space-time. It is, says Varela, a relational identity, which exists only as a relational pattern, but there is no substantial and material. The thought that everything that exists must have substantial and material existence is an old way of thinking that belongs to the Western tradition.

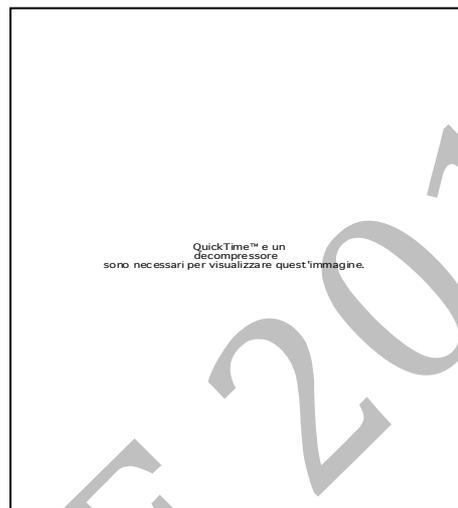


Fig. 4. The shadow of a perception. Average scalp distribution of gamma activity and phase synchrony. EEG was recorded from electrodes at the scalp surface. Subjects were shown upright and upside-down Mooney figures (high contrast faces), which are easily perceived as faces when presented upright, but usually perceived as meaningless black-and-white forms when upside-down. The subjects' task was a rapid two-choice button response of whether or not they perceived a face at first glance. Color coding indicates gamma power (averaged in a 34–40 Hz frequency range) over a given electrode and during a 180 ms time window, from stimulation onset (0 ms) to motor response (720 ms). Gamma activity is spatially homogenous and similar between conditions over time. By contrast, phase synchrony is markedly regional and differs between conditions. Synchrony between electrode pairs is indicated by black and green lines lines, corresponding to a significant increase or decrease in synchrony, respectively. These are shown only if the synchrony value is beyond the distribution of shuffled data sets ( $P < 0.01$ ; see methods, Ref. 18). Modified from Ref. 18.

Varela and Thompson, in a volume of the journal *Cognitive Science*, regarding this question say: "The most plausible mechanism for large-scale integration is the formation of dynamic links mediated by synchrony over multiple frequency bands. Neuronal groups exhibit a wide range of oscillations (in the theta to gamma ranges, 6–80 Hz), and can enter into precise synchrony over a limited period of time (a fraction of a second). Synchrony in this context means precise phase-locking as directly quantified by novel statistical methods (rather than indirect measures of synchrony in terms of spectral coherence that do not separate phase and amplitude components). The role played by such synchronization of neuronal discharges has been greatly highlighted by recent results from microelectrode physiology in animals. Two scales of phase synchrony can be distinguished: short- range and long-range. Most electrophysiological studies in animals have dealt with short-range synchronies or synchronies between adjacent areas corresponding to a single sensory modality. These local synchronies have usually been interpreted as subserving 'perceptual binding'. Detailed evidence for long-range synchronizations between widely separated brain regions during cognitive tasks has also been found". (Thompson, Varela, 2001, p. 418)

### 3. The matter of the question....

From the comparative analysis of two models of research comes out the hypothesis of the existence of a cognitive unconscious that does not coincide, point to point, with the affective unconscious.

Already Piaget, in 1973, wrote on this topic in an article titled "The affective unconscious and the cognitive unconscious" which is the text of a lecture given in 1970 at the American Society of Psychoanalysis.

In that article, written with the intent of establishing a link between psychoanalytic theories and the theories of intelligence, Piaget shows that while the subject, both in cognitive and affective context, has a relative and partial consciousness of the results of affective and cognitive processes, he does not know why instead of his intimate feelings nor their source nor the because of their intensity.

In summary, the cognitive structure is a system of connections that any man can use, but this does not reduce or restrict the content of his conscious thought which is binding on certain forms rather than others, and this happens in a succession of levels of development of unconscious whose origin can be traced back to the primitives nervous and biological coordinations. The cognitive unconscious consists, then, in a set of structures and operations that the subject ignores, except for the results.

When Binet enunciated this truth by saying that "The thinking is an unconscious activity of the mind" had, therefore, good reason to call it so. He wanted, in fact, say that if "I" is conscious of the content of his thought, he does not know, however, nothing of the structural and functional reasons which impel them to think in this or that way, or, to put it another way, the deep mechanism that guides and directs the thought itself. In the case of affective processes, and therefore energy, the results to which they lead is only partially conscious, it is translated, in other words, in feelings more or less clearly perceived of the subject as real, emotional and actual.

The discourse on the nature of human knowledge assumed a more unique and interesting connotation if, on the basis of the above specified, it is assumed the existence three expressions of the Mind "encysted" in a single dimension of the case, which forms the basis for the "unit/distinction" of the cognitive stages.

It is hypothesized, in this view, the existence of a:

- ❑ Phenomenological Mind (semantics of knowing) that answers to questions of “sense”;
- ❑ Computational Mind (logical syntax of knowledge) which responds to questions of “logic”;
- ❑ Bio-Physiological Mind (grammar of knowing) that responds to questions concerning human “evolution”.

Cogitate is not the same thing as compute. The operations of the calculation result in algorithms that can be processed by any machine capable of operating on the physical symbols (a computer, a brain). The machine computing processes representations following rules that cannot be violated (one of these rules is the logical principle of non-contradiction). In humans, this may be the expression of “Computational Mind”.

Some organisms, however, are characterized by the property of possessing different levels of rules: in the lowest level, they are very simple; at a higher level, there are meta-rules, that is, rules of the second level. They consist of the possibility of suspending the application of the rules of the first level in some circumstances. To carry out such an operation must, however, reflect the rules of the lower level. Here the compute takes the form of cogitate.

Cogitate can therefore be defined as the set of operations produced by reflexivity. Reflexivity is a characteristic of the human being and the cogitate is essential prerogative of system thinking. In humans, the quality of thinking is linked to the ability to question the sense of their own position in the world. The sense, in this perspective, is neither in the system nor in the world, but in the relationship that is established between themselves” (Phenomenological Mind) (Minichiello, 1995).

From the comparative analysis of the two methods, it can be hypothesized, moreover, the genetic nature of the human relationship. The biological substrate of the human component (neurons, atoms, etc.) acts, in fact, according to synchronized behavioral patterns (Bio-Physiological Mind).

This conceptual articulation presupposes a unified teaching method (enactive didactic), articulated and harmonized in the three levels of description mentioned above through a dual articulation of learning processes: the “response learning” and the “deep learning”. The deep learning is the path that every human being does to maintain its sense unit inside an environment in turn equipped with sense. The purpose of the system is the preservation of their own mental organization (identity) through successive modifications of his own mental structure. (Minichiello, 2003)

#### 4. Conclusion

That having been said, the paideia-society interrelation stands within a paradigmatic vision of contemporary pedagogy like the double-faced Janus, from which a new dimension of man and citizen arises along with a new way of understanding education//educability of the subject-person (Pastena 2011).

It is all about suggesting a new way of interpreting pedagogy where the teaching- learning interaction becomes alternative teaching methodology to the many current practices. No doubt so much uneasiness and failure to achieve success in the schools are caused by the nature and the way of teaching approaches, by an agency that is often too prone to hyper-didacticisms that bring about confusion and disconcert rather than self-orientating enaction. In fact, enaction means understanding learning as the creation of worlds, where the student experiences the didactic action in structural coupling with the teacher.

In short, it is a Paideia that is seen in its atropo-ethical dimension as the hard core that allows interaction (in an enactive circuit) between “sense”, “logic” and “evolution”.

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# New application system for 3D mapping the fire scene as new trend for education in fire safety engineering

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## Abstract

Experts from the Main School of Fire Service tested eSURV system with the view of identifying the potential and usefulness of the system for firefighter officers and other experts who undertake scene examination, especially fire scene. The tests demonstrated, among others, that the system is capable of making high-accuracy measurement, easily operated, and provides for a short time of scene examination. Polish language version of the software and compatibility with specialist programs which are used across various firefighters, police and experts units in Poland is one of the additional assets of the system.

The on-site application of eSURV system significantly facilitates the work of firefighters, officers and fire behavior experts who secure the scene of crime at each documenting stage, i.e. starting from scene investigation through making sketches.

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*Keywords:* eSURV; scene of crime examination; 3D measurements; mapping; practical application; fire safety engineering.

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## Introduction

Post-fire investigations are procedures which are executed in connection with the occurrence of a fire or an explosion. In Poland various entities are authorized to handle the determination of the causes of fires. They include law enforcement authorities, judicial bodies or participants of the insurance market. The procedural system in cases related to fires may be consequently divided into the following:

- determination of causes of fires (explosions) in pre-trial proceedings,
- determination of causes of fires (explosions) for the needs of insurance companies,
- determination of causes of fires (explosions) for the needs of court proceedings (criminal and civil proceedings).

Each of the above mentioned activities is subject to slightly different legislative regulations that form a framework for the execution of activities, and in addition to the determining the cause of the fire, the consequent objectives of the procedures differ to a slight extent.

The objective of the pre-trial proceedings is determination whether a fire was a random incident or whether it happened as a result of an offence (intentional act), i.e. whether the fire was started as a result of criminal offence (prohibited act), or as a consequence of failure to act on the part of the person responsible for the fire safety of the given facility. The investigation proceedings are to allow the establishment of all circumstances related to the case by way of compiling information and evidence connected with the crime and allow the discovery and capture of the perpetrator or perpetrators of such crime. A further objective is to compile all personal data, as well as collecting and keeping evidence for the court in criminal proceedings (conviction and sentencing).

In Poland the below specified bodies are authorized to instigate and implement pre-trial proceedings in cases related to fires:

- the prosecutor – as regards the initiation and execution of investigations and probes,
- the police - as regards the initiation and execution of probes and carrying out investigations (on the prosecutor's orders).

One of the forms of investigation procedures are verification activities. They allow establishing whether notification of the commitment of a prohibited act (an offence) or information about a fire is real and whether

consequently the initiation of an investigation procedure is justified. There is also a need of carrying out the required scope of activities in securing the traces and evidence of the crime before they may become lost or deformed prior to the issuance of a decision on launching the investigation procedure. In the case of a fire, of which the Police and the Prosecutor's Office are notified, is not discontinued before the case is opened, two below mentioned forms of investigation procedures may take place:

- probe,
- investigation.

As soon as a fire protection expert is sent to the fire site, a process is started of executing all the necessary activities oriented on the establishment of the cause of a fire. In this stage experts cooperating with the Police, apart from maintaining order and safety on the incident site, are also obliged to assure securing the post-fire site from any changes until arrival of the investigation team. Depending on the situation they can also be assisted by other police patrols dispatched according to needs to the incident site.

Maintaining the fire site in an unaltered condition until arrival of the investigation team is an indispensable and important action that enhances the likelihood of correct establishment of the cause of the fire.

The investigation team dispatched to the fire scene comprises at least two persons: the person assigned with carrying out the inspection and a police forensic investigator. In some fires an expert in fire protection has to participate in the investigation. However, in some cases of investigation fire related procedures, in which the body conducting the investigation procedure does not appoint an expert, but instead for example makes use of the incident report drawn up by the Rescue and Extinguishing Unit of the State Fire Service, in which the likely cause of the fire has been specified. This as a rule takes place for such fires, which in the opinion of the body conducting the investigation procedure does not pose a hazard for the life or health of many persons or a considerable threat for a property, and the cause of the fire specified in the incident report does not entail any indication of an illicit act.

Some fires are particularly serious, as they entail the death of numerous persons (for example the fire of a multi-family residential building in Kamień Pomorski, in which 21 persons died) while others are characterized by the great extent and exorbitant material losses (such as for example the fire in the JPP Meat Processing Plant in the township Łyse). In such cases the execution of investigation procedures is directly supervised by the prosecutors, and the investigation teams dispatched to the incident site as a rule comprise more persons than generally, including also experts of various specialization fields. In this type of fires the inspections comprise a few stages and may take place within a time longer than one day.

The first stage of an undertaken investigation procedure ends when all activities on the fire site are completed. In some cases already after completion of this stage (even after the lapse of a year or more) while the investigation procedure is still being conducted, a necessity arises of performing additional inspections. This takes place when during an investigation procedure some required activity was not performed, or if new circumstances appear, and their examination requires making a new inspection of the site. The execution of such an inspection is determined by the state of the fire site or burnt facility and requires particular attention, as the traces and secured evidence taken up at a later time may turn out to have been altered, for example as a consequence of variable atmospheric conditions.

The next stage of the on-going investigation procedure is the questioning of the claimant, the witnesses, the suspects, as well as a search, an investigating test, a confrontation and a visit to the scene of the crime. In some fires technical documentation of the facilities, technological lines and implemented processes has to be appropriately secured. This is indispensable because the accepted version for the breakout of a fire points to an energy related stimulus arising from a failure of the device or the incorrect progress of a technological process.

In a fire-related investigation procedure the objective of all the above mentioned activities is the establishment of the cause of the fire and finding a full clarification of its breakout and spreading. In addition, the body conducting the investigation procedure wants to ascertain whether the fire was a random incident or whether it was a result of a prohibited act. This means that already in the stage of an investigation procedure the perpetrator may be detained and arrested.

## 1.2. Inspection of the incident site

This shows that the inspection of the incident site is the most important activity in the process, which determines the further proceedings ending in a court sentence. The basic drawback of the site inspection is that it is non-repetitive. At present the adopted methods of securing traces on the place of incident for various reasons remain far from perfect. This is caused by such factors, as the pressure of time, the unavailability of the appropriate equipment, lack of sufficient knowledge or even common carelessness. While the last two factors depend on the people involved and on their professional approach to their occupation, the lack of appropriate equipment and the time pressure connected with the inspection are independent on them. This is due to the fact that it is simply impossible to perform the assigned duties in a professional way without suitable equipment, frequently in difficult conditions, in many cases when the superiors have already ordered them to proceed to the next incident site.

As each fire is different, activities that have to be carried out during the investigation procedures may vary. The methods to be adopted for needs of the investigation procedure are determined by the prosecutor (police officer), who was entrusted with the case. Such prosecutor (police officer) obtains information as to the type of fire (designation and size of the facility, extent of damage, type of activity executed in the facility etc.) and starts to organise the appropriate forces and means both with respect to the composition of the investigation team, as well as with respect to the required equipment. On the incident site in the first place the area is delimited, on which the inspection is to be carried out, which should be secured from the ingress of unauthorized persons. Furthermore, the body conducting the investigation procedure also defines the composition of the investigation team and decides whether an expert or experts should be appointed, and in which field. Correctly executed inspections of the cause of the fire, as well as the properly discovered and secured traces and material evidence constitute an element of key importance in the determination of causes of fires. Apart from scheduled actions, such as for example questioning of witnesses, the body conducting the investigation procedure, makes individual decisions as to when and which actions would have to be performed depending on the actual circumstances. This due to the fact that during the conducted proceedings new circumstances may appear, which determine which measures are to be carried out next. For example, during the execution of inspection a necessity arises of making use of a specialist equipment, which can allow reaching the place where the source of the fire was located. The ability of reaching the place where the combustion process had been initiated may define the next activity, such as for example securing material evidence. This means that the body conducting investigation procedure has to make decisions in an on-going way as to the necessity of further actions that are indispensable in the process of determining causes of a fire.

To a large extent the final effect of the conducted investigation, i.e. the determination of the cause of a fire and the finding and detaining of the perpetrator, depends on decisions made by the body conducting the investigation procedure. In the majority of fires a decision as to the composition of the team investigating team is made by the officer on duty of the police unit.

### 1.3. Possibilities offered by the eSURV system

Measurement equipment, such as measuring cups and measurement carts, which is presently at the disposal of court experts in the fields of fire protection, forensic experts and medical emergency personnel prove to be useful in simple cases – in cases of complicated investigations the possibilities offered by such equipment proves to be simply insufficient. This is connected with land topography, and among others with places of difficult access, on which traces may be left. This problem may to a certain extent be solved by modern devices used for measurements and 3d visualisations of the incident sites, darkening of places after flash over. However, in the majority of cases these devices are complicated in use, and while their basic advantage is precision, while a clear drawback – the time-consuming process connected with measurements and processing of the obtained results. Furthermore, also to be borne in mind is the lack of compatibility of the available systems with the Polish applications, easy in use, thanks to which the processing of obtained results would become simple and quick.

To a large extent this problem is solved by the eSURV system. It assures precision of measurements, is easy to handle, offers compatibility with the Polish software and easy data processing.

The eSURV system is designated for measurements, documentation and 3D visualization, as well as to interpret a fire scene and determine in what manner a fire started and the way it spread. The main objective of the system is to show how scientific principles can be applied by the fire investigator. The solution is based on an electronic total station. Its work is being controlled by special software, designed to help the experts in documenting, analysing and

reconstructing the accidents. The system includes innovative solutions that have been submitted for patent protection. The solutions improve the safety, the speed and the efficiency of the work. The quality of the final effect is impossible to achieve using traditional methods. eSURV allows the user to collect in a digital form data concerning the geometry of the environment, including traces and objects revealed on the site of the incident, then develop a plan and sketches, as well as a realistic 3D model of the scene of the post fire places that can be used in the visualization, reconstruction and compartment fire dynamics, which provide the basis for understanding fire behaviour. Working with the eSURV system has already proved successful in such fields, as criminal incidents and road accidents.

The version of the eSURV system dedicated to conflagration incidents allows the user to measure the site of the fire and create the necessary documentation. The innovations implemented in the system make it possible to recreate precisely the geometry of the site of the incident and the coordination of revealed traces and objects. The system allows obtaining the sketch of the situation and collecting the measurements in digital form for later use to build a true-to-reality 3D model of the site of the event.

eSURV is a system based on the surveying techniques dedicated to measuring points on the site, but the improvements allow the experts to examine the accident sites with no surveying qualifications to create the required documentation. Amongst the innovations that are being protected are the following:

- The position of registered points regarding the global reference system is now designated using GNSS receiver and magnetic field sensor
- Changes in the position of the measuring device is being defined using the acceleration sensor
- The procedure of defining a new measurement position that includes comparing the coordinates of two points – the same points for the new and the previous position
- An algorithm deciding if it is possible to commence the measurements using the sensors to measure the temperature of the outside and inside the measuring device
- The details of the site registered using a photo transformed into orthophoto maps, for which the common points are defined by a measuring device that is a part of the system

The version of the system dedicated to document the sites of road accidents has become available on the market. It has been implemented in several Police units, as well as some Military Gendarmerie units. The completion of the parts of the system designed for conflagration incidents will allow offering this solution to the services that document the sides of conflagrations, including fire departments. The development of the CD mapping system of fire sites is of considerable importance, as the execution of proceedings in cases related to fires is a statutory obligation of the law enforcement and judicial authorities. Those authorities undertake proceedings once they have been notified of such an event, as a fire. The instigation of an examination or investigation takes place at the claimant's request, or is carried out ex officio. The objective of such proceedings is the determination whether the given deed may be considered a prohibited act (criminal offence) or not. The authorities handling the proceedings are bound by applicable provisions of the Code of Penal Proceedings, which imposes specified obligations on parties to the proceedings. From the viewpoint of the conducted proceedings the determination of responsibility for the caused fire (determination of the perpetrator) and the determination of risk caused by the specific event (legal qualification of the caused danger) are of key importance. This requires that such proceedings be carried out effectively and that hard and uncontested evidence is gained. One of the elements that could significantly influence the effectiveness of the conducted preliminary investigations (related to fires) is the development of unambiguous and transparent rules for cooperation between the State Fire Service and judicial authorities, from reporting of the fire and documentation related to the facility on fire (e.g. reports inspection and identification activities, etc.), and further cooperation based on a partnership approach. For the time being there are no available rules for cooperation, as legal proceedings may be carried out by the law enforcement and judicial authorities, but the determination of the cause of the fire is also one of the tasks of the State Fire Service, and such entities, as insurance and claim adjustment companies and private persons are interested in the outcome of the process of such investigation. What is more, the effectiveness of proceedings is reduced as a consequence of legal bodies being notified much too late or the legal authorities failing to take any actions at all, as well as due to incorrectly performed inspections, inaccurately drawn up reports, inappropriately secured evidence from the site of the fire or failure to inspect evidence secured on the fire site, lack of availability of a sufficient number of experts in fire protection, deficiencies

in basic know-how of the person assigned with the inspection and carrying out of proceedings, lack of follow-up by the person executing the inspection (lack of familiarity with the event, making interviews not based on sufficient information as to circumstances of the given case), insufficient technical equipping during the inspection, lack of modern mobile equipment, such as one that allows qualitative determination of the presence of flammable substances. Such a great number of issues in the present organisation system of post-fire investigations leads to a considerable number of preliminary investigations, which in the long-lasting process consisting in the determination of the cause of the fire generates additional costs; those costs could be limited thanks to correct and accurate 3D mapping of post-fire sites for all the parties involved, because in the case of almost each preliminary investigation related to the determination of a cause of the fire the first legal action to be executed is an inspection of the site of the incident, followed-up by written report and photographic documentation. For this reason the presented 3D mapping system of fire sites offers a state-of-the-art device that provides a useful tool for the development of a correct site drawing and 3D visualisation, which will allow drawing conclusions as to the cause of the fire in an unequivocal way in each case on the basis of consistently developed documents, which would directly affect the costs related to fire related proceedings, and a reliable and uncontested source of the processed analytical evidence elements would contribute to better identification of the causes of fires, and as a result would considerably improve the social attitude, as frequently arson is not easy to assess, and in such a situation costs of insurance is borne by the entire society. The 3D mapping system of fire sites allows a better initial verification of the place where the fire has started and directions of its spreading, as well as communication of cooperating bodies with the application of compatible technologies.

### **Summary**

The most important hazard for establishing the cause of a fire is failure to perform activities, the execution of which becomes hindered or even quite impossible as time passes. They include primarily actions connected with inspections of the fire site and with securing traces and material evidence. This is due to the fact that as time passes the traces become gradually obliterated and material evidence may get lost. In addition in the majority of fires it is necessary to clean up the site of the fire, which may pose a hazard to the safety of people, or to commence restoration or reconstruction works of the burnt facility. Also the failure to examine traces or material evidence secured on the incident site may have a significant impact on making impossible the establishment of the source of a fire, its cause or also other circumstances important for the particular case. Also the time in which particular activities in the investigation procedure are carried out may affect the final effect of that process. For example, if witnesses to the incident (fire) important in the case are questioned too late, the description of the incident presented by them is as a rule incomplete or the questioned person can even have forgotten some of the facts involved.

Neglecting to perform certain actions by the person executing the investigation procedure, similarly as making incorrect decisions as regards their execution, frequently makes it impossible to determine the source of the fire, its cause or other circumstances of importance for that particular case. That is why in such cases it is so important for adaptation of new application allowing the reproduction of the fire site at any time and the development of a correct training system for persons involved in carrying out inspections of post-fire sites.

### **Acknowledgements**

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# New approach to industrial engineering education with the help of interactive tools

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## Abstract

One of the universities responsibilities is to form a quality graduates who will be armed with the knowledge needed in industrial practice. In this context a constant improvement of teaching materials must be done in order to reflect the current needs of the industry. This paper presents a new approach for updating the content of the Industrial Engineering course as well as a new concept of teaching according to the principles of Constructivism theory. The main aim of the practical part of the course is to design layout of the industrial company with the help of computer modeling, for which we used an e-learning form.

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*Keywords:* Industrial Engineering; Constructivism theory; E-learning; Multimedia components;

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## Introduction

After centuries of steam and plastics is the 21<sup>st</sup> century marked as a century of information technologies. At the current rate of information and communication technologies development, it is almost unthinkable for the company to maintain stable market position without them including various support software tools. This also applies to the field of industrial engineering. For the support of the majority of industrial engineering methods a highly advanced software products that help in meeting the challenges of industrial engineers are available today. Not only a summary of the software, but also the overall concept how to approach and work with data, are nowadays referred to as the concept of digital factory.

The comprehensive planning and operation approach of the digital factory has already become a central innovation issue in the automotive and aviation industry but also in other advanced and globalized sectors (Bracht, 2005).

The term is defined as follows:

Digital factory is the generic term for a comprehensive network of digital models, methods and tools – including simulation and 3D visualization – integrated by a continuous data management system.

Its aim is the holistic planning, evaluation and ongoing improvement of all the main structures, processes and resources of the real factory in conjunction with the product (VDI Richtlinien 4499, 2008).

The focus of the digital factory is early production planning and design of the factory closely coordinated with all corporate processes. The main aim of the digital factory is to accelerate and improve production planning and to overlap it intensively in the sense of simultaneous engineering with product development. Digital factory has the ambition to cover whole product lifecycle management (PLM). Figure 1 shows possible application areas for the digital factory right up to the end of the product life.

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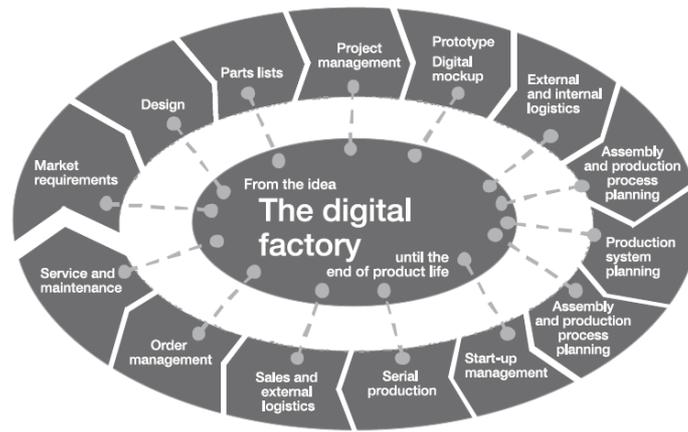


Fig. 1. Examples of application areas for the digital factory through PLM (VDI Richtlinien 4499, 2008)

From these current trends, it is clear that even universities must respond to new demands of practice, where a clear need for engineers who can work and develop in conditions of modern production technologies can be seen. In this context a constant improvement of teaching materials must be done in order to reflect the current needs of the industry. That’s why we also decided to innovate the content and form of transferring knowledge to the students with regard to the requirements of practice. The main part of innovation was the practical part of the industrial engineering course.

## 2. Methodology

As we mentioned before one part of the innovation was the new approach to education of industrial engineering. Education on universities in Czech Republic is provided still in more traditional way. As described by Barbosa (Barbosa, 2012) the teaching methods are based on memorization and repetition, without students’ realization of the true meaning of the information. The prevailing thought is that the teacher has the knowledge and on the other hand the student knows nothing. This education can be seen as an act of depositing information in student’s memory. In this way students get proper education and information though, but they do not stay in their head for a long time and are very rapidly displaced by other information.

More appropriate is the Constructivism approach or Constructivism theory. It is based on the idea that people construct their own knowledge through their personal experience. The effectiveness of Constructivism is that it prepares students for problem solving in complex environment (Al-Huneidi, 2013). They are more active in building and creating knowledge based on their experience and interpretations. Teacher’s role is essential and important in learning process. He/she must act as a mentor and help students to interpret knowledge and guide them to refine their understanding and interpretations.

The basic theories of Constructivism are summarized in Table 1. (Janjai, 2012)

Table 1. Learning activities designed by using theories of constructivism.

Principle of learning	Learning activities
1. Construction of new knowledge	1. Request the students to describe their background experience on the subject to be learned. Encourage the students to propose the method for learning new knowledge according to their interest and competency.
2. Authentic learning	2. Let the students face real situations, such as problems in the classroom.
3. Activity-based approach	3. Request the students to construct the knowledge by themselves from various activities such as the study from documents, survey, interview and

- experiments.
4. Group process and member interaction
4. Assign the students to work together as groups, each of which has 4-6 students. Each member of the group has a specific role and mission. The outcome of the work was evaluated by all members of the group.
5. Request students to use the rule of PDCA (Plan, Do, Check, Act) to control their work to achieve the goal.
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The second part of the innovation was hidden in new materials for the education of industrial engineering. In the line with current trends, we tried to approach to the teaching with interactive form. E-books were found out to be a suitable tool for ICT education, where different kinds of multimedia support are easily to be visualized (animation, videos, case studies, etc.). Regarding this fact we have already several years ago approached to the development of our own software environment for creating e-books. This environment called ProAuthor is an author's system, a tool for the electronic online courses creation that are placed in specific output format on the learning management systems. Other form of the output from this author's system may be offline multimedia electronic textbooks – e-books.

### 3.Results

#### 3.1.New concept of the course

With Constructivism theory in mind we approached to the development of an innovated course. "Industrial engineering" is a compulsory course in Mechanical Engineering study program at University of West bohemia. This program is a bachelor type of study and can be passed in both full-time and combined form of study. The aim of the Industrial Engineering course is to familiarize students with the causes of the historical development of industrial engineering, with basic areas of industrial engineering in industrial practice and to equip them with the skills to use basic methods and tools of industrial engineering (from individual processes to the entire management system). The practical part of the course is now focused on project based learning activities where constructivism characteristics are applied. The duration of practical part is 13 weeks and the main goal is to complete assigned project which is focused on spatial arrangement of the production. One of the digital factory software was chosen for design and evaluation of student's spatial arrangement proposals (layouts). Students work can be divided into 3 parts.

##### *Part 1: Creation of the project teams and familiarization with software VisTable (3 weeks duration)*

Students form individual project teams consisting of maximally 4 students. Working in groups allows students to exchange their ideas and express their experience, thus enhancing their knowledge. Social interaction is an essential source for constructing the new knowledge (Janjai, 2012). In this first part students are familiarized with calculations that are needed for optimal spatial arrangement. They obtain a unique submission of products that need to be produced in their factory, individual produced quantities, manufacturing technologies, expected earnings etc. On this submission they apply mentioned calculations and receive concrete data for future spatial arrangement. Finally in the first part they are confronted with VisTable software and learn how to use it for layout proposal.

##### *Part 2: Elaboration of practical projects (7 weeks duration)*

In the second part will students in collaboration with team members propose and design concrete spatial arrangement from their submission. With all the knowledge that they obtained already in the first part they will now work individually on their projects. Of course a teacher is all the time at their disposal for questions and confrontation of their proposals. All this time the teacher act as a facilitator or mentor. He will guide the students, provide them with feedback and correct any mistakes that may appear during project solving. Also a set of e-books were developed for the students that obtain all the information they need to complete the project (Kurkin, 2011), (Bures, 2012), (Miller, 2013). The content of these e-books is mentioned later.

##### *Part 3: Projects presentation, evaluation and knowledge transfer (3 weeks duration)*

The last part will serve for knowledge transfer between the students. In the last 3 weeks students will present their practical project during which the collaborative learning and assessment among students will be promoted. The teams of students will receive comments from other students and also can benefit from solutions presented by

others. The lector acts again as a moderator of discussions, corrects the students' thoughts and ideas and explains potential mistakes. The evaluation of students' activity and ability will be performed by traditional assessment. The teacher evaluates students' activity in the course, participation, team work, and fulfilment of practical project. Final assessment will be done at final exam which will be a combination of results from practical project and written test.

### *3.2. Education with the help of interactive tools*

New e-books have been developed to help students in solving their practical projects. E-books are great for education of IT topics. You have the opportunity to use commented or not commented videos, animations describing real examples or screen capture videos which describes how to work with the software. E-books are also good tool for students studying in combined form of study who lack time for spending at university. After self-study phase with these e-books, students will have a lecture on the spot with the teacher where they can ask questions and go deep into the problematic.

Animations are suitable for easy explanation of the problem that's why we chose to use them in our e-books. A set of basic animations was developed. These animations help students with basic operation of the software used for practical project. Animations show for example how to:

- navigate in the software,
- use library to insert new objects,
- manipulate new objects and change their attributes,
- create a transportation network,
- create a material flow or
- create new objects.

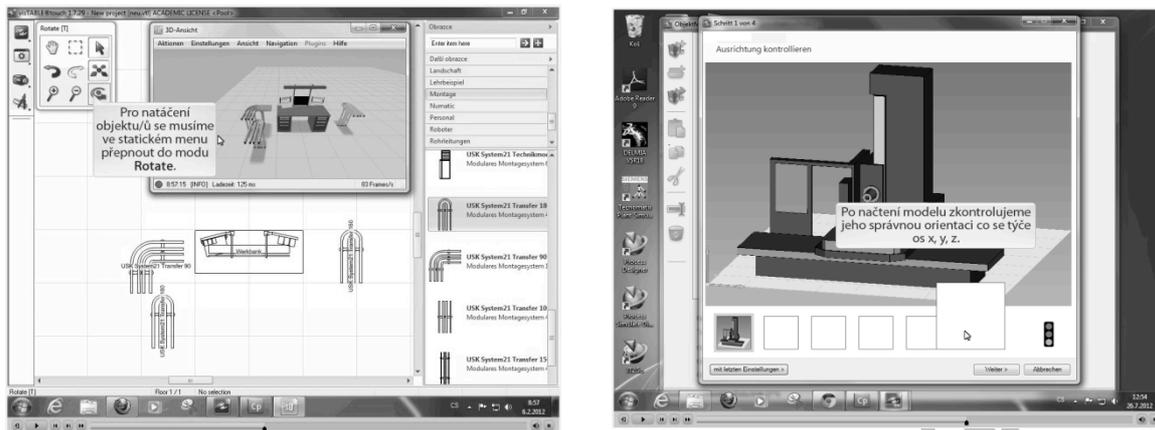


Fig. 2. Animations – (a) use library to insert new objects; (b) create new objects.

Great help when building new course with Constructivism theory is hidden in case studies. These practical examples can be used as a basis for theoretical reflection and also promote active postures in students. Already several surveys marked the contributions of case studies (Eroglu et. al., 2013) and that's why we included them also in our e-books. Those case studies were focused on work with VisTable software. The purpose of our case studies was to explain and describe basic topics that students need to master before they are able to complete the practical project. We created three basic case studies.

#### *Creation of the classroom*

This is an interactive concept of the study where students create a model of the room in which the course takes place. They have the opportunity to directly compare the extent to which a layout can be realistic. Students must take all diameters by themselves and then draw the layout. They have also the opportunity to use laser meter for diameters measurement. The entire case study is very detailed and describes every step of classroom model creation.

#### *Creating 1st material flow*

This is already an advanced study. It points out the way how to proceed during creation of a new material flow. Students obtain a basic layout of a production company into which they enter the material flows and perform an assessment of the spatial arrangement.

#### *Production optimization*

In this case study a previous layout is modified. New technologies are being bought to the company so the production has changed little bit. First goal that students have is to replace old machines and workplaces for the new ones. The second task is to evaluate the updated spatial arrangement and propose changes in order to reduce the amount of manipulation and transport of the goods. New layout is designed, verified and visualized. This is the last task.

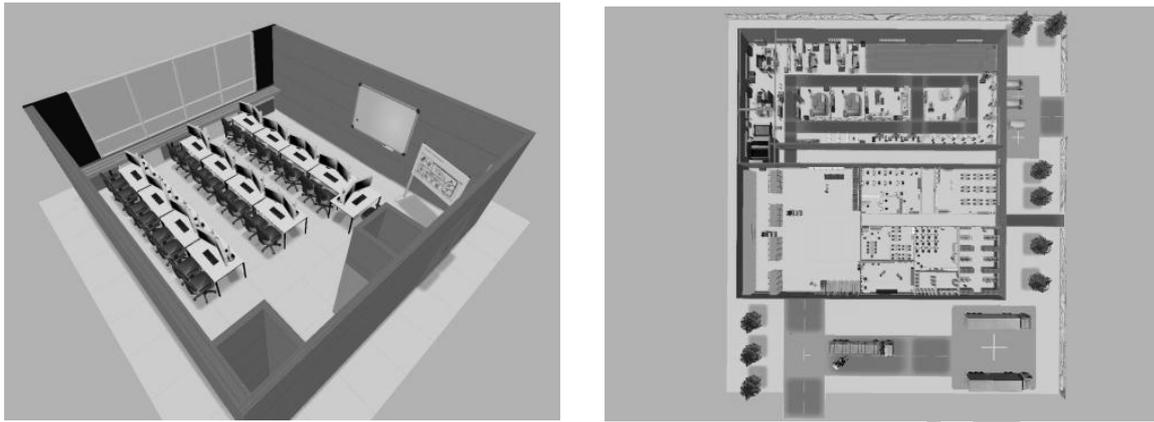


Fig. 3. An example of case studies – (a) model of classroom; (b) modified model of the production company.

#### 4. Conclusion

The paper summarized motives and reasons that led to the development of innovated course focused on industrial engineering topic. One of the main reasons was to improve already existing course and make it more students friendly. The content of the current course was reformed, so both the content and the teaching form would be more effective. The new concept of the teaching was developed according to the Constructivism theories. In the future course the students will be more independent. They will be evaluated on the basis of practical project elaboration. Not only the concept but also the study materials were improved. Students now have the opportunity to study from interactive e-books with various multimedia components such as videos, animations, case studies etc. With these multimedia components the major pitfalls that may await students during their studies are illustrated.

The proposed and innovated course will be implemented in the study program from February 2015. During this pilot run the students' satisfaction with the new course will be evaluated. The intent is to divide students in two groups. One group will be taught by the old manner, the other one by the new manner. The work of both groups will be monitored closely during the whole semester and at the end the evaluation of their satisfaction will be done by questionnaire. The results will be evaluated together with students study results. After this pilot action there will be an actual proof of the new course eligibility.

#### Acknowledgements

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# New horizons for Malaysia's landscape education: Gate project across cultures and continents

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## Abstract

GATE is an Erasmus Mundus mobility project funded by the European Commission (2012-2016). This programme has opened up an opportunity to the Asian university students/staff to further study in European countries and to enhanced university partnerships. GATE is quite new, thus landscape students/staff need to grasp this opportunity for their better future prospect. This paper highlights the GATE project possibility in enriching the environment for landscape study and contributing to the academic excellence of Malaysia's landscape education. GATE project acts as a new horizon in landscape education, enhances the skills, qualifications and benefits linguistically and culturally the respective universities.

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*Keywords:* Gate project, landscape architecture education, partnership, academic excellence.

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## Introduction

Landscape education has been taught for long years in western countries such as United States of America (US) and European Countries (EU). Landscape education in Asia including Malaysia could be considered as a new field. Today, landscape architecture profession is growing in the Asian region. It also undergoes a radical transformation regarding its order of size and other particularities (Bartfai 2013). An intense pressure of competition coming from other disciplines has urged landscape architecture students, especially from Malaysia, to get ready for new challenges in their international skills, experiences and knowledge. This is very important in order to enable them to get recognized and employed in any parts of the world.

The European Commission has initiated a new strategy called “European higher education in the world” (Bartfai 2013). This initiative aims to offer university students (especially from Asian region) international experiences, enhanced skills, and broaden their mind. GATE (knowledGe mAnagement Technology transfer and Education programme) is one of the projects under this programme that focus to students at all levels from Asian countries including Malaysia, Cambodia, Indonesia, Laos, Thailand, Vietnam, Mongolia and China. Indirectly, GATE has opened a new landscape education access to the Asian countries that helps in increasing learning and teaching quality (Thomas, Chang & Abt 2007). Landscape architecture students/staff from Malaysia need to grab this opportunity for their better future. They should recognize that in order to become good landscape architect and to produce good landscape designs, they need to get experiences abroad for gaining knowledge and skills learned from other professionals.



Photo 1: In order to become a good landscape architect and to produce good landscape designs, it is necessary for students to get experiences abroad for gaining knowledge, skills learned from other professionals.

Previously, Malaysia's university students/staff further their study overseas on landscape fields via governmental scholarships, private and/or family budget. Today, GATE project supports them in finding scholarship and solving their financial problems. However, they need to compete with other university students, but at least the project has broadened their chances or choices of scholarships.

## Objective of the Paper

This paper was written from the view of the authors based on their involvement in the project. The aim of this paper is to share and highlight the GATE project as a new horizon in landscape architecture education for Malaysia. Specific objective is to explain and encourage landscape architecture students/staff to take the opportunity of the GATE project and to enhance their benefits towards increasing skills and qualifications of landscape education.

## Gate Project

GATE is one of the projects under Erasmus Mundus programme, and being prepared by a consortium of leading European universities together with the partner universities in Asia. Johannes Kepler University Linz, Austria (JKU) is coordinator for the project. The GATE project is open to students at all levels; Bachelor, Master, PhD, Post-doc researchers and staff with scholarship.

The designed project's idea was to improve higher education cooperation and develop teaching and learning to benefit social development. It was believed that interdisciplinary and trans-disciplinary orientated development could give quality to the education and serve society and higher education level. GATE programme delivers significant help to landscape architecture students and academic staff in landscape field by offering a new window to the world. The programme enables them to set up

learning and working relationship with international academic faculties concerned, and acquire experience and knowledge in the field according to their needs. According to JKU/Gate (2013), objectives of the projects are as follows:

- i. to supports institutions' international co-operation advancement via Erasmus exchange principles (such as the Learning Agreement) to the mobility activities between the partner institutions.
- ii. to promotes co-operation between sending and hosting institutions in enriching the educational environment of both the hosting and sending institutions in the EU and in the respective partner countries.
- iii. to offer new cooperation opportunities for EU and Asian universities and give to developing new links between academic institutions in the EU and Asia.
- iv. to enable students and staff to help linguistically, culturally and educationally from the pursuing studies experience or carrying out research in another country.
- v. to improves the transparency of studies, credit transfer and recognition, and qualifications by working according to the direct of what has become common practice in regard to student exchange under the Erasmus programme.
- vi. to provides good students from vulnerable groups with further education and professional development and to issue EU social and democratic values. The same applies to gender equity.
- vii. to enhance the skills and qualifications of international higher education staff through the mobility.

In more concrete terms, the project objectives for the mobility programme flow from the Asian partner universities to the EU are as follows:

- viii. to increase the number and quality of mobility exchanges and enhancement through sustainable scientific and cultural cooperation and mutual transfer of experience and knowledge with the partner countries.
- ix. to enhance as well as encourage and enable highly qualified graduates and scholars from the partner countries to get qualifications in the European Union while contributing to the academic excellence and visibility of their home universities.
- x. to designed the exchange programmes that benefited to all partners and limit "brain drain".

There are several European universities participating the Gate project. These universities included Johannes Kepler University Linz, Austria, University of Tampere, Finland, Université Pierre et Marie Curie, France, Freie Universität Berlin, Germany, Corvinus University of Budapest, Hungary, Università degli Studi dell'Aquila, Italy and Universidad Politecnica de Valencia, Spain (JKU/Gate 2013).

For Asia, there are thirteen universities taking part in Erasmus Mundus programme as listed by the JKU GATE 2013. The name of the universities are University of Battambang (Cambodia), Universitas Gadjah Mada (Indonesia), National University of Laos (Laos), Universiti Putra Malaysia (Malaysia), Thammasat University (Thailand), Hanoi University of Science and Technology (Vietnam), Ho Chi Minh City University of Technology (Vietnam), Shandong University of Technology (China), Tongji University (China), Indian Institute of Technology Madras (India), The Maharaja Sayajirao University of Baroda (India), Mongolian University of Science and Technology (Mongolia) and National University of Mongolia (Mongolia).

#### **Gate As A New Landscape Education Horizon**

Even though GATE project is not exclusive for landscape education, authors consider this project as a new horizon in landscape education. This means that a new space, chance and support has been established. GATE has provided a space for landscape architecture students/staff to get involved in the project by offering them full scholarship to study abroad. Previously the chances for them (especially from Asian region) to study overseas were limited with difficulties in getting scholarship, but now GATE has opened up the opportunity and provides them space for study.

New horizons in landscape education also relate to strategies in improving landscape education quality. Since landscape architecture education is a professional programme, it concerns about the student quality after graduation as well as other study fields take into custody. GATE is gearing to this and improves the transparency of studies and recognition of landscape education and prepares the students/staff to the world standard and recognition. Therefore, presumably student/staff who take part in this project will be easily recognized in any parts of the world.

GATE project can also be considered as an "old institution helps a younger institution programme". European universities, with many of them established long time ago, are well-known for their reputation and excellence in education and research. On the contrary, universities in Asian region, especially in Malaysia, could be considered as new and in lack of funds. Thus, the initiative taken by the European Commission benefited lots to universities in Asian countries, especially in terms of funding. Therefore, GATE project also be seen as a process of "rich institutions help the poor institutions" for their development. Also, is clear that a new pattern in education system was born in the world where there are no more boundaries in searching for knowledge and experience – an idea that corresponds with the "world without limits" slogan.

GATE could be a platform for a broad discussion among landscape lecturers and students between European and Asian countries. They can distribute as well as share their opinions, suggestions and arguments with a professional. This leads to a positive learning process and enriches the landscape education system at greater levels of institutional collaboration. This can also reinforce the commitment and ambition to further improve landscape education quality.

## Landscape Architecture Education in Hungary

Landscape education in European countries dates back to 1919 when the first landscape architecture programme was established at Ås in Norway (Holden & Tutundzic 2008). Elsewhere in Europe this happened later, and became general only in the 1960s. As Vries (2003) claimed, the roots of the institute highly influenced the professional content of the programmes. Looking at the roots, one can observe the multiple disciplines that gave birth to the profession (Table 1). This kind of background has also determined the main approach, based on the strength, ability, expertise and experiences of the schools.

Table 1: The Roots of the Institute in European Countries

Tradition	Examples of Institutes
Horticultural	Budapest, Larenstein, Vilvoorde, Versailles, Weihenstephan
Agriculture / Forestry	Evora, Wageningen, Zagreb
Fine Arts	Edinburg, Hamburg, Leeds
Architecture	Amsterdam, Barcelona, Genua, Greenwich, Helsinki
Environmental Planning	FH Neubrandenburg, Newcastle, FH Nuertingen
Urban Planning	TU – Vienna, TU – Delft, ETH Zurich

(Source: Vries 2003)

In Hungary, the first courses in landscape design appeared as soon as 1896 at the then Hungarian Royal Institute of Horticulture (Möcsényi 2008). However, it was only in 1963 when a full programme in landscape architecture started. Although the roots of the institute were clearly horticultural, the academic activity of Béla Rerrich, an architect, between 1908 and 1923 was highly influential on the complex nature of the discipline in Hungary, including also the aspects of architectural and urban planning approaches (Jámbor 2009). In 1992 the Faculty of Landscape Architecture was established, and is probably the only independent faculty of the discipline all over the world.

Nowadays part of the Corvinus University of Budapest, the Faculty is still the only institution for landscape architecture programmes in Hungary. This situation provides a special role to the school as a kind of national centre of the profession. Currently, the programme is offered at bachelor's (BSc), master's (both MSc and MA) and PhD levels. From this year (2014), the MA programme will also be available to international students in English.

Being a small country, international relations and cooperation are essential to Hungary. This is also true for the field of education. Thus the Faculty of Landscape Architecture is keen on learning new experiences of international schools advanced in certain subjects of the profession, and shares its experience with others. The increasing number of incoming students reflects growing interest towards the school, where there are currently 27 different courses offered in English yearly. Currently, most of the international students arrive from Europe and South America. Therefore, beyond the exchange of professional knowledge, the Faculty also regards the GATE programme as an opportunity to establish links towards potential new educational markets in Asia.

## Malaysia's Landscape Education - Learned From European Universities'

In Malaysia, landscape education started when Diploma in Landscape Design programme was offered in 1985 by the Department of Landscape Architecture, Universiti Teknologi Mara, Malaysia (UiTM), 66 years behind the European countries. There are many things to learn and information to gather from European universities in this field. Lots of knowledge, experience and ideas can be shared. GATE project has opened up the door for Malaysia's landscape architecture students for this purpose. Authors strongly believe that learning from experts in special landscape disciplines is necessary to strengthen landscape education programme in Malaysia.

In the meantime, landscape education has evolved in Malaysia. Many public universities as well as private universities offer landscape architecture programme at all levels (Diploma, Bachelor, Master and PhD). Table 2 lists the name of university/college that offers landscape courses in Malaysia.

Table 2: List of University Offered Landscape Education in Malaysia

Name of the University	Levels of Study	Status of the University
Universiti Putra Malaysia (UPM)	Bachelor, Master, PhD	Public
Universiti Teknologi Mara (UiTM)	Diploma, Bachelor, Master, PhD	Public
Universiti Teknologi Malaysia (UTM)	Bachelor, Master, PhD	Public
Universiti Sains Malaysia (USM)	Master, PhD	Public
Universiti Malaysia Sabah (UMS)	Master (Horticulture Landscape)	Public
International Islamic University of Malaysia (IIUM)	Bachelor, Master, PhD	Private
Lim Kok Wing University	Bachelor	Private

Infrastructure University Kuala Lumpur (IUKL)	Bachelor	Private
Kuala Lumpur Metropolitan University College (KLMUC)	Diploma Landscape Architecture	Private
Geomatica College International	Diploma Landscape Architecture	Private
Kolej Risda	Diploma in Landscape Management	Private



Photo 1: Landscape education has evolved in Malaysia where many public universities as well as private universities offer landscape architecture programme at all levels (pictures courtesy from Mohd Yazid 2014).

The appearance of landscape education in Malaysia was not based on the institutional roots, like in European countries. Basically, landscape education in Malaysia was based on the need and demand from the industry. Malaysia is a developing country experiencing rapid development growth. As a result, many natural areas, such as forests and wetlands, have been transformed to allow for housing and new town developments. Therefore, it is argued, that landscape architects can become leaders in gearing environmental movement among land designers and planners towards conservation that can lead towards healthy city development in Malaysia (Mohd Kher & Suhardi 2007). Realizing on this matter, landscape education has been strengthened and spread out in Malaysia in order to produce more qualified professionals in landscape architecture in order to fulfill the country's demand.

A well established landscape education in European countries has encouraged Malaysian government to send their students/staffs abroad, especially to United Kingdom at the beginning. Writers believe, this is because Malaysia has strong relationship with UK government due to the country's ex-British colonization. At the same time, the government also encourages the students/staff to go to other European countries for enriching the landscape educational environment. The most important thing is to develop new links in landscape education between academic institutions in Malaysia and European countries.

The opportunity opened by the European Commission via GATE project must be snatched by Malaysian students. They can gain many benefits from the project such as learning new ideas, experiencing different education system, improving their language skills and sharing their professional interests. Indirectly, GATE can act as a new horizon in putting Malaysian landscape architecture students in the world map and get to be renowned globally.

## 7. Gate Benefits To Malaysia's Landscape Education

It was reported that Erasmus Mundus has significantly contributed to the development of participants' home countries and benefited to their people (Hadas et al. 2009). Authors believe that there are also many benefits that Malaysia's landscape education can gain from GATE project. Generally, academic staff involved in the GATE project will be able to study and learn the European landscape education system, especially in learning and teaching process that can be adopted to Malaysia's education. They can understand and get know how the subjects, studio and field works were carry out.

Malaysia's landscape educators who participate in GATE project can help in improving landscape education syllabus. Their knowledge gained from the study as well as the teaching and learning methods they experience can be utilized in syllabus revisions. This is very important in order to ensure compatibility of standards, qualifications and learning outcomes within and outside of Malaysia.

Regarding students, authors believe that they can develop their skills in terms of critical thinking related to future landscape, globalization and the environment via GATE project. Their mind would be more "open", and they return home with higher level of understanding of the world system. Knowledge that they gain from other landscape professionals at the host university can be used for improving landscape education and practices where ever possible. Students involved in GATE project have to manage things on their own during the programme, thus it increases their ability to look after themselves and sort of own interaction with others. This will be useful when they return and start to work in competition. Whether they realize or not, they are preparing themselves to become landscape architects who are capable and skillful in the aspects of planning, designing and

managing landscapes toward establishing a quality, healthy and balanced environment for human needs.

Regarding the institutional benefits, the university involved in the programme will have a chance for better landscape research collaboration in the future. Since the roots of landscape architecture in Europe derive from six different fields, thus there are many research opportunities. For instance, research on sustainable design informatics that relates with design and information technology for achieving sustainable living environment could be suggested. Experienced landscape researchers from European universities can share their expertise and technology with Malaysian students/researchers on that particular topic. Those who are involved in GATE project could also use their experience and knowledge to further develop university landscape education programmes.

Discussing about research collaboration, Karts and Martin (1997) claimed that research collaboration should be encouraged amongst the international universities because it benefits both parties. Integrating resources and engaging a critical mass of people with diverse backgrounds are useful to make significant impact on critical landscape education development (Hamrita 2012). Furthermore, most of the governments have been keen to increase the level of international collaboration engaged in by the researcher whom they support in the belief that this will bring about cost saving (Katz & Martin 1997). Therefore, Malaysia's researchers/students from landscape architecture background need to take this opportunity because authors strongly believe that GATE project is towards that effort.

## 8. Conclusions

GATE project can be considered as a new horizon in landscape architecture education. It provides students/staff high-quality education and practical training opportunity. The project helps in developing their expertise, skills, gain practical experience and increase their network of contacts. All this can be of great benefit to the future development of landscape architecture profession in Malaysia, and generally in the world. The project successfully diffuses the knowledge and researches among students and academics and leads to development in landscape architecture education.

Students/staff gain a level of confidence in their abilities, return with new knowledge, have cultural understanding, mature in study field and find lifelong friends from the host university. For the staff, participating, the project helps endorsing their academic status. For lecturers, benefits include not only work experience, but also an endorsement and advancement of their academic status.

If possible in the future, it is recommended here that GATE secretariat can increase the number of post doctoral participants for Malaysia and extended the minimum duration of the post doctoral from 6 months to 12 months. Nevertheless, the most important is that the project has increased the international cooperation in landscape education and suitable to raise the understanding and recognition of landscape architecture profession in the world.

## 9. Acknowledgement

Authors acknowledge to the Erasmus Mundus Programme, especially GATE Project that provides a new horizon in landscape education field. It's also goes to University Putra Malaysia and Corvinus University of Budapest who gives a place for authors to get involved in the programme. Special thanks to GATE Coordinator Team who give an excellent co-operation and helps in ensuring the success of the project.

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# New Horizons on Education Inspired by Information and communication technologies

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## Abstract

Nowadays, society is affected by the information and communication technologies (ICT) challenges that come with the Internet network and the World Wide Web. We are talking about e-society, e-commerce, e-learning, web of things ... and so on. For education, what has changed after the ICT challenges? Are there improvements with this new “materiel”? What are the new horizons?

First of all, ICT introduces e-learning which is a way to learn using networks with a distant tutor. Second, we have digital learning resources to manage, which gives new learning scenarios and disciplines. Third, we can access a lot of pedagogical resources over the world, a good and a problematic fact. Recently, some studies present the finding that ICT are used without a mature integration in educational contexts. As result, sometimes there is no added value to the teaching/learning processes. Blended learning is a new direction to find how to integrate ICT tools to real classes so that the quality of teaching and learning will be really improved. This paper discusses these different points of views and gives a conclusion about some horizons where ICT will take the adequate place in classes.

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*Keywords:* Information and Communication Technology, e-learning, digital learning resources, blended learning

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## 1. Introduction

Information and Communication Technology (ICT) services are now used with various types of tools to aid the different learning tasks. Every day, new technological advances affect the way information is handled in education institutions, libraries and information centers. The impacts of new technologies are felt by every actor in schools and universities because computing, communication and mass storage technologies reshape the way that learners, teachers and education staff access, retrieve, store, manipulate and disseminate information to each other. The way of learning has changed and will change since ICT are in all ways a part of our lives and the former teacher isn't now the once and main source of information and the focal point of the teaching learning process.

Today we talk about two categories of people who learn and teach in different ways: the “digital natives” (Prensky, 2001), born in the digital age, who spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age. The second category, the “digital Immigrants” one, is composed of those who were not born into the digital world but have, at some later point in their lives, become fascinated by and adopted many or most aspects of the new technology. Consequently, using Prensky's “terminology”, digital immigrants instructors are teaching digital natives, it is clear that they can't teach the same way they were thought. Different works in the literature analyze this problem or change.

In this paper, the first point presents, the main horizons given by ICT for learning/teaching commonly called Information and Communication Technologies for Education (ICTE). The second point synthesizes the noticed

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changes as positives or negatives ones. After that, before we conclude, point three discusses some recommendations to get improvements or future horizons in learning with the ICTE use.

## 2.Horizons on Education Inspired by Information and Communication Technologies

The 1990s was the decade of computer communications and information access, particularly with the popularity and accessibility of internet-based services such as electronic mail and the World Wide Web. At the same time the CD-ROM became the standard for distributing packaged software (replacing the floppy disk). This allowed large information-based software packages such as encyclopedias to be cheaply and easily distributed. As a result educators became more focused on the use of the technology to improve student learning as a rationale for investment. Today, computers and networks, in schools, are both a focus of study themselves (technology education) and a support for learning and teaching (educational technology).

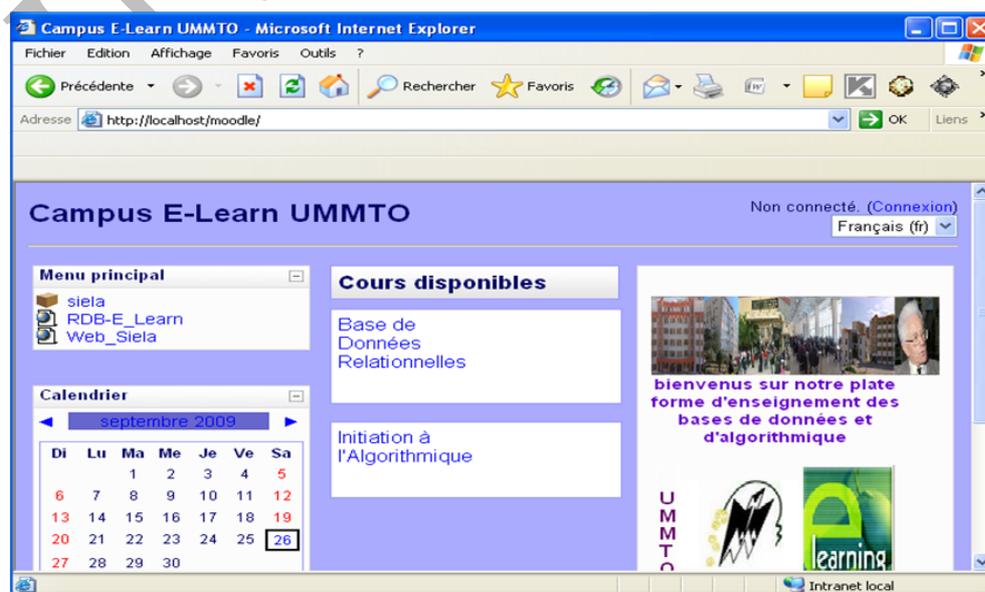
It has been suggested by LeBaron and Bragg (LeBaron & Bragg, 1994) that the role of technology in education is so important, that it will force the issue of didactic versus constructivist teaching. Teachers will no longer have a choice but will be compelled to use a constructivist approach in a technology-rich environment. Indeed, according to Mann (Mann 1994), the use of new technologies in an educational setting has caused the theory of learning, constructivism, to receive new attention. Students in these settings become empowered by gaining access to real data and work on authentic problems. We observe compatibility between constructivism and the use of ICTE and join Collins (Collins, 1991) who states, "So, inadvertently, technology seems to be coming down on the side of constructivists, who have been trying--unsuccessfully to date--to change the prevailing societal view of education".

We discuss below four key words presented in the literature as the bases of the different ICT challenges in learning and teaching: e-learning and MOOCs, digital workspaces, digital resources, and blended learning.

### 2.1.E-learning and MOOCs

Different concepts have been attributed to e-learning, but the term has also been substituted by others, such as computer based learning, technology-based training, and computer-based training, distant learning ... Moreover, some people confuse the concept of e-learning with the concepts of a virtual campus or online courses, which can be part of the e-learning universe but do not sufficiently define it. In (Sangra & al., 2012), a detailed study is presented about the 'e-learning' concept which has different views related to sociology, education science, psychology, ICT or computer science.

Simply, we can define e-learning as the domain that covers all methods of training using computers. This broad definition includes several independent axes such as: medias online or offline, learning individually or collectively, formater present or absent ... Other terms are sometimes used, we find: online training/learning, online education, distance learning, web based learning ...



In practice, e-learning is often seen as a means of training from any computer station equipped with an Internet connection where many types of technologies (information and communication ones) can be used, for example: audio, video, computers, laptops, tablets, whiteboards, learning management systems (LMS) (see Fig. 1), intelligent and /web based tutoring systems (see Fig. 2) and mobile devices (like Smart phones) that give the concept of m-learning ...



Fig. 2. Example of web based intelligent tutoring system, the WebSiela system, for Algorithmic

The most important horizon today for e-learning are the MOOCs (Massive Open Online Courses) that are online courses aimed at unlimited participation and open access via the web. In addition to traditional course materials such as videos, readings, and problem solving, MOOCs provide environments where there are interactive user forums that help build a community for students, professors, and teaching assistants. Since 2012, the development of MOOCs became faster where several well-financed providers, associated with top universities, emerged, including *Coursera*, *Udacity*, and *edX*.

## 2.2. Digital workspaces for education

To accurately reflect their staff's changing work experience, leading organizations have begun to implement an entirely new working environment – the digital workplace. By integrating the technologies that employees use (from e-mail, instant messaging and enterprise social media tools to specific applications and virtual meeting tools), the digital workplace breaks down communication barriers, positioning you to transform the employee experience by fostering efficiency, innovation and growth. The key to success, however, lies in the effective implementation of a digital workplace strategy capable of driving true cultural change.

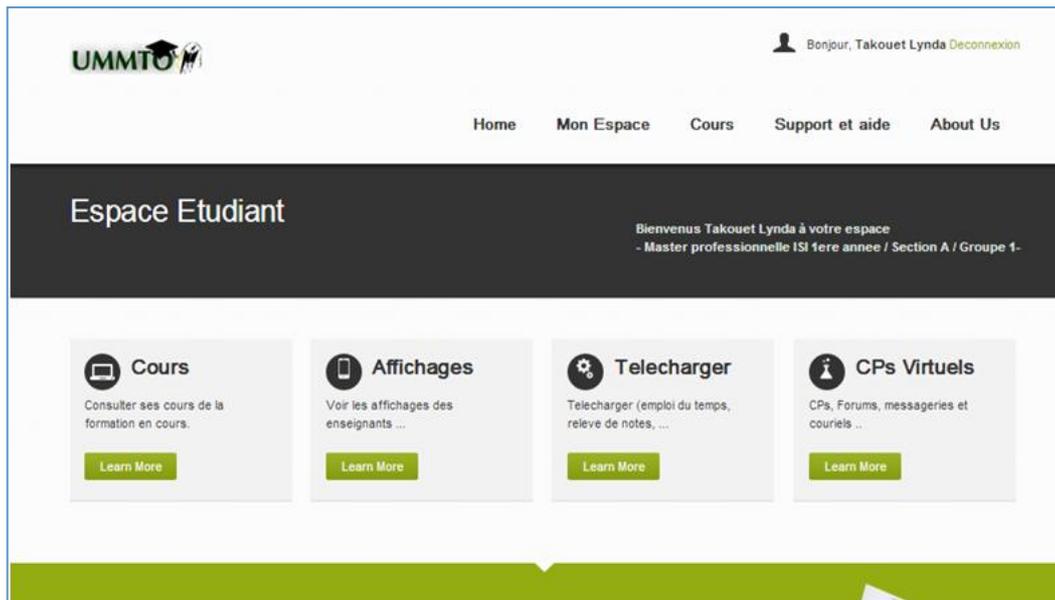


Fig.3. Example of a workspace prototype developed for Tizi Ouzou University department

A digital workspace for education institutions called virtual school; virtual campus ... allows its students, teachers and staff to access individualized information and services at any time, from any place, only with an Internet connection and a web browser (Fig. 3 gives an example from a workspace prototype developed for Tizi Ouzou university department). In different developed countries (like USA, France, Canada ...) these spaces are used and managed. They offers many services accessed via a secured user account already created and activated by the workspace administrator:

- news about the current and upcoming events, whether academic, scientific, community, cultural, related to sports, etc;
- access to administrative information for students: back-to-school calendar, personal timetable, assessment information: regulations, calendar, results and grades,
- access to teaching services: submission of practical work, access to e-learning modules;
- access to library resources and/or information retrieval,
- online access to existing computing services: management (reading/sending/sorting) of emails, access to personal document storage space;
- additional services provided through the digital workspace: access to personal files (whether of studies or career), access to local intranet, online personal or shared calendar, access to shared document storage spaces, allowing, for example, a teacher and his/her students to share documents, whatever their geographical situation, bookmarks, access to online software.

### 2.3. Digital Learning Resources

Digital learning content or digital learning resources called also learning objects consist of data files and software applications (programs) that may be distributed online or on disc. Therefore schools and systems need to provide teachers and students with ready and easy access to these resources. Increasingly this access will be online, particularly for data files, and while there is a huge quantity of such resources there are two major problems: accessing high quality resources and choosing appropriate resources. In the other side, the design and use of digital

learning resources to support effective learning and teaching have to respect quality principles that are divided into two groups, which are interrelated:

- Core pedagogic principles, which underpin effective learning and teaching, drawing from learning theory and commonly accepted best practice;
- Core design principles, covering issues such as resource design, accessibility and interoperability.

Today, one has to learn how to design, search and use digital learning resources.

#### 2.4. Blended Learning

To adapt to the changing trends in education, One of the innovative solutions is blended learning (see Fig. 4) in which modern technologies are integrated into the teaching and learning process, attempting to overcome some limitations that are experienced in the conventional classroom environment (Wakefield & al., 2008).

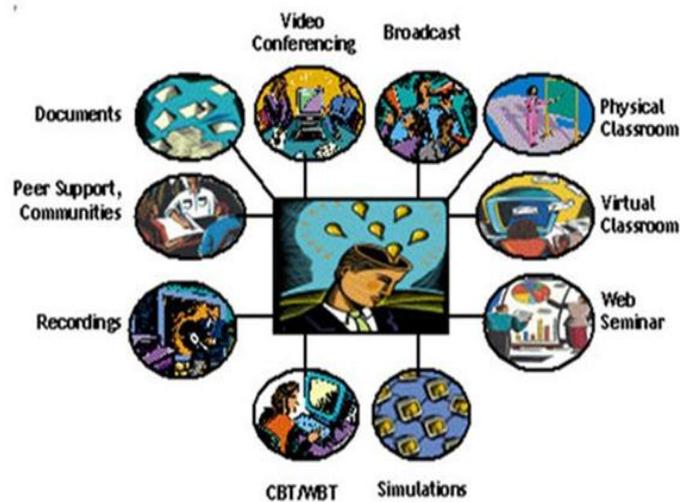


Fig. 4. Blended Learning<sup>101</sup>

In (Lopez-Perez & al., 2011), the authors point out that when ICT is adopted to complement traditional modes of classroom teaching, tertiary students seem to prefer this approach. Also Harris et al. (Harris et al., 2009) reckon that blended learning is a resource-effective methodology, with the potential to support teaching and enrich student learning experience.

### 3.Synthesis About The Changes Brought By ICT and Discussion

There's more to be written about the impact of ICTs on learning and teaching. Hence, one can't diagnose the changes but just summarize the main positives ones and negative ones, given in what follows. The most positive changes are:

- Learn and access information anywhere and anytime. For some people such as the disabled or the sick, it is a challenge.
- Communicate to any where so collaborate easily: get support, learn from other experiences, conform the problem complexity and collaborate to get a solution ...
- Compose a new course or any other content easily with multimedia possibilities which can be a challenge for some people like blind and deaf.

<sup>101</sup> [small-changes-big-returns.wikispaces.com](http://small-changes-big-returns.wikispaces.com)

- Enhance of constructivist approach what can help improve of competencies for some training
- ...

The main negative ones are:

- Superficial learning: Most of learners just copy the way so don't really "construct" anything;
- Too many time in front of digital material what can cause health problems.
- Difficulties in teaching technologies: the speedy changes don't give time to learn them enough to be thought.
- Learners must demonstrate rigor and discipline, especially if they are isolated in a distance education.
- Isolation: Contacts with other learners and with the trainers are reduced or absent.
- Proficiency: ICTEs use requires sufficient mastery of the tools and the Internet. This gives more to learn.

Technology is developed to solve problems associated with human need in more productive ways. If there is no problem to solve, the technology is not developed and/or not adopted. Applying this principle to educational technology would mean that educators should create and adopt only technologies that address educational problems, of which there are many. It means also avoid "Techno-centric Thinking" (Papert, 1987). Indeed, most educators would claim not to be technocentric, however, when discussing the use of computers in schools there is always the danger that the focus will be on the technology, particularly the hardware. When making decisions about the use of computers in schools, particularly budgetary decisions, there is a tendency to start with a consideration of the hardware, then the software and perhaps consider the users and learning last and least.

It is necessary to develop a thorough rationale before beginning to use computers in schools and classrooms. With the increasing availability of computer hardware, it is important that teachers do not become engrossed in the machine but focus rather on their primary role as educators. Teachers need to extend their imaginations with the awareness that as developments in computer technology occur they will be able to achieve more of their goals.

Since the 1960's the computer has been heralded, by some, as the solution to many problems in education. For example, many early computer scientists saw the possibility of the computer replacing teachers in schools. However these pictures of students sitting behind computer terminals for much of the day have largely not occurred in mainstream schools and most would not like this to be realized. There are three main rationales for ICT in schools: one concerns the organizational productivity of the school, and the other two focus on the needs of students: technological literacy and support for their learning.

The need for ICT competent teachers stems from the need for ICT competent students and for ICT-rich learning environments that enhance students' learning across the curriculum.

Historically, technology has been developed to solve problems, improve living standards and to increase productivity. Therefore, it is reasonable that we should expect educational technology to be developed with similar objectives. Within the educational context these objectives become: to increase productivity and solve problems in teaching/learning processes. Productivity is a concept most happily found in economics textbooks where the productivity of a worker or economic unit is defined by dividing the output (revenue) by the input (costs). This is more difficult to define for the education industry since the output is not easily measured, particularly not in monetary terms to compare with the costs. The output is largely the quantity and quality of learning demonstrated by students, or learning outcomes. How to measure the quality of training using ICT can also be a new horizon for education today.

We conclude this discussion with a set of recommendations for a good use of ICT for learning and move towards positive changes:

- Give opportunity and time to children to learn ICTs from the beginning of their schooling
- Define when and how to use ICT to improve each learning process with a dynamic way to equilibrate, in a blended mode, the face to face learning, e-learning and self learning modes. Each education organization has to become a learning organization. A learning organization is one that creates and instils a vision and culture in which employees are skilled at creating, acquiring, and transferring knowledge (Garvin, 2008). According to Hannah & Lester (Hannah & Lester, 2009), learning organizations should utilize strategies that focus on the macro, meso, and micro levels of the organization. Targeting all layers of the organization ensures that all employees, operational procedures, and systems have the same set of guiding

standards and characteristics that create a culture of continuous and adaptive learning.

- Analyze the ICT needs in each educational institution to implement an adapted information system. For that some questions such as: how to get, manage and/or change technologies will be a permanent process to insure the quality of the information system so in a certain way the quality in learning. The implementation of ICT culture will be progressive.
- As with any other product, ICT are to be consumed in moderation. Every human being must learn how to use them to improve its living and this is also a challenge for learning from sociological point of view.

#### 4. Conclusion

Computer based systems, ICT and any technology in general should not be viewed as "add ons" but as tools which are an integral part of a person's learning experience. These tools have to be used in an adaptive way depending on the different parameters around the learning process to give positive new horizons. Consequently, the need to invent digital natives methodologies for all subjects, at all levels, will lead schools and universities to become learning organizations since there are continuous changes with ICT. Learning organizations adapt easily to new change because the employees are accustomed to creating, acquiring, and transferring knowledge. They are able to adapt to new challenges and situations by creating solutions to problems. In non-learning organizations, employees wait for leadership or other employees to address new obstacles. As a result of the innovative culture of learning organizations, employees feel the freedom to make decisions and respond to new events. The problematic is nowadays present in all schools and universities over the world with different aspects. This imposes a migration to a learning organization mode, which cannot be accomplished only by establishing new policies and decisions at the macro level but expecting changes in the other organizational levels. We are currently working on blended learning pedagogies and didactics using computer based self learning tools in higher education in a learning organization context.

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# New possibilities of knowledge transfer by playing manager games

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## Abstract

The aim of this article is to describe the current view on concept of education for sustainable development. The role of universities nowadays became more complex and one of the essentials is to create and enhance partnership between universities and practice. Specifically, it is the transfer of theoretical research knowledge base to practice. One of the ways how to realize this transfer by simple and comfort way is using manager games.

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*Keywords:* Manager Games; University; Knowledge; Transfer

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## Introduction

Sustainable development is one of the key issues in manufacturing these days. Traditional view of business was trying to maximize profit for stakeholders, while new model of business recognizes the impact of business on society and environment. Based on EU debate, sustainable development encompasses three dimensions: economical, environmental and social. Our goal is to explain, that in order to be able to follow the trend of ensuring the “triple bottom line” on a high level, it is necessary to transfer all new know-how and innovations from research to practice. To be able to do so, it is essential to start at the base of research – at universities and education.

## Roles of Universities

What is the role of university today? All successful universities have educational, research and application roles. The main idea of modern universities is to wipe away the borders of these three pillars and bring the research and development innovation into education in order to easily innovate the industrial practices.

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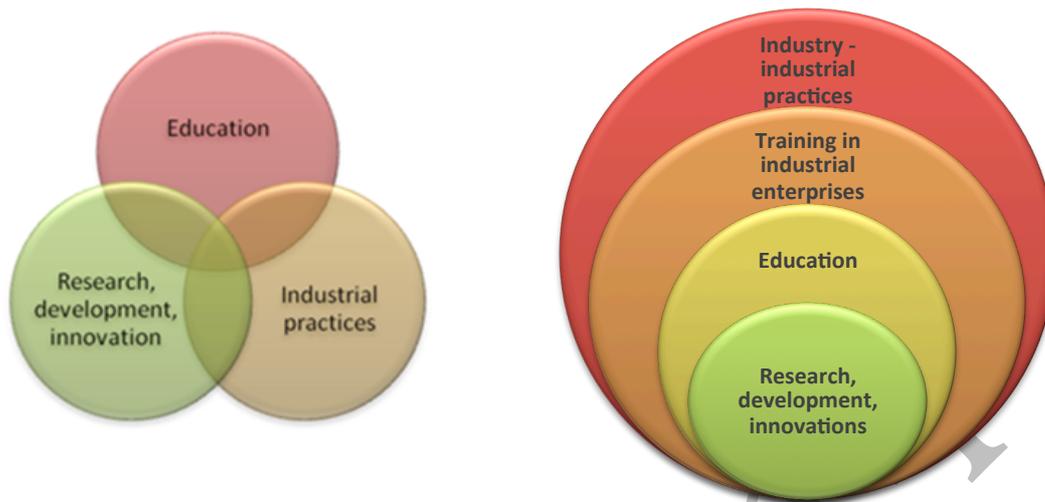


Fig. 1. Role of universities; transfer of knowhow into practice

This principle is illustrated on Figure 1. All research outputs, development and innovations, should not be separated from practical world. Students should not only study classic scholar materials, but also should be led into studying new approaches, ideas, principles and innovations based on research and development activities. It is precisely this background, that has been used to create and improve the educational framework for students at all stages of their education at Department of Industrial engineering at University of West Bohemia. It is important to add research, development and innovation activities and outputs into modern educational framework that would take profit from scientific workplaces. In case of setting easy transfer of research, development and innovation outputs into education, the society will take profit from it by getting educated graduates with the knowledge of the down-to-date approaches, methods, theories and processes. New ideas, knowledge and methods must fade from the inner area (research) into education, then into training in industrial enterprises which is useful for the enterprise, because of the possibility of its the use in the industrial practices.

As mentioned, modern, progressive education should not ignore outputs of state of art research. But what are the possibilities of influencing students and practitioners from industry to continue lifelong learning of new? We have to find the shortest connection between two points – universities (having knowledge) and enterprises. New and innovative methods used in education are necessities. Despite many obstacles, our verified and successful method how to teach specialists working in real enterprises knowledge base from universities is schooling in real enterprises. The innovative idea of this method is the fact of using manager games for teaching and bringing the theory into practice.

## Methodology

Games are tools that can create "real environment". The use of games is very good in coaching staff. Their main task is to develop the capacity for strategic thinking and decision making in tense situations, promote teamwork and communication between individuals. Management games can be called by different terms. For example business simulators, business games, interactive learning environmental, management flight simulators, microworld or serious games. (Kudrna, Ottova, Sramkova, Edl, 2014)

The aim is to test manager games players behavior during the game. When playing, you can try system thinking instead of reactive behavior. The basis of management games are like in other games rules, the more complex they

are, the harder playing is. Even with complex rules can be free space to search for new results in the game, which enhances the attractiveness and gaming experience and creative approach develops players. (Kudrna, Edl, 2013)

In University of West Bohemia in Pilsen manager games were developed, which are used for training with employees from real companies. Within this, there is interactivity and direct involvement of all participants, and thus to a better understanding of the issue. Equally important is feedback from the participants, which helps to enhance and improve games themselves.



Fig. 2. Gaming

### Lean games

Although one cannot learn about Lean manufacturing exclusively from playing games, they do allow quick experiential learning more than reading about Lean, or listening to a lecture. Games allow players not only to learn about the interaction of particular Lean tools, but also develop richness of discussion, participation, and decisions making that are essential requirements for successful Lean implementation.

There exist many games helping to learn and practice lean methods and principles and some of them became an inspiration for creating simulation games at the Department of industrial engineering and management in Pilsen.

Within lessons at the University of West Bohemia in Pilsen students of Faculty of Mechanical Engineering created for example new manager game to explain Kanban principle.

Lego Kanban is the original simulation game created in order to explain the Kanban method. The game is intended for those interested in practical testing of difference in production management pull and push principle. Players have the opportunity to put themselves in role of supervisor or production planner, buyer or operator in the manufacture and find out what their role in the company is, which has not implemented Kanban. Afterwards players will try how to implement Kanban and how the implementation changes their job. (Kudrna, Ottová, Šrámková, Edl, 2014)

The goal of the game is a practical demonstration of planning and process management while using Kanban method. A practical application of system design (stores and supplies) is ready for players. The participants will learn the pull principle and they will recognize the main differences compared to push principle. The main purpose of deployment of simulation games in teaching and training Kanban method is the active involvement of participants, the need of teamwork and thereby establishing conditions close to practice. (Kudrna, Ottová, Šrámková, Edl, 2014)

The game simulates a manufacturing company with its customers and suppliers. The company is engaged in assembling plastic components. All production materials are purchased from one vendor and finished products are sold directly from warehouse. Players take role of workers in various positions - assembly worker, buyers, production planner, worker in input or dispatch warehouse, an economist and more. All jobs are tested before and after the introduction of Kanban. (Kudrna, Ottová, Šrámková, Edl, 2014)

Another manager game teaching principles of lean manufacturing is SMED game. This game was developed as an interactive instrument for explanation of extended SMED method. The game is designed for comprehensive usage in all branches. It can be used in wide range from specialized production enterprises up to universities. The game is as SMED method itself very variable in terms of range of usage and in terms of comprehensiveness and level of players. (Kudrna, Ottová, Šrámková, Edl, 2014).

Department of Industrial Engineering and Management at University of West Bohemia developed many other games dealing with new principles in industrial engineering. Although one cannot learn about Lean manufacturing exclusively from playing games, games do allow quick experiential learning more than reading about Lean, or listening to a lecture. Games allow players not only to learn about the interaction of particular Lean tools, but also develop the richness of discussion, participation, and decisions making that are essential requirements for successful Lean implementation.

## **Results**

This paper presented popular ways of knowledge transfer from universities into industrial practice. Despite many obstacles it is definitely a good way how to persuade and motivate industrial workers and experts to study new methods, principles and processes.

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# New trends in teacher's education.

## Educational placement of the adopted child.

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### Abstract

In Italy, the number of adopted school-age children is increasing. According to the Commission of Intercountry Adoption (2013), 3106 children were adopted, 47.5% of them are between 5 and 9 years old. The present action-research aims at exploring the spread of good approaches in schools in terms of welcoming of adopted children. For this purpose, 268 teachers of primary schools were involved in analyzing the social representation about adopted children and their family. The results show a simplified vision of the adoptive family, which is described as heroic family or, on the contrary, as a family with difficulty.

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*Keywords:* international adoption, intercultural education, teacher training, social inclusion, adoptive culture.

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### 1. Introduction

Children Adoption is the legal institution ensuring the founding the right to live peacefully in a family. Intercountry adoption – type of adoption among countries – was regulated internationally by the Hague Convention of 29 May 1993 on the Protection of Children and Cooperation in Respect of Intercountry Adoption (Fadiga, 2002). The Convention underlines the need to establish standards and safeguards to protect the child's primary interest and his or her fundamental right.

In Italy, as already highlighted worldwide (Brodzinsky and Palacios, 2005), intercountry adoption has undergone a strong growth in the last few years; according to statistical data by the Commission for Intercountry Adoption, only in 2012 about 3106 children whose average age was 5 years old and 11 months arrived in Italy to be adopted (CIA, 2013).

Intercountry adoption is rather complex in the cultural and social field (Chistolini, 2010). The children's integration into the new context may cause disorientation, discomfort so that they sometimes refuse their new adoptive educational models in favour of those of provenience. All that makes difficult the success of adoption.

In particular, school is the first place where adoptive children have the possibility to meet their new context allowing to the good achievement of the integration process (Bomber, 2011).

It's important to underline that the educational placement could be compared to an "educational journey" because it represents a crucial phase for the child in being part of his new context – with its idioms, regulations and customs

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– and sometimes also with the prejudices and the distorted representations of its members (Garro, Novara and Di Rienzo, 2013). Merely through specific and detailed educational strategies, this “journey” comes to be a fundamental step in the integration process rather than a further traumatic experience.

According to this, school becomes an important element to support the adoptive child’s learning and socialization.

The school insertion in the scholastic system could produce a critical state in the adoptive child because of his particular past and origins, especially in the adoptive child of foreign origins; in fact, the educational placement of this child could intensify cognitive and relational problems connected with adoption itself (Rosnati Palandri, 2009), due to the eradication from the country of origin, to injuries suffered, to the interaction with parents, to learning a new language and to the adaptation to unusual rules and habits.

A good school placement of the adopted child must therefore be able to rely on a social and cultural climate well-grounded on a positive representation of adoption, that is based on some particular fundamental conditions; these are a hearty and effective reception, an accompanying device support on its way through critical issues, a strong educational agreement between school and family and the collaboration among well-trained operators.

It is necessary that the educational roles of these figures can be combined to help the child to his/her own behavior by promoting successfully the strength, the hopes, the resilience and the pleasure deriving from his/her world (Schofield and Beek, 2006).

## **2.The Research**

The aim of the study was to explore the knowledge and representations that guide the educational work of teachers in responding to the adopted children’s needs. For this purpose, we have studied the teachers’ representation of the foreign/not foreign origin adopted child and his family.

### *2.1.Methodology*

The contribution is based on Grounded Theory (GT) methodology, in the conviction that it is one of the most interesting qualitative approaches in research.

GT is a research methodology that aims at exploring the meanings given to the phenomena, which are the object of the research.

The theoretic framework of reference is symbolic interactionism (Glaser and Tarozzi, 2007) from which the focus of methodology on the processes of attribution of meaning derives and they are seen as the fruit of interaction among subjects.

What is required of the researcher who uses this methodology is commitment to an interpretative activity able to shed light on the meanings attributed to the realities of the participants in the research. In order to do this, the researcher enters the field of investigation unequipped with rigid pre-existent theories, so that the research can be guided by the emerging reality from the interaction with the structural, social and temporal field of investigation itself (Mills, Bonner and Francis, 2006).

### *2.2.Participants*

268 Sicilian primary school teachers (Italy) – of whom 253 (94.4%) female and 15 (5.6%) male – between the ages of 26 and 65 years old ( $M=47.7$ ;  $sd=8.4$ ) were involved.

The proportion, although disproportionate in relation to the female gender, reflects the demographics of Italian primary school teachers, and a prevalence of women in performing teaching activities.

Their average teaching years are 20.7 ( $sd=8.4$ ); in fact, 10.1% of them has been teaching from 0 to 10 years, 43.3% from 11 to 20 and the 46.6% more than 20 years. Of these participants, 58% say they do not have adopted children experience in the classroom.

### *2.3.Procedure*

The administration of research tools took place during the educational planning upon agreement with head

teachers, and in accordance with a collective administration, that ensures full anonymity to all individuals involved.

#### 2.4. Instruments

A self-report questionnaire constructed ad hoc for this study, focuses on the collection of knowledge and social representation about the phenomenon of country/intercountry adoption by teachers. Through the use of open-ended questions the tool allows us to see:

- the images that teachers associate with the adoptive family;
- the adjectives used by the same to describe better the adopted child.

#### 2.5. Data Analysis

The collected textual data were analysed using the software packages for qualitative data analysis ATLAS.ti 5.0.

A *Hermeneutic Unit* (file that includes the texts to be analysed) that contains 553 *Primary Documents* (textual material consisting of answers to open-ended questions) was created.

An inductive approach (bottom-up) organized into three sequential stages – open, axial and selective coding – has been used in order to code the data presented in text form.

The process of coding foresaw that, in the first phase (*code in vivo*) were isolated text strings (*quotations*), subject to interpretation in order to proceed to the attribution of a code<sup>1</sup>.

Starting with the first 242 codes to emerge, we proceeded with the creation of codes of more general dimensions which define the meaning of categories which are conceptually wider (*codes families*); finally, selective coding consists in a high level conceptualisation, through which, it is possible to identify central categories – core categories or *super codes families* (CF) – to which all the others codes are somehow linked (Chiarolanza and De Gregorio, 2007).

To test the reliability of coding, two independent judges were involved; they, with the help of *memos* (notes taken about the research process, explaining the passages of contextualisation), confirmed such reliability during the different steps of encoding (Milesi and Catellanni, 2002).

#### 2.6. Results

In the Hermeneutic Unit, three super code families (*foster couple*; *foster family* and *child representation adopted*) were created in order to aggregate the 93 codes that remained after several processes of recoding, renaming and deleting.

Through the coding of collected material, ATLAS.ti was used to elaborate two maps (*Network Views*) to make analysis results more intuitive.

Network views are composed of codes and present code-to-code relations (see Figures 1 and 2).

In these networks are located core categories which were traced through the concept of “adoptive family” and “adopted child”.

In particular, from the very first findings, it became immediately obvious that the participants in the research were referring to a double meaning of adoptive family:

- “adoptive couple” that take up an adoption process;
- “adoptive family” as household that is formed after a child’s adoption.

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<sup>1</sup> For clarity, the codes are shown in italics.

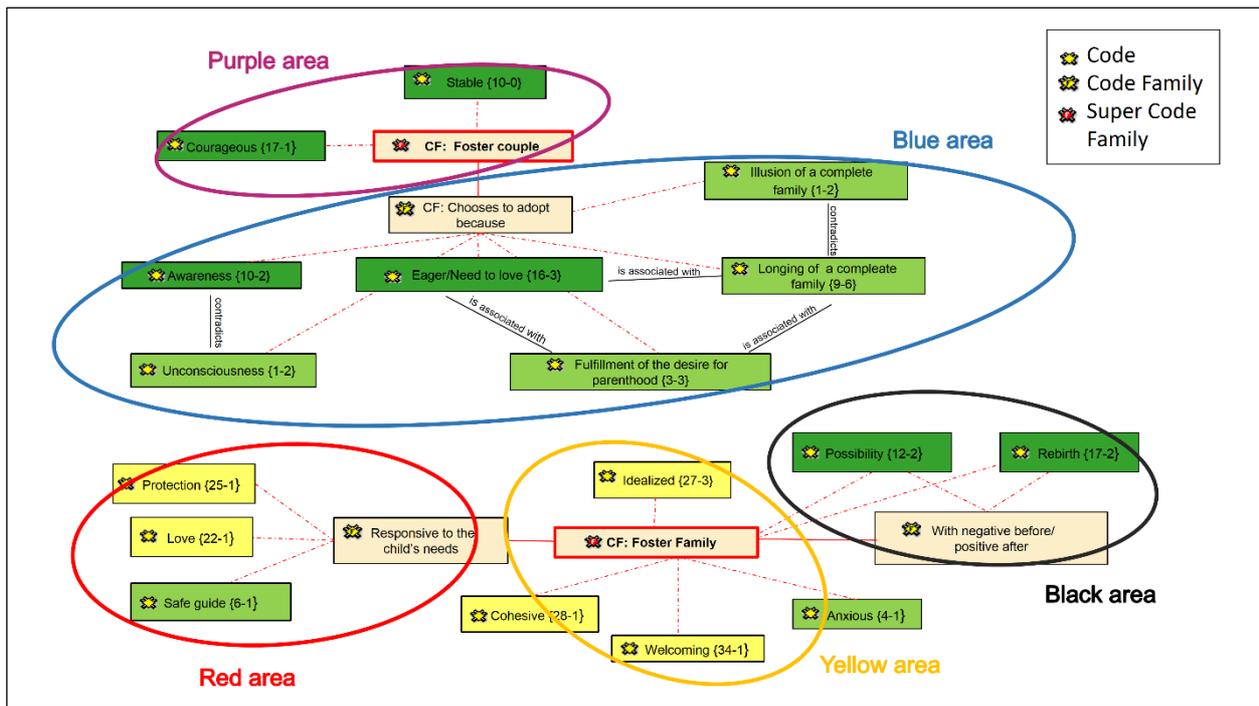


Fig. 1. Social representation of the adoptive family

In the first case, the couple (Figure 1: super code family “foster couple”; blue area) is represented by people who have the desire to establish a *family completion* and especially emerges the *need to give love* and the *desire for parenthood*. The adoptive couple, therefore, choose to adopt to provide care and protection to the child and, thus, pass from the marital dyad to a family configuration. It is a couple who acquired *awareness* both in terms of ability to procreate their own children and as appropriate maturity to welcome a foundling, creating with the latter relationship of belonging and not of possession, where in belonging there is awareness to receive a different creature from him, with his/her specific characteristics. Awareness is in contradiction with the *unconsciousness* of the couple; for teachers, the adoptive couple may decide to adopt because they are not actually aware of the difficulties that the adoptive process implies.

The adoptive couple is considered (Figure 1: purple area) to be *courageous* to make a difficult and delicate choice, that breaks the social schemes and plans to deal with the narcissistic injury of denied biological parenthood; it’s a couple ready to face the uncertainties and difficulties of the whole adoption process. For this reason it is associated with the idea of stability because they share values and solidity in their marital relationship.

The adoptive couple is considered *stable* even from an economic point of view, and this is certainly linked with the idea that the adoptive process is very expensive.

As regards the second macro-area, the adoptive family (Figure 1: super code family “foster family”) appears *cohesive*, *accepting*, a family that at times, therefore, appears *idealized* (yellow area); “responsive to the needs of the child” (code family) of *protection*, *love* and *safe guide* (red area) narrated as reassuring and soothing, ready to encourage, strengthen and sustain the relationship with their children, and their growth.

Furthermore, the passage of the foster family from “a negative before to a positive after” (black area) is recognized by teachers because adoption enables a *rebirth* and a *chance* for all involved, sanctioned by the chance to become family.

Little space, however, is devoted to the possible fragility and difficulties with which the adoptive family must grapple with the only meaning of anxiety (code *anxious*; yellow area) linked with the fear that their expectations are not fully met, and also linked with the doubts and concerns about the success of adoption. No reference to the extra



The first step is based on the adoptive family comprehension in its psychological aspects to downsize its idealised vision as perfect and heroic; instead, the second one focuses its attention on pedagogical, psychological, sociological and juridical matters that belong to foreign adopted children.

All this, the aim is to give professional qualities to redefine the educational intervention strategies in favour of foreign adoptive children's welfare in school. Therefore, it is necessary that teachers apply and carefully address the experience of adoption in order not to trivialize what these children are carriers in terms of experiences and fragilities (Chistolini, 2010).

Adopted children are constantly engaged in many efforts linked with the new context and their past history: the increased vulnerability of adopted children to educational difficulties, as confirmed by international studies (Wadsworth, 1993; Oullette, Bellau and Patenaude, 2001; Lorenzini, 2004; Davies, 2005; Palacios, Román and Camacho, 2010) are often due to their emotional weariness, to the "exhaustion in thinking" (Bowlby, 1979), and especially to the interior difficulties of the disturbed child. It is only a question linked with the difficulties due to the absence of cares but, moreover, it is important to lay stress on the traumatic experiences suffered by these children that caused them cognitive and emotional privations reflected in their linguistic and learning sphere (Guerreri and Odoriso, 2007).

It is fundamental that the educational institution and teachers recognize these efforts and don't underestimate them. On the other hand, the complexity of the school can't be excluded or denied but it is important to try organising starting from any social actor's skills.

The hardships of adopted children may, indeed, arise, continue or expand also due either to a teaching staff, or a single teacher, who leaves to spontaneity and improvisation – or even worse – common sense, answers that require indeed specific skills.

The school must be able to accept, hold and dissolve critical moments and events. In order to guide effectively the "learning journey" of the adopted child and support it in its specific development tasks common to peers, teachers must become "guardians of resilience" (Cyrulnik, 2005), so they should be able to listen, reassure, propose appropriate tasks which are always a little further, but not too much, compared to the current level of development of the child, too.

According to this, precise information, training and awareness programs for all school operators should ensure that the educational and scholastic insertion of sponsored children arrive at its ultimate goal: full integration. In fact, train and educate oneself to reception in an intercultural perspective, is an essential requirement and constitutes the only possible and more effective response to the complexity and the plurality of experiences with which each person is called to confront.

The pedagogical orientation of welcome focuses on the individual, on his learning and his needs, overcoming the concept of centrality of school and its educational path which only students have to adapt to (Bandini, 2007).

Ultimately, it appears crucial to create a territorial network of support for the school integration of adopted children, by developing the dialogue between educational services, families and community (Chistolini, 2013).

A dialogue founded on the elimination of all taboos regarding the topic "adoption" at school knowing that an increasing familiarity with diversity constitutes a *chance* for all territorial communities which – acquiring greater intercultural competence and recognizing the interdependence of all citizens' needs – will experience a growth of social cohesion and empowerment furthermore activating processes developing a sense of community.

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# News on children related to education in the Turkish printed media

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## Abstract

One of the significant problems of today's societies is the distresses and problems in the field of education. Development and progress of a country depends on its success in the field of education. Due to the rapid changes in social life and continuous developments in science and technology, education of individuals becomes even more important. At this point, the mission of printed media is to concentrate on the news that inform, educate and guide children. In this study, the contents of the news on children, which was issued in two Turkish newspapers, namely *Milliyet* and *Cumhuriyet*, for 45 days (between March 15 and April 30, 2014) will be analyzed. In the same way, by taking the headlines and contents of the news on children related to education into consideration, the factors that are emphasized in the respective news will be examined.

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Keywords: news, children, education.

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## 1. Introduction

One of the most outstanding characteristics of modern societies is that mass communication technology has a major place in people's lives. Radio, television, movies, newspapers, magazines and books have already become a part of social life. On the other hand, one of the most complicated issues of today's societies is the bothersome and lacking points confronted in the field of education. Progress and development of a country depends on its success in the field of education. Social life changes rapidly, there is a continuous development in science and technology and education of people takes a new meaning. Within this scope, in the work, titled "Children News Pieces on Education in Turkish Printed Press", the children news, published in **Milliyet** and **Cumhuriyet** newspapers -the two selected different press groups- within a time period of 45 days (March 15-April 30) will be examined for their content. In examination of the news, the title and the content of the news will be taken into consideration and the elements outstanding in the children news on education will be given consideration. Besides, the photo of the news will be examined; however criticisms and columns will be left out of the scope.

### 1.1. Definition of News

The "news" term has many definitions: "News basically is the crucial developments relating to an individual and information on the said developments. News, given place in mass media, inform people on social, political, economic and cultural developments at personal, local, national and international level. In summary, news inform,

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educate, entertain, upset, please, motivate or discourage people (Girgin, 2002:3).

In order for an action or statement to be qualified as news, it has to combine elements like realness, novelty, interestingness, cruciality and clearness in its scope. If we have to expand the said elements: the reality element in journalism is a must. Unless a news piece is based on facts, it cannot bear the realness quality. On this matter, the 6<sup>th</sup> article of Occupational Principles of Press says: “News, which can be questioned using journalism facilities, may not be published without being questioned or being sure of their accuracy.” Novelty, in other words, timeliness of a news piece is of extreme significance; an incident, which is no longer up-to-date, is deprived of its news quality. What interestingness signifies in the news language is transfer of unusual actions and statements. The reason is that modern communities pay attention to news, which directly lean on matters or issues related to them. However, sometimes cruciality element is not looked for in news with charming content. Since issues for which people may have sensitivity may have a negative or positive impact on emotions, they are found significant. Extent of sphere of influence of a news piece and the quantity of the sections following the news piece are among indicators of significance of a news piece. On the other hand, element of clearness bears significance for the target audience. This requires selection of words, communicating sentences built up with these words with a specific content integrity, observing spelling rules and arranging the news piece with a plain language by avoiding unnecessary details.

## 1.2. Definition of a Child

“A child in short and in the legal sense can be defined as the youngest member of a social community built by a married man and a woman. However, the sources define a child as a growing up human child, a minor citizen and a human being in between the periods of infancy and adolescence. We cannot say that a child is an ingrown adult; rather, he is a separate individual identity. He is a distinct living being that has to be analyzed with his mental patterns, reactions, behaviors and perceptions”. (Gönenç, 2004:391)

“All individuals at ages of 0-18 in general are regarded as children in all societies. On the other hand, the age 18 is the commonly accepted adulthood and adolescence border.” (Pembecioğlu, 1997: 253)

Every society defines a child in its own terms. “The society defines a child according to the value attributed to him in its structure. A child is a part of production and one of the units charged with functional elements as a labor power for some societies. On the other hand, a child is an outcast and is not attributed pretty much social and individual value”. (Öcel, 2002: 29)

You need a child to build up a family and generations. One of the elements, making up a family together with mother-father, is a child. The said term is used for girl or boy members of a family before adolescence period. It is possible to define a child as the youngest member of a social community made up of a married man and woman in legal marriage. Woman-man and mother-father identities of a family shape the identity of a child. Societies are defined according to the value they attribute to a child for his characteristic qualities. Initial social relations get a start in family. A child tries to deserve familial love at first by doing what they approve and share their values and manners. “Socialization process is that in which an individual gets hold of role expectations, values and manners of the society in which he exists by way of interpersonal relations”. (İnceoğlu, 2000:109).

If the development process of a child is assessed as a whole, we can conclude that there are four separate periods:

- Infancy period (ages of 0-2)
- Early childhood period (ages of 3-6)
- Latest childhood period (ages of 7-11)
- Adolescence period (ages of 12-18)

Childhood period is in general the period during which the individual is dependent on his parents. Children, who are brought up in a family environment in which emotional and social interaction and communication are healthy, frequently have a stable and solid personality. Family is the unit in which the child goes through his first social experience. Social behavioral pattern of an individual depends on his experiences of learning during childhood to a large extent. Behaviour and manner patterns exhibited in presence of a child are of great importance for his development and his future. Relationship of a child with family members forms the basis of the manner and behavior patterns he adopts during life time. For instance, familial communication and interaction with the near environment may turn a child to an insecure and anxious personality in the end; on the other hand, the person may grow up as a confident individual in such an environment. Formation of a constructive environment for the development of a child depends on affectionate and tolerant way of approach. A child, who does not receive such an

attention, may show negative types of behavior in the future. On the other hand, some societies view the child as part of economic production and attribute functional meanings to him in professional life while others expel him and do not value him in society as an individual.

Family unit at the same time fulfills an effective socialization duty in the life of a pre-school period child. Relationship between parents and a child has an impact on his approach to other people as well as his social manners and behavior. In addition, friend and school circle out of the family border shapes development of manners and attitudes of a child to a large extent. Plus; radio, television, book, newspapers, magazines and movies are the mass media, occupying a significant place in the development of a child. Such media contribute to socialization process of the child by having a negative or a positive impact on the manner and behavior patterns of the child.

The most effective support contexts provided by the family for the development of a child are as below:

- “The family gives him the feeling of confidence in order to ensure that he has a stable personality within the community.
- It prepares the proper ground in order for him to acquire social dignity.
- It forms a model with appropriate commonly accepted behavior patterns in order to ensure that he is capable in the socialization process.
- It guides him for development of commonly accepted social behavior patterns.
- While being accustomed to the conditions of the child, it solves out the problems he is confronted with.
- It assists him with acquisition of verbal and social habits needed for harmony.
- It instigates and develops the skills of the child to ensure that he attains success in school and social life.
- It supports developments of interests proper for his area of interests and capabilities.”

(Yavuzer, 1995: 138-139)

### 1.3. Definition of Education

The place education holds in our lives in every time period cannot be denied. And it is the childhood period in which educational need is the highest. In our age during which information becomes increasingly more of an issue, there are many people, who have the opinion that they are master of everything but in reality they do not know anything at all. It is ignorance or wrong education, which gives rise to this issue. Families, who still have not recognized significance of reading, are of the opinion that their children can learn things via TV, radio, computer or smart mobile phone. Superficial or wrong-lacking information is given to users by reason of the said media.

“What lies at the root of education is instillation of target behavior to individuals in other words to ensure development in personal behavior. Through education, which is the mechanism bringing about the learning process, it is ensured that people get hold of various information, capabilities, skills, manners, areas of interests and habits. When the individuals, who build the society, receive an ideal and contemporary education, the society concerned turns into an ideal and contemporary society as a result. Progress of societies and as a result nations is in direct proportion to the quality of the given education system. Progress achieved by the countries, where education level and quality are high thanks to the contemporary education systems, in almost every field particularly economy may be brought forward as a valid clue to that statement. The said countries allocate a big portion of their national income to education and make investment in human quality as they recognize how important education is in progress of societies and as a result they contribute to development of labor force quality and ensure acceleration of production, efficiency and economic development in the end... Education is not limited to giving information and instillation of target behavior to the target group. One of the basic objectives of education is to raise awareness of people and to encourage them to think and question. Education having a purpose of a superior human quality supports the target to bring up a society and a generation able to take on large-scale responsibilities to get accustomed to rapid developments and changes in science and technology in the face of globalization and integration process.” (Kihtir, 2004: 1-2)

If the relation between education and efficiency is evaluated: “Efficiency ensures efficiency and efficiency brings about happiness as a natural consequence. It is suggested that impact of education on efficiency rate and as a result development will be achieved by following three paths. The order of the said impacts is given below: to have an impact on efficiency directly by improving the quality of labor force, to have an impact on capital efficiency indirectly by providing utilities for technical development, to have an impact on behavior patterns of directors, in

other words decision makers, in an economy and to have an impact on efficiency of rational data use. In brief, education affects efficiency directly or indirectly with its economic, social and political functions; activates economic activities and accelerates development at production and consumption level". (Tosun, 1990: 127)

According to a general definition, education is: "Planned series of activities providing development in human behavior patterns to a certain extent on the basis of pre-established objectives." According to another definition: "It is the activity supporting new generations to acquire knowledge, capabilities and perceptions and to develop their personalities while preparing to take their place in the society." (Oğuzkan, 1993: 46)

According to a third definition, it is given as below: "1-To have an impact on the way a child or an adolescent is brought up 2-To bring up a person in an area of activity; integrity of ethical, cultural, intellectual and technical data acquired by a person or group in this area" (Büyük Larousse Sözlük ve Ansiklopedisi, 1994: 3550)

Plus, education is a fundamental human right, taking place in the Convention on the Rights of Children. "In order for education to be classified as a right, it has to involve the following conditions at minimum:

- It has to encircle everyone.
- It has to be given within an adequate time period.
- It has to be a life-long available service.
- As a principle, it has to be given free as a public service.
- It has to have a contemporary, scientific and vital content.
- It has to be utilized in a free, democratic and participative environment.
- It has to be diversified according to areas of interests and capabilities not to mention general knowledge acquisition.
- It has to be given by hand of experts and particularly well-trained instructors" (Kihtir, 2004: 13)

On the other hand, "According to Durkheim, education holds a significant place in socialization of children... By way of education and particularly history, children attain a perception uniting the community made of many separate individuals in the society." (Giddens, 2008: 732)

If the time periods of a person are assessed: "The most significant time period for education is childhood period. At this point, the young-age human being going through his childhood period has to be understood. Essentially, it is a duty assigned for grown-ups to understand children. Moreover, what grown-ups have to do primarily is to know this young person to be brought up better and to prepare him to a stable and healthy life in the end. This becomes possible after development of his qualities open to improvement as well as education and upbringing." (Yavuz, 1992: 23)

"Education is the only solution in a world, where there are a great many issues like raising fundamental human rights awareness, ensuring a sustainable social and economic development, solution of ethnic issues, putting an end to inequality existing between sex groups, stopping abuse of child labor. Quality on a life-long learning basis is the key to the person's ability to take his occupational and personal future under control and more efficient participation in society... The number of people receiving longer education periods increases and enrollments in higher education rise. On the other hand, pre-school education quality improves. Policy makers have to follow such significant tendencies and have to show sensitivity to such areas". (Kihtir, 2004: 35-36)

## 2. Objective and Method

In the study, titled "Children News Pieces on Education in Turkish Printed Press", the target is to examine how and from which perspective the child is assessed in the educational news pieces in newspapers.

Within the scope of this study, children news pieces on education, published in Milliyet and Cumhuriyet newspapers within a time period of 45 days (March 15 – April 30 2014), will be examined for their content and the elements highlighted in the said newspapers will become certain. In selection of the dates, the time period in which the schools function, has been given consideration. In examination of the news pieces, the title and the content of the news piece will be of priority and the elements highlighted by newspapers in children news pieces on children will be attached importance. In this research, the children news pieces on children and the news photos will be examined; on the other hand, criticisms and columns will be left out of the scope of the study.

## 3. Findings and Evolution

In a time period of 45 days assigned for the research in which the education process went on in schools, the total number of children news pieces on education that took place in **Milliyet newspaper** was 34. While 29 of the said

news pieces were published with a photo, 5 of them were published without a photo. All of the news pieces had the interior developments as their content; on the other hand, overseas educational developments were not given place. In 4 of the present news pieces, social content was highlighted. While the policies of other schools, application terms, price policies of private schools were given place in 10 of 34 news pieces, personal success stories of students took place in 6, social responsibility projects and organizations developed by various organizations or persons in 8 and finally the practices, announcements, examination application terms, examination dates and examination results of the Ministry of Education in 10. As can be deduced from the said data, Milliyet newspaper gave place to practices of other schools or practices of the Ministry of Education to a large extent (58 %) and published the majority of the news pieces (54,1 %) with a photo.

In a time period of 45 days, fixed for the research, The total number of children news pieces on education that took place in **Cumhuriyet** newspaper was 31. While 15 of the said news pieces were published with a photo, 16 of them were published without a photo. All of the news pieces had interior developments as their content; however, overseas educational developments were not given place.

In 2 of the said news pieces, social content dimension was highlighted. In 12 of 31 news pieces, practices of other schools, application terms, price policies of private schools were assessed; on the other hand, in only 1 of them, personal success stories of students; in 5 of them, social responsibility projects and organizations developed by other organizations or people in the field of education; in 11 of them, practices and statements of the Ministry of Education, application terms for the examinations it holds, examination dates, examination results; in 1 of them informative data in relation to KidZania, a city designed for children opened with efforts of private entrepreneurship in Istanbul and combining entertainment and education and in 1 of them, the stories of children of families dealing with agriculture taking to road for seasonal work without taking their school reports were given place. As can be deduced from the said data, Cumhuriyet newspaper gave place to practices of other schools or the Ministry of Education in the children news pieces on education to a large extent (73,6 %) and almost half of the news pieces (48 %) was published with a photo.

As can be deduced from the data in this text, Milliyet newspaper gave place to news with education content more than Cumhuriyet newspaper. Photos and personal success stories are given place in a higher number of news pieces. However, we can say that in both newspapers, readers were deprived of developments in the field of education in various parts of the world as far as the world we are living in is a globalizing world is concerned. It will be a plus if newspapers correct their deficiencies and make mention of developments in this process.

In Turkish mass media, we are frequently confronted with news with discouraging content. For instance, newspapers or televisions give place to news pieces touching on families, using violence on their children, leaving or murdering them. Social news pieces in which low standard life conditions are made mention of are given place on newspapers more than childhood success stories almost every day.

By way of news pieces in the context of which unfavorable developments take place, social positions of children on the third page of newspapers are ignored in a sense. They give place to children, who are in general a member of low classes in a socio-economic and cultural sense, in such news pieces as if it was an acceptable matter. Such news pieces, which do not make any contribution to readers and which are given to reader for magazine, take away curiosity of people. Content of the said news pieces, made of large photos and short texts, are built by easy sentence structures appealing to everyone and are reinforced with a great many adjectives.

While giving place to news pieces in newspapers making a mention of children, journalists have to be more careful in the way they view children and such pieces should not have an appealing nature. People charged with issuing the news pieces should act after giving a thought to the way they will have an impact on the subject of the news pieces in the future. It should be expected from journalists to be more sensitive in issuing the news pieces so as to provide a right to live and receive education in more safe environments to all children as a requirement of children's rights.

3<sup>rd</sup> page news pieces with violent content should be narrowed down and instructive, informative, leading news pieces targeting children should be given place more. More attention should be given to publication of texts and photos, which will contribute to the way the children grow up to be healthy adults in society, support their mental and physical health and add a plus to their education process.

In our country, where the rate of young population is high, news pieces with underaged content should be prepared meticulously. What press should do at this point is to give place to informative, instructive news pieces or to ones leading them to accurate occupations instead of touching upon cases in which children and the young, who are the future of the society, are looked down upon, accused and given in victimized conditions.

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# O IMPERATIVO DA PRÁTICA NA FORMAÇÃO CONTÍNUA DE PROFESSORES DE LÍNGUAS: ALGUMAS CONSIDERAÇÕES

Magali Saddi Duarte<sup>104</sup>

## Abstract

This paper discusses the new trend of continuing education for language teachers which takes into account the practical rationality that operates in a way to dictate the teachers' actions, the type of investigation adopted, the moments of reflection, the intervention of a researcher with a recognized mastery of the field language. The instrumental rationality studied reveals a break and continuity with technical rationality paradigm. Based on dialectic materialism and Critical Theory of the Frankfurt School, it was verified that the lack of comprehension of the socio-historic aspects that permeate reality entails a limitation in the continuing education of the teacher.

## Keywords

Continuing education; Language teachers; Practical rationality; Technical rationality; Dialectic materialism

## Introdução

As discussões sobre a formação do professor no Brasil se intensificaram no período que antecedeu a aprovação da Lei n. 9394/96, de Diretrizes e Bases da Educação Nacional. Iniciaram-se críticas ao modelo de formação de professor denominado *racional técnico*, anteriormente conhecido por pedagogia por objetivos ou pedagogia tecnicista. Com marcante influência no campo educacional nas décadas de 1960 e 1970, o paradigma da racionalidade técnica trazia uma concepção de currículo vinculada à orientação tecnicista, cuja origem se deu na América do Norte, com o fim da Segunda Guerra Mundial. Este artigo – tem como objetivo apreender e problematizar a sugestão de mudança paradigmática da epistemologia da racionalidade técnica para a epistemologia da racionalidade prática orientação feita na área de língua estrangeira por meio da linguística aplicada. Alguns linguistas aplicados com acentuada produção acadêmica e influência na área de formação de professores de línguas passaram a investigar a formação desse profissional com base na abordagem do professor reflexivo crítico, em que a prática é foco tanto para a reflexão quanto para as sessões colaborativas. Donald Schön, filósofo e pedagogo norte-americano, propõe um modelo de formação que tenha como base o ensino prático reflexivo. Para o norte-americano é na perspectiva da reflexão, com base nos problemas que surgem cotidianamente na prática dos profissionais que se poderá pensar uma base epistemológica, tendo como pressupostos o conhecimento-na-ação, a reflexão-na-ação e a reflexão sobre a ação. Na proposta de mudança paradigmática questionamos se a abordagem reflexiva, por si só, permite ao professor atingir autonomia, conscientização, emancipação, criticidade, dentre outras categorias que permeiam seus pressupostos. Não se pode desconsiderar que o sujeito insere-se numa dada realidade, e, por conseguinte, há de se levar em conta sua historicidade e os nexos constitutivos dessa história. Daí as perguntas propostas para este estudo: O que a ação do professor de língua inglesa revela sobre a relação teoria e prática na sua formação contínua? Em que medida o procedimento racional operado pela epistemologia da prática referencia o conhecimento teórico do professor de inglês? Como as categorias experiência, prática, reflexão e investigação fundamentam o procedimento da racionalidade técnica?

## FUNDAMENTAÇÃO TEÓRICA

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As mudanças político-econômicas e culturais ocorridas devido à crise do sistema capitalista só se intensificariam no Brasil na década de 1990, surgindo, assim, a proposta de novas políticas educacionais no campo da formação de professores. De acordo com Kuenzer (1999, p.166), “a cada etapa de desenvolvimento social e econômico correspondem projetos pedagógicos, aos quais correspondem perfis diferenciados de professores, de modo a atender às demandas dos sistemas social e produtivo com base na concepção dominante”. Assim, podemos verificar que ao se dar o esgotamento de um modo de produção, inevitavelmente, o projeto pedagógico dominante passa a sofrer críticas e propostas de superação são sugeridas. Antunes (2000, p. 35) afirma que o modelo de produção taylorista/fordista começou a dar sinais de esgotamento na década de 1960, e, sobretudo, no início da década de 1970, “o capitalismo viu-se frente a um quadro crítico acentuado.”.

Com a globalização e com a reestruturação produtiva houve a demanda de uma educação de novo tipo, “estando em curso a construção de uma nova pedagogia e, portanto, de outro perfil de professor.” (KUENZER, 1999, p.169). É nessa mudança político, social e econômica que se iniciam, no exterior, na década de 1980 a proposta de superação do paradigma da racionalidade técnica, sugerindo o paradigma da racionalidade prática.

Em oposição ao paradigma técnico, Diniz Pereira (2008, p. 24), cita Carr e Kemmis (1986), para explicar que em modelos práticos de formação docente,

a visão prática concebe a educação como um processo complexo ou uma atividade modificada à luz de circunstâncias, as quais somente podem ser ‘controladas’ por meio de decisões sábias feitas pelos profissionais, ou seja, por meio de sua deliberação sobre a prática. De acordo com essa visão, a realidade educacional é muito fluida e reflexiva para permitir uma sistematização técnica.

Para Diniz Pereira (1999, p. 113) é no paradigma da racionalidade prática que

o professor é considerado um profissional **autônomo**, que reflete, toma decisões e cria durante sua ação pedagógica, a qual é entendida como um fenômeno complexo, singular, instável e carregado de incertezas e conflitos de valores. De acordo com essa concepção, a prática não é apenas lócus da aplicação de um conhecimento científico e pedagógico, mas espaço de criação e reflexão, em que novos conhecimentos são constantemente gerados e modificados (grifo meu).

Pérez-Gomez (1995) ao defender o paradigma, em questão, explica que o ponto de partida do modelo da racionalidade prática é a própria prática, e que com base nela o professor pode analisar e interpretar suas atividades e, também, elaborar suas teorias.

O americano Donald Schön, precursor da abordagem denominada professor reflexivo, critica a formação de profissionais que tem como pressupostos teóricos o paradigma da racionalidade técnica e defende uma proposta de formação profissional com ênfase na prática. Para Schön (2000, p.17), as situações problemáticas que surgem atualmente na prática “escapam aos cânones da racionalidade técnica”. No entendimento do autor,

quando uma situação problemática é incerta, a solução técnica de problemas depende da construção anterior de um problema bem-delineado, o que não é, em si, uma tarefa técnica. Quando um profissional reconhece uma situação como única não pode lidar com ela apenas aplicando técnicas derivadas de sua bagagem de conhecimento profissional. E, em situações de conflito de valores, não há fins claros que sejam consistentes em si e que possam guiar a seleção técnica dos meios (SCHÖN, 2000, p.17).

Dessa forma, Schön, propõe, então, um paradigma educacional que tenha como base o ensino prático reflexivo. Para ele é na perspectiva da reflexão, com base nos problemas que surgem cotidianamente na prática dos profissionais (não necessariamente a de professores, mas pode se dar em qualquer profissão) que se poderá pensar uma base epistemológica, tendo como pressupostos o conhecimento-na-ação (*knowing-in-action*), a reflexão-na-ação (*reflection-in-action*) e a reflexão sobre a ação (*reflection-on-action*). O primeiro, conhecimento-na-ação, refere-se ao conhecimento presente no desenvolvimento das ações profissionais, ou como diria Schön (1983, viii), o conhecimento tácito. De acordo com este autor, o conhecimento que está *na ação* nem sempre é passível de ser verbalizado, podendo ser expresso por meio da *performance*. O segundo, reflexão-na-ação, diz respeito ao conhecimento gerado a partir da própria ação. O terceiro, reflexão sobre a ação, a reflexão se dá retrospectivamente sobre a ação realizada. (SCHÖN, 2000).

Nesse novo paradigma Schön cunha a expressão *talento artístico profissional*, que está relacionada às competências desses profissionais demonstradas nos processos artísticos e intuitivos. Ao discorrer sobre a epistemologia da prática, ele explica que

nessa visão, reconheceríamos como um caso-limite as situações nas quais é possível fazer uma aplicação rotineira das regras e dos procedimentos existentes a situações problemáticas específicas. Para além dessas situações, por regras, teorias e técnicas conhecidas trabalham em instâncias concretas, por intermédio de uma arte que consiste em uma forma limitada de reflexão-na-ação. E, para além destas, reconheceríamos casos de diagnósticos problemáticos nos quais os profissionais não apenas seguem as regras de investigação, mas também às vezes, respondem a descobertas surpreendentes através da invenção imediata de novas regras. Esse tipo de reflexão-na-ação é fundamental para o talento artístico com o qual os profissionais, muitas vezes, compreendem situações incertas, únicas e conflituosas (SCHÖN, 2000, p. 38).

Na epistemologia da prática alternativa, sugerida por Schön (2000, p. 38), o talento artístico profissional é entendido em termos de reflexão-na-ação e cumpre um papel central na descrição da competência profissional. Nessa perspectiva, o profissional pode se deparar com situações em que “é possível fazer aplicação rotineira das regras e dos procedimentos existentes a situações problemáticas específicas”. Para as situações problemáticas não específicas, ‘regras, teorias e técnicas conhecidas trabalham em instâncias concretas, por intermédio de uma arte que consiste em uma forma limitada de reflexão-na-ação’. Mas ainda existem outros “casos de diagnósticos problemáticos nos quais os profissionais” além de seguirem as regras da investigação, “às vezes respondem a descobertas surpreendentes através da invenção imediata de novas regras” (SCHÖN, 2000, p. 38). Neste último caso, o autor diz que a reflexão-na-ação é muito importante para o talento artístico do profissional, uma vez que o ajudará a compreender “situações incertas, únicas e conflituosas” (SCHÖN, 2000, p. 38). De acordo com Schön, a *performance* habilidosa inerente ao profissional não precisa ser explicada ou descrita pelo profissional.

O modelo de formação profissional (SCHÖN, 1983) pressupõe um conhecimento inerente ao professor, que é capaz de refletir sobre sua ação e tomar decisões que se fizerem necessárias ao desenvolvimento de sua prática. É por meio da adoção desse modelo, segundo seus seguidores, que se poderia formar um professor autônomo; isso, porque ele permite a reflexão, a partir da qual o professor torna-se capaz de tomar decisões com base em sua ação pedagógica.

Como consequência da guinada do paradigma que embasa a formação do professor, Diniz-Pereira (1999) descreve, em linhas gerais, o perfil que o professor da educação básica deve ter mediante uma formação que

- seja capaz de compreender os processos humanos mais globais;
- seja capaz de compreender os fundamentos das ciências e de expressar uma gama de conhecimentos;
- contemple a experiência de trabalho coletivo em detrimento do trabalho individual, no sentido de que sua formação se dê na perspectiva do professor reflexivo;
- leve o professor a pesquisar.

A proposta de formação com evidenciada centralidade na prática também nos chega por meio da literatura portuguesa, sobretudo pelas produções de Antonio Nóvoa (1995) e Isabel Alarcão (1996). De acordo com o pensamento de Nóvoa (1995), a formação que importa, não está no acúmulo de cursos, ou de conhecimentos, ou de técnicas, mas na capacidade de desenvolver um trabalho de reflexividade que seja crítica no que diz respeito às práticas e também a construção de uma identidade pessoal.

A reflexão defendida pelos teóricos, que defendem uma supremacia da prática em detrimento à teoria, não se propõe pensar as questões sociais tendo como horizonte a mediação dos fatos para o possível entendimento do que ocorre na realidade; ao contrário, limita-se à resolução de problemas pontuais que acontecem no cotidiano da sala de aula. Conforme mostra Celani, a visão de Schön

de reflexão, “na ação” e “sobre a ação”, oferece um arcabouço útil para se explorar as possibilidades de transformações nas representações dos professores relativas a ensinar e aprender inglês, pois está orientado para a solução de problemas e a criação de hipóteses. Está relacionado a princípios e não a regras. A reflexão, no contexto educacional, envolve a substituição do conhecimento pedagógico por perguntas que decorrem da prática pedagógica. Esta é também a visão de construção de conhecimento de Freire: um

conjunto de reflexões, recriadas à luz de perguntas e discussões a fim de “iluminar” a realidade (Freire e Schor, 1986, p. 25). (CELANI, 2003, p. 26).

Para a autora, é na educação reflexiva e no ensino reflexivo que se pode pensar em ‘emancipação’. Nela, não há preocupação com o acúmulo de conhecimento, mas, antes, com a melhoria da qualidade da prática. Ainda de acordo com a pesquisadora,

na visão positivista de educação, o conhecimento é entendido como resultante da pesquisa, desenvolvido por alguém, que não o professor, dentro de rigorosos padrões científicos, generalizável e aplicável a qualquer situação, enquanto que na visão reflexiva a imprevisibilidade das diversas situações da sala de aula faz com que o conhecimento seja questionado a cada momento e seja reconstruído a partir da reflexão. Deste modo, a reflexividade passa a estar embutida nas formas de conhecimento da modernidade (Giddens, 1991, apud BARNETT, 1994, p.23). E o professor se torna um pesquisador de sua própria prática (CELANI, 2001, p. 26).

A questão de uma formação centrada na prática exige, também, que o professor seja produtor de conhecimento, ou seja, ele precisa ser um pesquisador da sua prática. A noção de professor pesquisador surgiu na Inglaterra na década de 1970 com o professor e pesquisador Lawrence Stenhouse (DICKEL, 2008). Para Stenhouse (1996, p. 38) citado por Dickel (2008, p. 56), “empregar a pesquisa significa realizá-la”. Na esteira da afirmação do autor inglês, Carr e Kemmis (1988), citados por Dickel (2008, p. 56) “defendem que dizer isso é ir além da idéia de um professor como usuário reflexivo e crítico do saber elaborado por outros”.

A exemplo de autores nacionais, tais como: Diniz Pereira (2008), Dickel (2008) e internacionais: Stenhouse (1968); Carr e Kemmis (1988); Zeichner (1995), que trabalham na perspectiva da racionalidade prática, Rosa, sugere uma formação de professor que contemple o ‘processo investigativo’ que vem materializar-se por meio da ação reflexiva. Senão, vejamos:

inseridos num cenário complexo, convocados a realizar um trabalho desafiador, os professores precisam ser reconhecidos e reconhecer-se como sujeitos ativos, produtores de suas realidades e capazes de intervir e transformá-la. O desenvolvimento de uma postura investigativa a respeito do mundo ao seu redor através de um olhar questionador, sistemático, consistente e teoricamente fundamentado - características inerentes ao trabalho do pesquisador - coloca-se agora como desejável ao trabalho do professor (ROSA, 2002, p.169).

De fato, a investigação vem a ser um pressuposto básico da epistemologia da racionalidade prática. Diniz-Pereira (2008) entende a investigação realizada por educadores como estratégia para a construção de modelos críticos e emancipatórios de formação docente.

Celani (2003) ao discorrer sobre a formação continua do professor propõe aos professores o ‘agir colaborativo’, inaugurando dessa forma, uma nova relação entre Universidade e Escola, e, entre ambas e uma entidade particular de ensino de línguas:

o quadro teórico que embasa este programa enfatiza novas formas de relacionamento entre, por um lado, a Universidade e a Escola, e, por outro, entre ambas e uma entidade privada de ensino de línguas, ao mesmo tempo em que introduz mudanças conceituais e metodológicas quanto ao processo de pesquisa na sala de aula, o que pressupõe (...), entre outros, novas questões epistemológicas, técnicas, políticas, éticas, procedimentais, pessoais e educacionais e, portanto, novas questões de pesquisa quanto ao ensino-aprendizagem e formação de professores, bem como novas maneiras de respondê-las. Nesse tipo de pesquisa, todos os envolvidos colaboram na problematização e construção de sentidos sobre as teorias de ensino-aprendizagem e sobre o discurso da sala de aula. Partindo-se do pressuposto de que não há uma forma única de solução de problemas na Educação (...), dada a diversidade de contextos, de objetivos e de objetos a serem estudados, o que interessa aos responsáveis por este programa é a análise de cada situação em contextos particulares. (CELANI, 2003, p. 27).

O destaque para a mudança do papel do professor, sustentado pelas transformações ocorridas no processo histórico, e a posição política dos teóricos em fazer da educação um campo de atuação que possibilite a formação de professores críticos para uma consequente mudança social tem como consequência um outro modelo de formação que se denomina modelo da racionalidade crítica, que tem em Carr e Kemmis (1986) sua defesa.

Carr e Kemmis (1986, p. 156), citados por Diniz Pereira (2008, p. 28), ao tratarem sobre o modelo crítico, dizem que

ele carrega uma visão de pesquisa educacional como análise crítica que direciona a transformação da prática educacional, os entendimentos sobre a educação, e os valores educacionais daqueles envolvidos no processo, e as estruturas sociais e institucionais, as quais fornecem o esqueleto para sua ação. Nesse sentido, uma ciência da educação crítica não é uma pesquisa sobre ou a respeito de educação, ela é uma pesquisa na e para a educação.

Apresentar a epistemologia da prática como princípio básico da formação do professor orienta-nos a pesquisar seus fundamentos e o procedimento racional que a envolve. Isso não só porque o cenário histórico nos provoca a buscar entendimento sobre as mudanças ocorridas no mundo contemporâneo, sobretudo no que se refere às políticas sociais, mas também porque é papel dos educadores tentar apreender o que ocorre no mundo no que diz respeito ao conhecimento produzido e às transformações históricas.

As reformas promovidas na educação e as mudanças nas produções teóricas são sempre justificadas pelo desenvolvimento histórico, pelas transformações ocorridas no mundo político, econômico, cultural e social. A contundente crítica ao modelo de racionalidade técnica sugere a superação e a substituição desse modelo pela racionalidade prática. A abordagem do professor reflexivo, que se insere no modelo de racionalidade prática, pressupõe a ideologia de que o professor alcançará autonomia, emancipação, criticidade e conscientização (CORACINI, 2003, p. 307). Ora, o alcance das categorias mencionadas pela racionalidade prática: autonomia, criticidade, emancipação e conscientização não podem ser alcançadas caso não haja uma real compreensão do que ocorre nas determinações históricas. Isto é, do ponto de vista do materialismo histórico e da teoria crítica da Escola de Frankfurt, na sociedade administrada como a que se vive, pouco provável que se obtenha autonomia ou criticidade. Os princípios de formação docente, propostos pela racionalidade prática, só podem promover as mudanças almejadas pelos teóricos, tais como, transformação social, autonomia e criticidade do professor, dentre outras, mediante uma proposta em que a possibilidade da existência de classes esteja superada. Nesse sentido, alegamos que a substituição do paradigma da racionalidade técnica pelo paradigma da racionalidade prática é mais uma luta de poder, em que diferentes concepções de mundo se põem, e cuja pretensão é a obtenção de hegemonia. Além disso, a epistemologia da prática, assim como a epistemologia da racionalidade não se expressam tendo como suposto a totalidade, na medida em que não percebem a realidade social como um todo orgânico.

Coracini aponta a incoerência da epistemologia da prática e critica o fato de ela não se diferenciar do positivismo presente na racionalidade técnica ao tentar sistematizar tudo:

(...) essa tentativa de esgotar o assunto, sistematizando tudo – o tempo (velocidade), o momento (quando refletir), os lugares (onde), o método (como) e o objeto da reflexão (sobre o que refletir) – mostra claramente que se trabalha com situações ideais, próximas do ideal de verdade, objetividade e racionalidade, características que essa abordagem partilha com o positivismo que ela fortemente recusa (CORACINI, 2003, p.308).

### **Considerações Finais**

A formação reflexiva do professor é “atravessada pela visão cognitivista, linearizante e homogeneizante da aprendizagem, pela concepção de linguagem transparente – e pela concepção de sujeito centrado, consciente e inteiro (completo)” (CORACINI, 2003, p. 317), pois “é herdeira da tradição ocidental fundada na racionalidade e, portanto, na consciência e na crença de que, como indivíduos (indivisos, não-divididos, portanto, unos), centrados, podemos atingir o auto e o heterocontrole dos processos cognitivos” (CORACINI, 2003, p. 317).

No campo da Educação, Freitas ao discutir a pouca significância dada ao tema formação de professores, alerta para o praticismo que se busca engendrar nesse novo modo de formação. O autor destaca que nele o “conceito de ‘prática

social' tende a ser reduzido ao conceito de 'problemas concretos', e os últimos orientam a formação do educador.” (FREITAS, 1992, p. 96-97). Assim, Freitas alerta o leitor para os riscos que a formação teórica do educador corre. Para ele não se trata de inverter a ênfase no currículo de formação do professor dando primazia à prática. Trata-se, pois, de “adotarmos uma nova forma de produzir conhecimento no interior dos cursos de formação do educador.” (FREITAS, 1992, p. 96).

Ainda conforme Freitas, o que está em evidência é um neotecnicismo, uma vez que, as propostas veiculadas para a formação do trabalhador serem compatíveis com o objetivo de atender às necessidades do novo padrão de exploração da classe trabalhadora. Freitas esclarece que denomina de neotecnicismo “a retomada do tecnicismo dos anos 70 sob novas bases. No entanto, mantém-se aqui sua característica fundamental: uma análise da educação desgarrada de seus determinantes históricos e sociais.” (FREITAS, 1992, p. 98).

Shiroma (2003) ao discutir as várias concepções de profissionalização, afirma que um dos *slogans* utilizado na proposta de modelo de racionalidade prática, retoma os princípios da Gerência de Qualidade Total, que surgem nos anos de 1980 e 1990, para discutir e analisar a proposta de formação que, segundo ela, defende a “extirpação dos conteúdos que não seriam diretamente aplicados em sala de aula e estabelecendo a primazia da prática.” (SHIROMA, 2003, p. 63).

A autora faz referências à proposta do Diretor executivo do QCA (*Qualifications Curriculum Authority*), o britânico Hargreaves e à UNICEF como forma de explicitar suas preocupações acerca das novas propostas de formação de professor. Segundo Shiroma, o professor de Educação da Universidade de Cambridge, presidente do Comitê de Treinamento e Desenvolvimento de Professores Universitários e membro da *Task Force on Standards in Education*, Hargreaves argumenta que “a forma de melhorar a eficiência e eficácia das escolas é adotar o modelo de divisão técnica do trabalho.” (SHIROMA, 2003, p. 64). A autora avalia que essa proposta vai ao encontro das determinações feitas pelos organismos internacionais. Para exemplificar sua análise, Shiroma faz referência ao documento da UNICEF (2000), redigido por Peter Buckland intitulado *Making quality basic education affordable: what we have learned?*, que sugere que “investimentos na formação em serviço, apoiados pela educação à distância, são preferíveis ao treinamento inicial como estratégia para expandir rapidamente o fornecimento de professores e providenciar um *estoque de professores relativamente baratos (sic)*.” (SHIROMA, 2003, p. 64) (grifos no original). A essa proposta de formação de professores com menor custo e baixa qualificação, a autora designa de proletarização dos docentes.

Em 1992 Freitas já chamava a atenção para o fato de que havia um temor de que “o novo padrão de exploração das classes trabalhadoras, (...) reacenda uma contradição importante no seio das demais contradições do sistema capitalista: a contradição entre explorar ou educar” (p. 93). O professor faz as considerações de Shiroma (2003) referentes à formação de baixo custo e de má qualidade do professor. Critica ainda, o fato de algumas ideias sugerirem a eliminação da formação pré-serviço e enfatizar apenas o treinamento em serviço. O autor observa nesta proposta mais uma forma de empobrecimento da formação do professor. Nesse sentido, Shiroma (2003, p. 75) afirma que a decisão da reforma em retirar da formação de professores nas universidades foi uma medida que contribuiu “para a consecução deste objetivo (proletarização docente) na medida em que pretendia desqualificar os professores, oferecendo-lhes treinamento rápido e barato, e formando, por extensão, um considerável ‘exercito pedagógico de reserva’.”

Acerca da formação de professores de inglês, verifica-se que a maioria dos linguistas aplicados que trabalham com formação de professores adota a perspectiva do professor reflexivo crítico como paradigma a ser seguido na formação contínua do professor. Pensamos ser necessária a construção de uma análise crítica a respeito dessa epistemologia, pois acreditamos que este paradigma, por si só, não é capaz de transformar, mas tão somente reformar ou adaptar uma realidade que volta e meia precisa ser reajustada.

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# Obtainment and management of informal learning experiences among saved life experiences via a life logging system: an observation of a software developer

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## Abstract

In this study, process of obtainment and management of learning experiences by using a life logging system, that captures camera shots and screenshots spontaneously and continuously, is applied and evaluated in scope of a software developer's informal learning experiences. Life logging system is applied for a month by the first author of this paper and application results are evaluated with the help of semi-structured interviews and logs by both of the authors. As a result of the evaluation process, it is seen that life logging system carries an important potential for being an effective tool for managing informal learning experiences of software developers.

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*Keywords:* Life logging, informal learning, recording of learning experiences, management of learning experiences

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## 1. Introduction

Roots of the life logging researches are based on Memex vision of Bush in 1940s (Bush, 1945). This vision, which became real with the help of Mann's wearable computer experiments in 1990s (Mann, 1997), is accelerated with Aizawa's wearable computer experiments for saving everything sensed (Aizawa et al, 2004) and Microsoft's SenseCam Project (Hodges et al., 2006). A couple of years later, Bell was able to save all the information he saw, heard, read. Individuals with memory problems were able to cope with their problems with the help of images taken every 30 seconds with the help of SenseCam (Gemmell et al., 2002). Today, life logging devices became widespread and turned into consumer products. Producers of life logging devices and software gathered under Quantified Self movement (<http://quantifiedself.com>) and started organizing international conferences semi-annually.

Individuals catch records belonging to their daily life individual experiences via life logging systems. Later, they can obtain results, which can improve their life quality, by working on these records. Mutlu (2014) suggested an approach to obtain learning experiences and manage them with images saved by life logging and in order to support lifelong learning he also developed a series of software for easing the application of this approach. He experimented the applicability of the approach called as "management of learning experiences" and the tools related to it with his friends (Mutlu et al., 2014).

Management of learning experiences approach includes steps such as (a) saving life experiences via life logging tools, (b) interpreting the saved experiences, (c) creating a personal database by listing the contexts accompanying these experiences, (d) collecting learning experiences among life experiences and giving them a signification, (e) planning, control and evaluating learning experiences

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Software, which takes screenshots at each 30 seconds in order to capture life experiences in virtual environments and takes camera shots from computers at each 30 seconds in order to save experiences in physical environments, is developed. The images caught by both of these two software are saved on OneDrive (SkyDrive) cloud environment.

An experience processing software, (AllMyListsLE) which access images as a form of history tree and enables users to create unlimited number of entries for commenting on the daily, monthly and yearly nodes, has been developed. With the help of the experience processing software, it is possible to log entries such as events belonging to images caught by a chosen device with specific software; time sections belonging to a specific month and stories belonging to a specific year. By using the same software it is possible to create a personal database via tree structure; tag learning experiences within the life experiences such as “formal learning”, “non-formal learning” or “informal learning”; create planning, control and evaluation lists such as to do lists for future, done lists for present and completed ones list for past in order to ease the management of learning experiences.

Software developers are the first ones who realized the need for lifelong learning and tried to manage lifelong learning processes efficiently. From development of the first computer in mid 1940s to today, computer software and hardware industries developed more than any other industry and this development continues gradually. A software developer gains fundamentals of software engineering during his/her college years and after his/her graduation, he/she allocates much of his/her time for non-formal and informal learning experiences in order to increase his/her knowledge and abilities in software development processes.

In this study, attainability and manageability of informal learning experiences of software developers are researched by using management of learning experiences approach. With this aim, life experiences of the first author of the paper, who is also a software developer, is recorded for a month via life logging system and informal experiences are tried to be determined among software development experiences then they are tried to be managed by using experience processing software. Application is evaluated by both of the authors via observations, written logs and semi-structured interviews.

## **2.Method**

### *2.1.Action Research*

In this study, action research method is applied. According to Kemmis and McTaggart (1988) action research is a common self-reflective investigation technique which is carried out by participants in order to realize their own social or educational activities and the situations at which these applications take place as well as to develop rationalities and judgments related to them (McNiff and Whitehead; 2002). In researchers which are required the researcher to apply the action on his/her own, observe himself/herself during the action and evaluate himself/herself; action research method is preferred because it includes an applicable and manageable process. Action researches for developing a new system, determining problems of an existing system or upgrading it are usually designed as action cycles. In this study, it is aimed to determine the new findings and results of an approach, an approach which is tested and developed and its applicability is also tested within an area defined by certain lines. Because of that action research is designed as sole action cycle which includes (a) determining the action research question, (b) defining the research, (c) planning and applying the action, (d) collecting data by observing the action, (e) evaluating observation results, (f) reflecting the results critically.

### *2.2.Question of Action Research*

If a software developer records his/her daily life experiences with a life logging system can he/she capture and manage informal learning experiences among them?

### *2.3. Definition of The Research*

In this study daily life experiences of the first author is recorded via a life log system, then they are scanned in order to find knowledge work experiences in personal research environments and management activities related to these experiences are carried out. This process is observed and evaluated by both of the authors.

The action is applied from 15 May till 15 June 2014. During this term, first author of the study recorded his daily life experiences via a life log system and commented on them by interpreting these experiences with the help of the experience processing software once in every two days. A system which works on personal and business computers of the author and catches screenshots and camera shots at every 30 seconds and saves them on OneDrive (SkyDrive) cloud environment is used as a life log system. By scanning these records every week the author collected findings related to these experiences and collected them on a personal knowledge base. Parallel to this transaction he caught and tagged informal learning experiences within his life experiences. Lastly, he used “to do lists” “lists of the activities done” and “lists of the activities she completed” in order to plan, control and evaluate his experiences in his own software development environment.

### *2.4. Collecting Data by Observing the Action*

In order to observe the action, both of the authors recorded their daily activities belonging to this process via life log. Daily records are interpreted by both of the authors via an experience processing software, semi-structured interviews are done by meeting once-twice a week and interview notes are saved as daily activity notes.

### *2.5. Analyzing Data in Order to Evaluate the Action*

Authors collectively evaluated observations and they have made mid-term evaluations by gathering together at the end of each term. With this aim, they used the records they made and interpreted them via life logging system.

### *2.6. Critically Reflecting the Results*

A report, which also includes critics towards application of the action, is formed by using the evaluation results.

## **3. Findings**

The daily life experiences of the first author are recorded for a month and the findings obtained as a result of the observations and evaluation meetings related to the application process of the management of learning experiences related to first author's experiences held by both of the authors. And they are examined according to the steps of the “management of learning experiences” approach:

### *3.1. Findings Related to Recording and Interpretation Processes*

During application period, images captured by life logging system and saved on OneDrive (SkyDrive) cloud environment are scanned by AllMyListsLE software on hourly, daily, weekly and monthly basis and activities, episodes and stories related to software development process are tried to be determined.

As a result of the examination of the records made during a month by using the abilities of AllMyListsLE software, it is realized that activities of the practitioner-researcher are shaped around two different stories which are mentioned below. Moreover, both research periods and intersecting episodes of each of the stories are mentioned below the related story.

(a) A Project for developing a common purpose learning management software (it started before this research and will continue afterwards):

Developing user and role registry module  
Developing course management module  
Developing and designing e-learning environments which will be offered within scope of the courses

(b) Designing and structuring new media server which will be used in scope of Anadolu University Distance Education System (This started during the research period and it will continue after the research):

Determining the Technologies and tools to use  
Determining business plan and calendar

Activities such as coding, development and management of database, visual design, research, examination, planning, testing, communication (e-mail, social networks and news) and meeting are made within the context of these stories and episodes. Even though main activity of the software development process is direct coding, so many different activities are done during this period. Testing the codes is the most important part. During the examinations, it is determined that testing the codes takes time as much as coding

Another activity which should be empathized during coding activity is researching efficient coding techniques. According to a software developer, we can defend that the individual should have aim of searching the latest updates in order to stay updated and develop himself/herself. This effort usually contains following and learning the updated versions of the software development tools (programming language, IDE, add-ons etc.) they used.

Even though personal abilities of the developers differ from each other, usually a developer uses help files while making software development coding. Same situation is also valid for this research. The research showed us that the researcher frequently used help files for both integrated development environment and coding language.

Another activity observed parallel to coding, testing and debugging activities is developing a database. Database management processes include activities such as creating a database, data validation, logging data, deleting and editing.

Visual design is one of the activities done by the researcher during software development process. In order to prepare web based interface of the developed software visual design tools are used.

During the research it is seen that examination, testing and planning activities are mainly carried out for determining re-allocation of a media server in Anadolu University's Distance Education. Activities done during these episodes, software solutions belonging to different producers are examined and compared in scope of the findings obtained. A working plan which shows how the examined media server solutions will integrate Anadolu University Distance Education System is designed.

### *3.2. Findings Belonging to Contexts*

During the research, contexts related to the experiences are tried to be determined and persons, places, episodes, behaviors, features, emotions entities are logged into the lists. It is determined that the data given below is mainly found in these lists.

**Persons:** Other project members, managers of Anadolu University Faculty of Distance Education, colleagues, corporate representatives and client representatives

**Places:** Home, office, meeting rooms at the workplace, top management offices

**Episodes:** Meetings, delivery of reports

**Behaviors:** During the month of the research daily and weekly routines of the researcher are tried to be determined.

The most attractive point of the research is that the researcher prefers working accompanied with music. It is also seen that during the time he spends on computer, he also maintains intensive communication via e-mail, Facebook, Twitter.

**Entities:** It is determined that the researcher used numerous software, hardware and environments each of them is specific for a purpose or work. Chrome, Internet Explorer, Safari and Firefox browsers and Visual Studio and Sublime Text software development tools grab attention as the most commonly used ones. In addition to them,

Photoshop and Illustrator are also used intensively during graphical design processes. For listening music Grooveshark, following news feeds Flipboard and management of Twitter accounts Tweetdeck is used. Moreover, for management of e-mails Gmail and for management of documents Microsoft Office software is used intensively during Daily activities. Google Calendar, Dropbox and Wunderlist are also tools used intensively.

### *3.3. Findings Belonging to Informal Learning Experiences*

Learning experiences found while scanning the experiences are tagged as formal, non-formal and informal learning experiences. Informal learning experiences are also examined in itself and tagged as “implicit (tacit) learning”, “integrative learning”, “reactive (incidental) learning” or “self-directed learning” experiences. Informal learning experiences of the software developer are densified under the topics given below.

Examination of the sample codes given in online sources.  
Studying help files, tutorials and user manuals provided by producers of software development tools and platforms.  
Scanning community sites of software developers.  
Surfing through Q&A web sites concentrated on software development and system management  
Browsing software development user’s reference books  
Examining journals of other software developers  
Browsing video sharing sites of software developers

When records made during the research are examined, it is seen that learning processes of the software developer are centered on reactive (incidental) and self-directed learning experiences. When we explain all of the software development process on problem-solution axis, we see that the duty of the developer here is finding a solution. The process of finding a solution which happens within a certain process has a potential for creating reactive (incidental) learning experiences. Debugging, testing, searching for help within the context of coding can be defined as casual learning experiences

Software developers of whom can be defined as persons finding solutions, have to keep themselves updated in order to be successful at their jobs. It can be defendable that software developers have self-direction which is feeding on need for development of software developers.

### *Finding Belonging to Non Formal Learning Experiences*

During the application, it is seen the first author has practices given below towards auditing the current and evaluating the past:

Creating a working plan and a calendar  
Creating task lists and following them  
Preparing reports  
Working on the Project and writing journal

## **4. Discussion, Results and Suggestions**

Within scope of the research, life logging system is applied individually for a month and application results are evaluated via semi-structured interviews and logs. An analysis towards management level of the individual learning experiences is made from the point of view of a software developer. As a result of the evaluations, it is seen that life logging system carries a potential for being an effective tool for managing informal learning experiences.

Recording their life experiences during certain intervals enables individuals to analyze the life they experienced later. Evaluating life experiences fast and easily makes this system sustainable. The life logging tested in this study

enabled users to record their own life experiences fast and easily so that they can make their individual evaluations towards past successfully.

The life logging system gives the practitioner-researcher the ability to observe his own life experiences with the third eye. The recorded life experiences gives an opportunity to developers to make their self-evaluations. It makes possible to analyze time management, one of the most important elements of the project management processes, within the individual context.

Many of the tacit knowledge may be lost experienced during software projects focused on a specified target with limited time without being noticed. Life logging system enables us to make self-evaluation which is required for uncovering the tacit information we experienced but didn't realize faster and easier.

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# Online collaboration model using systems thinking to enhance leadership of agricultural undergraduate students: the conceptual model

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## Abstract

The purpose of this study was to develop a conceptual model about online collaboration using system thinking process to enhance leadership by a reviewing and synthesizing of the literature concerning about online collaboration tools, system thinking, and leadership skill in agricultural undergraduate students. The framework was presented in three elements which composed of 1) communication, 2) a mechanism for sharing documents, and 3) searching and matching social network members and six steps which consisted of 1) define the problem, 2) analyze factors 3) draw the map 4) research data 5) improve by a group 6) summarize and deploy.

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*Keywords:* Online Collaboration; Systems Thinking; Leadership

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## Introduction

The importance of learning is knowledge that science learner needs to study, research and develop by themselves. It means those learners are able to think systematically, plan, analyze the related factors, be able to see the related impact factors, and solve those problems using their experience or external information. However, it was found that sometimes learners were not able to solve the problem by themselves.

The Internet is the communication channel which has become the main factor for all careers, as well as for education. All tools on the Internet are used in order to apply for instruction, starting from a student who is a knowledge receiver (one way), and becoming two way communications with a sender (teacher). However, due to the limitation of technology, this is only asynchronous communication in which student and teacher may not be able to communicate with each other immediately in the same time. Now the asynchronous problem is improved to help teacher and students to be able to communicate immediately (synchronous) like a real time communication in class room, but in the different locations, which helps in learning or arranging activities together via the Internet, by using various methods which are proper for the current education system.

Agricultural students are going to work with various kinds of people from different backgrounds of education and social. They will meet with different situations and problems. Agriculture Sciences Curriculum in the Faculty of Agriculture, Kasetsart University, is intended to improve students' efficiency; leadership skill, teamwork, capability to adjust themselves to different people and social, which students can exchange their knowledge, sharing the information and working out together for problem solving. Students should be able to response for their duties according to each skill, have confidence to decide and be able to achieve the efficiency goal.

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## **Objective**

The purpose of this study to synthesize research that support develop a conceptualize the connection between online collaboration using system thinking to enhance leadership skill of Agricultural undergraduate students.

## **Research Framework**

Populations of this research are instructors in agriculture field, including five specialists and academic experts on computer instruction, three specialists in system thinking, and three specialists in leading skill, in order to research and assess the quality of tools for further utilization.

## **Online Collaboration**

Online collaboration is a method and process of group members to work together inside the group and with other external groups who have the same objectives. The members will use online collaboration tools to communication that existing or being everywhere at the same time and should have three basic services: a way to communicate, a mechanism to share documents, and some means to discover other members of the community (Fichter, 2005). The online collaboration tools will help users to see the overall problem and help them to analyze and solve the problem systematically in order to plan for their study management. Apart from these, the qualification of this tool is aimed for online collaboration of users even though they are in different locations. They will be able to support a group management conveniently e.g. access control, developing of mechanism for information sharing that all members can access , delete or edit and record the information. Also, having the member searching system helps to increase the collaboration efficiency and support for making decisions.

## **Systems thinking**

Systems thinking is the method of overall problem solution, in order to understand the format of the visible situation. System thinking is also presenting the scope of work in order to define the problem, raise the smart questions and, make proficient decision (Weeney, 1996) System thinking is a basic concept of knowledge and tools that developed in order to solve the problems with creatively. System thinking consists of 6 steps: 1) Define the problems/situation – focus on the situation which helps students to express their opinion on planning to specify objectives 2) Analyze factors and define cause and result – using previous knowledge to identify the element of the problem and consider causes and related impact factors. 3) Draw the map for relation cycle – student can draw a mind mapping for those related problem. 4) Research for additional information to solve the problem model or situation model - student can research for additional knowledge from online information, exchange their knowledge and share with others through education 3.0 tools 5) Present to their group and brainstorming - bring the problem relation model from each student to present among the group and seek for the best model. 6) Present their model to a big group in order to summarize the conceptual model that could be the right way to apply and solve the problem. A system thinking emphasize the complicated problems, and tries to access and manage those complicated system closely, and reflect the causes of problem clearly, with efficient methods.

## **Team Building**

Enforce the team members to communicate may lead to their goals and the problem solving activities can increase their trust in team building process. (Scott D. Williams, T. Scott Graham & Bud Baker, (2003). Teamwork is sensitive complicated and flexible process, in which members will befriend and support each other on their work, by joining advantage and decreasing the disadvantage of the member divisibly. Teams will be able to adjust themselves in all situations, which help teams to work across the complicated problems towards their efficiency goal. Teamwork structure management is different from general organization structure, since teams need to decide on each item, e.g. working system management, work relationship and time schedule. Then it's important to consider these factors; 1) Define team composition by considering objectives, quantity of work, difficulty and complication of work which the team need to manage, comparison to manpower and sources in order to define the method and format of collaboration including scope of communications, roles, power and clearly responsibilities of each member. 2) Define and fill leadership role by appointing the proper leader of the team. Consider from structure format and limitation of environment for the proper leadership, role and responsibility. However, each team may encourage the members to present their leading skill, by considering the ability, experience and personality of each member. 3) Developing external connections- exchange of news and external information, including relationship

with other groups e.g. customer, ingredient seller, and community or government organization. 4) Size of team – Each team should consist of 7-10 persons. Too many members in a team will cause small group work, unemployment and conflict among the team. On the other hand, if there are not enough members, the team will perhaps lack skills and team power, which cause less efficiency of group work. 5) Choosing team members – Members will help to complete the team in terms of quantity and quality which help to seal off disadvantage among the members. Each team should select the members from different skills as follow;

- Members with technical skill who intend to work for accomplishment.
- Members with analysis skill and problem solving skill, in order to define the problem, offer solutions and choose the best solution.
- Members with communication skill and good relationship with other people, in order to cooperate among the team and other groups for mutual understanding between the team and external environment.

## Leadership

Leadership which proper to knowledge background of agriculture undergraduate students, need to show the students' ability both in being leader and member of the team in order to support and facilitate problem solving in each situation, which helps to improve students to achieve their goal and maintain good relationships with others. Bartol & Other (1998) presented the main point from the study of leaders of Ohio University. The result revealed that leaders who concern both themselves and others, have a tendency to be successful and be accepted by followers, more than leaders who have only one side concern (either for oneself or for others)

Thus, a good leader needs to be the one who gives precedence to the quality of work. Hersey and Blanchard (1997), Yukl (2010) Leader who define their main role and responsibility for both leader and follower, in order to achieve the goal, is the leader who has the ability and role to the follower in their work officially e.g. sharing of work, specifying the objective and expect for quality of work within the timeframe. A leader also needs to have a good relationship with the team. A leader should always be concerned with others, based on reliable, respect other people and care for the subordinates, by expressing attention of the members' life, situation and contentment.

Table1. Online Collaboration Tools Using Systems Thinking to Enhance Leadership

Online Collaboration Tools	Systems Thinking	Team Building	Leadership
<b>Online Conferencing</b>	1. Define the problems/situation – focus on the situations which help students to express their opinion on planning to specify objectives.	1. Define team composition by considering from objectives, quantity of work, difficulty and complication of work which team need to manage, comparison to manpower and sources in order to define the method and format of collaboration including scope of communications, roles, power and clearly responsibilities of each members.	planning 1. Defining principles and practices of group members. 2. Determine the purpose of the performance. 3. Define goals to guide the success of the group. 4. Management group in the direction that the group policy.
<b>Online Conferencing</b>	2. Analyze factors and define cause and result – using previous knowledge to identify the element of problem, reconsider of causes and related impact factor.	2. Define and fill leadership role by appointing the proper leader to the team. Consider from structure format and limitation of environment for the proper leadership, role and responsibility.	Experience - A knowledge and skills as well as experience. These leaders are able to make predictions.
<b>Mind Mapping Tools</b>	3. Draw the map for relation cycle – student can draw a mind mapping for those related problem.	3. Developing external connections- exchange of news and external information, including relationship with other groups e.g. customer, ingredient seller, and community or government organization.	The ability to gather relevant information. The reason for the comparative interpretation of the data and explains how to resolve the problem.
<b>Existing Social Networking Sites</b>	4. Search for additional information to solve the problem model or situation model - student can search for additional knowledge from online information, exchange their knowledge and share with others through education 3.0tools.	4. Size of team – Each team should consist of 10 7persons. Over members in a team will cause small group work, unemployed and conflict among the team.	Ability of communication - to communicate using formal and informal style. The transfer of knowledge, recommendations and presentation to the group member Interpersonal skill
<b>Existing Social Networking Sites</b>	5. Present to their group and brainstorming - bring the problem relation model from each student to	5. Choosing team member – Member will help to complete the team in terms of quantity and quality which help to seal off	Ability of decision making Define the scope of the problem and what is involved.

	present among the group and seek for the best model.	disadvantage among the members.	To identify the cause of the problem and summarize
<b>Blog Network</b>	6. Present their model to a big group in order to summarize the conceptual model that could be the right way to apply and solve the problem.		Find best alternative solution can be integrated with the knowledge, skills, and experience. Compliance the alternatives

## Method

This study is a research and development, in order to develop the online collaboration using system thinking to enhance leadership skill in agriculture undergraduate students. There are two steps for model building:

- Study the opinion from the specialist regarding the format of online collaboration with system thinking to enhance leadership skill in agriculture undergraduate students.
- Build the online collaboration with system thinking to enhance leadership skill in agriculture undergraduate students.

Regarding the study of principle, concept, theory and related research, which help to obtain the format of online collaboration with system thinking to enhance leadership skill in agriculture undergraduate students, for further experiment.

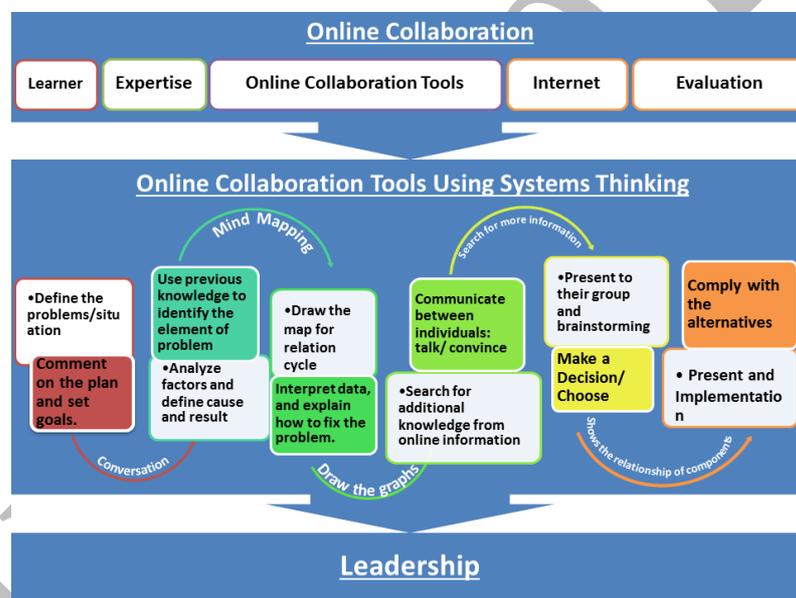


Fig. 1 conceptual model of online collaboration using systems thinking lead to leadership

Therefore, if students are able to work in team, this will encourage them to assign the responsibility by using tools for online collaboration, which helps to create good relationship with others. Students can also share the idea to solve the problem in each situation systematically. Starting from a specific situation problem, analyze the main factor by building the relation cycle model in order to find out the cause of problem, search the information with other students, and brainstorm for the best solution to solve the problem in each work (Peter M. Senge, 1990). For that collaboration format which students are able to draw the cause of relation problem will help to build leadership who will bring the team to achieve the expected goal successfully. More details will be presented in chapter 2-4.

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# Online learning in vocational school: focus on students' perceptions

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## Abstract

In this study, we describe vocational school students' practices and perceptions of online learning based on interviews and observations. First, we identify student characteristics within online classes. Then, we report student perceptions of online lectures. Finally, we summarize our recommendations to improve the online teaching. The methodology used in this study was qualitative data-collection techniques to obtain vocational school student views on online education and educational processes. For this purpose, two stages of data collection were used in this study these were one-on-one open-ended interviews and think-aloud observation.

According to data analysis from this study, communication between students and teachers has a basic effect on shaping students' perceptions and approach to online learning. Also, they have some negative ideas of using and implementations of technology in lectures. Included in this finding is that the meaning assigned by students to any technological material used in lectures is directly connected with the way this material is implemented. Another important finding is that planning of course, assessment and curriculum plays basic role in student's concentrate on lectures and success in online learning.

We investigated only a few of the possible relationships between perception of the online environment, the technological materials used in lectures, students' approach to online learning, and students' perceptions of this learning way. Although Web resources and community were mentioned in this study, they may play a more effective role in student online learning than was analyzed in this study. Some additional factors that may effect student perceptions needed to be investigated are the link between perception and outcome, faculty use and knowledge, faculty perceptions and training.

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*Keywords:* online learning; students' perception; vocational school; technological material

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## 1. Introduction

Online learning is a new generation of learning (Spender, 2001). It is a more recent approach to the method of education, offering the learner more control over the learning process (Acton et al., 2005). This service can be delivered by a variety of electronic media, including internet, interactive TV and satellite (Govindasamy, 2001). In this study online learning offers a means of self-directed education with improved learning through interactivity between teacher and student.

Information and Communication Technologies (ICTs) provide new systems for the creation of innovative environments of teaching and learning, by re-defining the educational models all over the world during the recent years. This mean that individualized learning through online education is developing as a major area especially in higher education. In addition to its new opportunities, ICTs offer new challenges for both teachers and students. It is essential that we have an understanding of the practices and perceptions of an effective online student in connection with the growing number of online courses (Redmond, 2011). Laurillard (2002) emphasized that "if there is to be

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innovation and change in university teaching—as the new technology requires, as the knowledge industry requires, and as students demand—then it follows that academics must become researchers in teaching” (p. 22).

Research in the area of online education is growing. Some basic research questions in this area are as follow. How will students, teachers and universities handle online education? What kind of teaching methods could be best approach for online students’ needs? How do student perceptions impact their actions, approaches, and learning within the online education system?

This paper explores vocational school students' practices and perceptions of online learning based on interviews and observations. We describe learner characteristics within online lectures, and analyze how vocational school students' perceptions of the online education. Then we summarize our recommendations on the positive and negative aspects of online lectures, and on the improving of online teaching.

## **2. The role of the online learning**

Developing online learning systems is becoming a basic part of education modules for many universities. They apply new ways to attract students not only in traditional education but also in the online teaching. Armstrong (2011) stated that it is important to ensure high levels of student learning and by achieving a better understanding of students’ needs in relation to their online learning. He argued, “By investigating ways that students perceive and interact with the learning environment, it may be that the design of the online learning environment can be better developed to support learning” (p. 223).

The online teaching strategies have been an effective area of discussion for researchers. As the general view of higher education changes, the incorporating of technological materials into educational structures has become more essential. The study (Smith and Ferguson, 2002) investigated the differences between online teaching and classroom instruction. The sample included 21 teachers who taught in both the traditional classrooms and online teaching formats. According to the authors, most teachers were trained in traditional teaching strategies and lack the experience and training in online teaching systems.

Menchaca and Bekele (2008) conducted a qualitative study on learner and instructor position in online teaching module. They stressed that significant differences exist between traditional classroom teaching and online teaching. Menchaca and Bekele determined five factors to develop a framework for an effective online learning, which include human factors, course factors, leadership factors, technology factors, and pedagogic factors. According to them, these factors are essential to provide an effective and challenging environment that supports an interactive teaching in an online environment. Wojnar (2002) performed a study on the best practice model of online teaching and learning. He conducted a qualitative case study that included a sample of six students. In this study, Wojnar stressed that many online courses do not have a pedagogical approach. An important finding of his study is that pedagogical design is an essential factor in developing an effective online learning.

## **3. Methodology**

### *3.1. Participants*

Data were collected in the summer academic session of 2012-2013 at the distance education web page of Kocaeli vocational high school. The sample consisted of 18 vocational school students who were enrolled currently in the business and accounting departments at the university. The high school is a medium-size, private vocational high school with a student population of approximately 4,500. The population has a male to female ratio of 55% to 45%, and about 25% of the students identify themselves as persons of color. Almost 60% of students are from Kocaeli, with the others coming from İstanbul and throughout Turkey. Between 35% and 40% of the students receive some form of financial aid: scholarships, grants, or loans.

Students participated in the data-collection methods; these were 18 in the interview process and 15 in the think-aloud observations: 8 in the business department and 8 in the accounting department. Student participants were mostly in their mid-25s; 9 were female, and 9 were male. Fifteen students participated in two of the data-collection methods, and all students participated in only one data-collection method.

### 3.2. Materials and Procedure

The methodology used in this study was derived primarily from research into student learning, in the tradition of Biggs (1987), Entwistle & Ramsden(2002), and Armston (2011). The perspective of the student regarding both the process and outcomes of learning and instruction is analyzed in this approach. Qualitative data-collection techniques were used to obtain and describe vocational student views on online learning, online learning materials, and instructional processes. One-on-one open-ended interviews and think-aloud observation were used in this study for data collection. Data from think-aloud observations were used to confirm findings from the interviews.

## 4. Findings

The framework of approach to learning is used to analyze the data collected for this study. Three approaches to learning as described in Entwistle and Ramsden (1983). are called “deep,” “strategic,” and “surface.” Strategic learning is sometimes called “approaching,” depending on the nature of the study. Deep learning is defined as examining new facts and ideas critically, and making numerous links between ideas. Characteristics of deep learning include: looking for meaning, focusing on the central argument, researching of concepts needed to solve a problem and linking course content to real life. According to the authors, the strategic learner is a student who intends to achieve the highest grade possible through effective time management and organized study materials.

We examined participants’ responses in interviews, and think-aloud observations; categorization of responses was based on the tools mentioned, statements of value, and perceptions of positive or negative effect on learning. The think-aloud observations served to confirm or add insights to data collected during the interview process. Analysis of the data from interviews, and think-aloud observations can be categorized as three major findings;

- the role of communication in shaping perceptions of students
- how technology is used
- the role of course planning for students success

The role of communication in online learning was determinative in every data-collection method. Students stated a strong desire for directions on everything from assessments to school environment. All of the participants stated that they felt a lack of educational conversation with instructors. How teachers communicate online determined the meaning of online learning for students. Most of the students perceived communication as “a restricted connection”, so they changed their approach to learning adopting a more flexible learning styles; strategic learning or surface learning.

In interviews, and think-aloud observations, participants did not perceive the negative attributes of technology to be inherent in the technology, but they explained some troubles about its use and implementation. The basic expectation of the student was that communication technologies would be used in ways familiar to them and in providing a response to their educational needs. Some participants mentioned technology implementation problems in association with the lack of organizational structure found in some online lectures. Also, all participants used effectively net searching system to gather lecture materials. They underlined that the lecture materials provided by school was restricted, insufficient and hard to use. When asked to explain their material use, participants stated that net searching and information gathering don’t have the access restriction in the system that their school present. Another words, when the education quality was perceived low, students showed a strategic or surface approach to the online learning.

All participants stated that the main reasons of taking online education were flexibility of time management, gaining independence, self-control and self-directed learning within the online learning system. This learning manner created some communication problems with instructors. For some participants, this approach was perceived a weak point of the online learning. They stressed that the direction and the level of online education must be allowed by instructors.

## 5. Recommendations and Conclusion

The findings of this study confirmed some past research results (Cotton, 2006; Armstrong, 2011 & Redmond,

2011). But, a more general study would provide additional data on students' perceptions of the online learning. This study was conducted in the summer academic session of 2012-2013 during the regular 14 weeks at Kocaeli vocational high school with 18 students. Perceptions of communication played an important role in the results of this study. Although this study conducted on students' perceptions of communication and observations of their actions within the online learning, actual communications were not evaluated.

The possible links between instructors use communications and the content and level of communications online should be analyzed in future studies.

In this study, we have investigated relationships between perception of the online learning, students' approach to online learning, and students' perceptions of online learning, the materials used in this learning. A more detailed investigation of student perceptions of online learning, including comparison of online learning and face to face learning, internet resources, and social networking could be made in the promotion of online learning. Although we mentioned internet resource and social networking in this study, they may play more powerful role in student online learning than was presented here.

The link between perception and outcome not investigated deeply in this study. When considering online education, a surface approach to link between perception and outcome may not be sufficient to understand the link. Comparing students' expectations from online teaching and use of communication technology in the online classroom could be useful for future studies on student perceptions of online learning. Additional factors not investigated in this study are for online learning, the position of online learning in the future plan of universities, the learning and teaching standards of online education.

In this study, Participants' statements about response time of any activity were not intended during data collection. All participants stated that teachers and students were unresponsive to define a precise time for any activity. Investigating what is an appropriate response time for discussions and assignments should be searched in another study.

Investigating the link between school personal training in the use of the developments for online education and student perception and outcomes is not sufficient. Participants clearly stated that say they want in an online course and the standards as written into newest online teaching models. This model should be including more and faster communication, more connection between students and online education stuff. An investigation of the effects of this model on perception, approach, and outcome may provide a better understanding of how best to design online education.

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# Open and distance education programs of Anadolu University since the establishment

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## **Abstract:**

*In our study we evaluated the policy of Anadolu University in reaching to the community in wider sense. We examined the relationship of time with the number of programs by using linear models for 1982-2014 period. We used some specific dummy variables in the model to express the structural changes over time. According to our significant model, we made predictions for the next few years. In conclusion we realized that since the establishment, Anadolu University tried to answer to the demands of society from a broader perspective by monitoring the technologic developments in the world related to open and distance education.*

*Keywords: Anadolu University, Open and Distance Education, Time Series, Dummy Variable, Structural Changes*

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## **1. Introduction**

The size of the demand for higher education both in the terms of campus or open and distance education, depends on the employment opportunities of the graduates more than the offered training programs and the names and images of the education institutions. If we assume that, all of the programs are starting after considering the employment opportunities and achievements of the students, the number of the programs will gain vital importance. For this reason, in this study by considering the structural changes, we tried to evaluate the linear relationship between the time variable and the number of open and distance education programs at Anadolu University for 1982-2014 period. As in many time series structural breaks, jumps and changes in trend may occur in the data of the historical development of Open and Distance Education. Here time is the independent variable and the number of programs is the dependent variable. These structural breaks can be observed in the data of universities as seen in various data of some countries. We discuss the structural changes which we observed in the number of programs, in the linear regression models in the scope of dummy variables. We take the subject into consideration on Anadolu University Open Education Faculty's programs. Therefore, we examined the number of programs which are opened and closed in 33-year time frame. Because for opening new programs in a university, especially in open and distance learning does not depend on only the resources, economic power, technology, sub-structure and academic staff of that university. This decision is at the same time, depends on the expectations of the young population, the demand for community education, the demand for public education in the country and many other factors. Therefore, the number of programs is a very significant variables which should be considered.

## **2. Open and Distance Education Programs of Anadolu University From Yesterday to Today**

As known, the first important example of open and distance education applications in Turkey can be regarded as YAY-KUR which was established as the result of the decision to promote the mass education policy of the 2nd Five-Year Development Plan, and nearly 50 YAY-KUR schools (vocational schools) was initiated in the years of 1975 and 1974. Yet again in the period of the 2nd Five-Year Development Plan, Eskişehir Academy of Economics and Commercial Sciences established closed-circuit television system in order to make mass education in an educational institution for the first time in Turkey, with this organization, Eskişehir Academy has already established the infrastructure of open and distance education. Because in this system courses given in the television studio could be delivered to a large mass of students located in the classroom. The successful implementation of the

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Academy had been closely followed, examined and learned by the public administration. Indeed, in 1982 a law numbered 2547 was enacted with the goal of restructuring higher education in Turkey. While this law was being drafted the success of Eskişehir Academy was taken into account and Open Education Faculty was established at Anadolu University in Eskişehir as a first in Turkish Education System. In fact, with the establishment of this faculty we need to mention here that a very serious phenomenon has emerged. The law numbered 2547 which was acted by the need of restructuring Turkish higher education, first of all probably aimed to raise the rate of enrollment to higher education. This target would stay as a distant dream even today, without the success and the establishment of Anadolu University Open Education Faculty at that time.

Anadolu University was the first university which started open and distance education with Economics and Business Administration program in Turkey, Anadolu University Open Education Faculty has wasted no time since 1982. From the first day, trained staff of the University started to prepare the textbooks according to distance learning techniques which were delivered to students in order to support television lectures. So, television programs and textbooks were used as effective training tools.

Anadolu University, started to implement a powerful open and distance education system with a slogan that emphasizes both the objectives and the target points very clearly. This slogan was, planting the flag of Anadolu University in every city in the country and to offer the opportunity of higher education to all society throughout the country. Although working according to this exciting slogan, capacities of Economics and Business Administration Program in the early 80s, were limited. However, the nature of the massive demand for higher education remained for a while. But in time, the social demand has reached saturation point. Especially in the second half of the 90s 'application and registration' demands are met with significantly increased capacity by 40% and 50% at first, then fell to 25% in subsequent years. Individual demands of those who want to study in this period gained priority and weight. Therefore in these years, by taking the concentrations of individual interests and expectations into account new educational programs were opened in order to meet different demands towards the different new programs (Barkan, 1998, pp. 288-310).

During the legislative changes made in the years 1993-1994, two new faculties was established with the names of Economics and Faculty of Business Administration at Anadolu University to carry out the programs of business and economics. By such organization, the expression of open education was eliminated from the diplomas. With this operation, encountering of graduates with a false perception who have equal rights with formal education graduates had been largely been prevented.

Between 1990 and 1997 covering seven years, Open Education Faculty by opening several degree completion programs experience a very volatile period. These license completion programs were opened as a result of public demand and offered by the public depending on its opportunities. Thus, every day on the way to a meet a larger mass of students which was the main target and coverage, transient elevations and stability were observed. However, in this period Anadolu University followed the spread of open and distance learning technology and developed at the level of our world and country by succeeding in face-to-face teaching support applications with the support of country level offices which were built. While many similar open and distance education institutions around the world were failing in face-to-face teaching supports for open and distance education students. Anadolu University also induced society's education and training demand by the help of its country wide offices. This application, as undoubtedly increase the visibility and reputation of Anadolu University, and was able to increase its resources and also contributed substantially to the subject to remain unrivaled until today.

Between 1993 and 2008, Anadolu University built some new structures in order to move beyond the traditional functions of distance education and started to use much more intensive modern communication technologies. Among these, Anadolu University realized the first video-conference trial in 1997. In 1999, lectures in marketing were given by video-conferencing technology to the students in the Economics Department of Ahmet Yesevi Turk and Kazak International University in Kazakhstan.

As another first, Knowledge Management Distance Education Program was opened in 2001. More Internet and computer technology in this section, based on real-time began to be engaged in teaching courses. Students attended live classes in a virtual classroom environment with the course instructor. 2001-2002 academic year, "Second University" program was launched.

By 2008, Rector of the University opened a discussion and asked the university's senior academicians and management what lessons can be given by trained staff of open and distance education. A draft which has been prepared opened up for discussion by presenting proposals for new programs. After taking contributions to these proposals new programs were opened. However, these programs can be opened at short time, but that was not only

because of the request of the Rector. The main reason was that the university's technological infrastructure had become available for this change. During this period, the Computer Research and Application Center (BAUM) were also ready with experience and equipment gained over the years and also have the possibility to evaluate many different exams of very large mass of students and else.

In recent years, interactive learning environment is enriched for learners by offering interactive e-books, video, audio, animations. In this way, the "Information" is transferred to learners with different center distance education techniques coming out of the ordinary. Apart from that, students began to take face-to-face lectures aiming to bring together academicians and experts online, and e-seminars continues.

Open Education exam are given to e-services in order to prepare students for the final exam more effectively and efficiently. Today discussion groups using customized courses cover both the instructor and course related courses, which are responsible for the exchange of information with other distance education students. Furthermore chat environments can be created. Thus, Anadolu University, creating more flexible learning models are trying to create a digital revolution. Anadolu University, also in recent years opened offices as well as Western Europe, Macedonia, Kosovo, Bulgaria and by giving weight to Open Education in Azerbaijan is showing trends of globalization

### 3. Methodology

The time variable can affect the dependent variable in two different ways. First generally, dependent variable in the examined time series may have a trend by the effect of time. Second, time variable may have a certain effect on time series data over a certain range and also may have another effect in another range (Draper & Smith, 1981, Ağaoğlu, 1989). A number of reasons may be cited on structural changes and jumps in the series. Multiple different trends can occur in this case. In such cases, multiple regression model with dummy variables is likely to be more suitable for the trend of the event. (Ağaoğlu, 1989).

Matrix of structural changes are as follows:

1	1	0	0	0	0
1	2	0	0	0	0
1	3	0	0	0	0
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
1	12	0	1	0	0
1	12	1	1	0	0
1	12	2	1	0	0
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
1	12	16	1	0	1
1	12	16	1	1	1
1	12	16	1	2	1
1	12	16	1	3	1
1	12	16	1	4	1

The first column of the matrix above is established for the constant term. The second, third and fifth columns specify three different trends and the dummy variables are referred respectively as X1, X2 and X4.

X3 is set to zero for all points on the first line and then goes to 1 for all points on the second line to allow for a jump (positive or negative) from the first line to the second. In the same way, X5 is set to zero for all points on the second line and then goes to 1 for all points on the third line to allow for a jump (positive or negative) from the second line to the third. If no other predictor variables are involved we can fit the model. X3 is the dummy variable which provides the jump to the second part from the first, and X5 provides the jump from the second part to the third.

According to these explanations our model are as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 \quad (1)$$

### 4. Application

Our data set consists all of the started open and distance education programs including degree, associate degree and bachelor's degree completion programs since the establishment of Anadolu University. Distribution of programs in

the data set is as follows:

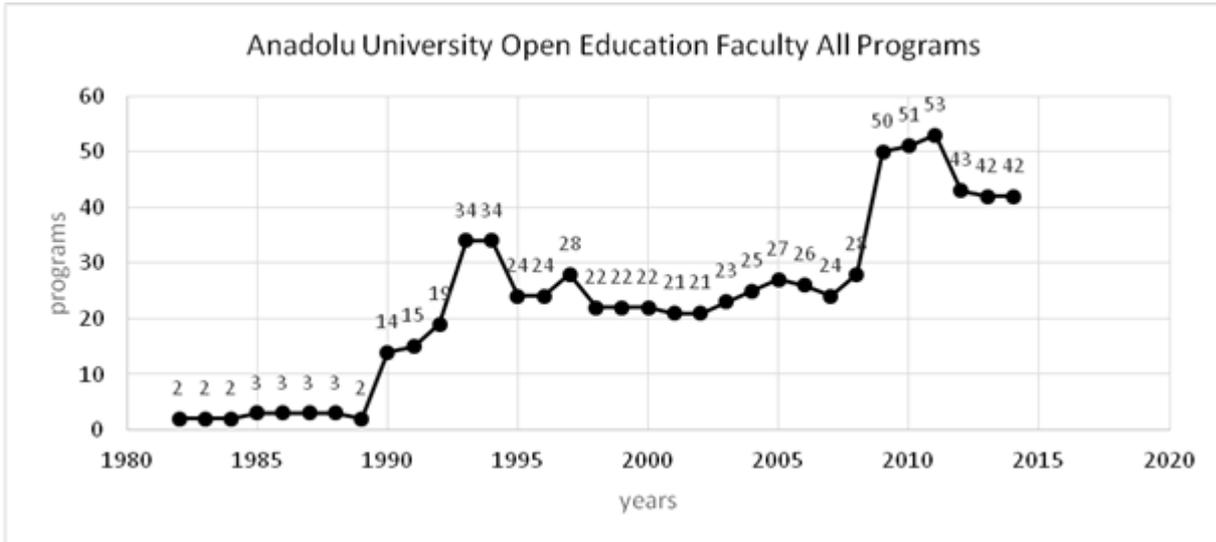


Figure 1: Open and distance education programs including degree, associate degree and bachelor's degree completion programs since the establishment of Anadolu University.

#### 4.3. The Structural Changes in Our Analysis :

As mentioned above there are two important structural change points in our study:

1. Establishment of the Faculties with the names as Faculty of Economics and Faculty of Business Administration in 1993-1994. In addition, opening several new programs at the Open Education Faculty
2. The opening of many new programs in 2008 with the initiative of the Rector.

Therefore, we considered that the number of programs has a vital importance in our study. Then when we create the series, we saw these two major structural changes. According to these structural changes and our data set was divided into 3 periods as, from 1982 to 1992, 1993 to 2008 and 2009 to 2014.

#### 4.4. Models of Our Analysis:

By considering structural breaks 4 models are produced in the study. While constructing the models, the distribution of the number of programs in the scatter diagrams is taken into account and models were produced accordingly with 4 assumptions below:

**Model I:** Model with structural changes and with existing trends in 3 periods.

**Model II:** Model containing structural changes, without an existing trend in 3 periods.

**Model III:** Model having structural changes without a trend in 1. period, but with trends in 2. and 3. Periods.

**Model IV:** Model of structural changes without a trend in 1. and 2., but with trend in the 3. Period.

#### Model I

$$Y = -3.145 + 1.555X_1 - 0.281X_2 + 11.910X_3 - 2.200X_4 + 29.408X_5$$

s.e.: (2.528) (0.373) (0.212) (3.142) (0.934) (3.494)

t : -1.244 4.171 -1.325 3.790 -2.354 8.418

F = 91.384 and  $S_y=3.91$

$R^2=0.944$  and  $Adj R^2= 0.934$

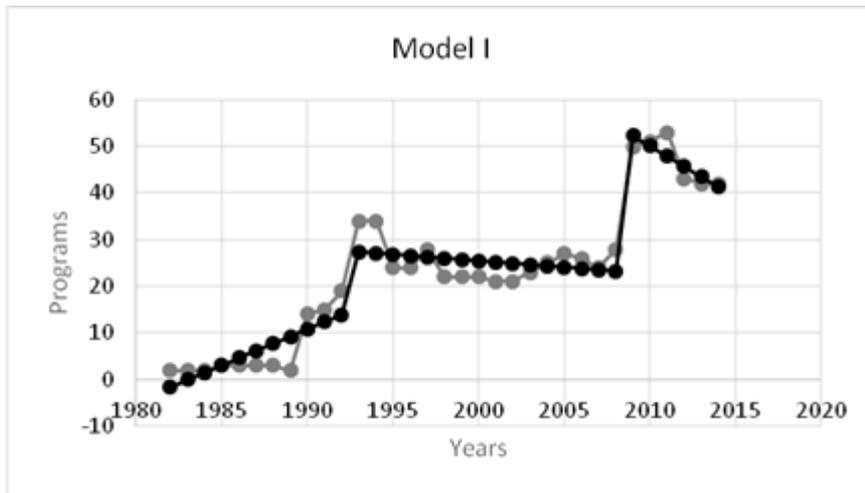


Figure 2: Model I

According to 0.05 significance level Model II is significant. But,  $\beta_0$  and  $\beta_2$  coefficients are statistically insignificant at 0.05 significance level. Because of the insignificant coefficients in Model I, we created Model II. In this model we only took jumps into consideration, and we assumed that there are no trends in all pieces.

### Model II

$$Y = 6.182 + 19.131X_3 + 21.521X_5$$

s.e.: (1.547) (2.010) (2.456)

t : 3.996 9.519 8.761

F=125.414 and  $S_y=5.13$

$R^2=0.893$  and  $Adj R^2=0.886$

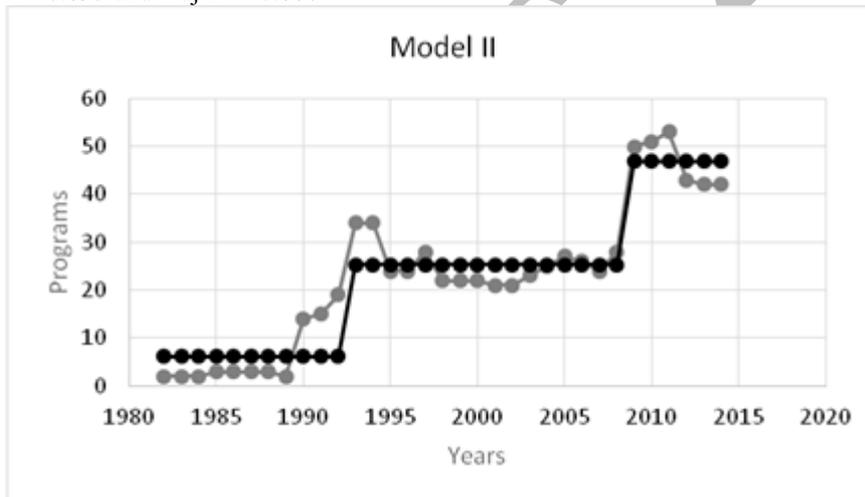


Figure 3: Model II

All coefficients of Model II are statistically significant at 0.05 significance level. Thus, we reached a significant model in Model II. However, we cannot say that there is a clear trend between 1982 and 1989. Accordingly, for the sake of reaching to a more significant model, without considering the trend in the 1. Period we produced Model III.

### Model III

$$Y = 6.182 - 0.281X_2 + 21.237X_3 - 2.200X_4 + 29.408X_5$$

s.e.: (1.484) (0.267) (2.779) (1.177) (4.399)

t : 4.165 -1.052 7.641 -1.870 6.685

F= 69.299 and  $S_y=4.92$   
 $R^2=0.908$  and  $Adj R^2 = 0.895$

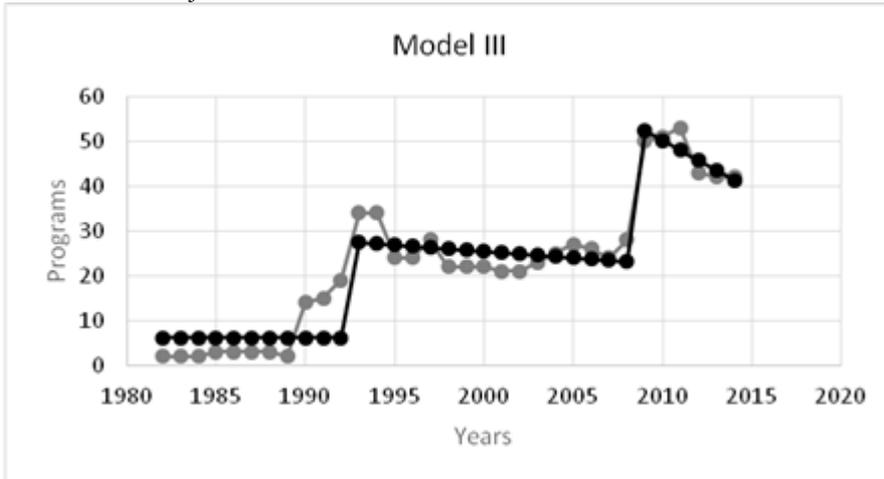


Figure 4: Model III

Model III is significant according to 0.05 significance level. However, the coefficient  $\beta_2$  is statistically insignificant and  $\beta_4$  coefficient is significant at the 0.10 significance level. All other coefficients are significant at 0.05 significance level.

Here, we concluded that there is no trend in the 1993-2008 time period due to the insignificant value of  $\beta_2$ . Then we continued with the assumption that there is a trend in the period between 2009 and 2014 and produced Model IV.

**Model IV**

$$Y = 6.182 + 19.131X_3 - 2.200X_4 + 27.021X_5$$

s.e.: (1.487) (1.931) (1.179) (3.776)

t : 4.158 9.905 -1.866 7.156

F= 91.69 and  $S_y=4.93$

$R^2=0.905$  and  $Adj R^2 = 0.895$

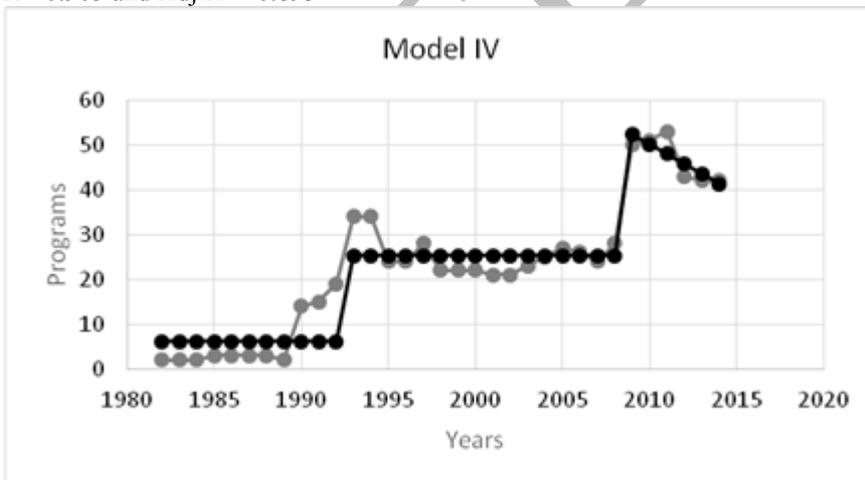


Figure 5: Model IV

Model IV is significant according to 0.05 significance level. However  $\beta_4$  coefficient is statistically significant at the 0.10 significance level. And all other coefficients are also significant at 0.05 significance level. The level of significance at 0.10 is accepted in many social studies or in topics related to social issues. But here,  $\beta_4$  coefficient because of the probability value 0.072, is rejected at 0.05 significance level.

*5.3. Projections of the Models:*

Model II has bigger standard error than others.  $\beta_4$  coefficient of Model IV, which gives the slope of the 3. Period is statistically significant at the significance level of 0.10. As mentioned 0.10 significance level is accepted in social areas such as education. Therefore, it is difficult to specify the best model precisely at this stage. But, we can say that Model IV gives an early warning signal and this warning is noteworthy to mention that there is a reduction in the number of programs in recent years. The Model II is a model that shows a trend in the balance. Therefore, we must focus on both models and their warnings. According to Model II and Model IV, predictive values of the number of programs in following years was different from each other.

The Number of Programs in Model II and Model IV are listed in Table 1:

Table 1: Forecasting Values

Model II Standard Error.= 5.13			Model IV Standard Error= 4.93		
Forecasting years	Expected Values	Expected Program Numbers	Forecasting years	Expected Values	Expected Program Numbers
2015	46.834	47	2015	41.334	41
2016	46.834	47	2016	39.134	39
2017	46.834	47	2017	36.934	37

## 5.Result and Evaluations

Here the standard error of Model IV is 4.93 and only one coefficient of this model with the value of significance level 0.10 is accepted. From the statistical point of view, Model II is found to be statistically significant at 0.05 significance level both in terms of coefficients and model, and Model II has 5.13 standard error value. According to this model, in 1993 and in 2009 sudden increases occurred in the numbers of Open or Distance Education Programs and these increases are reflected in the form jumps in the graphics. There is no trend in three different periods. Depending on the Model II, our forecasts about the number of enrollments for 2015 and following years is, 46.834. This shows us the number of our programs in the coming years will be approximately 47.

The decrease in the number of programs in 2009-2014 period, which is statistically significant at the 0.10 level is forcing us about the acceptability of Model IV in our analysis. As cited before, in many studies on social issues such as on education 0.10 significance level can be accepted. Furthermore, this model also provides early warning signals and according to Model IV there has been a sudden increase in the number of Anadolu University Open and Distance Programs in 1993 and 2009 and this is reflected in the form jumps in the figures. However, although continuing efforts of Anadolu University to use technology in open and distance learning recently there is a falling trend in program numbers, which can be accepted as a negative sign in the policy of giving education opportunities to the society in broader sense.

Two key demands are effective in opening new programs. The first one is social demand. Our university must follow the changing goals, priorities and transformation in society, and analyze and identify them carefully. Accordingly, university must organize a suitable open education and distance education policy. It is easy and necessary to give an example from the past. As we mentioned before, establishing two new faculties with the names of Faculty of Economics and Faculty of Business Administration in 1993 and eliminating the expression of open education from the diplomas. This operation prevented graduates from encountering a false perception. As for the future, universities should establish warm relations with the community and public administration and should continue to develop its infrastructure for new educational technologies. For this purpose, it is necessary for our university to maintain its power in every aspect.

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# Open educational resources development model for an inquiring cultural skill of higher education students

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## Abstract

This study is aimed to develop Open Educational Resources (OER) model for an Inquiring cultural skill of higher education students. The findings revealed as follows: The model consisted of four components: 1) A scope of a knowledge domain 2) Content development: media design and development, including and evaluation of the media effectiveness 3) Implementation: publish with Creative Common (CC) license and 4) Quality assurance: by learners' vote and the outcome of learners' inquiring cultural skill

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*Keywords:* Open Educational Resources; Inquiring; Cultural ; Higher Education

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## Introduction

Open system theory education, especially interacting with culture, shall start once Thailand enters ASEAN Community of immense and colorful cultural diversity in 2015 under the ASEAN Charter which shared commitment and collective responsibility in enhancing regional peace, sharing and caring community, security and prosperity exceptionally cultural identity. The Vision of an ASEAN Socio-Cultural Community embedded goal of a community of cohesive, equitable and harmonious societies, and bound together in solidarity for deeper understanding of the richness of ASEAN's history, languages, culture and common values. One of the key features in regional education cooperation is integrating their respective programs and activities in a complementary manner among ASEAN scholars and academicians in the region.

The diversity of ASEAN culture is the environment that encourages the exchanges of energy, matter, and information in education which appropriate to new world technology and communication. The communication of Society Convention establishes the goal of study from learners' cooperation and contentment, which leads to characteristic of inquiry based learning. The learners shall be a knowledge builder with the inquiry capacity in capable of creative and innovative solution to become thoughtful and motivated. Inquiry means the value of perception in today's world. The innovative learners will be capable in engaging in their own inquiries, hypothesis presenting, data and information accumulating, analyzing, summarizing, classifying or result specifying, and ability to implement in different contexts. This could be evaluated by inquiry self assessment form that used a scoring rubric to perform.

Inquiry in general implies "eager to know" premises and applicable of useful knowledge. There are indications of inquiry such as; creating questions of their own, expressing one's opinion, and reading to collect the evidence. The learners engage in learning processes include; inquiring attitudes, listening, questioning, evaluating, writing, observing, and operating.

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This study is to apply an open educational resources development model for an inquiring cultural skill of higher education students to develop their skills and knowledge they need to function in ASEAN culture awareness. Beside, the use of resources and strength in open education would be great supportive role in learning ability, society, norm, culture diversity, and ASEAN's heritage. The learners are invited to learn the experience of other cultures and religions as a key feature, in fact, of collaboration among scholars and academicians. These are to improve the knowledge progress and strengthen our role before entering ASEAN in 2015.

### **Purposes of the study**

This study is aimed to develop open educational resources (OER) for an inquiring cultural skill of higher education students in Thailand.

### **Research methodology**

Phase I – Analyzing and synthesizing related literature and documents of an Open educational resources and process of learning with open educational resources for an inquiring cultural skill of higher education students. It included four stages

1. Researching and analyzing general information upon the basic element and process of open education resources for an inquiring cultural skill of higher education students in Thailand. Researching covers a range of approaches to learning and teaching, including:

- 1.1 Open Educational Resources and the elements supported
- 1.2 Contributing teaching and learning activities based on OER
- 1.3 Cultural learning that encourages inquiry skills and cultural competence.

2. Establishing OER for an inquiring cultural skill of higher education students.

3. Submitting Establishing OER for an inquiring cultural skill of higher education students to 5 experts' opinions.

Phase II – The development of open educational resources for an inquiring cultural skill of higher education students

1. Developing the open educational resources for an inquiring cultural skill of higher education students. The processes include:

1.1 There are 3 levels to develop OER in accordance with teaching plan: (1) Designing OER (2) Creating teaching and learning tools and (3) Creating the learners' interaction part.

1.2 Developing cultural contents and tools, the process has included:

1.2.1 Analyzing contents that are useful for developing into OER and the contents should be associated with region's culture or affected social spirit on; food, tradition, history, legend, and belief that impact on spirit rising, appreciation, admiration, and pride of that community.

1.2.2 Developing contents according to analyzed pattern.

1.2.3 Presenting contents to 2 experts for the reviews.

1.3 There are 3 tools or medias that used in developing OER; (1) Website, (2) Picture, and (3) Video. The distribution of OER shall be under Creative Commons Licenses.

**5. Research findings and Conclusion:**

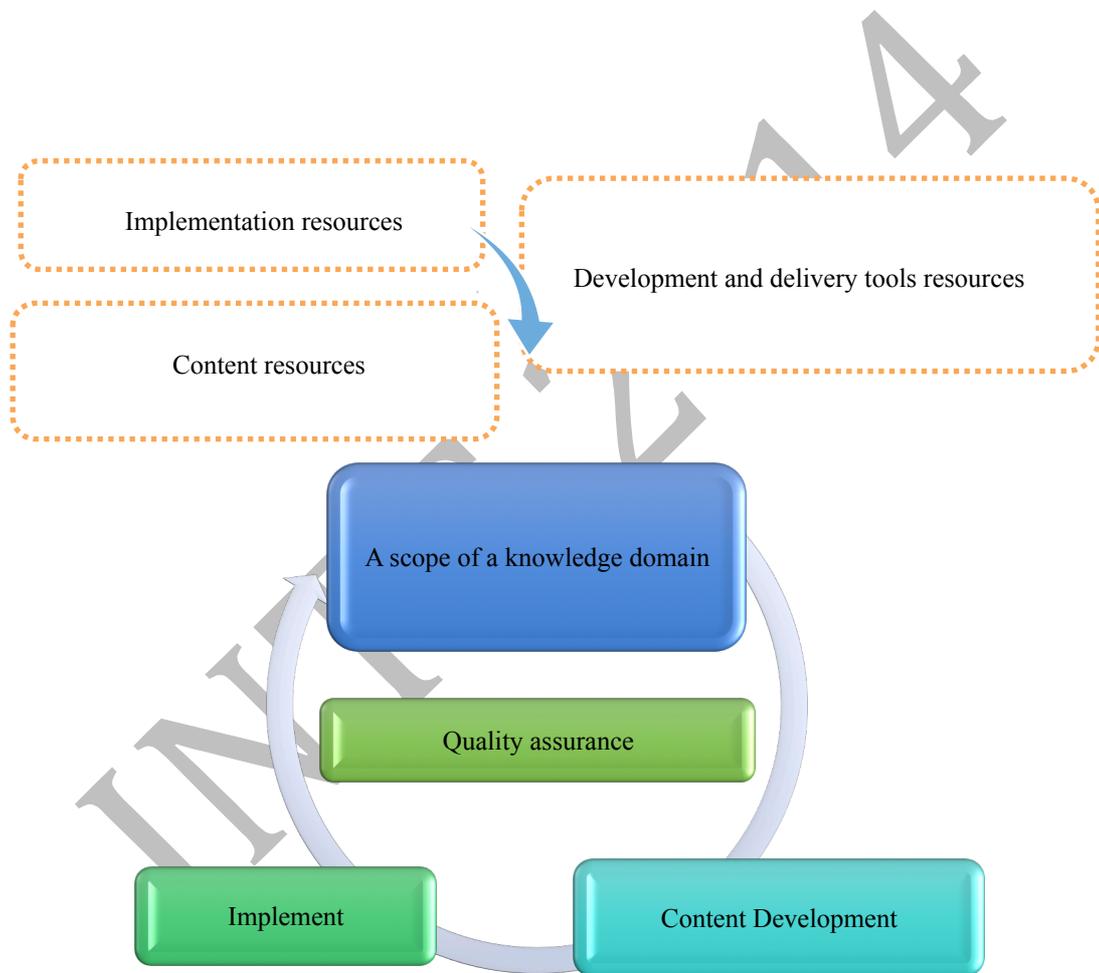


Fig. 1. open educational resources for an inquiring cultural skill of higher education students model.

The OER model identified 3 characters below; (1) Content resources, (2) Development and delivery tools resources, and (3) Implementation resources- are of 4 processes in effective to implement in student learning include; (1) Scope of content, (2) Content Development, (3) Implementation, and (4) Quality assurance.

1. A scope of a knowledge domain embarked on process detail below:

1.1 Content assignment in open educational resources for an inquiring cultural skill of higher education students revealed as follow:

1.1.1 Interconnection boundary between food, culture or tradition in the region.

1.1.2 Basic element of association between food, culture or tradition in the region

1.1.3 Value of social upon food, culture, tradition, history, legend, and/or belief affected to enhance social spirit rising, appreciation, admiration, and pride.

1.2 The confinement and presentation model of content and activities present character of Open Courseware; Obtaining and accumulating diversified tools for the learners to independently gain knowledge but under the restriction of the content copyright, the reference work has to be mentioned properly and the author should allow to share as Open licenses.

1.3 Interconnection boundary between culture and local tradition, the content must be associated between these two subjects and bring people to clearly recognize their regional identity and relatedness.

1.4 The authorship, OER content can either belong to a lone authorship or multi-authorship and it shall be properly clarified.

1.5 The Granularity, a scope of information and content shall be limited each time by database operational system; word processing, Portable Document Format-PDF etc.

1.6 The tools used in developing medias of OER, will be develop in a public and collaborative manner including providing the rights to study, change and distribute the software to anyone and for any purpose (Open source Software). The tools and media is consisting of; (1) Website, (2) Picture, and (3) Video

2. Content Development is identified in detail below;

2.1 Population and sample is the undergraduate student. Learning capacity of each age group is not equivalent, population and sample setting is necessary to proceed in medias and tools development to serve the right group.

2.2 Specification on level of difficulty is required in relation to the learner's grade

2.3 The observation on an association between food and culture/tradition is aimed to analyze the interconnection among regional food and culture to be guidance on OER development in term of usage, demand, necessity, and tool selection.

2.4 Open Licenses: Open Licenses or Creative Commons License is enable the free distribution of an otherwise copyright work and used when an author wants to give people the right to share for non-commercial uses in OER as long as they abide by the conditions that are specified in the license by which the author distributes the work.

2.5 Process of content and tools development can be classified below;

2.5.1 Content can be developed from analyzing process.

2.5.2 A review and evaluation will be performed by 3 content experts to verify the precision and completion before developing into OER

2.5.3 Media and tool could be developed in accordance with the indicator thus the learners would engage themselves towards inquiry attitudes, appreciation, and greater awareness of heritage of ASEAN region.

2.5.4 Also media and tool efficiency will be review by 3 experts to verify precision before trial.

3. Implement

3.1 The distribution of this OER will be done through internet due to convenience and speed.

3.2 Inquiry capacity evaluation shall be done by measurement model of open education system function in cultural awareness on the higher education learner in term of inquiry skill building.

4. Quality assurance: by learners' vote and the outcome of learners' inquiring cultural skill.

## 5. Recommendations

1. Recommendations on a research implementation

This OER could be adjustable and modified according to the situation, circumstance, learner's characteristic, and subject to achieve the learner's objective.

## 2. Recommendation on a next research

OER development should be allied with other skills, for example; creativity, analytical thinking, and ethics in academic work.

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# Opinions of lecturers regarding management of classrooms where Turkish is taught as a foreign language

## at an official Turkish teaching center

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### Abstract

In this qualitative study, opinions of lecturers working at an official Turkish teaching center at a government university regarding management of classrooms where Turkish is taught as a foreign language were determined through focus group interview technique; and the results were acquired by means of descriptive analysis technique. The present study indicates that participant lecturers were incompetent in terms of theoretical information regarding class management theoretical knowledge. Participant lecturers were incompetent in terms of classroom management skills. While participant lecturers were managing classrooms, they presented behaviors for establishing a positive learning environment, maintaining productive utilization of learning-teaching time, motivating students, and establishing an effective communication environment. Management of the classrooms where Turkish was taught as a foreign language was affected by physical factors, factors relevant with the characteristics and applications of the lecturer, factors relevant with student needs, interests and characteristics, social factors and factors relevant with the attitude and operation of management of the institution. Classroom management was affected by nationality, cultural and religious differences among students. Participant lecturers have not determined classroom rules in their courses and they do not find classroom rules necessary. There were several unwelcomed student behaviors experienced in classrooms. The lecturers interfere in these unwelcomed behaviors through the methods which can be associated with the reactive classroom management model.

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*Keywords:* Teaching Turkish as a foreign language, classroom management, Turkish teaching centers.

### Introduction

Teaching Turkish as a foreign language has recently been a subject gaining prominence. Increasing political, economic and social value of Turkey has made Turkish a preferred language for foreigners to learn (Şahin, 2013). In order to respond this increasing demand, within the entities of universities located in Turkey, the subject of teaching Turkish as a foreign language has started to be taken into consideration seriously after 1950s. The Project called "Turkic World Student Project" which was commenced in 1991, has been one of the projects which enables teaching Turkish as a foreign language to come in to prominence recently. Students with foreign origins have been invited to Turkey from abroad for their education under this Project (secondary, undergraduate and graduate levels) by the Ministry of National Education. Primary objectives of this project were teaching the current dialect spoken in

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Turkey to youth from the newly-founded Turkic states and from relative Turkic societies; introducing Turkish culture and education system; handing Turkish language and Turkish culture down to the next generations; and expanding the dialect spoken in Turkey. In order to reach these targets, Turkish was started to be taught as a foreign language systematically in the Turkish Teaching Center at the Ankara University (Ankara University TÖMER: the Turkish teaching centers across Turkey use abbreviation of “TÖMER” which represent purpose of the institution) in 1984 (Açık, 2008). In addition to the Ankara University TÖMER Center, private and official Turkish teaching centers (Official institutions have been structured within government universities.) have been founded to teach Turkish as a foreign language [Adana Science and Technology University TÖMER, Anadolu University Turkish Certificate Program, Akdeniz University Continuous Education Center, Başkent University Language Research and Application Center (BÜDAM), Başkent University Turkish and Foreign Language Teaching Center (Başkent TÖMER), Boğaziçi University Language Center, Çanakkale On Sekiz Mart University TÖMER, Dicle University Foreign Languages Teaching Application and Research Center, Dokuz Eylül University Language Education Research and Application Center (DEDAM), Ege University Turkic World Research Institute Turkish Teaching Division, Fatih University Continuous Education Center, Fırat University Language Education-Teaching and Research Center, Gazi University Turkish Teaching, Research and Application Center (Gazi TÖMER), Gaziantep University Turkish Language Teaching Center, Giresun University Giresun TÖMER, Hacettepe University Language Teaching, Application and Research Center (HÜDİL), İstanbul Aydın University TÖMER, İstanbul University Language Center, Kırklareli University TÖMER, Maltepe University Continuous Education Center, Mevlana University TÖMER, Sakarya University TÖMER, Selçuk University Faculty of Theology Turkish Program, Süleyman Demirel University Turkish Language Teaching, Research and Application Center, TOBB Economy and Technology University TÖMER, Trakya University Language Education and Teaching Application and Research Center, Yunus Emre Institute Turkish Education and Teaching Center) (Adana Science and Technology University TÖMER, 2014). All of the students registered in these institutions, who learn Turkish as a foreign language (majority of whom are from Turkic states and relative Turkic societies in Asia and Balkans), have foreign nationality.

It is possible to state that Turkish teaching centers at the government universities are the most prominent ones among the domestic and foreign institutions undertook teaching Turkish as a foreign language. Majority of the students who learn Turkish as their foreign language receive education in these institutions. Furthermore, developments and ongoing studies in these institutions regarding teaching Turkish as a foreign language can be taken as effective samples by other institutions.

It can be also said that official Turkish teaching centers in Turkey are the main drives of the “Turkic World Student Project” which was introduced by the Turkish Government in 1991. The success of the mentioned Project largely relies on the success of these institutions in their teaching activities.

Reaching defined objects in terms of education organizations is only possible through management of resource elements efficiently. Management of education is a branch of science which searches for answers for the question of “How educational institutions can effectively take advantage of human, money and technology resources to reach their objectives?” There is classroom management in the foundation of the education management; and acquired success level in the classroom management consequently determines the quality of education management (Öksüz *et al.*, 2011). The classroom is production unit of a school; and it is a special environment where the behavior changing process takes place (Demirtaş and Güneş, 2002). Students gain teaching objectives in the classroom. In order to ensure that students gain target behaviors, resources in the classroom and time factor must be used effectively and in a harmonized manner for an effective and productive learning. In other words, classrooms are required to be managed.

While classroom management was used to represent a view based on discipline understanding which refers establishment of teacher authority in the classroom before, now in our contemporary time, it refers “creation of a classroom environment facilitating learning” (Demirel, 2006). Some of the classroom management definitions from literature were presented below:

“Creating, protecting and managing learning environment to reach teaching objectives.” (Brophy, 1988).

“Managing classroom environment like an orchestra.” (Lemlech, 1988).

*“Stimulating process for simultaneous motivation of both classroom teaching resources and students to accomplish objectives of the classroom.”* (Celep, 2002).

*“Stimulating both students, who are human resources of a classroom, and material resources, which are tools and equipment, along with targets of classroom.”* (Demirtaş, 2009).

All of activities regarding systematical and conscious application of principles, concepts, theories, models and techniques about planning, organization, application and evaluation (Erdoğan, 2010).

As it can be understood from the definitions exhibited above, the essential objective of the classroom management is to assist students to reach their objectives by establishing positive and productive learning environment (Alkan, 2007). Classroom management determines success level of Turkish teaching as a foreign language. In other words, classroom management can be considered as the essential factor to reach targets set relevant with teaching of Turkish as a foreign language and to obtain efficiency and productivity in classrooms where Turkish is taught as a foreign language.

Thus, it can be said that accomplishing purposes of the “Turkic World Student Project” depends on the success of official and private Turkish teaching centers in Turkey in providing Turkish language education as a foreign language; similarly success of teaching Turkish as a foreign language depends on successful classroom management. It is more important to portray the current conditions of official Turkish teaching centers regarding classroom management since these institutions are pioneers in teaching Turkish as a foreign language.

Variables of classroom management can be considered as teacher, student, school program, education environment, education management, and family and friend environment. Of these variables, the most strategic one is teacher. Hence, teachers are responsible for arrangement and maintenance of education processes (Aydın, 2012). One of the most important roles played by teacher in a classroom is being manager of a classroom (Marzano, Marzano and Pickering 2003). As a classroom manager, a teacher is expected to coordinate all factors affecting the teaching – learning process (Erken, 2002). Thus, it can be said that management of classrooms are in responsibility of teachers. Because of these responsibilities, the most primary resource concerning the classroom management is the opinions of teachers. In official Turkish teaching centers, opinion of lecturers must be requested regarding management of classroom where Turkish is taught as a foreign language so that significant data would be acquired concerning the management of classrooms in official Turkish teaching centers where Turkish is taught as a foreign language; and these data will be foundation for development of classroom management.

The purpose of the present study is to determine opinions of lecturers working at an official Turkish teaching center, where Turkish is taught as a foreign language, about the classroom management.

## **Method**

This section describes the research pattern and the study group; and explains data collection mean, collection process and their analysis process.

### ***a. Research Pattern***

The present research is a qualitative study. Qualitative study is a technique employed in systematic investigation of meaning emerging as a result of experiences of persons who are subjects of the research (Ekiz, 2003). Sensitivity to the natural environment, participant role of the researcher, determination of perceptions, flexibility in research pattern, and inductive analysis are the primary characteristics of the qualitative researches (Yıldırım and Şimşek, 2005).

Research data was collected through “focus group interview”, one of the qualitative research methods. Focus group interviews are commonly used to expose superficial information. In this regard, appropriate to the general specifications of qualitative researches, participants’ knowledge, experience, feeling, perception, opinion and attitudes are important in focus group interviews. The essential objective is to portray the ideas and point of views of the participants based on the collected data instead of acquiring information leading us to general conclusions (Çokluk, Yılmaz and Oğuz, 2011).

### ***b. The Study Group***

The research data was collected through focal group interview method conducted with seven lecturers employed in the Turkish teaching center operated under a government university.

Four women and three men lecturers participated into the focal group interview on a voluntary basis. Participants were selected among the lecturers with minimum three years of experience in Turkish teaching subject. There were two lecturers who completed their third year at Turkish teaching subject. Other five lecturers' experience levels in teaching Turkish were five, seven, ten, sixteen, and seventeen years respectively. It was also ensured that the most experienced lecturer (seventeen years) at the institution participated into the interview.

### ***c. Data Collection and Analysis***

The researcher prepared five interview questions to determine opinions of lecturers regarding classroom management, who teach in the classrooms where Turkish is taught as a foreign language at the Turkish teaching center operated under a government university. In order to provide internal validity of these questions, opinions of specialists were consulted. These questions were exhibited below:

1. *Which of your behaviors are important for you in regard to enable your students to reach the instructional objectives by establishing positive and efficient learning environment, in another words to classroom management?*

2. *What are the factors affecting your classroom management?*

3. *How does it affect your classroom management to have students from different nationalities, culture and religions in the same environment?*

4. *Do you ensure that there are classroom rules in your classroom? If you ensure this, how do you determine these rules?*

5. *What sorts of unwelcomed student behaviors do you experience in the classroom? How do you interfere in these unwelcomed student behaviors?*

The research data was collected from the answers given by lecturers during the focus group interview. The interview took place in the meeting room at the institution employing the lecturers; and it took one hour and fifty minutes. Obtained data was interpreted by means of descriptive analysis. Descriptive analysis enables us to organize data based on the theme revealed by the research questions and to present them by taking questions or dimensions used in the interview into consideration (Yıldırım, & Şimşek, 2005; Çepni, 2009). In the descriptive analysis, direct citations are included so as to reflect opinions of the interviewed or observed persons impressively. The purpose of the descriptive analysis is to exhibit obtained findings in an organized and interpreted form to readers. The data obtained along with this purpose is first described in a systematic and deliberate way. Then, these descriptions are explained and interpreted; cause-and-effect relationships are probed; and finally certain results are obtained. Associating and interpreting themes formed, and making predictions about the future can be among the dimensions interpreted by the researcher (Yıldırım & Şimşek, 2005).

In this study, obtained findings were described first. Afterwards, these descriptions were explained and interpreted. Cause and effect relationship was investigated and finally results were acquired.

### **Findings**

Before the interview, lecturers were not given information or explained anything regarding classroom management. Focus group interview started with the question of “*What is classroom management?*” in order to determine their classroom management perception and to prepare them for the interview. Based on their answers given to this question, it was understood that theoretical knowledge of lecturers concerning the classroom management was inadequate. It was thought that this situation was result of the fact that none of the lecturers have received classroom management training before or in their service period. It was also determined that participant lecturers have not paid personal effort to educate themselves in the area of classroom management.

The first question prepared along with the objective of the study is that “*Which of your behaviors are important for you in regard to enable your students to reach the instructional objectives by establishing positive and efficient learning environment, in another words to classroom management?*”

The first question was the one most emphasized, and about which lecturers expressed their individual opinions most. Behaviors determined based on the lecturers' answers given to this question indicate that lecturers have number of classroom management skills although they were insufficient in terms of theoretical dimension of classroom management. It can be said that lecturers have gained these skills through their experiences.

When the answers given to the first question were being analyzed and assessed according to the classroom theoretical framework, this analysis revealed the purposes and behaviors of lecturers in regard to classroom management. These purposes and behaviors specific for each purpose were given below:

**Establishing a positive learning environment:** *a. Trying to adopt tolerance and democracy culture in the classroom. b. Encouraging students to be active in classes. c. Approaching students friendly and cheerful. d. Ensuring cooperation among students who do not have any relationship among each other. e. Performing activities which will develop their empathy skills. f. Performing group studies. g. Calling students with their first names. h. Encouraging students to call each other with their first names. i. Performing celebrating activities in the classroom (birthday, important days and holidays.). j. Performing gift occasions. k. Conducting social and cultural activities (sightseeing; theatre, movie, concert or dining etc.). l. Performing bakes in the classroom in which all of the students make preparation and contribution for it. m. Not to let students to exclude each other. n. Using sense of humor. o. Emphasizing inter-cultural similarities, trying to enable interaction among cultures.*

**Productive utilization of learning-teaching time:** *a. Taking attention of students (playing or singing a song, playing games, taking advantage of humor etc.). b. Coming to the class after sufficient lesson preparation. c. Ensuring that students to come to the classes after preparation. d. Enabling students to be efficient in the classroom. e. Applying teaching technology in classroom. f. Taking feedbacks from students.*

**Motivating students:** *a. Informing students about successful or failed results. b. Informing students about objectives of the Turkish teaching. c. Awarding. d. Punishing. e. Asking interesting, surprising, and intriguing questions. f. Being good role model for students. g. Narrating success stories. h. Praising students. i. Performing activities for entertaining students (listening or singing songs, playing games, using sense of humor, etc.) j. Ensuring equality and justice in the classroom. k. Establishing appropriate physical contacts (touching shoulder, handshake, giving five etc.).*

**Establishing an effective communication environment:** *a. Encouraging students to use only Turkish in the classroom to ensure that there is a common language in the classroom. b. Trying to teach newly learnt words with their all sorts of meanings (lateral and trope meanings) when students face with the word first. c. Teaching the meaning of gestures and mimic specific to Turkish culture. d. Establishing communication with each student in the classroom.*

The prominent opinions of the lecturers while they were answering the first question were presented below:

**Opinions regarding the aim of establishing a positive learning environment:** It was understood from their answers that lecturers, who participated into the interview, have strived for establishing an environment which allows them to fulfill their social needs and where students feel comfortable and sense of belonging, and they cooperate with each other. According to the lecturers, in order to establish a positive learning environment, first of all, it is required to adopt tolerance and democracy culture in the classroom. This requirement is result of conflicts among cultures, religions or nationalities. Lecturers stated that mentioned conflicts were the most important obstacle before the positive learning environment.

**Opinions regarding the aim of productive utilization of learning-teaching time:** Lecturers considered that it is important to keep students active during the class hours in terms of both establishing a positive learning environment and obtaining productive utilization of learning-teaching time. Regarding productive utilization of learning-teaching time, lecturers indicated that the productivity dramatically reduced during the afternoon classes, which eventually affected learning-teaching time adversely and thus, it is required to implement speaking lessons which are less exhaustive during afternoons. Based on these assessments, it was deduced that lecturers consider “speaking lesson” (the other lessons are reading, writing and grammar) as the easiest and the least exhaustive lesson.

Lecturers find lesson preparation necessary for both themselves and for students in terms of using learning-teaching time efficiently. They stated that motivation of students and utilization of teaching technologies during lessons (projection equipment) was important for productive utilization of learning-teaching time.

Lecturers emphasized the importance of using student feedbacks as a foundation for the future plans in regard to productive utilization of learning-teaching time.

**Opinions regarding the aim of motivating students:** It was understood that participant lecturers apply both internal and external motivation approaches to motivate students. Especially, it can be said that behaviors such as informing students about “successful and failed results”, “informing students about objectives of Turkish teaching”, “asking interesting, surprising and intriguing questions” and “performing activities to entertain students (listening or

singing a song, playing games, using sense of humor etc.)” were used to provide internal motivation of students. It was seen that lecturers have also applied external motivation techniques. During the interview, it was understood that awarding was the most frequently used external motivation tool applied by the lecturers. They remarked that systematic awarding affects the student motivation in a positive way.

Furthermore, lecturers mentioned that providing equality and justice within the classroom environment makes students to feel secure. They indicated that as students believe in there is no privileged student in the classroom, and as they trust the lecturers in terms of equality and justice, this results in higher level of student motivation.

Another motivation enhancing behavior exhibited by the lecturers is appropriate physical contact with the students (touching shoulder, hand shake, giving five and etc.). According to the lecturers, this behavior is perceived as a “honoring and praising” act; and this contributes development of a friendly and sincere relationship between a lecturer and a student.

**Opinions regarding the aim of establishment of an effective communication environment:** When behaviors of the participant lecturers for establishment of an efficient communication environment was investigated, it was observed that they tried to provide a common language in the classroom; and thus, they steered and encouraged student to use only Turkish during the lessons. Hence, participant lecturers believe in the fact that establishment of an effective communication environment can only be possible with a common language. Lecturers stated that effective communication over the common language depends on students’ skill level in this language. According to lecturers, the most important skill to use Turkish as a common language is to have rich vocabulary knowledge. Thus, they stated that students would not experience difficulties while expressing themselves. Lecturers indicated that they try to teach all different meanings of a Turkish word when students encounter with this for the first time in order to enrich their vocabulary.

Since lecturers believe in that non-verbal communication tools also facilitate the communication and they increase efficiency of the communication, they indicated that they place special importance to teach gestures and mimics specific to the Turkish culture. Lecturers also emphasized paying attention to establish communication with all students in the classroom in order to establish an effective communication environment.

The second question prepared along with the objective of the present study, “*What are the factors affecting your classroom management?*”

When the answers given to the second question were analyzed and assessed within the theoretical framework of classroom management, it was seen that factors affecting classroom management of lecturers were accumulated under five main titles: *a. Physical factors. b. Factors relevant with the lecturer characteristics and applications. c. Factors relevant with student interest, need and characteristics. d. Social factors. e. Factors relevant with attitude and operation of the management of the institution.*

According to the lecturers, factors affecting classroom management and the relevant main title concerning each individual factor were exhibited below:

**Physical factors:** *a. Temperature. b. Light. c. Teaching tools and materials. d. Number of student. e. Size of the classroom. f. Classroom layout. g. Gender distribution.*

**Factors relevant with the lecturer characteristics and applications:** *a. Approach of the lecturer toward the student. b. Application differences among lecturers. c. Personality characteristics of lecturers. d. Quality of the communication between lecturer and student.*

**Factors relevant with student interest, need and characteristics:** *a. Personality characteristics of students. b. Unwelcomed student behaviors. c. Student ages. d. Education levels of students. e. Students’ interests and needs. f. Sexual need.*

**Social factors:** *a. Nationality, religion, cultural differences. b. Information obtained by students regarding Turkey and Turkish culture from their environment. c. Political and social developments around the world. d. Political and social developments occurred in home countries of students. e. Classroom culture.*

**Factors relevant with attitude and operation of the institution:** *a. Attitude of the institution. b. Operation of the institution.*

Lecturers stated following important opinions regarding the factors affecting classroom management while they were answering the second question:

**Opinions Regarding the Physical Factors:** *a. Teaching and learning is not efficient in the classrooms with students more than 15. In foreign language teaching, it is more important to take care of student individually. This is*

not possible in crowded classrooms. **b.** Education can be more efficient and productive in classrooms with small size. **c.** Classroom board is required to be big in size. Thus, it affects students more positively to leave notes which were written during the lesson period on the board without erasing them. **d.** Conventional (in order) layout system facilitates control over classroom. **e.** It must be ensured that all classrooms are provided equal opportunities in terms of teaching tools and materials. **f.** It is more convenient to manage classroom in which female students are in majority and classrooms with mixed gender. **g.** It is more possible to experience unwelcomed student behaviors in classrooms consisted of only male students, therefore, it takes long time to interfere in these behaviors which shorten learning-teaching time. **h.** In classrooms, there must be a table and a chair for each student. These tables and chairs must be mobile so that they can be combined for group studies.

**Opinions Regarding Factors Relevant with Lecturer Characteristics and Applications:** **a.** The relationship between lecturer and student must be healthy. Healthy communication is a two-way communication. **b.** Friendly approach of the lecturer enables students to view themselves valuable, which affects their motivation in a positive way. **c.** Democratic behaviors of lecturers consolidate students' trust in equality and justice in the classroom. Consequently, increasing trust in equality and justice affect student motivation positively. **d.** Differences in applications of lecturers affect classroom management (e.g. the differences among attendance check). While a lecturer is implementing the attendance check at the very beginning of the lesson, another one might do it after the beginning of the lesson, or even at a later time; and they might check in late students as regular attendees. This difference cause rule-obedient lecturers to be perceived as authoritative and intolerant lecturers, which decrease their popularity among their students and thus, student-lecturer relationship can be affected negatively. A negative relationship stance between lecturer and students affects the classroom management as well.

**Opinions Regarding Factors Relevant with Student Interest, Needs and Characteristics:** **a.** Several unwelcomed student behaviors can be experienced in classrooms. The time period spared to interfere in these types of behaviors reduce regular learning-teaching time. Some of the unwelcomed student behaviors in the classroom are result of personal characteristics of students. **b.** The classrooms with low average age can be managed more conveniently compared to the ones with higher average age. Older students might have greater expectations regarding education. These greater expectations affect classroom management. **c.** In classrooms, besides the graduates of the secondary schools, there can be students graduated from an undergraduate or even graduate degree. Students with higher education level might have greater expectations from teaching. These greater expectations also affect classroom management. **d.** Students use their cell phones frequently. Cell phones are required for students' interest in social media and they fulfill students' communication needs with their families and friends. Frequent usage of cell phones is one the most essential obstacle before an effective and productive teaching. When students are interfered in, they allege an excuse of "*I am using my cell phone for its dictionary.*" Moreover, instead of transferring the notes on the board into their notebooks, they take picture of the board with their cell phones. **e.** Students experiences sexual intimacy in the classroom due to their sexual needs, one of their physiologic needs. These intimacies especially distract attention of other students and affect the classroom environment negatively. This can be as well considered as an unwelcomed student behavior.

**Opinions Regarding Social Factors:** **a.** Students from countries with political problems among each other argue frequently in the classroom and they even fight with each other. There can also be religious conflicts and arguments in classroom. **b.** Political and social developments in the world and in the home countries of students can affect the classroom management. These developments cause conflicts, polarity and fights in the classroom. These conflicts and polarities are required to be managed. **c.** Some students were provided erroneous information about Turkey and Turkish culture beforehand. This erroneous information may have caused a negative perception among students about Turkey and Turkish culture. This negative perception can affect students' motivation and their desire to learn Turkish adversely. It is required to perform studies and activities to dismiss such a negative perception in the classroom. **d.** Political and social developments which take place in the home countries of student affect the classroom. For instance, a terror attack in their home country tarnishes psychology of students and affects their motivation negatively. **e.** Classroom is affected by students' values, norms, and traditions. This effect may especially cause unwelcomed student behaviors. For instance, a student may present adverse attitude toward the lecturer involuntarily in order to be member of group of friends.

**Opinions Regarding Factors Relevant with Attitude and Operation of the Institution:** **a.** The management of the institution can register new students even long after commencement of the educational year. The appropriate practice is to form new classrooms consisting of these students. However, the management of the institution

sometimes included these students into existing classrooms. Such an application causes lecturers to return previous chapters (once for each student) inevitably. This situation affects current students adversely. Furthermore, inclusion of new students into the classrooms is a frequent incident, which consequently affects teaching negatively. **b.** Some applications of the management of the institution (e.g. treating some lecturers more exclusively) affect the motivation of lecturers negatively; and this low level of motivation may have an effect on classroom management. Low motivation level of lecturers can affect classroom management negatively. **c.** Formalist / bureaucratic approach of the management of the institution affects loyalty of lecturers toward the institution negatively and decreases their motivation. For instance, management of the institution continuously checks lecturers' entry and exit times, but it does not present similar care for the supervising of the teaching process. In other words, institution only considers the time spent in the classroom; it is not interested in whether the teaching time is used effectively or whether a quality teaching is provided. This approach makes lecturers think that management of the institution only focus on customary rules, attitude or certain formality. Not only this approach, majority of applications and inventions cause the management of the institution is perceived as a formalist / bureaucratic. According to the lecturers, this attitude of the management of the institution affects their job satisfaction and their loyalty to the institution adversely; and consequently, this affects classroom management of lecturers negatively.

The third question prepared along with the objective of the present study is that *"How does it affect your classroom management to have students from different nationalities, culture and religions in the same environment?"*

The points emphasized by the lecturers while they were answering this question were presented as following: **a.** *Managing nationality, cultural or religious conflicts.* **b.** *Sparing time for activities enabling students to gain universal norms and values, and culture of tolerance and democracy.* **c.** *Sparing time for activities to establish intercultural communication, cooperation and reconciliation.* **d.** *Trying to prevent minority students to incur misbehaviors and to be excluded from group of friends.*

While answering the third question, prominent opinions of the lecturers were presented as following: **a.** *Accepting students from different cultures, nationality, or religions in one classroom causes conflicts in the classroom. Student conflicts prevent acquiring teaching objectives.* **b.** *To prevent conflicts based on students' nationality, culture or religion discrepancies, lecturers have to play a peacekeeper role frequently. Efforts for resolution of the conflicts among students sometimes cause waste great part of learning-teaching time.*

The fourth question prepared along with the objective of the present study is that *"Do you ensure that there are rules in your classroom? If you ensure this, how do you determine classroom rules?"*

Based on the answers given to this question, it was deduced that participant lecturers did not spend special effort to determine certain rules in their classrooms; and that they do not find classroom rules necessary. Important opinions of lecturers regarding this question are presented as following: **a.** *Some rules are formed by themselves, but there is no any sanction in case these rules are not abided by students.* **b.** *Older age levels of students and their maturity levels eliminate the necessity of establishing rules in the classroom.* **c.** *Establishing rules and managing the classroom based on these rules may leave negative impact on students who are trying to discover Turkey and to know Turkish culture.*

The fifth question prepared along with the objective of the present study is that *"What sorts of unwelcomed student behaviors do you experience in the classroom? How do you interfere in these unwelcomed student behaviors?"*

Unwelcomed student behaviors in the classroom and intervention methods of the lecturers were exhibited below:

**Unwelcomed student behaviors encountered in classrooms:** **a.** *Avoiding listening to each other or interrupting other students' word.* **b.** *Using cell phone during the class.* **c.** *Teasing, humiliating.* **d.** *Sexual intimacy due to sexual needs, physical contact.* **e.** *Improper behaviors against rules of good manner.* **f.** *Listening music from cell phone or mp3 player during the lesson.* **g.** *Unauthorized recording of lecturers' speech.* **h.** *Unauthorized video recording of lecturer.* **i.** *Making noise.* **j.** *Flipping someone out.* **k.** *Making homework assigned from another lesson.* **l.** *Cheating.*

**Intervention Methods of Lecturers in Unwelcomed Student Behaviors:** **a.** *Ignoring unwelcomed student behavior.* **b.** *Making eye contact.* **c.** *Exerting students out of the classroom.* **d.** *Warning students verbally.* **e.** *Changing student's place.* **f.** *Making complaint about the student to the management of the institution.* **g.** *Applying other punishment methods.*

Based on the data collected through focus group interviews, it was understood that there have been several

unwelcomed student behaviors experienced in the classrooms in which Turkish is taught as a foreign language. It was also realized that lecturers have usually preferred punishment against these unwelcomed student behaviors during their intervention; and that these interventions were mostly individual. Therefore, it is possible to say that lecturers have been applied reactive model among models of classroom management. In the reactive classroom model, award or punishment is used to keep unwelcomed behaviors under control (Başar, 2010). Moreover, interventions are aimed at the individual. Preferring punishment and aiming at individuals may increase severity of unwelcomed student behaviors (Sadık, 2008). Lecturers, incompetent at classroom management and incapable of using other models (precaution, development and holistic classroom management models) use reactive model frequently (Başar, 2010).

## Result and Discussion

In the present study, opinions of lecturers working at the Turkish teaching center operating under a government university in Turkey were tried to be determined regarding management of classrooms where Turkish is taught as a foreign language. Following conclusions were drawn as a result of the study: *a. Participant lecturers were incompetent in terms of theoretical information regarding class management theoretical knowledge. b. Participant lecturers were incompetent in terms of classroom management skills. c. None of the participant lecturers has received classroom management education before or during their service. d. None of the participant lecturers has spent a personal effort for self-education about classroom management. e. While participant lecturers were managing classrooms, they presented behaviors for **establishing a positive learning environment, maintaining productive utilization of learning-teaching time, motivating students, and establishing an effective communication environment.** f. Management of the classrooms where Turkish was taught as a foreign language was affected by **physical factors, factors relevant with the characteristics and applications of the lecturer, factors relevant with student needs, interests and characteristics, social factors and factors relevant with the attitude and operation of management of the institution.** g. Classroom management was affected by nationality, cultural and religious differences among students. h. Participant lecturers have not determined classroom rules in their courses and they do not find classroom rules necessary. i. There were several unwelcomed student behaviors experienced in classrooms. The lecturers interfere in these unwelcomed behaviors through the methods which can be associated with the reactive classroom management model.*

Classrooms are managed so that students can reach teaching objectives by establishing positive and effective learning environment; and that effective and productive learning and teaching take place. To accomplish these purposes, lecturers are required to be competent in terms of theoretical knowledge and skills concerning classroom management. According to Aydoğan (2007), one of the conditions for operation of foreign language teaching process appropriate to its objective is that teachers are required to have knowledge and skill about classroom management.

It is not able that none of the participant lecturers has received any education regarding classroom management before or during their service period. According to Day (1993), classroom management is one of the components of the pedagogical information, one of the four knowledge types which constitutes knowledge foundation of the education process of the foreign language lecturer.

Participant lecturers stated that there was not any education activity conducted within the institution; even they were not aware whether that was any education under the title of “classroom management education”; even if such an education was given, they were not informed about this occasion; and the management of the institution has never informed them about such an event. Ağaoğlu (2012) emphasizes that pre-service training is especially one of the factors affecting classroom management.

Majority of the students who learn Turkish in an official Turkish teaching center are awarded the MEB scholarship. This scholarship given by the MEB is an investment of Turkish Government on youth from Turkic States and Turkic and relative societies to teach them Turkish dialect spoken in Turkey, to introduce education system and Turkish culture, to hand Turkish language and Turkish culture down to the next generations, and to increase number of population who speak the Turkish dialect spoken in Turkey. It can be said that acquisition of the mentioned objectives relies on the success of the official Turkish teaching centers at teaching Turkish as a foreign language. In teaching Turkish as a foreign language, the basic factor, which will ensure reaching instructional

objectives, efficiency and productivity in teaching, is classroom management. Incompetency of the teachers, the most strategic (determiner) variables among the variables of classroom management (Aydın, 2012), will cause inefficiency in classroom management. Accordingly, inefficiency in classroom management can prevent reaching teaching objectives and performing efficient and productive teaching activity. This situation will eventually cause that the investment aforementioned above to be lost and it turns out to be infertile. It is notable that lecturers working at an official Turkish teaching center located in Turkey have not received any training about classroom management; and that they were not selected among the ones who have received pedagogical training which also includes classroom management.

Erdoğan (2010) describes rules as combination of written or unwritten regulations which are used to carry out relationships in an effective and healthy manner. On the other hand, Başar (2010) characterizes classroom rules as regulations of student-student and student-teacher relationships to facilitate life in a classroom. It can be said that lack of classroom rules determined by the lecturers may affect the relationships in the classroom, and consequently this affect classroom management negatively and even complicates the management.

During the interview, lecturers stated that they have encountered unwelcomed student behaviors in the classroom. Facing unwelcomed student behaviors in a classroom suggests that there is need for classroom rules. According to the participant lecturers, the most frequently encountered two unwelcomed student behaviors were “*avoiding listening to each other or interrupting another’s word*” and “*using cell phone in the classroom for communication purposes*”. Even though unwelcomed student behaviors are not consisted of only these two behaviors, when structuring rules, it is required to pay attention to avoid inclusion of negative commanding expressions and elements in speeches (e.g. “Please speak after asking for permission.”, “Respect others.”, and “Use your cell phones outside the classroom.”) in order to prevent waste of learning-teaching time; and these rules will facilitate using time efficiently and productively. Independent of students’ ages and maturity levels, each of them may present unwelcomed behavior in the classroom; and they may commit some breaches. Violations of traffic rules by adults can be good example for this.

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# Organization and quality in school education

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## Abstract

The different approaches of educational institution analysis lead to a fundamental question: how the school may be able to meet the challenges of the economic and social framework continues to present? The interaction between educational institution with the territory and the social context can be effective if the school is able to analyze the strengths and weaknesses of the organizational solution adopted, reduce barriers that may hinder communication with other organizations and the world of work, improve internal quality and develop training plan consistent with the needs of the context.

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*Keywords:* Organizational analysis; Quality; School

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## 1. Introduction

The purpose of this paper is to analyze the quality criteria as part of the learning process, lines of action and organization of the schools, the relationship of the same with the outside world, world of work and community of reference. This consideration that the quality of an organizational solution is related to the ability to be up to date, even with the challenges of the operating context of the same organization (La Rosa, 2002).

The changes that have affected the education world up to now are an important step to initiate a review process of educational institutions function, seeking to pursue certain objectives such as:

- improve the training of teachers and trainers in the knowledge that the preparation of teachers is a key factor for educational quality improvement;
- strengthen links between the education/training systems and the labor market, with particular emphasis on the orientation;
- promote learning more specific only towards the need to reduce the dropout phenomenon;
- encourage studies to enhance professional profiles related to economic sectors in the rapid development with significant employment opportunities;
- greater use of information and communication technologies as teaching and learning tools from the earliest levels of study (Biondi, 2008);
- enhance the learning of foreign languages.

Other ways, however, must be made in the direction of a careful analysis of the organization and quality improvement that puts the focus of the students' needs (Jenkins, 2006).

In recent years the school has been forced to take on new roles, set new goals, outline new methods of action as a result of the changes generated by problems that society is going through. Against this background, it is essential to develop a school, where, through the development of all internal professional resources, it is proposed to pursue its objectives with the maximum efficiency and effectiveness (Early, Maxwell et al., 2007). The quality, in this context, is presented as the necessary condition for implementing the educational renewal.

## 2. Organizational analysis

Analyze the school as an organization is a necessary step for an effective change process. In fact, today more than yesterday, in addition to teaching skills, the school requires organizational and managerial skills to be able to move in a different way than in the past (Dei, 2007).

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First it's necessary to think about school as an organization providing services and with a strong professional value. In the knowledge that there are not "excellent" organizational solutions defined in advance. So it is necessary to analyze its organizational reality, its strengths and weaknesses in order to think about the most appropriate interventions to be carried out. In this context, a self-evaluation process may be the beginning of a path of improvement. The aim is precisely to identify its positive aspects (skills possessed, subject of breadth of teaching, etc.) and its critical areas (limits in staff and space availability, resistance to change, etc.) that may become areas that need work. Similarly it can evaluate threats (limited available resources against the need to make investments, economic system trends, etc.) and external opportunities (possibility of making agreements, contacts with other organizations, etc.). This can lead to critically rethink the methodological approaches used and make innovative renewed decisions.

The organizational analysis considers the educational offer as the result of a consistent set of processes that need to be properly planned, governed and controlled in order to ensure the quality and reliability of the same (Bombelli, 2001). The identification of these processes in an educational institution allows it to ensure effective development and control, to reduce the causes of inefficiency and to have more positive visibility in the territory in which it operates (Butera, Coppola, Fasulo, & Nunziata, 2002).

On this basis, it must then initiate an accurate reflection phase on some critical issues such as:

- the awareness of being part of an organization that wants to change, innovate and require everyone, a special contribution;
- the importance of the institution, in the full freedom to teach, to establish specific targets and identify control indicators that define the achievement of these objectives;
- diverse courses offered to ask what are the foundations on which to build a position of advantage over other "competitors" in the area;
- assess the efforts put in place to communicate outside its initiatives and competence levels, in the knowledge that a lack of attention to communication and external relations cannot better its work;
- consider the activities that can be carried out in partnership with other entities outside the institution, looking for those who, based on their specific skills, are able to give the best contribution to the pursuit of quality improvement;
- carefully evaluate the possible cultural resistance to change and the risk of de-motivation, through a review of human resources management; considering the continuing need to manage periods of change with the aims of improving quality of the education offer, streamline the procedural aspects (simplification), reduce waste and inefficiencies;
- consider the most appropriate ways of sharing and involvement: in fact, those who work directly may know better than others the different issues and, therefore, report problems and suggest improvements.

Those mentioned are just a few facets of the organizational problem in an educational institution, but in any case they could introduce the delicate issue of quality improvement.

### **3. The quality in educational institutions**

The quality issues arise in the industrial world and after they are imposed on the service sector. This trend has also affected education services but it would be risky to think of a mechanical transfer of quality concepts and methodologies, without carefully evaluating the education system specifics.

How can the quality change a field like school? What changes are possible?

There are no good answers (in general), as it will be necessary to study the possibility of intervention with respect to the peculiarities of each individual school and initiatives already in place.

It can be risky to get quality starting from the imitation "success" experiences, because what works in one context does not fit in another; in case of, the experience of another institution can become an opportunity to reflect on their own situation.

In any case, the quality is presented as a condition for implementing the school renewal in a gradual manner, also according to European Union indications (Westerheijden, Stensaker, & Rosa, 2007).

The importance of this element justifies the opportunity to talk about a quality project that develops through different stages or levels that constitute the various steps to be taken. Each stage or level has its objectives in order to recall the next level with the guaranteed presence of skills and resources needed.

Regarding a quality project in a school situation, at various levels of education, means promoting a new way of teaching, through enhancement of all professional resources, it is proposed to pursue, with the greatest possible

efficiency and effectiveness, its objectives; this through the development of concrete action plans to translate into results clearly identifiable and measurable (Van Maele & Van Houtte, 2011).

It seems important to perceive quality improvement as a challenging course that requires resources, determination and involvement of people who make a contribution to the school. Every day consistently to all of its activities, it tries to exploit all the resources available to improve the quality of supply, reducing at the same time, the non-quality factors.

If the institutions concerned follow this path, they can get out of a kind of self-referentiality and to have a better perception of the needs of students, to enable a range of initiatives and projects to qualify for training services, develop a more systematic analysis of effectiveness and efficiency of its activities through the definition of improvement interventions.

Everything in the knowledge of what the labor market requires of young people who wish to join in the same: a solid store of knowledge, a good ability to achieve interpersonal relationships, communicate, learn continuously, reprocess and use the knowledge they possess. A fundamental task of schools is to provide an adequate basic knowledge on the subjects of their respective fields of study, and this reinforced, especially for the more technical fields, with practical applications for the subject of study, preparing the student to a sort of greater pragmatism. To the extent that this goal is pursued, the young person will be better prepared for the world of work, valuing the indicated basic preparation. This could encourage greater levels of youth employment, providing a contribution to give concrete answers to one of the most important problems in recent years. In the delicate relationship between school and work seems increasingly in need of programs, methodologies, tools (practical activities, internships, etc.) that combine cultural preparation and a pragmatism that should be present from the earliest school experiences up to the highest levels of education, in order to enrich the professional profile of the person concerned (Pedder & Opfer, 2013). This could lead to a double positive effect: on the one hand, support the young in job searching and promote an constant desire to learn (both as a skill and as a habit); on the other hand, create conditions to allow the recruitment of a young person in a company that can provide a contribution in terms of knowledge. This pathway is based, therefore, on the need to provide an ample supply of "thought processes" and "know-how" to the student, so that he/she acquires more skills and knowledge in dealing with labor problems that await him (Hongboontri & Keawkhong, 2014).

For the school it is important to carefully consider who are its "customers". In the first place the students, as users of the service and after their families, then the labor market and society as consumers of skills. In this context, teachers and administrative staff can be considered as "clients" when they benefit from the tools and facilities made available to them and to support and make more effective their activities.

Against this background, the "product" is connected to the dimensions of competence concept i.e. knowledge, know-how (practical application of knowledge) and know how to develop personal characteristics and behavioral aspects. The educational activity is asked to reflect on its "product" considering the centrality of the customer, this leads to reconsider the educational offer in relation to the needs of its "customers" and to seek the satisfaction of their expectations.

The project in question cannot have deadlines, in the sense that the school must always continue to review its services to respond effectively to new user requirements, establishing the logic of continuous improvement (Lieto, 2002).

To develop an approach to quality and activate planning and control mechanisms within school organizations, that lead to a better matching of the current needs of society, it must act within each school. Especially today where the educational institution is presented as an organizational system with its own autonomous space in which it moves through the development of internal dynamics and interrelationships with its environment.

The objective is to develop a management dimension within the institution, so as to develop the ability to efficiently and effectively control of service area, entrusted to it.

Effectiveness, efficiency, functionality and quality have become popular buzzwords to describe external expectations towards public administration in general. Specifically, in order to adequately respond to external requests, schools should seek to develop capacities to delineate adequate and systematic offer plans and individual work must be accompanied by moments of collegiate design (Lovat & Toomey, 2009).

It is the discrepancy between actual results and expected results to provide data on which to base the analysis process and evaluate the causes of deviations and possible new definition of objectives and means of action. After the identification of the critical factors of quality on which to intervene, it is appropriate to define verification tools

(satisfaction questionnaires, analysis of complaints, internal audits, etc.) in order to be able to outline corrective, preventive or improvement actions to facilitate a greater "customer" satisfaction.

In this framework, it can define a quality strategy of the institution. This allows it to outline a system of quality management, which is a set of items (resources, responsibilities, activities, etc.) that are put in place to achieve quality objectives that the organization has been given.

These are goals that, on an internal level, pursue continuous improvements in its work, while, on the outside, they look for an appropriate level of reliability (i.e. ability to ensure consistent quality levels over time).

Any quality program requires, however, in the first place, the staunch support of senior management. After that, the aspects on which to operate are as follows:

- try to implement the concept and the requirement of quality within the school; For this purpose educational initiatives could be expected, managers and teachers to introduce the principles and methods of quality, secondly, to create the conditions for organizational development of the school, in order to achieve specific goals that each institution is given as part of its cultural and management autonomy; the objective is, therefore, to seek continuous improvement in the quality of the education service and in close connection, increase its professional and organizational reliability;
- optimize internal communication and external communication;
- assessments of possible innovations in terms of the educational offer, which, for example, on the basis of some experience in schools, may relate to the area of self-learning, where students can access with the support of teachers who gradually provide personalized courses of study through the integration of several media;
- testing of tools to monitor the perception of students about teaching and, more generally, about the whole school, from which to draw reflection elements to assess any action to be taken;
- promote intervention projects that are realistic, aimed at improving the quality, shared, consistent with the expected school model;
- creation of a network between different educational institutions to promote the development of quality programs; initiative that could affect several schools that lead to actions in parallel within their own context, customizing the program, monitoring and discussing the results online.

It is important to try to organize synergistic cooperation, both within the same educational institution between professionals and operational areas and between different educational institutions to promote the discussion and the sharing of good practice and, finally, with the reality of the world of work to bring the same to the school.

#### **4. Some concluding remarks**

In the school the quality issues arise at a time of great change and they push the school to seek a new identity, with respect to which the institutional changes can open significant potentialities.

What seems important to highlight is that, addressing the quality issues implies the definition of innovative proposals that affect not only the educational dimension, but also the organizational aspects of the school as a whole.

Through a correct approach to quality management systems, the school may, as indicated, innovate in order to identify its strengths and weaknesses, and thanks to its efforts to obtain important external recognition.

Quality service will provide students with an "extra card", which they can use to enter in the world of work, and it will help to give a better answer to student's issues.

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# Ottoman family and child education (1300-1600)

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## Abstract

Children, from past to present have always been an important part, in fact a keystone of our life. According to Islam, a child is a continuation of the lineage; therefore children were very precious in the Ottoman State. From its' birth, the child's, care, nourishment, first step, circumcision, education etc. were celebrated through different rituals. Furthermore, their toy and play had special meanings.

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*Keywords:* Child education, Family in Islam, Turkish family, Ottoman Empire, Sübyan, Enderun

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## **I. Family in Islam**

According to Islam, Allah (c.c.) created human being, gave him the ability of knowledge acquisition and using it (The Most Gracious - Ar-Rahman, 55/4), He made him the most honourable creature, He made him, human being, undertake the trust (liability and responsibility) which was refused to undertake by any other living creatures (The Confederates-Al-Ahzáb, 33/72). He enabled him to rise and become lofty with his own will and effort (The Sun - Ash-Shams, 91/10). So, the human being, who acts on this aim, should always be diligent to find the truth and goodness.

This human being will exist, procreate, form the society and culture and pass it down. In addition to these, Islamic people need to cooperate and act with solidarity (Erdil,1991:11). This unity and solidarity includes the circles of family, neighbour, nation (race), ummah (Islamic races) and humanity.

Family in the centre is also the base. Unless family is the base, it is unlikely for the other structures to form and to protect the creatures. Acting with solidarity and cooperation is a kind of behaviour and for starting a family and marriage there are some requirements. These are as follows: Sexual need, love, fear, need for security, education and desire for lineage continuation. Islam took these needs into consideration and while forming the family, it directed and encouraged in compliance with them (Karaman,1992:386).

## **II. Turkish family**

In Turkish history, in a long time period, the military and political intuitions and even organizational units were hard up, states could not continue their existence and because of that they had to fall.

Family was the unique stand of Turkish society against these hitches mentioned above (Turan,1992:85). The main factors of Turkish family, which was one of the institutions suffered the least change in Turkish society, were wedding, birth, mother and father in the rise of Ottoman Empire (Turan,1992:86). Birth was the source of happiness as usual in Turkish nations. When a birth occurred, coins used to be spilt, a piece of jewellery used to be pinned onto the infant and the new dad had feasts prepared. When a baby was born, the most important process was name-giving ceremony. The name-giving ceremonies, which we encounter in the tales of Dada Gorgud, went on, as a tradition, in the 1300s (Turan,1992:87). At the name-giving ceremonies, an event which concerned the family or society was the source of inspiration and usually Turkish names were chosen.

While bringing up a child, one of the most striking point was teaching him Turkish language well. Cradle was indispensable furnish. Perambulator was also used if financial status of a family was good (Turan, 1992:88).

Circumcision ceremony was always important. In fact, in the capital of the state, when the children of statesmen and notables were circumcised, the children of poor inhabitants were commonly included into the circumcision ceremonies.

A child was trained by his mother and father (parents) at home, when he reached at a certain age, he was sent to school. At that term, children were usually sent to school when they were 4 (four) years old, even though there was not a certain limitation (Turan,1992:89). At a certain age, children got more extensive education (Turan,1992:90). Children 12 age and above could take the courses such as language, vocabulary, meaning, statement, rhetoric, prosody and calligraphy, afterwards they learnt maths, logic, philosophy, astrology, Arabic and Persian.

A father plays a crucial role at bringing up a child. A father meets his family's needs and he organizes domestic tasks. A child grows up at his family home and he has temper and morals similar to his elders. Family and environment have a great positive or negative influence on a person. Especially childhood is a fertile term for education. As a matter of fact, a child's sole is simple. In the coming ages of a child, it is difficult to change and correct (Turan 1992:92).

Throughout history, the place of mother in a Turkish family is incontestable. A mother is the most important factor at the language learning of a child. Mother is dominant and responsible person for several matters at home. It is natural that all natural needs of a child are naturally supplied by mother. Mother is the person who maintains a household, determines requirements and conducts immigrations between summer pastures and winter quarters.

Family is the most universal among all social forms. Family origins are grounded with our complex feelings in our organic system. These are desire for continuing bloodline, motherhood, friendship and parenthood (mother-father) feelings. These feelings are strengthened with interdependent secondary feelings, which rise and occur as a result of

social relations, such as romantic love, racial proud, compassion and mercy of partners, economic safety of family, individual need and keeping bloodline.

Personality structure of a child improves in a family. Family members provide the child with organic and mental habits. Since the socialization of an individual occurs in the family, the influence of family on a child is a part of personality development (Gökçe,1976:3).

Family is composed of individuals who are connected each other with material and moral relations which have juridical and moral results including a range of responsibilities. It involves several people having relationship whether they live under the same roof or not. Within this scope, families which consist of individuals, who love and respect each other, help each other expecting nothing in return, act with solidarity, and as well become peaceful and be in safe, become a nation joining each other. Nations who involve individuals and families like these will be peace, safety and tranquillity factors for all humanity (Karaman, 1992:388).

### **III. Child education**

#### **A. Child Education in Family**

Family, which is natural and basic element of society, has existed since the beginning of humanity. So it has had important duties to continue existence of society, has directed economic life, has arranged social and politic life, and has performed religious and cultural functions. Moreover, family has been the main factor of existence of human and formation of new generations. The most important duty of it is to bear a child and rise him well (Demirel, Gürbüz, Tuş, 1992:97).

A child's education and training is the most important issue subsequent to nutrition. Since Ottoman Empire was governed with compliance with Islamic principles and it was majorly theocratic, Islamic values were given priority to in all kinds of educational institutions (Seyidoğlu, 1985:58). The educational institutions of Ottoman Empire were religious centric. A child was not only a member of a family, he was also a little member of the place he lived in other words of neighbourhood community. Nurture provided to a child in family was given in an unnamed system, what nurture meant was teaching Muslimized Turkish mores to a child. (İpçioğlu, 2001:135).

In a sense, family was major school in Ottoman society. Child was brought up by his mother. Child was under guardianship of his parents (Ortaylı,2006:40).

Child gets his initial experiences in his family. A person's following life and relations are substantially effected by his intrafamilial relations. Early childhood ages are very important for a person's personality development and acceptance. Girl identify with mother, boys identify with father. Nearly all of the proverb about personality development and identification emphasize that characteristic features of family elders are also seen at their children (Kırımlioğlu,2005:118,119).

A child should be nurtured with nice and pretty words, he should be taught nice and clear words, his unmentionable and impolite words and behaviours should be prevented. A child remains unchanged when he grows up, he does not give up his old habits easily. A child should be sent to bazaar and street when he is little. Meal and water are firstly given them at dining table. Boys over ten years old should sleep in a different bedroom from their parents' and sisters', they should be prevented from being friend with bad tempered people. Girls should be loved more by their parents (Akyüz,1982:70).

Women, especially girls, were brought up like coy flower, they were prevented from envious eyes. Because of that both house building and neighbour formation were done taking this privacy into account. Important precautions were taken in order to preserve girls and women by Ottoman Empire(Z. Demirel,2010:79)

In an Ottoman family, a child was under his father's legal supervision. The records such as "Ömer bin Ahmed" or "Zeyneb bint-i Ahmed" showed female and male child were mentioned at all religions and everywhere. Because of that child education was done by mainly mother and grandmother and in addition to that relatives, neighbourhood and community had control on it. Child was someone who had to be preserved. If a child lost his father, he had to be supported by his grandparent, if he did not have a grandparent he had to be supported by his uncle. Ottoman community attempted to bring up a child well. In Ottoman Empire, parents gave more importance to get their child marry than their education, because of that child used to stay in the background. Girls were nurtured in compliance with marriage and boys were directed to their fathers' jobs (Doğan, 2005:124).

Child care was done by their mothers and milk-mothers. Each child had its own cradle. A child slept in it and spent

most of a day in it. Some of them were made of walnut. Wealthy families used to have silver and slim embossment cradles made. Cradles of sultans' sons and sultans from Ottoman dynasty were made of golden or precious stones. Child were educated at home. No matter how rich, girls were educated at home. They did not have a tutoress or teacher. They learnt religion lesson and moralities. Then they were nurtured about marriage( D'ohsson,a,1992: 213,214).

Katip Çelebi was important in Ottoman society. He mentioned about the education of society both in his works and speeches. According to him, a child should be sent to school when he was six, boys should be taught craft, girls should be taught housework, and children should not be told evil tongue and damned. He gave importance child education and training (Sakaoğlu, 2003:37).

One of the most distinguished issue on child rising in Ottoman Empire was teaching Turkish language. This situation was clearly seen when Christian children particularly chosen to be Janissary were taught primarily Turkish language and Islamic religion. When Guild of Janissaries was founded, Çandarlı Hayrettin Pasha said about the children recruited that "let's give them to Turks, they will both become Muslim and learn Turkish, then they will become Janissary". A family, who taught the religion and language to Janissary candidate Christian child, could not be considered to be disregardful of their child's education on these issues. Mother was effective at language teaching. Mother was responsible for lots of things at home. It was normal that a child's lots of needs were met by his mother.

From the period the child spent in the uterus to the one he was ready to be accustomed to the society and the morals: the family used to be observed. The main aim was to bring the child up to be someone who was dutiful child for the society. As it was understood the basic task of an Ottoman family was to bring up a child as it was all other families. Children were considered as a material connection to the future and they were regarded as future.

## **B. Child Education at School**

The early education of a child was given at home by his parents. A child at a certain age was sent to school. Children were sometimes sent to school when they were 4. However, children were generally sent to school when they were 6 (Turan, 1992:85,86).

Amen parade for children was a term used for the ceremony practised for the children who started school on time. "Amen", which was a Syriac becoming Arabic, means "God, accept it, let it be"

Let it be protected from all the troubles in the earth

For the sake of the greatness of God, Amen.

Baki

When a child was at school age, he started school with a ceremony. Starting school used to take place on blessed days. If there were not any blessed day in that season, Amen parade for children took place on either Monday or Thursday.

Starting school used to start with house cleaning, all family members used to go to bathhouse, and there were entertainments till evening. When other members of family finished their preparations, the child was prepared. He was dressed up cleanly. The child in his new clothes used to wear scarf and diamond moon. Then the child was taken to Eyüp Sultan on a horse. While he was being taken to school, hymns were sung. When a hodja finished his hymn, the child got down the horse and they followed the parade. While following the parade with the shouts of "Amin, Amin", the child to started school and learnt the first lesson.

### **1. Ottoman Elementary-Primary School**

They were "the basic schools" where girls and boys between the ages of 5/6 and 11/12 got education together in other words got coeducation. At these schools, basic knowledge such as reading writing, Quran and calculation were taught.(Pakalın, 1983:58,59)

Teaching at Ottoman Elementary-Primary Schools was not conveyed as suitable to strict-year-class system but "success level". Discipline was basic principle for education. The teacher teaching at these schools were usually trained at madrasahs (Akkutay, 1994:6,7).

Schools went on until Thursday noon. Since Fridays was holiday, children were allowed or in their words they were relieved. Every day afternoon when lessons finished, they all swore off their sins altogether and prayed and said "Amen!". This old custom was not forgotten and was kept on at all schools (Abdülaziz Bey, 2000: 63).

Teachers of Ottoman Elementary-Primary Schools used to tell that children should be served, complimented and smiled at first three days, but they should not be admonished, beaten and sworn.

They stated that after children were accustomed to school slowly and in easiness, they should start their education little by little.

It is not known whether Ottoman Elementary-Primary School had a formal curriculum. Graduation age was not also stated, either, however, there was an obligation to read the Quran from beginning to end in order to graduate (İhsanoğlu, 1999:1).

A teacher at an Ottoman Elementary-Primary School put what he taught children and how he behaved people into words with the following poem

(Original Version in Ottoman Turkish)

Dolardı mektebin içi sübyan  
İderdim onlara talim-i Kur'an  
Olup beş vakitte mihraba mülazim  
Bu manalardı ancak bana lazım  
Oturmazdım avamın aresinde

English version:

The children would rush into my school  
I would teach them the Quran  
I would make them pray  
Just these would concern me  
I would neither interfere the gossips of the public nor spend time with them.

Alphabet, public and other component, Turkish wordbook, moral, writing, catechism, Turkish, Tajwid, Quran memorising were taught at Ottoman Elementary-Primary Schools, and it was important to teach them children (Akyüz, 1994: 62,79,106). Teachers taught children reading methods courses at Ottoman Elementary-Primary School. They especially taught reading Quran. There was a teacher teaching writing, calligraphy and different types of writing in one of schools (Abdülaziz Bey, 2000: 70).

Teachers of Ottoman Elementary-Primary Schools socialized well with the socio-cultural environment they lived in and they became a part of the society. Because of that they were respected and consulted people. There were some reasons why they had socialized with socio-cultural environment and they had been consulted. The people considered teachers and schools as a way to “grow into a man” and they respected them a lot (Akyüz, 1994:62).

In summers, Ottoman Elementary-Primary Schools organized school trips in order to have children entertain and show around. In these trips, children would be taken to Veli Efendi Meadow, Beykoz Meadow, Kağıthane Park and Göksu meadow. Teachers would inform children about the decision to go on school trip, children would tell it to their parents and bring the money, which they took appropriate to their financial situation, for trip expenses to their teacher. Children used to enjoy and be happy with these school trips.

When each of children trained at these schools grew up and got a job or advanced in the career, they always respected the rights of their teachers. It was an old moral principle to respect and kiss their hands when they saw their teachers, additionally, to call their friends and help them when they were in difficulty (Bey, 2000: 64).

#### a) **Madrasah**

They were educational institutions which trained complying with the principles of Islamic religion. The madrasah opened the city of Fez in Morocco was the first of them. These schools marched forward in time and experienced their most productive period during the time of Seljuk and Ottoman Empires.

Madrasahs which were educational institutions served under mosques and prayer rooms next to them at first, in the course of time they severed their connection with them and continued their operation in different buildings.

Iznik Madrasah was the first Ottoman Madrasah founded in 1331. Religion and positive sciences of that time were taught in Madrasah (Gürbüz, 1993:200,201).

There were departments of madrasah corresponding secondary schools, high schools and universities of today. Primary education was out of madrasah. There was a school near madrasahs. In that term, school meant primary school (Öztunç, 1977: 144,145).

Madrasahs were the backbones of the system of education in Ottoman Empire. In fact, madrasahs played a crucial role at the development of culture and civilization. During the foundation of the empire, madrasahs which developed

in Iznik and Edirne climaxed with Süleymaniye Madrasah which was built by Mehmet the Conqueror in 15 and 16<sup>th</sup> centuries. Both provided pecuniary resource and brain drain from Islamic World to the madrasahs in İstanbul actualized this development (Öztürk, 2007:566).

Madrasahs were educational institutions which had a certain programme and were open to public. The ones founded by Sultans were called “sultanic” and the ones founded by statesmen or ulema as a foundation were called “private”. There was a madrasah next to nearly all of the big mosques in metropolises and towns.

During the Ottoman Empire, the people taught at madrasahs were called “mudariss”, the students of madrasahs were called “aspirant” which meant “someone who looks for wisdom” or “suhte (burnt)” which meant someone who burnt for the sake of truth.

Students of a teachers were called “Shakird (pupil). New disciples used to serve their teachers and even the assistants who were negotiants in madrasahs.

The grades of education in madrasahs were determined with lawbooks. In this regard, three-stage education was conveyed at madrasahs until 16<sup>th</sup> century. The first part of it was called “Outside”, secondary part was called “Within” and higher part was called “Sahn”.

Students were able to choose their teachers. A student who learnt “introduction to scholarship” from the teacher he had chosen at outside madrasah, then passed to one of the telvih madrasahs which belonged to one of the teachers of “within madrasahs”. Madrasahs were divided into four as Fatih and Kanuni madrasahs, Darulkurra Madrasahs, Darulhadis madrasahs and Medical madrasahs( Özbilgen, 2003:310,312).

The system and organization of madrasahs were established on the base of foundation like mosque, imaret, caravansary, inn and bathhouse in the Islamic world. Since these institutions had religious aspects, the foundations had to be in conformity with shariah. Madrasahs were also for training administrative and judiciary staff and they made the central administration durable and powerful.

Mathematical sciences such as Arithmetic, geometry, algebra and astronomy and physic, one of natural sciences were taught at Ottoman madrasahs (İhsanoğlu, 1999:232).

When the quality of teachers, students and education went down at the end of 16<sup>th</sup> century, madrasahs started to spoil (Özdemir, 2011:119).

Whatever the opinions of the founders of madrasahs were, the main aim of them was to get man ready for afterlife not for this world (Sakaoğlu, 2003:20,21).

#### b) **Child Education in Palace**

Shahzade was the title given to sons of Padishahs. They were educated for a length of time. When Shahzades were weaned at the age of one, they were trained by private trainers. When they were 6, they started their primary education and they were taught to ride horse and use a gun (Özdemir, 2011:496).

Shahzades were called as “Chelebi”, but then they were named Shahzade. They were called with this name until the end of Ottoman Empire ((Özdemir, 2011:496).

Shahzades were born by haseki, ikbal and odalisques. In other word, regardless of their mother’s race, sons of Padishahs were called Shahzade and they were cared.

His mother and three aghas superintend a Shahzade’s care. The oldest agha was the head tutor called “head lala”. The other tutors under the command of him were called “lala”. Lalas were responsible for shahzades’ education and their loyalty to the Padishah. Because of that one of the Enderun aghas who was close to the Padishah and known by him used to become lala (Özbilgen,2003: 90).

Ottoman shahzades got their theoretical education in the palace. Leading scholars of the term were hired as teachers. Teachers used to come to the palace with an old woman wearing black clothes without being seen by seraglio women. Shahzades learnt especially Arabic and Persian. Shahzades did horse riding and battle practises with page boys in the third yard of the palace. Ottoman shahzades got their applied education in sanjaks they governed.

Lalas were responsible for Shahzades’ education. Lalas were made responsible for a shahzade’s education. A lala also prevented a Shahzade to come under the Padishah’s domination (Afyoncu, 2010:186,187).

When a Shahzade was at the educational age, the notables of the state used to get together at the palace, the shaykh al-islam used to pray the young prince and his alphabet book, then he made him recite all letters. The Shahzade’s book, cartoon, bag and etc. were the gift of the shaykh al-islam and they were ornamented with gold and precious stones. After this ceremony, shahzades used to wear the caftan of honour. A teacher was assigned and lessons started at the chamber of Kızlar agha (D’ohsson,b,1992: 963,964).

All students of Palace schools were recruited from families, who had divine love and were totally on the way of God with their religions and traditions, from different places of the Empire, in accordance with the Devshirme Law.

Palace schools were managed by White Aghas from the time they were founded to the time they vanished. They were very disciplined and talented (Akkutay, 126).

#### i. **Shahzadegan School**

It was a school pertain to education of Shahzades. Their curriculum was the same as the curriculum of Ottoman elementary-primary schools where children of community went to. The reason why some members of Ottoman dynasty were very sophisticated was the private education they had later. In addition to that there was a meshkhane in the palace. Meshkhane was a school where page boys had music education (Akyüz, 1994:65). Shahzadegan School was peculiar to the palace. Shahzades, who were appointed as sanjak-beys or state governors at young ages, had education under the supervision of intellectual, experienced civilian or soldier lalas. Shahzadegan School was upstairs of chamber of Kızlar Agha in the palace (Sakaoğlu, 2003: 40).

#### ii. **Enderun School**

Enderun School and military schools were educational institutions which had been established directly by the state until the reign of Mahmud the second. The major duty of Enderun School was to raise well-educated, talented, mannerly and reliable statesmen and soldiers from the children who were recruited from Christian citizens.

The children, who were to accepted to Enderun School, initially were given to a Turkish family so that they could learn Turkish-Islamic culture, after they had stayed there for a few years, they were sent to acemi oğlan schools to have military education. The ones chosen from these schools were accepted to Enderun and they had higher education there. A great number of grand viziers who had a say in ruling the country, viziers, army commanders, governors, architects and engineer raised for centuries at Enderun (Kazıcı, Ayhan, 2010:520,527).

The organization of Enderun consisted of six-graded seven chambers most of which were founded by Mehmet the Conqueror. These were a Grand and Small Hall, a Falconers Dorm, a Campaign chamber, the Larder, the treasury and the Privy Chamber. The Enderun students had to pass twelve promotional exams during their education. However, in addition to their success at the exams, their interest, abilities and individual differences played crucial roles at their promotion. Students who could not their education there, attended their troop leaving their chambers via "leaving" method.

Enderun had educationally a progressive structure. Unless a page boy made a hit, he could not graduate from Enderun, he was assigned to a troop pursuant to the degree of the chamber he left as a leaver.

Another aspect of Enderun education was to teach Ottoman perception and Islamic culture. Under favour of Enderun, the Empire could fulfil its mission with its all institutions.

Another principle of Enderun education was discipline. There was some rules and morals that Enderun people had to obey. The going to bed and getting up times were scheduled. All daily salaahs were prayed with the community. There was a White Agha bed in addition to the beds of eight or ten youngsters in the dorms. Youngsters ate neither more nor less, and meat and rice were among their staple food (Z. Demirel, 2010:34,36).

Enderun was not a kind of school which had a grade system, people got education there to serve. They were promoted from a dorm to another dorm. The more they were appreciated, the closer service to the Padishah they were assigned to. Interestingly they had spoken and face to face education there. There were also sport, painting, literature and calligraphy education there.

Mehmet the Conqueror was the one who gave its main form to Enderun School. Mehmet the Conqueror, who was the best-knowing "Sultan" in the Ottoman Dynasty, brought the academic structure of the school to perfection. The feature of Enderun School was that it was long-term and continual and its sphere of influence was large.

Science, culture, Islam religion lessons were taught at these schools where period of study was 14 years. However, in progress of time as the number of schools increased, they lose their significance. Enderun was abolished officially on 3 April 1924 when the Topkapı Palace (New Palace) was converted into a museum) (Uslubaş, 2013:203,204).

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# Outputs of interactive exploration and project-based teaching at Mendel University in Brno, Czech Republic

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## Abstract

This paper deals with the effectiveness of teaching methods using interactive and project-based teaching. The aim consists in encouraging both linguistic and professional competence through language teaching. A survey covers the effectiveness of the teaching methods and the response of students to the innovation of the German language course in forestry, timber, arboriculture and landscape engineering. In general, students took a positive attitude to the interactive tutorials; on the contrary, they took completely negative attitude to the project-based teaching. Teaching process using the interactive CD is creative and flexible; in addition, it is an open system, which is to be innovated in the future. Despite the negative attitude, we would like to recover project-based teaching and implement project-based learning so that different disciplines could be presented and compared using their contrasts: hunting / wildlife protection, forest harvesting / wildlife protection, landscape engineering / wildlife protection, bark beetle occurrence / wildlife protection. We want our students learn how to express their opinion using proper linguistic means and terminology, encourage and enhance their professional competence.

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*Keywords:* project teaching; interactive teaching; project-based teaching; linguistic and professional competence; interactive CD; different disciplines comparison; creative teaching

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## 1. Introduction

Having discussed and exchanged our experience with many university language teachers at the INTE conference in Rome we introduced as a part of the project “Akademie” the project teaching in the professional German language curriculum at the Faculty of Forestry and Wood Technology, Mendel University in Brno, Czech Republic. The professional German language terminology covering forestry and wood technology branches had been taught using individual presentations focused on the professional oriented topic and we got several-year positive experience. It consists in the fact that referring to the professional language terminology a university student corresponds to a secondary school level expert who is able to present a topic correctly, however, the language level correctness is insufficient.

As we wanted to move the language lessons up and reached further innovative level, in 2013/2014 we introduced the project teaching at Mendel University in Brno, Czech Republic. The aim consisted in creating small teams of students whose task was to prepare a topic for further presentation. A half a year later we found out that the idea did not work as we had expected. Students were not used to working in a team, which had been selected by a teacher, they had problems in collaboration. The next semester these were the students who created three-member teams with similar study interests; each team prepared a topic in detail, worked on it in detail, extended and

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discussed it. They used to team working, the teams started competing and the effort resulted in excellent presentations based on curriculum topics. We introduce the paper, and put a nomenclature if necessary, in a box with the same font size as the rest of the paper. The paragraphs continue from here and are only separated by headings, subheadings, images and formulae. The section headings are arranged by numbers, bold and 10 pt. Here follows further instructions for authors.

## **2. Project teaching**

Presentations, both individual and in teams bring students a wide range of vocabulary and topics. Students select their topics themselves and therefore are able to bring more variable and extensive scope of topics. Presentations are correct considering facts; a teacher – linguist is not usually able to reach that level; however, they are not perfect speaking about the language use. At this moment, comments and explanations of the teacher are necessary as well as students' discussion and evaluation.

We found out that students are not able to select the right and relevant expression from a dictionary. The role of a teacher is irreplaceable again referring to the professional language use; only a person working with a language, particularly a professional technical language for a very long time is able to convey his/her experience. Dictionaries are not sufficient. Students often use translators in the belief that a computer is able to translate correctly; however, confusing terms, lack of required terminology, and vague classification by branches; these are just a few problems they meet and translations fail.

Students do not know how to use the Internet resources. They do not verify the expressions on German or Austrian internet sites; they frequently select improper translation from Czech, Hungarian or Polish sites. This is the moment when wrong translation results from language interference. Czech, Hungarian and Polish sites present "word for word" translations based on the native language background, particularly those expressions, which have to be translated into the German language completely differently. Students are not able to consider the expression frequency either on home sites or sites presenting improper translations. The teacher has to show students to be able to consider the history of some expressions and the fact that they cannot be translated because of the historical relationship within one nation. It covers a range of expressions of Austrian-German dishes and approximately 1,300 further expressions, which differ completely in Austrian-German. Robert Sedlaczek states and proves 1,300 differences in his book *Das österreichische Deutsch? Ueberreuter*, 2004, Wien.

It is just a teacher – an expert and professional with many-year practice who is able to convey specialized vocabulary, neologism information, usage differences and subtle language distinctions.

## **3. Preparing multimedia interactive CD**

A multimedia interactive CD, which is being in progress at the moment, will help to present professional specialized terminology from timber and forestry branches, both for German and English languages. Every unit is based on a professional quality text, which is supplemented with an interactive vocabulary and exercises related directly to the text. A high-quality text for a lesson must cover a text packed with professional specialized terminology so that there are maximum terms used within a specific branch. After that the task of research comes as it is necessary to create software applicable to a language practice; further step consists in investigating what types of exercises are relevant and what else has to be done in order to make the exercise efficient as much as possible; in addition, the units are liven up using photographs.

We also succeed in a brand-new field of study, i.e., arboriculture, which is a part of the faculty curriculum. This branch is an interdisciplinary field between the forestry and horticulture disciplines and it is taught at the Faculty of Forestry and Wood Technology, Mendel University in Brno, Czech Republic. The study material had also been required by the students of a new branch – Wooden Structures, which is taught at the Faculty of Forestry and Wood Technology. While collecting materials, we decided to supplement the originally developed arrangement with a professional specialized vocabulary consisting of 1,000 items. We added a quiz-type revision and the material summary; the studied problems are recorded as well the vocabulary studied. This results in the fact that the vocabulary is repeated several times.

Every unit also includes a grammar explanation part, however, at an academic level; there is an above-standard interpretation with examples from professional practice, elaborated detailed lexicology section and further

specialized technical examples attached. Students are lead and pushed to reading scientific texts and while presenting, they learn how to build a professional specialized text. Students learn how to master two skills: working with a text and handling the professional style; thus the students are trained to manage academic reading and writing.

The final stage will cover accomplishing audio-materials, i.e., the texts will be recorded by a native speaker.

In addition, the study materials will be supplemented with video-recordings with a native speaker comments; the topics will cover working environment and there will be descriptions of technological procedures, which students are familiar with and study at Mendel University.

The entire project will result in a monograph written by a teacher.

#### **4. Discussion**

Professional specialized language teaching is crucial for further professional future. The companies generally prioritize the English language. However, the research conducted in companies in the city of Brno showed that German companies prefer German at negotiations; we believe that the reason is to prevent misinterpretations. Therefore, the company employees located in Brno are highly motivated to study the German language and their language education is supported by the companies.

Project teaching may vary depending on the level and type of the school. At a university-type facility, a foreign language teaching process should result in a higher quality of presentations, presentation skills, Bachelor's as well as Master's thesis. Teachers help to improve foreign language skills of students applicable in practice. One goal is to prepare students for the practical-oriented specificities of their profession, such as trading, real-time company interviews, meetings, etc. The other goal, aimed at science and research oriented students, is to prepare them master conference presentations, presentations for large audience, publishing and project implementation.

#### **5. Conclusion**

We should realize the fact that the knowledge of a foreign language promotes professionalism in the workplace, shapes the company profile at negotiations with partners and customers, encourages a personal success, supports a personality, and it helps to prepare for a professional life. In addition, it also brings and creates irreplaceable social and cultural multidisciplinary interconnections.

Project teaching combines teaching and practice, there are encouraged both language and professional competences. Students are allowed to participate creatively in learning-teaching process. It learns how to solve a task, topic, problem, and how to work in a team. In our case, the topic and working approach are selected by students. This method offers various creative approaches. Since those are students with a secondary professional education background, they can bring and integrate a great spectrum of professional oriented topics as well as their hobbies: drawing, taking photographs, knowledge of various scientific disciplines, e.g., entomology, hunting, etc. Students start getting training in a 3-phase process: preparation – processing – final product (topic presentation). They gradually acquire not only the process itself but also responsibility feeling for the “product”. They learn estimating the time needed for particular activity. Both the teacher and students make comments. Project teaching is an open form of a practical learning-teaching process; it can be extended, created and modified continuously.

The third year of the project should be focused on evaluation criteria both of teaching-learning process and presentation skills.

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# Overseas education process of outgoing students within The Erasmus Exchange Programme

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## Abstract

Erasmus Programme is a student exchange programme carried out within the frame of the agreements between higher education institutions of European Union countries and the candidate countries. Programme is supported by The European Union . Programme aims at providing the outgoing students with new abilities and different experiences. The Exchange programme also aims at enhancing the employment opportunities of the outgoing students. Programme came into use in Selcuk University in 2005 and 465 students have been sent to study abroad as Erasmus students in the last three years. The aim of this study is to evaluate the education process of outgoing students sent to abroad by Erasmus Programme. In this study, Erasmus Students Satisfaction Survey was applied to the 50 outgoing students. The problems, encountered by outgoing students in their education , were determined ; the experiences that students gained in a different education life and culture were presented and also the contribution of the Erasmus Programme on personel and carreer development of outgoing students were determined. The comments and suggestions were stated according to feedbacks obtained from the survey based on opinions and thoughts of outgoing students. With this study it is aimed to shed light on the students to be sent to study abroad next academic year based on the knowledge and experiences and to minimize the encountered problems.

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*Keywords:* Erasmus Programme, student exchange , problems , higher education process

## 1. Introduction

Today education has gained importance considerably. In the past high school graduation was used to be sufficient to find a job however today university graduation is inadequate in terms of finding a job. For this reason , people are turning towards studying abroad. Studying abroad at university in a European country is thought to be advantageous because of the opportunities such as gaining different perspectives at abroad and taking a great chance to acquire the opportunity to live abroad , taking opportunities to have more diversified and better jobs. The reason why people prefer other countries for education is basically the desire to take education at a better university and desire to graduate from university as equipped with qualities requested by the global job market. Overseas education of the students contributes to the formation of an international understanding and intercultural interaction ( Öçal,2012). One of the programmes that allows students to study abroad is Erasmus Exchange Programme. Two types of mobility activities ,including staff and student mobility, are carried out within the Erasmus Exchange Programme. Students are gaining an opportunity to study abroad within the Erasmus Student Mobility Programme.

Erasmus Student Mobility For Studies is an exchange programme carried out within the framework of the bilateral agreements between institutions of higher educations. Erasmus Programme has been being implemented in Europe since 1987. In Turkey by the establishment of the National Agency , Erasmus Programme was initiated as a pilot program in 2003 - 2004 and Turkey has been a member of these programmes officially since 2004 ( Boyacı, 2011). The programme was called as Socrates I between 1987 - 2000 and Socrates II between 2000 - 2007. Since 2007 this programme took part in the European Union Lifelong Learning Programme. Youth Programme and the Lifelong Learning Programme which were implemented between 2007 and 2013 , gathered under a single roof as

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Erasmus Plus Programme. The programme will get into the act as Erasmus Plus Programme between 2014 and 2020.

By encouraging the higher education institutions to cooperate with each other , Erasmus Exchange Programme aims at allowing students to study abroad and to recognize European countries and cultures , contributing to the strengthening of communication and cooperation between countries; developing and popularizing of European standards in education ; improving the quality of higher education. Programme also aims at raising the equipped individuals who will fulfill the expectations of business world and the universities which provide qualified higher education services (Duman ,2001; National Agency, 2005 ).Erasmus Programme gets into the act in two different areas including Staff Mobility and Student Mobility. Apart from the staff mobility , there are two types of erasmus mobility programme for students. Within the framework of the Student Mobility Programme students can benefit from student mobility for studies and student mobility for placements. Erasmus Student Mobility For Studies can be carried out within the bilateral agreements between institutions. By Erasmus Student Mobility For studies , students, who are registered to a higher education institution which has an Erasmus University Charter ( EUC ) and provides formal education in Turkey , will have the chance of being an exchange student for one or two semesters ( between 3 and 12 months ) in an academic year at a higher education institution in a European country. Erasmus Student Mobility For placement also process of gaining experience of vocational training and working at a business or an organization in a foreign country. Period of education for undergraduate students , postgraduate students and doctoral students is between 3 and 12 months. For the students of short - term higher education institutions such as vocational high schools , period of education is minimum 2 months and can be prolonged up to 12 months. Within the Erasmus Exchange Program students will receive financial support for the period of education in which students stay abroad.

Before the beginning of the academic year grants for students per months are determined by the center according to national priorities and criteria. 27 EU member countries were divided into four different groups according to their living standards and costliness indexes and grant amounts were calculated for each country and these amounts were found appropriate to be given to the students who would study at these countries. Grant amounts were determined as 300€ - 400€ - 500€ according to countries taking part in four different groups. Grants are paid to the students in two installments. Installment rates are determined by National Agency in the manner that first installment rate will not exceed 80% of the total grant. First installment is paid to the students before they go abroad. Second installment is paid at the end of the education period of the exchange students after they deliver the Student Final Report , Transcript and Certificate of Attendance by hand. Total grant is calculated again according to starting and finishing dates of the education written on the Certificate of Attendance. students can only receive the grants for the period in which students study abroad. If students stay shorter than the planned education period , students can only receive the period in which students stay abroad.

Selcuk University has been actively participating in the Erasmus Programme since 2003. In the last five years between (2010 - 2015 ) bilateral agreements have been signed with 23 countries including 250 different institutions. Bilateral agreements were signed with the countries such as Poland , Germany , Romania , Hungary , the Czech Republic , Portugal. Between 2010 - 2011 total 34 bilateral agreements were signed with 17 different countries, between 2011 - 2012 total 17 bilateral agreements were signed with 11 different countries, between 2012 - 2013 total 23 bilateral agreements were signed with 11 different countries, between 2013 - 2014 total 62 bilateral agreements were signed with 17 countries, in the current year ( 2014 - 2015) total 115 bilateral agreements were signed with 18 different countries. In the last three years ( 2011 - 2014 ) total 465 students have benefited from the exchange program. In 2014-2015 academic year 199 students were selected for studying abroad , they will go abroad and conduct their education activities next year.

The aim of our study is to examine the education process of outgoing students within the Erasmus Exchange Programme, to identify the problems that they experience during the education process; to reveal the effects of the Erasmus Programme on the students and to bring solutions to problems that students will encounter in their education process based on the experiences of the students who studied abroad and turned back to Turkey.

### *1.1.Education Process Of Outgoing Students Within The Erasmus Programme*

The education processes of the students begin with the e-mail sent by Erasmus Coordination Office stating that students deserve to benefit from the Erasmus Student Mobility For Studies. The nominated students examine the

web sites of the schools that they will study and get the necessary information. An orientation programme is organized by Erasmus Coordination Office. After orientation programme the nominated students have to fill the application and accommodation forms published in websites of the schools. After filling the documents, they have to be signed by the departmental coordinator and Institutional coordinator. After signature process, documents are sent by post to the international relation office of the receiving institution. The receiving institution examines the documents and sends the acceptance letters of the students. After students receive the acceptance letters, they have to prepare and send the Learning agreement. Students have to acquire 30 ECTS for one semester and 60 ECTS for two semesters. The students, who prepare and deliver the learning agreement, proof of recognition, account number declaration petition, grant contract, can begin to the passport and visa processes. The students who get the passport and visa, are ready to go abroad and the receiving institution. The education period, in which the students will stay at receiving institution, is calculated and multiplied by monthly grant amount and 80% of this amount is put into the accounts of the students. Students who complete the education and turn back to Turkey, they have to deliver the return documents. The students have to prepare and deliver the Certificate of Attendance, Transcript, Boarding Pass, Photocopy of the passport stamps and Final Report. After documents are delivered by hand grades of the students are registered to system and 20% of the grant is paid to the students. Thus, Students complete and finish their mobility activities.

## **2.Method**

Our study was carried out with 50 students who went to the different countries in Europe for study within the Erasmus Exchange Programme between 2011 and 2014. A questionnaire was carried out to learn the level of satisfaction of the students who went to the different countries of the Europe for education, to identify the problems encountered by the students during their education and to find out their opinions and suggestions. 30 students from the Faculty of Economics and Administrative Sciences, 11 students from Faculty of Literature, 8 students from Faculty of Engineering and 1 student from Tourism Faculty took part in the questionnaire. Of all 50 students, 35 students went to Poland, 5 students went to Portugal, 2 students went to Spain, 2 students went to Germany, 3 students went to Italy and the remaining 3 students also went to Slovakia.

The questionnaire is consisted of two main parts including general information and satisfaction level of the students. Information about the receiving institution and the country in which the students will study and general information about the department and faculty that the students study in Turkey take place in the first part. In the second part, a grading scale from 1 to 5 about the issues on academic life, education system, health care services, accommodation and transportation, was used to measure the problems that students were encountered in receiving institutions. Scale was formed as very bad (1), bad (2), neutral (3), good (4), very good (5). Two open-ended questions were asked to the students including the effects of the Erasmus Programme on the students and the suggestions of the students about the Erasmus Programme.

## **3. Findings**

The questionnaire is consisted of 6 parts including the questions about academic life and education system, questions about health services, accommodation and nutrition, an emotional and a moral assessment, the effects of the Erasmus Programme on the students, general problems and troubles, opinions about the programme and suggestions of the students.

The findings belonging to the questions about the academic life and education system are as follows: Of all 50 students 34 students (68%) stated that they had no problems about the adaptation in education system; 15 students (30%) said that they had problems with adaptation in education system and 1 student stated that He/She could not adapt in the education system. About the issue on "Accessibility to the academic advisors and teachers" 32 students (64%) pointed out that they had no problems with accessibility to the academic advisors and teachers; 12 students (24%) stated that they had problems with accessibility to the academic advisors and teachers; 6 students (12%) said that they scarcely reached the academic advisors and teachers and they met teachers too late. 37 students (74%) expressed that academic advisors and teachers were helpful and tactful against the Erasmus students; 12 students (24%) stated that academic advisors and teachers kept themselves at a distance and stood on ceremony; 1 student said that academic advisors and teachers were negative and biased against the Erasmus students. About the issue on

the methods of teaching lesson 32 students (71%) found the methods of teaching lesson at receiving institution excellent and beneficial; 14 students evaluated the methods of teaching lesson as neutral and moderate; 4 students ( 9%) evaluated the methods of teaching lesson as very bad. 34 students (65%) found the library and resources sufficient; 13 students (28%) evaluated the library and adequacy of resources as moderate and neutral ; 3 students found the library and resources insufficient. 34 students (65%) stated that they understood the courses very well; 15 students ( 33%) pointed out that they understood the courses moderately; 1 student said that He/She could not understand the courses. 38 students (76%) stated that they could answer the questions posed by the teachers easily; 11 students (24%) expressed that they had problems with answering the questions.

The findings belonging to questions about the issues on health services , accomodation and hygiene are as follows : 23 students (42%) found the health services sufficient; 13 students (28%) evaluated the health services a s moderate; 14 students (30%) found the health services insufficient. 12 students (18%) stated that they could find the proper menu in cafeteria and dining hall; 18 students ( 39%) evaluated the menu selection as moderate; 20 students (43%) said that menus were not selected properly according to Turkish students. 21 students ( 37%) pointed out that foods were suitable for sanitation and hygiene rules; 22 students ( 49%) evaluated the issues of sanitation and hygiene as moderate and neutral; 6 students ( 13%) stated that foods and menus were not suitable for sanitation and hygiene rules. 26 students (48%) found the food prices affordable; 14 students (30%) evaluated the food prices as moderate ; 10 students (22%) found the food prices improper . 38 students (40%) evaluated the hygiene of the dormitories as very good; 9 students (20%) stated the hygiene of the dormitories as moderate or neutral ; 2 students stated that dormitories were not clean. 31 students ( 59%) found the prices of the dormitories affordable; 9 students (20%) evaluated the prices of the dormitories as moderate; 10 students ( 22%) stated that prices of the dormitories were not suitable. 39 students ( 76%) pointed out that transportation of the dormitories was easy; 8 students (17%) evaluated the transportation as moderate ; 3 students stated that transportation was difficult.

The findings belonging to question " In what aspects do you experience emotional and moral problems ?" are as follows : 31 students (28%) stated that they had longing for their families and friends; 27 students (27%) said that they had longing for their countries; 10 students (9%) pointed out that they felt loneliness; 8 students (7%) experienced disappointment , lack of communication and problems in exam presentation; 5 students (5%) stated that they had problems with exams ; 3 students (3%) said that they suffered from negative attitude of the teaching staff and 2 students experienced troubles about residence permit.

#### 4. Comments

The following comments can be drawn from the answers to the questions posed to the students to evaluate the period before they go abroad : Students described the process of document preparation as exhausting and difficult. They stated that they waited for a long time to have their departmental coordinators sign the documents. They pointed out that their departmental coordinators were inadequate and they had no problems in communication with receiving institutions. Some students stated that the receiving institution did not contact with the students and the receiving institution replied too late to the emails sent by students. Most of the students found the process of document preparation stressful and they stated that visa and passport process were easier. The comments that can be drawn from these findings are as follows: The assistance and the information, given by the departmental coordinator during the process of document preparation and process of signature and the process of course selection , were insufficient and below the students' satisfaction levels. Some students found these processes exciting, unproblematic, untroubled and the information given by the coordinators and assistance taken from the departmental coordinators were satisfying.

According to findings obtained from the questions, most of the students did not experience any problems in adaptation of education system. More than half of the students stated that they could reach and contact with the academic advisors and teacher easily , some students pointed out that they met teachers and academic staff a few weeks later after the courses started. More than half of the students were satisfied with the behavior of the academic staff and teachers against the Erasmus students. Students stated that academic staff and teachers were very sensitive ,helpful and insightful. some students said that behavior of the teachers and academic staff was disturbing and teachers discriminated between students, religious issues such as Islam had negative effects on some academic staff and teachers. Most of the students were satisfied with the methods of teaching lessons of the academic staff.

Students stated that generally they made presentations and prepare projects to get marks from the courses and when they failed , they had additional assignments to pass the courses. Also it was pointed out that students participated in the teaching lesson process , thus students were allowed to be active in classes and when the students did not grasp the issues taught in the lesson , academic staff or teachers used additional materials to make clear the courses. Most of the students stated that library and resources were sufficient . More than half of the students said that they could understand the issues taught in the courses and the language spoken in the classes and they could answer the questions posed by the academic advisors and teachers easily. However some students expressed that the English levels of the academic advisors and teachers were insufficient to communicate so students had problems in understanding the courses and the issues taught in the classes. The comments obtained from these findings are as follows : More than the half of the students were satisfied with the education system and attitude of the academic staff and some teachers were biased against some students. Attitudes of the teachers against the Erasmus students were below the satisfaction levels of the students.

According to findings belonging to questions about health services , accomodation and nutrition services , half of the students stated that they had no health problems so they did not use any health services , the students ,who used health services, said that healthcare personnel were not helpful , prices were so high and the specially middle-aged doctors could not speak English so they had problems in communication with the doctors. About the issues on menus in the cafeteria and the dining hall, some students said that they had no problems with the menus and the food presented in the cafeteria and dining hall and menus were proper for Turkish students at least they could cook for themselves, most of the students stated that canteens were insufficient , foods were bad and foods were not mouth-pleasing and the students could not find halal food so they were not suitable for Muslims. Özlem,G. ( 2013) obtained similar findings in her study. In her study some students stated that they could not take advantage of the food services presented by university because of the concerns about religious values. These students stated their concerns and opinions as follows : " I could not use the cafeteria and dining hall because of the religion differences; there were lots of menus in campus but we did not eat anything in case foods could include lard ". Similarly in our study , most of the students were not satisfied with the foods and menus in case they could include pork and lard , we can comment these findings as : the selection of the food and menus did not meet students' expectations. In addition to this , most of the students found the food prices affordable. In concern with accomodation and dormitories, most of the students found the dormitories clean and accomodation prices affordable, transportation to the dormitories from school easy. Some students stated that dormitories were expensive and they were not hygienic. From these findings we can comment as follows : health and food services did not meet the expectations of the students however most of the students were satisfied with the hygiene of the dormitories. Hygiene of the dormitories were above the satisfaction levels of the students.

#### *4.1. Effect Of The Erasmus Programme On The Outgoing Students*

We asked students what were the effects of Erasmus Programme on students or What Erasmus Programme contributed to outgoing students by open-ended questioning method. Students stated that Erasmus Programme increased the self-confidence of the students and they gained confidence to take a risk and go to different countries. Also students pointed out that they developed their language levels and practiced the spoken language and said that Erasmus Programme had positive effect on developing the language levels. Students also expressed that they recognized the different cultures and made new friends from different cultures and stated that Erasmus Programme developed their communication with other people. Students also expressed that they developed the sense of responsibility through Erasmus Programme , recognized a different education system in a European Country and said that the prejudice against the European countries and their people disappeared. Similarly in study of Papatsiba (2005) carried out on the experiences of 80 students who benefited from Erasmus Student Mobility Papatsiba stated that Erasmus Student Mobility Programme facilitated to overcome the difficulties that students encountered in different environments and cultures, also program increased the self-confidence of students and gave them courage to take a risk. Our students pointed out that Erasmus Programme provided work experience and overseas experience that would create a plus to students' CVs. From these comments we can say that Erasmus Programme has positive effects on students.

## 5. Suggestions And Opinions

The opinions of the students about suggestions for the outgoing students, who would study next academic year, were asked. Students stated that every student should benefit from the Erasmus Student Mobility Programme and evaluated the programme as useful for development of the language and personal development and recognizing the different cultures and students suggested that each student should use these opportunities for their education life.

The following suggestions were developed in the light of the findings obtained from our study. Considering the findings of our study :

- I. Our students answered the questions about accommodation and transportation and stated that accommodation prices and transportation fees were so high and this situation financially distressed the students. In this context by contacting with authorized person of the receiving institution ,Erasmus Coordination Office can make studies on making accommodation prices and transportation fees suitable and affordable, on the issue about whether special discount cards can be given to students or not ,
- II. Some students stated that they had problems in contact with the receiving institutions and they could not take any responses to the emails that they sent to the receiving institutions. In this context Erasmus Coordination Office can write with receiving institutions or e-mail each other about the issues on the subjects that students want to get information and inform the students,
- III. Some students stated that some academic staff and teachers treat with cultural prejudice against the erasmus students . discriminate during the teaching lesson in the classroom and exhibit negative behavior against the erasmus students. In this context Erasmus Coordination Office can contact with receiving institutions about these problems and attempt to solve these problems; if the negative behavior against the erasmus students is proceeded by the academic staff and teachers , the agreements signed between these institutions should be revised,
- IV. Some of our students evaluated the document preparation process as very difficult and troublesome and stated that the departmental coordinators were insufficient in terms of knowledge about erasmus exchange programme in process of the document preparation process and signature process of the documents and students pointed out that they could not reach the departmental coordinators and waited for a long time for signature process and they lost time in application process. In this context , Erasmus Coordination Office can elaborate the information section about the document preparation in orientation programme prepared for outgoing students and contact with the departmental coordinator and inform them about their duties and responsibilities in Erasmus Programme,
- V. Most of our students stated that foods and menus were not mouth-pleasing and they could not eat the meals because of the religious concerns. In this context , Erasmus coordination Office can contact with the authorised of the receiving institutions and make studies about the issues on inclusion of the appropriate and proper menus and foods in to canteen and cafeteria,
- VI. Direction of the outgoing students ,who have problems in adaptation to everyday life in the European countries, to the Intensive Language Courses can be suggested.

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INTE 2014

# Öğrenme Yönetim Sistemi Seçimi İçin Bir Karar Destek Sisteminin Geliştirilmesi

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## Özet

Gün geçtikçe yaygınlaşan uzaktan eğitim birçok insan tarafından eğitim sürecinin farklı aşamalarında tercih edilmektedir. Zamandan ve mekândan bağımsızlık, her kesimden öğrenciye erişim imkânı, öğrenci odaklı eğitim, kendi hızında öğrenme imkânı, asenkron ve senkron eğitime aynı anda imkân vermesi ve fırsat eşitliği sunması uzaktan eğitimin tercih edilme nedenlerinden bazılarıdır.

Uzaktan eğitim üniversiteler gibi eğitim kurumları için fırsat niteliği taşımaktadır. Üniversiteler uzaktan eğitimde etkili ve verimli eğitim verebilmek için bazı adımlar atmak zorundadırlar. Bunlardan bazıları şunlardır; teknolojik altyapının güçlü olması, nitelikli eğitmen (akademik personel) seçimi, teknik destek hizmetlerinin yeterli olması ve uygun Öğrenme Yönetim Sistemi (ÖYS) seçimidir.

Bu çalışmada, 10 adet açık kaynak ÖYS'yi 71 farklı kritere göre değerlendirebilen ve karar vericiye yardımcı olmak için tasarlanmış bir karar destek sistemi sunulmuştur.

*Anahtar Kelimeler:* Karar destek sistemi, öğrenme yönetim sistemi, karar verme.

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## Abstract

Distance education which has been becoming widespread day by day is popularly preferred at any stage of education process. Being time independent and non-spatial, the facility to access students from all strata, student oriented education, self-paced education, making asynchronous and synchronous education possible at the same time and the principle of equal opportunity are some reasons of distance education to be preferred.

Distance education is an important opportunity for educational institutions like universities. Universities need to bear the following qualifications to provide an effective and productive distance education: having a strong technological infrastructure, having qualified instructors (academic staff), providing efficient technical support and choosing an appropriate Learning Management System (LMS).

With this study a decision support system which was designed to evaluate 10 open source LMSs in compliance with 71 criteria is submitted.

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*Keywords:* Decision support system, learning management system, decision making

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## 1.Giriş

Günümüzde, teknolojik gelişmelerle birlikte uzaktan eğitime olan talep artmaktadır. Literatürde uzaktan eğitim

ile ilgili yapılmış birçok tanıma rastlamak mümkündür.

Literatürün önemli isimlerinden Moore'a göre uzaktan eğitim; öğrencinin varlığı ile sürekli yerine getirilmesi gereken öğrenme davranışlarını içeren, öğrenme davranışlarından ayrı bir biçimde gerçekleştirilen öğretme davranışlarındaki öğretim yöntemleri ailesi olarak tanımlanabilir; yani öğretmen ve öğrenci arasındaki iletişim, basılı; elektronik; mekanik ya da başka aygıtlarla kolaylaştırılmalıdır (Moore & Anderson, 2003).

Birçok eğitim kurumu talebi fırsata çevirmeye çalışmaktadır. Bu yüzden, üniversiteler başta olmak üzere kurumlar uzaktan eğitim merkezleri açmaya yönelmektedir. Uzaktan eğitim kurumlara avantaj sağlasa da etkili ve verimli bir uzaktan eğitim için dikkat edilmesi gereken birçok husus vardır. Bunlar arasında önemli olanlardan bir tanesi kitleselleşmedir. Birçok eğitim kurumunun uzaktan eğitime yönelmesi kitleselleşmeyi engelleyecektir ve kurumlar arasında gelir çatışmasına yol açacaktır. Bu yüzden, uzaktan eğitime yapılacak olan yüksek yatırımların karşılanabilmesi için uzaktan eğitimle ilgili birçok kriter göz önünde bulundurulmalı ve doğru adımlar atılmalıdır.

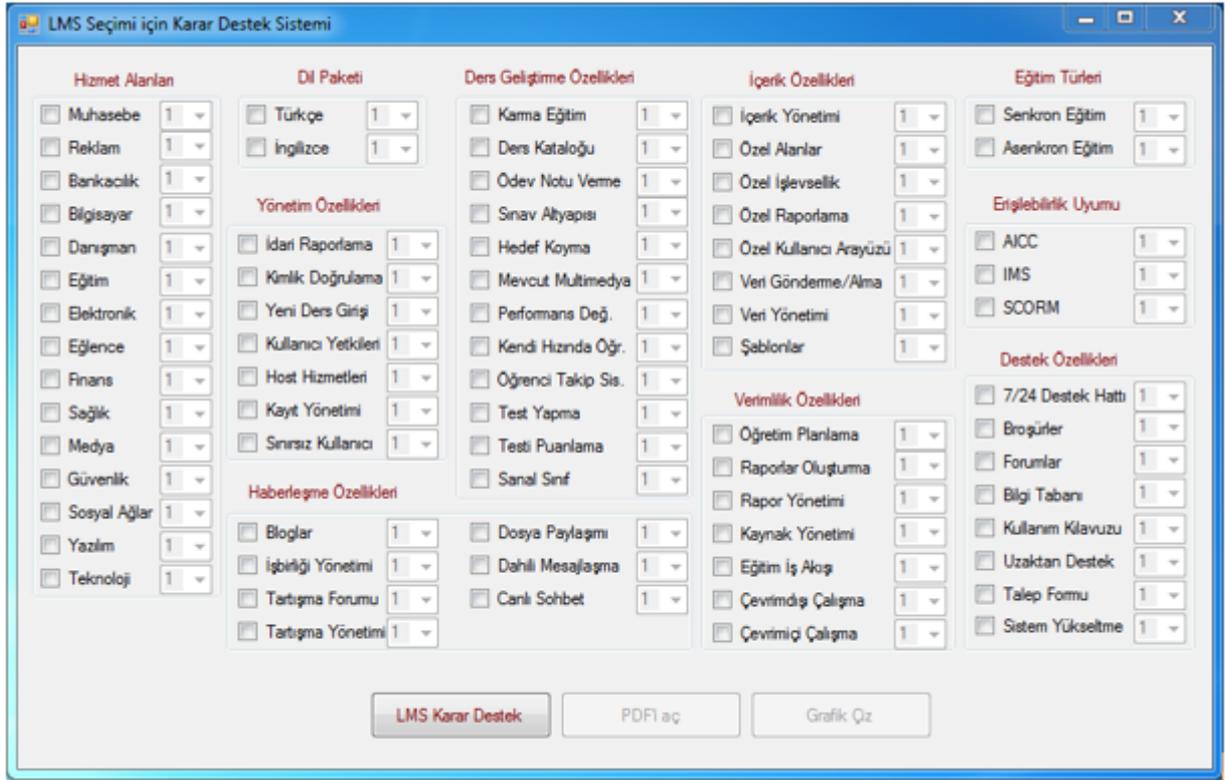
Bir uzaktan eğitim merkezi açılırken dikkat edilecek birçok husus vardır. Öğrenci talebi, açılacak olan programın geleceği, ülkedeki durumu, eğitim verecek personelin seçimi ve ÖYS seçimi dikkat edilecek hususlardan bazılarıdır (Özköse vd, 2013).

Bu çalışma ÖYS seçimi üzerine odaklanmıştır. ÖYS yazılımları, herhangi bir amaca yönelik oluşturulan öğretim aktivitelerinin ve çeşitli türlerdeki etkileşimlerin web üzerinden uygulanmasını sağlayan platformlardır. Diğer bir ifadeyle ÖYS internetin sunduğu tüm imkânları kullanarak farklı mekânlarda yer alan öğrencilere ve öğretim elemanlarına senkron veya asenkron yöntemlerle eğitim ortamında buluşma olanağı sağlar (Atatürk Üniversitesi, 2014). Bu sayede farklı fiziksel mekânlarda bulunan eğitmen ve öğrencilerin eğitim aktivitelerini yapabilmeleri ve eğitmen-öğrenci etkileşimi mümkün olmaktadır.

Bu çalışmada ÖYS seçimi için bir karar destek sistemi tasarlanmıştır. Karar destek sistemleri (KDS); karar vericinin yerine geçmesinden ziyade onun kararlarını destekleyen, yarı-yapısal ve yapısal olmayan problemlerin çözümü için karar vericiye karar vermesinde yardımcı olan etkileşimli sistemlerdir [Gökçen, 2011]. Mevcut çalışmayla, 10 farklı ÖYS'i 71 farklı kritere göre değerlendirebilen ve karar vericiye yardımcı olması için tasarlanmış bir karar destek sistemi sunulmuştur.

## **2.ÖYS Seçimi için KDS'nin Hazırlanması**

İlgili KDS, Microsoft Visual Studio 2010 ortamında C# programlama dili kullanılarak geliştirilmiştir. Bu çalışmada, 10 farklı ÖYS kullanılmıştır. Firmaların isimleri kullanılmak istenilmediği için ÖYS<sub>i</sub> (i=1,2,...,10) şeklinde isimlendirilmiştir. 10 farklı ÖYS için 71 farklı kriter 10 farklı başlık altında toplanmıştır. Bu başlıklar oluşturulurken her bir yazılım programındaki bölümler dikkate alınmıştır. Kriterlerin her birisi ilişkisi olan ana başlık ile eşleştirilmiştir. Bu eşleştirme sonucunda oluşturulan tablolardan programlama aşamasında yararlanılmıştır. Oluşturulan ve elde edilen kriterlere göre karar verme sürecine yardımcı olacak karar destek programı oluşturulmuştur. Şekil 1'de oluşturulan programın ara yüzü görülmektedir.



Şekil 1. Oluşturulan karar destek sisteminin ara yüzü.

Şekil 1'de 10 farklı başlık altındaki kriterler gözükmemektedir. Kriterler seçildikten sonra seçilen kriter için ağırlıklandırma işlemi yapılır. Ağırlıklandırma, 1-5 aralığındadır. 5 çok önemli anlamına gelirken, 1'e doğru düşüldükçe önem derecesi azalmaktadır. Seçilmeyen kriterlerin önem derecesi 0'dır. Yani karar verme süreci için kriterin anlamsız olduğu anlamına gelmektedir.

PDF'i aç butonunu ve Grafik Çiz butonu ÖYS karar destek butonuna basılıp karar destek sistemi işlemi tamamlandıktan sonra aktif olur. PDF'i aç butonu ile ÖYS'ler için yapılmış olan öneriler görüntülenirken, Grafik çiz butonu ile seçilen kriterlere göre ÖYS'lerin yüzde kaç uyumlu olduğunu gösterir.

### 3.Uygulama

Şekil 2'de seçilmiş olan kriterler ve derecelendirme değerleri gözükmemektedir. Karar destek sistemi bu kriterlere göre karar vericiye karar verme işleminde yardımcı olacaktır.

LMS Seçimi için Karar Destek Sistemi

Hizmet Alanları	Dil Paketi	Ders Geliştirme Özellikleri	İçerik Özellikleri	Eğitim Türleri
<input type="checkbox"/> Muhasebe 1	<input checked="" type="checkbox"/> Türkçe 5	<input checked="" type="checkbox"/> Karma Eğitim 2	<input checked="" type="checkbox"/> İçerik Yönetimi 5	<input checked="" type="checkbox"/> Senkron Eğitim 5
<input type="checkbox"/> Reklam 1	<input checked="" type="checkbox"/> İngilizce 3	<input checked="" type="checkbox"/> Ders Kataloğu 3	<input type="checkbox"/> Özel Alanlar 1	<input checked="" type="checkbox"/> Asenkron Eğitim 5
<input type="checkbox"/> Bankacılık 1		<input checked="" type="checkbox"/> Ödev Notu Verme 5	<input type="checkbox"/> Özel İşlevsellik 1	
<input type="checkbox"/> Bilgisayar 1	<b>Yönetim Özellikleri</b>	<input checked="" type="checkbox"/> Sınav Altyapısı 5	<input checked="" type="checkbox"/> Özel Raporlama 4	<b>Erişilebilirlik Uyumu</b>
<input type="checkbox"/> Danışman 1	<input checked="" type="checkbox"/> İdari Raporlama 3	<input checked="" type="checkbox"/> Hedef Koyma 3	<input type="checkbox"/> Özel Kullanıcı Arayüzü 1	<input checked="" type="checkbox"/> AICC 2
<input checked="" type="checkbox"/> Eğitim 5	<input type="checkbox"/> Kimlik Doğrulama 1	<input checked="" type="checkbox"/> Mevcut Multimedia 2	<input type="checkbox"/> Veri Göndeme/Alma 1	<input type="checkbox"/> IMS 1
<input type="checkbox"/> Elektronik 1	<input checked="" type="checkbox"/> Yeni Ders Girişi 4	<input checked="" type="checkbox"/> Performans Değ. 5	<input type="checkbox"/> Veri Yönetimi 1	<input checked="" type="checkbox"/> SCORM 5
<input type="checkbox"/> Eğlence 1	<input type="checkbox"/> Kullanıcı Yetkileri 1	<input checked="" type="checkbox"/> Kendi Hızında Öğr. 4	<input type="checkbox"/> Şablonlar 1	
<input type="checkbox"/> Finans 1	<input checked="" type="checkbox"/> Host Hizmetleri 2	<input type="checkbox"/> Öğrenci Takip Sis. 1		<b>Destek Özellikleri</b>
<input type="checkbox"/> Sağlık 1	<input checked="" type="checkbox"/> Kayıt Yönetimi 4	<input checked="" type="checkbox"/> Test Yapma 5	<b>Verimlilik Özellikleri</b>	<input type="checkbox"/> 7/24 Destek Hattı 1
<input type="checkbox"/> Medya 1	<input type="checkbox"/> Sınırsız Kullanıcı 1	<input checked="" type="checkbox"/> Testi Puanlama 5	<input type="checkbox"/> Öğretim Planlama 1	<input type="checkbox"/> Broşürler 1
<input type="checkbox"/> Güvenlik 1	<b>Haberleşme Özellikleri</b>	<input checked="" type="checkbox"/> Sanal Sınıf 5	<input checked="" type="checkbox"/> Raporlar Oluşturma 4	<input checked="" type="checkbox"/> Forumlar 5
<input type="checkbox"/> Sosyal Ağlar 1	<input type="checkbox"/> Bloglar 1	<input checked="" type="checkbox"/> Dosya Paylaşımı 4	<input checked="" type="checkbox"/> Rapor Yönetimi 4	<input type="checkbox"/> Bilgi Tabanı 1
<input type="checkbox"/> Yazılım 1	<input checked="" type="checkbox"/> İşbirliği Yönetimi 4	<input checked="" type="checkbox"/> Dahili Mesajlaşma 4	<input checked="" type="checkbox"/> Kaynak Yönetimi 5	<input type="checkbox"/> Kullanım Kılavuzu 1
<input type="checkbox"/> Teknoloji 1	<input checked="" type="checkbox"/> Tartışma Forumu 4	<input checked="" type="checkbox"/> Canlı Sohbet 5	<input type="checkbox"/> Eğitim İş Akışı 1	<input checked="" type="checkbox"/> Uzaktan Destek 3
	<input type="checkbox"/> Tartışma Yönetimi 1		<input type="checkbox"/> Çevrimdışı Çalışma 1	<input type="checkbox"/> Talep Formu 1
			<input checked="" type="checkbox"/> Çevrimiçi Çalışma 5	<input checked="" type="checkbox"/> Sistem Yükseltme 3

LMS Karar Destek PDFi aç Grafik Çz

Şekil 1. Örnek uygulama için kriterlerin ve ağırlıklandırma değerlerinin seçilmesi

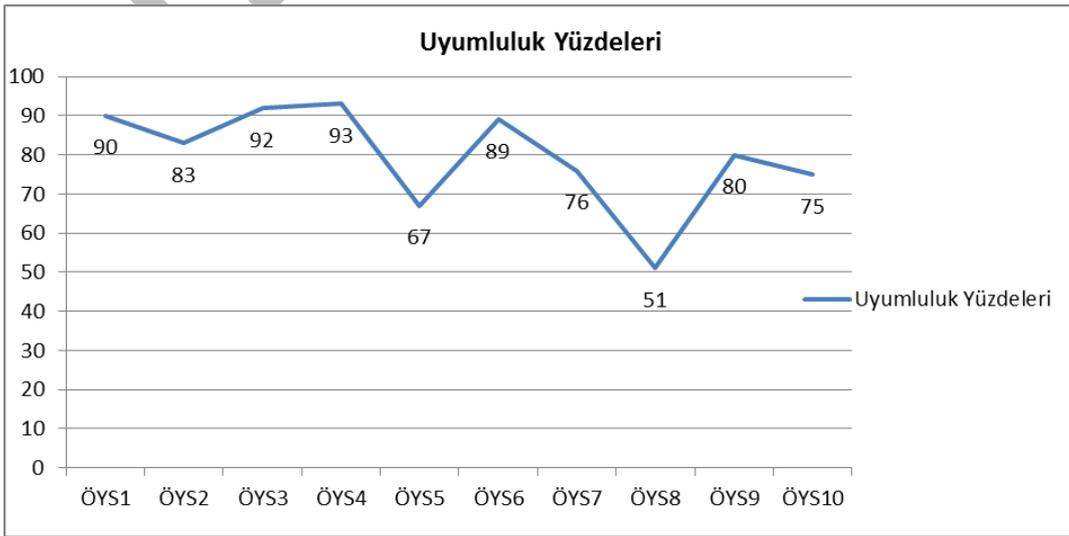
Şekil 2. ÖYS'lerin uyumluluk yüzdelerinin grafiksel olarak gösterimi

Şekil 3'de gözüktüğü üzere, ÖYS4 %93 ve ÖYS3 %92 ile en yüksek uyum değerlerini vermiştir. ÖYS8 ise %51 ile en düşük uyum seviyesine sahip ÖYS olarak gözükmektedir.

ÖYS'lerin desteklemediği özellikleri PDF üzerinden incelememiz mümkündür. ÖYS3, ÖYS4 ve ÖYS8'in desteklemediği özellikler aşağıda belirtilmiştir.

Buna göre ÖYS3;

- Yönetim özelliklerinden yeni ders girişini (Önem derecesi-4),
  - Yönetim özelliklerinden host hizmetlerini (Önem derecesi-2),
  - Ders geliştirme özelliklerinden hedef koymayı (Önem derecesi-3),
  - Erişilebilirlik özelliklerinden AICC'i desteklememektedir (Önem derecesi-2).



ÖYS4;

- Ders geliştirme özelliklerinden sanal sınıfı (Önem derecesi-5),
- Dil paketi özelliklerinden Türkçeyi desteklememektedir (Önem derecesi-5).

ÖYS8 ise seçilen 38 kriterden 17 tanesini desteklememektedir. Bunlar;

- Ders geliştirme özelliklerinden ders kataloğunu (Önem derecesi-3),
- Ders geliştirme özelliklerinden ödev notu vermeyi (Önem derecesi-5),
- Ders geliştirme özelliklerinden hedef koymayı (Önem derecesi-3),
- Ders geliştirme özelliklerinden mevcut multimedyaı (Önem derecesi-2),
- Ders geliştirme özelliklerinden performans değerlendirmeyi (Önem derecesi-5),
- Ders geliştirme özelliklerinden test yapmayı (Önem derecesi-5),
- Ders geliştirme özelliklerinden sanal sınıfı (Önem derecesi-5),
- Haberleşme özelliklerinden tartışma forumunu (Önem derecesi-4),
- Haberleşme özelliklerinden dosya paylaşımını (Önem derecesi-4),
- Haberleşme özelliklerinden dâhili mesajlaşmayı (Önem derecesi-4),
- Haberleşme özelliklerinden canlı sohbeti (Önem derecesi-5),
- İçerik özelliklerinden içerik yönetimini (Önem derecesi-5),
- İçerik özelliklerinden özel raporlamayı (Önem derecesi-4),
- Verimlilik özelliklerinden kaynak yönetimini (Önem derecesi-5),
- Eğitim türü özelliklerinden asenkron eğitimi (Önem derecesi-5),
- Destek özelliklerinden uzaktan desteği (Önem derecesi-3),
- Dil paketi özelliklerinden Türkçeyi desteklememektedir (Önem derecesi-5).

Karar verici istediği ÖYS'yi seçmekte özgürdür. Program sadece karar vericiye yardımcı olmak amaçlıdır. Karar vericinin yerine geçmez. Bazı verilerin yorumlanması gerekebilir bu yüzden karar vericiye göre alınacak kararlar değişebilir. Bir karar verici ÖYS3'ü seçerken, başka bir karar verici ÖYS4'ü ya da başka bir ÖYS'yi seçebilir. Kurumun ihtiyacı yapısında oluşturulan kararlara göre verilen sonuçlar doğrultusunda karar vericinin vereceği kararda değişikliklere ya da bazı kriterlerin tercih edilmesi ön plana çıkabilir.

#### 4. Sonuç ve Öneriler

Program istenilen karar verme süreci için verilerin elde edilmesi aşamasında başarılı olmuştur. Programın karar vericiye yardımcı olmak için harcadığı zaman saniye bazındadır. KDS çok hızlı bir şekilde çalışarak karar verici için önemli olan zamanı minimuma düşürerek daha doğru karar vermesini desteklemektedir.

PDF'e yazdırma işlemi ile ayrıntılı raporlama işlemi yapılmıştır. Ayrıca Excel'de grafik çizdirilerek karar vericinin ÖYS'lerin uyum yüzdelerini bir arada görerek karşılaştırma yapabilmesi sağlanmıştır. KDS'nin hedefi, burada da olduğu gibi karar vericiye yardımcı olmaktır. Karar verme sürecinde karar vericinin daha hızlı ve daha doğru kararlar almasını sağlamaktır. Bu program yardımıyla, ÖYS seçimi için karar vericiye karar verme sürecinde yardımcı olunmak istenmiştir ve başarılmıştır.

Programda bazı eksiklikler bulunmaktadır. Kriter sayısı normalde 81 iken programda 71 adet kriter kullanılmıştır. Bunun nedeni dil özelliklerinin hepsinin yansıtılmamasıdır. Sadece Türkçe ve İngilizce göz önüne alınmıştır. Ayrıca, yönetim özelliklerinden kullanıcı erişim kontrolü özelliği dikkate alınmamıştır. Bunun nedeni tüm ÖYS'lerde bu özelliğin bulunmasıdır. Daha önceden de belirtildiği üzere 10 adet açık kaynak ÖYS programının ayrıntılı karşılaştırmaları yapılmıştır. Fakat lisanslı ÖYS'ler sisteme dâhil edilmemiştir. Lisanslı ÖYS'ler sisteme dâhil edilirse daha etkin bir KDS tasarlanmış olur.

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INTE 2014

# ÖĞRETİM MATERYALLERİNİN ÖĞRENME-ÖĞRETME SÜRECİNDEKİ İŞLEVİNE İLİŞKİN ÖĞRETMEN GÖRÜŞLERİNİN ANALİZİ

Mehmet ŞAHİN\*

## ÖZ

Bu araştırmanın temel amacı öğretim teknolojilerinin ve materyallerinin öğrenme-öğretme sürecindeki işlevine ilişkin öğretmen görüşlerinin belirlenmesidir. Araştırmanın yöntemi taramaya dayalı betimsel bir surveydir. Araştırmanın çalışma grubunu Çankırı il merkezindeki (merkez ilçe) örgün ve yaygın eğitim kurumlarında görevli toplam 1029 öğretmen oluşturmuştur. Çalışma grubu kapsamında tüm alt grupların yaklaşık yarısını oluşturan toplam 512 öğretmenden veri toplanmıştır. Araştırmanın bulgularına göre öğretmenler öğretim materyali olarak en çok ders kitabı ve yazılı doküman ile yazı tahtasını kullandıkları, yine öğretmenler öğretim materyallerinin en çok ilgi ve dikkat çeker, bilgiyi somutlaştırır ve öğrenciyi güdüler işlevine katıldıkları sonucuna varılmıştır. Öğretmenlerin öğretim materyali kullanma sıklığı ve öğretim materyallerinin işlevlerine ilişkin görüşleri arasında cinsiyet ve hizmet yılı yönünden anlamlı bir fark bulunmadığı buna karşın görev yeri ve branş yönünden anlamlı bir fark olduğu sonucu ortaya çıkmıştır.

**Anahtar Sözcükler:** Öğretim teknolojisi, Öğretim materyali, Öğretim süreci

## THE ANALYSIS OF THE VIEWS OF TEACHERS RELATED TO THE FUNCTIONS OF TEACHING MATERIALS DURING THE TEACHING-LEARNING PROCESS

## ABSTRACT

It is aimed to determine the point of views of teachers about the functions of teaching technology and materials in teaching-learning process. The method of the research is a descriptive survey which is based on scanning. The study group of the research is generated by totally 1029 teachers who work in formal and informal education institutions in central province of Çankırı (Central Township). Under the study group, data is collected from totally 512 teachers who are half of the sub groups. According to the findings of the research, it is seen that teachers use course books and written documents and boards as teaching materials, and according to the teachers the teaching materials attract attention, embody the information and motivate the students. As a consequence, there is not a significant difference between using frequency of teachers of teaching materials and their point of views related to teaching materials in terms of gender and working years.

**Key words:** Teaching technology, teaching material, teaching process

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## ÖĞRETİM MATERYALLERİNİN ÖĞRENME-ÖĞRETME SÜRECİNDEKİ İŞLEVİNE İLİŞKİN ÖĞRETMEN GÖRÜŞLERİNİN ANALİZİ

## Giriş

Öğretim materyalleri, öğrenme süreci içerisinde öğretmen tarafından değişik ortamlarda öğrencilere sunulan araçlardır. Teknoloji ve materyal kavramlarına eğitimsel açıdan bakıldığında, birçok işlevi vardır. Bu işlevlerden başlıcaları; öğretme ve öğrenme araç ve gereçleri olmaları, bilgileri iletmeleri, gerçekliğin sunumunu sağlamaları, iletişim araçları olmaları, nesnelleştirilmiş eğitim sistemleri olmaları ve sembolleştirme araçları olmalarıdır. Bu araçlar; basılı materyaller, fotoğraflar, maketler gibi ilk bakışta anlaşılır nesnelere olabileceği gibi içeriğine erişmek

için daha yüksek teknolojiye gereksinim duyan ses kasetleri, videolar, CD'ler, internet sayfaları, çeşitli yazılımlar gibi ortamlarda da sunulabilir (Kaya, 2006).

Öğretim materyallerinin öğrenme ve öğretme sürecindeki en önemli işlevi öğrenme ve öğretme sürecini başarılı kılmaktır. Başka bir ifadeyle öğretim materyallerinden yararlanmanın temel amacı; etkili ve kalıcı öğrenmeyi sağlamaktır. Eğitimin niteliğini artırmada önemli bir öge olan öğretim materyalleri, öğretme –öğrenme sürecinde öğrenmeyi kolaylaştırıp daha kalıcı ve verimli bir öğretim yapmak için kullanılırlar. Öğretim materyalleri, öğrencileri motive ederek ders çalışmalarını tetikler, bilgiye erişim ve değerlendirme olanağı sağlar (Akkoyunlu, 2002). Öğrenme ve öğretme sürecinin önemli bir değişkeni olan öğretim materyali; amaç olmaktan çok amaca götüren bir araç işlevini yapar. Öğretim materyali; öğrenme sürecinde iletişimi kolaylaştırır, unutmayı engeller ve etkin katılım fırsatı verir. Dersin sıkıcılığını ve monotonluğunu giderir, öğretimi verimli ve ekonomik hale getirir. Öğrenciyi okul ve ders dışı faaliyetlere yöneltir, ilgiyi artırır, fiziki çevrenin rahatsızlıklarını önler, bedensel ve ruhsal problemlerin etkisini azaltır (Şahin, 2010).

Etkin olarak hazırlanan bazı öğretim materyalleri öğretim ortamında öğretmenin gösterdiği dikkat çekme, bilgiyi sunma, ipucu, katılım, alıştırma, tekrar, dönüt sağlama, düzeltme ve değerlendirme gibi tüm etkinlikleri gösterebilir (Şahin ve Yıldırım, 1999). Öğretim materyalleri öğretmenin yerini alacak bir seçenek olmamakla birlikte, konuyu öğrencilerine aktarmalarında öğretmenlere adeta asistanlık yaparlar (Gündüz ve Odabaşı, 2004) Öğrenme- öğretme süreçlerinin etkililiği hedef ve içeriği uygun öğretim yöntem ve tekniklerinin seçimi ve uygun öğretim materyalleri ile desteklenmesi ile sağlanabilir. Öğrenme-öğretme süreçlerini planlayan öğretmenler, öğretim etkinliklerini başarılı kılmak için hedef ve içeriğe uygun öğretim materyali seçilmesine özen göstermek zorundadır. Bu nedenle öğretmenlerin uygun öğretim materyali seçebilmeleri için materyalleri tanımaları ve kullanım ilkelerini bilmeleri gerekir (Uzunboylu, 2011, s.94).

Bir öğretim materyali seçimi ve kullanımı konusunda verilecek karar birçok faktöre bağlıdır. Araştırmalar materyalin öğretimsel değerini saptamada bazı ölçütlerin çok önemli olduğunu göstermektedir. Bu ölçütler arasında eğitimciler arasında uzun yıllar tartışmalar devam etmiş ve birlik sağlanamamıştır. Üzerinde anlaşma sağlanan tek husus farklı durumlarda farklı ölçütlerin kullanılmasının gerekli olmasıdır (Seferoğlu, 2011). Öğretim materyalleri geliştirme sürecinin temel bileşenleri; hedef kitle, içerik, öğrenme ortamı ve öğretim yaklaşımıdır (Kaya, 2006). Öğretmenler, tasarımcılar, görsel ve sözel sergileme yapan bireyler amaca ulaşmak ve hedeflenen mesajı tam olarak verebilmek için birçok öğenin düzenlenmesiyle ilgili tasarımla ilgili bazı kararları vermek zorundadır. Bunlar unsurlar, biçimsel yapı ve düzenleme ile ilgili kararlardır. (Seferoğlu, 2011).

Eğitimde uzun süre öğretimin temelini öğretmen ve ders kitabı oluşturmuştur. Ancak bugün teknolojik imkânlar sayesinde öğretmen ve ders kitaplarının yanı sıra birçok kaynak ya da materyalle çok ortamlı öğrenme imkânı yaratılmaktadır. Günümüz çağdaş sınıf içi çok ortamlı öğrenme imkânlarının sağlanmasında görsel ve işitsel araçlar ön plana çıkmaktadır (Yaşar, 2004). Eğitimde materyal kullanımı, etkili bir öğretim ortamı yoluyla öğrencilerin öngörülen hedeflere ulaşmasında ve yürütülen programın başarılı olmasında önemli bir rol oynar. Özellikle fen ve teknoloji öğretim programlarının başarısı için eğitim sürecinde materyal kullanımı yaşamsal derecede önemlidir (Karamustafaoğlu, 2004) Sınıf içerisinde öğretim materyali zenginliği öğrencilerin güdülenmesine önemli katkılar sağlar. Özellikle görsel ve işitsel araçlarla oluşturulacak öğrenme ortamı öğretimi etkili kılar. Etkili bir öğretmen dersiyle ilgili görsel ve işitsel araçları önceden hazırlaması, bu araçları nerde ve nasıl kullanacağını çok iyi planlaması beklenir. (Demirel, vd. 2004, s.30).

Araç-gereçlerin kuramsal faydaları ne olursa olsun, bunların kullanımı belirli düzeyde bilgi ve beceriyi gerektirir (Yalın, 2004, s.97). Bu nedenle öğretmen adaylarının eğitiminde temel bilgisayar okur-yazarlığı, internet ve öğretim materyalleri hazırlama konusuna önem verilmesi gerekir (Halis, 2001, s.114). Öğretim materyalleri çağdaş teknolojiye uygun olarak hazırlanmış olsa bile öğretmenlerin etkin kullanmaması halinde beklenen düzeyde başarılı olmaz. Yeterli nitelik ve niceliğe sahip olan araç-gereçler yerinde ve zamanında kullanıldıkları takdirde, bilgiler daha kolay anlaşılabilir ve kalıcı olmaktadır (Büyükkaragöz ve Çivi, 1999). Öğretmenlerin ve öğretmen adaylarının sınıf içinde etkin öğretim yapabilmeleri için, eğitim teknolojisi kullanımı ile ilgili becerileri kazanmaları ve bu becerileri de sınıfta etkin bir şekilde uygulamaları gerekmektedir (Varank ve Ergün, 2005).

Teknolojinin okullarda kullanılmasının para ve zaman kaybı olduğunu belirtenlere oranla, teknoloji kullanımının öğrenci başarısını artırdığını belirtenlerin sayısı daha fazladır (Bacanak vd. 2003). Hu, Clark ve Ma (2003) okullarda öğretmenlerin öğretim teknolojilerine karşı dirençli davrandıklarını belirtmişlerdir. Bunun nedenleri arasında öğretmenlerin hizmet öncesi eğitimleri yer almaktadır (Akt. Gündüz ve Odabaşı, 2004). Sınıf öğretmenleri ile branş öğretmenleri sınıf ortamında öğretim materyali kullanmaktan çok ders kitabı, ünite dergisi ve karahtayı kullanmayı tercih etmektedir (Demirel, vd. 2004, s.70). Yazı tahtasından bilgisayara kadar sayısız araç-

gereç öğretmene yardımcı olarak sunulmasına rağmen bazı öğretmenlerin elindeki basit bir aracı bile kullanmaktan çekindiği gözlenmektedir (Küçükahmet, 1995, s.94). Bunun temel nedeni öğretmenlerin öğretim araç- gereçlerini mezun oldukları öğretmen yetiştiren kurumlarda belli bir beceri düzeyine sahip olacak sıklıkta kullanma fırsatı bulamamalarıdır. Bir diğer nedeni ise, öğretmenlerin mesleki motivasyonlarının düşük olmasına paralel olarak, yeni öğretim teknolojileri konusunda kendilerini geliştirmeye istekli olmamalarıdır (Öztürk ve Oltuoğlu, 2003).

Okullara birçok bilgisayar, teknolojik cihazlar ve ders yazılım programları alınmasına rağmen, bunları uygulayabilecek yetişmiş yeterli sayıda öğretmen olmaması bu sorunu artırmaktadır. (Bacanak vd. 2003). O'Donnell (1996), bilgisayarların okullara girdiğini fakat sınıflara giremediğini belirterek bilgisayarın okullarda daha çok bilgisayar okur-yazarlığı, basit araştırmalar ve yönetim amaçlı kullanıldığını, sınıflarda ise öğretimi destekleyici olarak çok kullanılmadığını söylemektedir. Bunun en önemli nedeninin, öğretmenlerin bu teknolojileri dersleriyle nasıl bütünleştireceklerini bilmemelerinden kaynaklanmaktadır (Akt. Gündüz ve Odabaşı, 2004).

Gelişen ve değişen bilim ve teknoloji karşısında sınıf öğretmenlerinin kendilerini bu gelişmelere göre yetiştiremediklerini ve eğitim teknolojilerini kullanmaları konusunda önemli sayılabilecek miktarda eksikliklerinin olduğu göstermektedir (Yılmaz, 2007). Öğretmenlerin öğretim teknolojileri ve materyali kullanma konusunda yapılan araştırmalarda bu konuda önemli sorunların varlığı ortaya çıkmıştır. Uçar (1998), Dursun (1999), Coşkun vd. (2001: Akt. Yılmaz, 2007), Şahin (2000), Karlı vd. (2002), İşman (2002), Başaran (2003), Karamustafaoğlu (2004), Kutluca ve Birgin (2007), Gürbüz (2007), Akdağ ve Tok (2008), Fidan (2008), Kazu ve Yavuzalp (2008), Kahyaoğlu (2011), Çakır ve Oktay'ın (2013) yaptığı araştırmalarda öğretim materyallerinin seçimi ve uygulanması konusunda farklı sorunların yaşandığı saptanmıştır.

Son yıllarda yapılan araştırma sonuçlarına bakıldığında öğretim teknolojisi ve materyali ile ilgili sorunların genellikle benzer olduğu görülmektedir. Öğretim teknolojilerinin ve materyallerinin öğrenme-öğretme sürecindeki rolünün yadsınamayacağı bir gerçektir. Çünkü öğretim teknolojileri ve materyalleri hem öğretmenin öğretim işlevini yerine getirmesinde hem de öğrencilerin öğrenme sürecinde etkili olmasında önemli bir rol üstlenmektedir. Teknoloji ve materyalin bu önemli rolüne rağmen öğretmenlerin öğretim sürecinde etkili bir şekilde yararlanması hususunda farklı sorunlar yaşanmaktadır.

Okul, öğretmen, öğrenci ya da kullanılan teknoloji ve materyale göre sorunların görülme sıklığı, düzeyi ve niteliği farklı olabilir. Bilimsel çalışmaları yaygınlaştırarak sonuçlara etki edebilecek tüm değişkenlerin araştırılması sorunun güncel olarak çözülmesinde önemli bir katkı sağlayacaktır. Bu çalışmanın bu konuda önemli bir boşluğu gidereceği umulmaktadır. Bu araştırmanın temel amacı öğretim teknolojilerinin ve materyallerinin öğrenme-öğretme sürecindeki işlevine ilişkin öğretmen görüşlerinin belirlenmesidir.

## **Yöntem**

Bu araştırma, öğretim materyallerinin öğrenme-öğretme sürecindeki işlevlerine ilişkin öğretmen görüşlerini belirlemeyi amaçlayan bir çalışmadır. Bu nedenle araştırmanın yöntemi taramaya dayalı betimsel bir surveydir. Tarama modelleri, geçmişte ya da günümüzde varolan bir durumu, olduğu gibi betimlemeyi amaçlayan araştırma yaklaşımlarıdır. Araştırmaya konu olan olay, birey ya da nesne, kendi koşulları içinde ve olduğu gibi tanımlanmaya çalışılır. Onları herhangi bir şekilde değiştirme, etkileme çabası gösterilmez (Karasar, 1991,77).

## **Çalışma Grubu**

Bu araştırmanın çalışma grubunu Çankırı il merkezindeki (merkez ilçe) örgün ve yaygın eğitim kurumlarında görevli toplam 1029 öğretmen oluşturmuştur. Çalışma grubunu oluşturan öğretmenlerin 37'si okulöncesi eğitim, 254'ü ilköğretim, 254'ü ortaokul, 460'ı lise ve 24'ü yaygın eğitim kurumlarında görev yapmaktadır (MEM, 2013). Çalışma grubunu oluşturan öğretmenlerin tamamına veri toplama aracı dağıtılmış ancak 512 veri toplama aracı (okul öncesi 20, ilkököl 123, ortaokul 126, lise 231 ve yaygın eğitim 12) veri işlemeye uygun bir biçimde dönmüştür. Böylece, çalışma grubunu oluşturan tüm alt grupların yaklaşık yarısından veri toplanmıştır. Bu büyüklükteki bir çalışma evreni, kuramsal örneklem büyüklükleri tablosuna göre % 95 güvenirlilik düzeyinde 333 öğretmenin temsil edeceği varsayılmıştır (Balcı, 2005). Bu nedenle çalışma grubunu temsil edecek sayıda veri toplanmıştır.

## **Veri Toplama Aracı**

Araştırmanın verilerini toplamak amacıyla üç bölümden oluşan veri toplama aracı geliştirilmiştir. Birinci bölümünde kişisel bilgileri kapsayan cinsiyet, görev yeri ve hizmet yılına ilişkin çoktan seçmeli sorular yer almaktadır. İkinci bölümde öğretim materyallerinin kullanım sıklığının belirlenmesi ile ilgili 15 maddelik beş seçenekli likert tipi anket (ÖMKA) yer almaktadır. Üçüncü bölümde ise öğretim materyallerinin öğrenme-öğretme sürecindeki işlevlerine ilişkin 20 maddelik beş seçenekli likert tipi ölçek (ÖMİÖ) yer almaktadır. Veri toplama aracını geliştirmek için ilgili literatürden yararlanılmıştır. Ayrıca veri toplama aracının kapsam geçerliliğini belirlemek amacıyla program geliştirme ve eğitim teknolojisi alanında

doktora yapmış üçer öğretim üyesinin görüşlerine sunulmuştur. Uzmanlardan alınan görüşler sonucunda bazı maddeler düzeltilmiş, bazı maddeler ise veri toplama aracından çıkartılmıştır. Uzmanların tamamı veri toplama aracındaki tüm maddelere “uygun/geçerli” görüşünü verdikten sonra veri toplama aracına son şekli verilmiştir (Ek.1).

### Verilerin Toplanması ve İşlem

Veri toplama aracı özellikle gönüllü öğretmenler tarafından doldurulması sağlanmıştır. Elde edilen veriler; frekans, aritmetik ortalama, standart sapma, yüzdelik oran, t testi ve anova ile analiz edilmiştir. Veri toplama araçlarından OMKA'nın kapsam geçerliğini sağlamak için uzman görüşlerinden yararlanılmıştır. ÖMİÖ'nün geçerlik ve güvenilirlik çalışmaları öğretmenlerden toplanan 512 araç üzerinden faktör analizi ile yapılmıştır. Verilerin faktör analizine uygun olduğunun görülmesinin ardından veriler açımlayıcı faktör analizine tabi tutularak temel faktörler belirlenmiştir. Verilerin faktör analizine uygunluğu Kaiser-Meyer-Olkin (KMO) katsayısı ve Bartlett küresellik testi ile incelenmiştir.

ÖMİÖ için KMO (0.95) ve Bartlett (7970.424, p=0.00) testleri açımlayıcı faktör analizinin yapılabileceğini göstermiştir. Açımlayıcı faktör analizi sonucunda ölçeğin tek faktörden oluştuğu görülmektedir ve bu faktör ölçeğe ilişkin toplam varyansın %60.64'ünü açıklamaktadır. Ölçek maddelerine ilişkin faktör yükleri ise 0.53 ile 0.72 arasında değişmektedir. Ölçekte yer alan maddelerin madde ayırt edicilik indekslerine bakıldığında da 0.95 ile 0.96 arasında olduğu görülmektedir. Ölçeğin güvenilirlik çalışmaları kapsamında yapılan analizler sonucunda, Cronbach Alfa iç tutarlılık katsayısı 0.96 olarak hesaplanmıştır. Bu sonuçlardan yola çıkarak ÖMİÖ ölçeğinin mevcut araştırma kapsamında kullanılabilir geçerli ve güvenilir bir ölçme aracı olduğuna karar verilmiştir.

### Verilerin Analizi

Araştırmada elde edilen veriler değerlendirilirken veri toplama aracının birinci bölümünde yer alan bağımsız değişkenler için frekans, aritmetik ortalama, standart sapma, yüzdelik oran hesaplamaları yapılmıştır. Öğretmenlerin veri toplama aracında yer alan maddelere verdikleri yanıtların cinsiyet değişkenine göre farklılık gösterip göstermediğini belirlemek için t testi uygulanmıştır. Öğretmenlerin görev yeri ve hizmet yılına göre öğretim materyali kullanma sıklığına ve öğretim materyallerinin öğretim sürecindeki işlevlerine ilişkin görüşlerin farklılık gösterip göstermediğini belirlemek için ise grupların normal dağılım özelliği taşıması nedeniyle Kruskal Wallis-H testi uygulanmıştır. Gruplar arası farklılığı belirlemek için de ikili grup karşılaştırmalarından birisi olan Mann Whitney U testi uygulanmıştır. Verilerin istatistiksel analizinde hata payı üst sınırı 0.05 kabul edilmiştir.

### Bulgular

Bu bölümde, öğretmenlerin öğretim sürecinde öğretim materyali kullanma sıklığı ve öğretim materyallerinin işlevleri ile ilgili bulgulara yer verilmiştir. Bu bulgular araştırmanın amaçlarına uygun olarak iki alt bölüm halinde sunulmuştur. Birinci bölümde; öğretmenlerin görüşlerine göre öğretim materyali kullanma sıklığı ve öğretim materyallerinin işlevlerine ilişkin bulgulara İkinci bölümde ise öğretmenlerin demografik özelliklerine göre öğretim materyali kullanma sıklığı ve öğretim materyallerinin işlevlerine ilişkin bulgulara yer verilmiştir.

Öğretmenlerin öğretim materyali kullanma sıklığı ve öğretim materyallerinin işlevlerine yönelik görüşleri ayrı tablolar halinde ele alınmıştır. Öğretmen görüşlerine göre öğretim materyallerinin kullanma sıklığına ilişkin bulgular tablo1'de sunulmuştur.

**Tablo 1. Öğretmenlerin Öğretim Materyali Kullanım sıklığı**

Öğretim Materyali	N	Kullanım sıklığı			Ss
		Min.	Mak.	$\bar{X}$	
1. Ders Kitabı ve Yazılı Doküman	512	1,00	5,00	4,23	1,08
2. Yazı Tahtası	512	1,00	5,00	4,10	1,13
3. Bilgisayar ve Tablet	512	1,00	5,00	3,22	1,31
4. Fotoğraf, Resim, Afiş ve Poster	512	1,00	5,00	3,18	1,23
5. Tablo, Grafik, Şema ve Levha	512	1,00	5,00	3,02	1,28
6. Gerçek Eşya	512	1,00	5,00	2,93	1,32
7. İnternet	512	1,00	5,00	2,83	1,42
8. Harita ve Kavram Haritası	512	1,00	5,00	2,78	1,37
9. Maket ve Model	512	1,00	5,00	2,74	1,33
10. Projektör	512	1,00	5,00	2,53	1,48

11. Elektronik Tahta	512	1,00	5,00	2,14	1,50
12. Video	512	1,00	5,00	1,81	1,20
13. Teyp-Plak	512	1,00	5,00	1,48	0,95
14. Televizyon	512	1,00	5,00	1,47	0,91
15. Tepegöz	512	1,00	5,00	1,41	0,89

Tablo 1’deki bulgulara göre; öğretmenlerin ders kitapları ve yazılı dokümanlardan her zaman, yazı tahtasından ise sıkça yararlandıkları görülmektedir. Öğretmenlerin bilgisayar ve tablet, fotoğraf, resim, afiş ve poster, tablo, grafik, şema ve levha, gerçek eşya, internet, harita ve kavram haritası, maket ve modelden ara sıra yararlandıklarını belirtmişlerdir. Yine aynı tablodan öğretmenlerin projektör, elektronik tahta, videodan çok az düzeyde yararlandıkları, teyp-plak, televizyon ve tepegözden ise hiçbir zaman yararlanmadıkları anlaşılmaktadır.

Öğretmenlerin, en sık kullandığı öğretim materyallerinin ders kitabı ve yazılı doküman, yazı tahtası, bilgisayar ve tablet olduğu görülmektedir. En az kullandığı öğretim materyalleri ise teyp ve plak, televizyon ve tepegöz olduğu anlaşılmaktadır. Öğretmenlere göre öğretim materyallerinin işlevleri ile ilgili bulgular tablo2’de sunulmuştur.

**Tablo 2. Öğretmenlere Göre Öğretim Materyallerinin İşlevleri**

Öğretim Materyallerinin İşlevleri	N	Min.	Mak.	$\bar{X}$	Ss
1. İlgi ve dikkat çeker	512	1,00	5,00	4,47	0,73
2. Bilgiyi somutlaştırır	512	1,00	5,00	4,36	0,80
3. Öğrencileri güdüler	512	1,00	5,00	4,33	0,79
4. Dersi eğlenceli kılar	512	1,00	5,00	4,30	0,89
5. Etkin katılımı sağlar	512	1,00	5,00	4,25	0,83
6. Hedeften haberdar eder	512	1,00	5,00	4,24	0,81
7. Önbilgileri hatırlatır	512	1,00	5,00	4,23	0,83
8. İşaret ve ipucu görevi yapar	512	1,00	5,00	4,20	0,81
9. Bilgiyi tekrar etme fırsatı yaratır	512	1,00	5,00	4,20	0,88
10. Öğrenilen bilgileri kalıcı hale getirir	512	1,00	5,00	4,17	0,84
11. Yaşamla ilişki kurma fırsatı verir	512	1,00	5,00	4,11	0,87
12. Dönüt ve düzeltme imkânı sağlar	512	1,00	5,00	4,08	0,89
13. Bireysel öğrenme fırsatı sağlar	512	1,00	5,00	4,02	0,91
14. Zamanı etkili kullanma imkânı verir	512	1,00	5,00	4,02	0,94
15. Üst düzey beceri kazandırır	512	1,00	5,00	3,99	0,93
16. Sınıf içi iletişimi artırır	512	1,00	5,00	3,99	0,93
17. İşbirliği yapma ortamı hazırlar	512	1,00	5,00	3,97	0,90
18. Araştırma yapmaya teşvik eder	512	1,00	5,00	3,92	0,98
19. Derste disiplin sorunlarını önler	512	1,00	5,00	3,79	1,05
20. Sınıf yönetimini kolaylaştırır	512	1,00	5,00	3,62	1,13

Tablo 2’deki bulgulara göre; öğretmenler öğretim materyallerinin işlevlerinden ilgi ve dikkat çeker, bilgiyi somutlaştırır, öğrencileri güdüler, dersi eğlenceli kılar, etkin katılımı sağlar, hedeften haberdar eder, önbilgileri hatırlatır maddelerine kesinlikle katıldıkları görülmektedir. Öğretmenler, öğretim materyalleri ile ilgili işaret ve ipucu görevi yapar, bilgiyi tekrar etme fırsatı yaratır, öğrenilen bilgiyi kalıcı hale getirir, yaşamla ilişki kurma fırsatı verir, dönüt ve düzeltme imkânı sağlar, bireysel öğrenme fırsatı verir, zamanı etkili kullanma imkânı verir, üst düzey beceri kazandırır, sınıf içi iletişimi artırır, işbirliği yapma ortamı hazırlar, araştırma yapmaya teşvik eder, derste disiplin sorunlarını önler, sınıf yönetimini kolaylaştırır maddelerine ise katıldıklarını belirtmektedirler.

Bu bulgulara göre öğretmenler ölçekte yer alan ilk 6 maddeye kesinlikle katıldıklarını diğer maddelere ise katıldıklarını belirtmektedirler. Bu bulgular, öğretmenlere göre ölçekte yer alan tüm maddelerin öğretim materyallerinin işlevi olduğunu göstermektedir. Öğretmenler, öğretim materyalleri ilgi ve dikkat çeker, bilgiyi somutlaştırır ve öğrenciyi güdüler işlevine en çok, araştırma yapmaya teşvik eder, derste disiplin sorunlarını önler ve sınıf yönetimini kolaylaştırır işlevine en az düzeyde katıldıkları görülmektedir.

Öğretmenlerin öğretim materyali kullanma sıklığı ile öğretim materyallerinin işlevine yönelik görüşlerinin cinsiyete göre karşılaştırılması ile ilgili bulgular tablo 4’de sunulmuştur.

**Tablo 4. Öğretmenlerin Öğretim Materyali Kullanma Sıklığı İle Öğretim Materyallerinin İşlevine Yönelik Görüşlerinin Cinsiyete Göre Karşılaştırılması**

Görüşler	Değişkenler	N	$\bar{X}$	Ss	Sd	t	p
Öğretim materyali kullanma	Erkek	261	39,84	8,40	510	-0,11	0,91*
	Kadın	251	39,92	8,59			
Öğretim materyallerinin işlevi	Erkek	261	81,39	12,54	510	-1,54	0,12*
	Kadın	251	83,19	13,89			

\*p > 0.05

Tablo 4’de yer alan t testi sonuçları incelendiğinde, öğretmenlerin öğretim materyali kullanma sıklığı ve öğretim materyallerinin işlevine ilişkin görüşlerinin cinsiyete göre anlamlı bir farklılık göstermediği görülmektedir.

Öğretmenlerin öğretim materyali kullanma sıklığı ve öğretim sürecinde öğretim materyallerinin işlevlerine ilişkin görüşleri arasında görev yerlerine göre anlamlı bir farkın olup olmadığını belirlemek için Kruskal-Wallis H testi yapılmıştır. Bu analizden elde edilen sonuçlar Tablo 5’de gösterilmiştir.

**Tablo 5. Öğretmenlerin Öğretim Materyali Kullanma Sıklığı İle Öğretim Materyallerinin İşlevine Yönelik Görüşlerinin Görev Yerlerine Göre Karşılaştırılması**

Yeterlikler	Değişkenler	N	Sıralar Ort.	Ss	Sd	Kruskal Wallis H		Anlamlı Fark (Mann Whitney U Testi)
						X <sup>2</sup>	P	
Öğretim materyali kullanma	Okul öncesi	20	407,93	3,9	4	89,52	0,00**	OÖ-IÖ, OÖ-O OÖ-L, OÖ-YE İÖ-L, O-L
	İlkokul	123	328,00	24,0				
	Ortaokul	126	274,95	24,6				
	Lise	231	197,51	45,1				
	Yaygın eğitim	12	213,00	2,3				
Öğretim materyallerinin işlevi	Okul öncesi	20	354,93	3,9	4	29,82	0,00**	OÖ-O, OÖ-L İÖ-O, İÖ-L
	İlkokul	123	302,79	24,0				
	Ortaokul	126	248,49	24,6				
	Lise	231	229,81	45,1				
	Yaygın eğitim	12	215,83	2,3				

\*\*p<0.05, OÖ = Okul Öncesi, İÖ = Sınıf Öğretmeni, O = Orta Okul, L = Lise, YE = Yaygın Eğitim

Tablo 5’de yer alan, öğretim materyali kullanma ve öğretim materyallerinin işlevleri öğretmenlerin görev yerleri yönünden kıyaslanmasına ilişkin Kruskal-Wallis H testi incelendiğinde; öğretim materyali kullanma ve öğretim materyallerinin işlevlerine göre anlamlı bir farklılık olduğu görülmektedir.

Gruplar arasındaki bu farklılığı belirlemek için mann whitney-u testi yapılmıştır. Uygulanan Mann Whitney-U testi sonucunda, öğretim materyali kullanma sıklığında okulöncesi eğitim öğretmenleri ile ilkökul, ortaokul, lise ve yaygın eğitim öğretmenleri arasında, ilkökul öğretmenleri ile ortaokul ve lise öğretmenleri arasında anlamlı farklılık olduğu belirlenmiştir. Öğretim materyallerinin işlevlerinde okulöncesi eğitim öğretmenleri ile ortaokul ve lise öğretmenleri arasında, ilkökul öğretmenleri ile ortaokul ve lise öğretmenleri arasında anlamlı farklılıkların olduğu ortaya çıkmıştır. Grupların sıra ortalamaları dikkate alındığında öğretim materyali kullanma sıklığını ve öğretim materyallerinin işlevlerini belirlemede okulöncesi öğretmenlerin daha çok etkili oldukları ifade edilebilir.

Öğretmenlerin öğretim materyali kullanma sıklığı ve öğretim sürecinde öğretim materyallerinin işlevlerine ilişkin görüşleri arasında hizmet sürelerine göre anlamlı bir farkın olup olmadığını belirlemek için Kruskal-Wallis H testi yapılmıştır. Bu analizden elde edilen sonuçlar Tablo 6’de gösterilmiştir.

**Tablo 6. Öğretmenlerin Öğretim Materyali Kullanma Sıklığı İle Öğretim Materyallerinin İşlevine Yönelik Görüşlerinin Hizmet Süresine Göre Karşılaştırılması**

Yeterlikler	Değişkenler	N	Sıralar Ortalaması	Ss	Sd	Kruskal Wallis H X <sup>2</sup>	P
Öğretim materyali kullanma	0-10 Yıl	170	260,96		2	0,23	0,89*
	11-20 Yıl	224	254,00				
	21 ve Üstü	118	254,83				
Öğretim materyallerinin işlevi	0-10 Yıl	170	261,16		2	1,23	0,54*
	11-20 Yıl	224	248,46				
	21 ve Üstü	118	265,06				

\* p > 0.05

Tablo 6’da yer alan, öğretim materyali kullanma ve öğretim materyallerinin işlevleri öğretmenlerin hizmet süreleri yönünden kıyaslanmasına ilişkin Kruskal-Wallis H testi incelendiğinde; öğretim materyali kullanma ve öğretim materyallerinin işlevlerine göre farkların anlamlı olmadığı görülmektedir. Grupların sıra ortalamaları dikkate alındığında 0-10 yıl hizmeti olanlar öğretim materyali kullanma sıklığını ve 21 ve üstü hizmeti olanlar öğretim materyallerinin işlevlerini belirlemede daha çok etkili oldukları söylenebilir.

## Tartışma, Sonuç ve Öneri

Bu araştırmada, öğretmenlerin öğretim sürecinde öğretim materyali kullanma sıklığı ve öğretim materyallerinin işlevlerine ilişkin görüşleri ile ilgili bulgular elde edilmiştir. Öğretmenler öğretim sürecinde ders kitabı ve yazılı dokümanlardan her zaman, yazı tahtasından da sıkça yararlanmışlardır. Ders kitaplarının ve yazı tahtasının öğretim sürecinde en çok kullanılan öğretim materyali olması ülkemizde halen geleneksel eğitim ya da öğretmen merkezli eğitim uygulamasının devam ettiğini göstermektedir. Çağdaş bilgi ve iletişim teknolojisinin gelişmesi sonucunda, öğrenme sürecinde ders kitaplarından yararlanma oranını azalmış olmakla birlikte yine de en çok kullanılan kaynak olma özelliğini devam ettirmektedir. Kitap, sınıfta öğretmen ve yazı tahtasından sonra en sık başvurulan araçtır. (Coşkun, 1996). Ders kitabı, öğretmen ve yazı tahtası ile birlikte verilen tüm bilginin % 99’unu ileten bir ortamdır (Alkan, 1997). Öğrenciler sınıfta zamanlarının yaklaşık yüzde 80’ini ders kitapları ve ders kitaplarıyla ilgili etkinliklere harcamaktadır. İlköğretim 6, 7 ve 8. sınıf öğrencilerinin ödevlerini yaparken yararlandıkları kaynaklar arasında ilk sırayı ders kitapları almaktadır (Kuzu ve Yıldırım, 2008). Zaman ve teknoloji değişikliklerine rağmen halen geleneksel uygulamaların devam ettiği görülmektedir.

Ülkemizde olduğu gibi diğer ülkelerde de ders kitapları okullarda kullanılan temel materyallerden biridir (Kılıç ve Seven, 2008). Öğretmenler projektör, elektronik tahta ve videodan çok az düzeyde, teyp, plak ve tepegözden hiç yararlanmadıkları ortaya çıkmıştır. Günümüzde elektronik tahta ve bilgisayarın yaygınlaşmasıyla tepegözün, teyp ve plakin kullanılmaması normaldir. Ancak televizyon ve akıllı tahtadan yeterince yararlanılmaması oldukça düşündürücüdür. Merkez okullarında görevli öğretmenlerin elektronik tahtadan sıkça yararlanmaları beklenirken çok az yararlanmaları dikkat çekicidir. Teknolojiyi eğitim sürecinde etkin bir şekilde kullanmayan bir öğretmenin geleceğin neslini yetiştirmesi ve toplumsal kalınmaya katkı sağlaması beklenemez. Günümüzde bilim ve teknolojiye yapılan yatırım, ülkelerin gelecekleri açısından en değerli yatırım haline gelmiştir (Çalışır ve Gülmez, 2010). Ülkelerin kalkınmasını sağlayacak olan nitelikli insan gücünü yetiştirmede öğretmenlere büyük bir sorumluluk düşmektedir (Geçer, 2010). Araştırmada öğretmenlerin teknoloji ürünü öğretim materyallerinden sıkça yararlanmadıkları saptanmıştır.

Öğretmenler en çok düzeyde öğretim materyallerinin “ilgi ve dikkat çeker” işlevine, en az düzeyde de “işbirliği yapma ortamı hazırlar” işlevine katılmaktadırlar. Demirel (2002), öğretme-öğrenme süreçlerinde öğretim teknolojilerini kullanmanın, konunun daha etkili sunulmasına yardımcı olduğunu; bununla birlikte öğretimi daha zevkli ve anlamlı hale getirdiğini belirtmektedir. Karamustafaoğlu (2004) yaptığı bir çalışmada Öğretmenlerin yaklaşık 2/3’ü okullarındaki olanaksızlıklara rağmen kendi imkânları doğrultusunda öğretim materyali sağladıkları, ancak öğretmenlerin yarıdan fazlasının bu konuda hiçbir çaba göstermediği ortaya çıkmıştır. Bu durumdan

öğretmenlerin kendilerini geliştirmeye yeterince özen göstermediği gibi okullardaki öğretim materyali eksikliklerinin giderilmesinde sorumluluk alma konusunda da yeterince hassas olmadıkları düşünülebilir.

Öğretmenlerin öğretim materyali kullanma sıklığı ve öğretim materyallerinin işlevlerine ilişkin görüşleri cinsiyete göre karşılaştırıldığında anlamlı bir fark olmadığı ortaya çıkmıştır. Bu durum öğretim materyali kullanılması ve bunların öğretim sürecindeki işlevi ile öğretmenlerin cinsiyeti arasında bir ilişki olmadığını göstermektedir. Çakır ve Oktay'ın (2013) yaptığı çalışmada bayan öğretmenlerin teknolojiye karşı tutum ortalamalarının erkek öğretmenlerin tutum ortalamalarına göre yüksek olduğu, ancak bayan öğretmenlerin teknolojiyi kullanım ortalamaları karşılaştırıldığında gruplar arasında fark olmadığı gözlemlenmiştir. Bu sonuçlar, öğretmenlerin derslerinde teknolojiyi aktif olarak kullandıklarını ancak gelişen teknolojileri takip etmeleri ve bu yenilikleri etkin bir şekilde kullanmaları için desteğe ve hizmet içi eğitime ihtiyaç duyduklarını göstermektedir. Karamustafaoğlu'nun (2004) yaptığı bir çalışmada ise Fen ve teknoloji derslerinde erkek öğretmenler, kadın öğretmenlere göre daha fazla öğretim materyali kullandıkları ancak aralarında anlamlı bir fark olmadığı saptanmıştır. Her iki araştırma sonuçları bu çalışmanın sonuçlarıyla karşılaştırıldığında bir tutarlılık görülmektedir. Erdemir vd. (2009) yaptığı bir çalışmada ise öğretmen adaylarının bilgisayar, internet ve öğretim amaçlı teknolojiyi öğretimde kullanabilme konusunda cinsiyete göre özgüvenleri birkaç maddede farklı çıkmıştır. Kadın öğretmen adaylarının kavram, zihin ve bilgi haritaları ile programlı öğretim materyalinde erkek öğretmen adaylarının ise öğretimsel amacına uygun materyal seçmede ve hazırlamada daha iyi olduğu sonucu ortaya çıkmıştır. Akpınar ve Turan (2002) yaptıkları bir çalışmada da ilköğretim okullarında, fen ve teknoloji derslerinde erkek öğretmenler, kadın öğretmenlere göre daha fazla öğretim materyali kullandıkları sonucuna ulaşmışlardır.

Öğretmenlerin öğretim materyali kullanma sıklığı ve öğretim materyallerinin işlevlerine ilişkin görüşleri görev yerlerine göre karşılaştırıldığında anlamlı bir fark olduğu ortaya çıkmıştır. Özellikle okulöncesi eğitim kurumlarında çalışan öğretmenlerin görüşleri ile diğer kurumlarda çalışan öğretmenlerin görüşleri arasında anlamlı farkın çıkması araştırma sonuçlarının doğruluğunu kanıtlayıcı niteliktedir. Okul kademeleri arasında öğretim materyali kullanma ve öğretim materyallerinin işlevleri ile ilgili görüş farklılıklarının kullanılan öğretim materyallerinin ve işlevlerinin kademelere göre değişiklik göstermesinden kaynaklandığı söylenebilir. Gökdaş (1998) teknolojinin öğretim süreçleri ile bütünleştirilmesine geçiş sürecinde öğretmen yetiştiren kurumlarda yeterli sayıda derslerin bulunmadığını ve var olan derslerin ise bu amaca yönelik olmadığını belirtmiştir. Demetriadis vd. (2003) öğretmenlerin kendi öğretim yöntemleri ile bilgi ve iletişim teknolojilerini bütünleştiremediklerini, bunu sağlamak için desteklenmeleri ve eğitilmeleri gerektiğini belirtmişlerdir. Karamustafaoğlu'nun (2004) yaptığı çalışmada eğitim fakültesi mezunu öğretmenlerin eğitim yüksekokulu ve fen edebiyat fakültesi mezunlarına göre anlamlı bir farkla daha fazla materyal kullandıkları sonucuna ulaşmıştır.

1. Büyük ve Erol'un (2008) yaptıkları çalışmaya göre öğretmenlerin teknolojik gelişmeleri takip etme ve bunları kendi alanlarına uygulama konusunda yetersiz oldukları sonucun varmıştır. Ayrıca bu yetersizlikleri gidermek için Milli Eğitim Bakanlığı'nca düzenlenen hizmet içi eğitim seminerlerinin nitelik ve nicelik olarak ihtiyaca cevap vermediği saptanmıştır (Akt. Çakır ve Oktay, 2013). Birkök ve Vuranok'un (2010) yaptıkları araştırma sonuçlarına göre öğretmenler üniversiteden edindikleri bilginin bir kısmını zamanla unuttukları ve mezuniyetleri sonrasında üretilen yeni bilgilere de sistematik bir şekilde ulaşamadıkları ortaya çıkmıştır (Akt. Çakır ve Oktay, 2013). Önceki araştırma sonuçları ile bu çalışmanın sonuçları karşılaştırıldığında bir tutarlılık görülmektedir. Akpınar ve Turan (2002) yaptıkları bir çalışmada öğretmen okulu ile eğitim yüksekokulu mezunu öğretmenler, eğitim fakültesi ile eğitim fakültesi harici bir lisans mezunu öğretmenlere göre daha fazla materyal kullandıkları sonucu çıkmıştır (Akt. Karamustafaoğlu, 2004).

Öğretmenlerin öğretim materyali kullanma sıklığı ve öğretim materyallerinin işlevlerine ilişkin görüşleri hizmet sürelerine göre karşılaştırıldığında anlamlı bir fark olmadığı ortaya çıkmıştır. Hizmet yıllarına göre anlamlı bir fark olmaması dikkat çekici bir sonuçtur. Çünkü öğretim sürecinde öğretim materyali kullanılması belli bir hazırlık aşamasına dayanmaktadır. Bu hazırlık aşamasında yapılacak iş ve işlemler için bilgi, beceri ve istek önemli bir rol oynar. Bu bağlamda mesleki deneyimin materyal kullanma sıklığını ve materyallerin işlevlerine ilişkin görüşleri etkileyeceği düşünülebilir. Karamustafaoğlu'nun (2004) yaptığı çalışmada Fen ve teknoloji öğretmenlerinin materyal kullanma düzeyleri ile mesleki deneyimleri arasında anlamlı bir fark olmadığı ortaya çıkmıştır.

Sonuç olarak, öğretmenler öğretim sürecinde geleneksel öğretim materyallerinden daha sık yararlanmaktadırlar. Öğretim materyallerinin işlevleri konusunda öğretmenler yeterli bilgi ve farkındalık düzeyine sahiptir. Öğretim materyali kullanma ve işlevleri ile ilgili görüşlerin cinsiyete ve hizmet yılına göre anlamlı bir farklılık göstermemektedir. Ancak öğretmenlerin öğretim materyali kullanma ve işlevi ile ilgili görüşleri arasında

görev yeri ve branşa göre anlamlı bir farklılık bulunmaktadır. Bu sonuçlar kapsamında öğretmenlerin bilgi ve iletişim teknolojilerine dayalı çağdaş öğretim materyallerinden yararlanmaları için hizmetiçi eğitim etkinlikleri düzenlenmeli ve fiziki kaynaklar etkili kullanılmalıdır. Öğretim materyallerinin etkin kullanımına yönelik araştırmalar daha geniş kapsamlı olarak yapılmalı ve elde edilen sonuçlar değerlendirilmelidir.

## THE ANALYSIS OF THE VIEWS OF TEACHERS RELATED TO THE FUNCTIONS OF TEACHING MATERIALS DURING THE TEACHING-LEARNING PROCESS

Mehmet ŞAHİN\*

**Introduction:** Learning is permanent and effective as long as the learning environment appeals to many sense organs. Especially using new Technologies, learning environment will be enriched. Teachers are in struggle for transmission of the information to the students by using the effective methods based on technology day by day (Isman, 2005). Besides the gains for students, the most important standard in choosing learning material is relativity for students. In another words, it is conformity to the needs of students (Demirel, et.al. 2004). According to these explanations, in choosing, using and developing of learning materials, the basic criteria are educational value. Only one teaching material may not service for all targets of the course. For different teaching targets, different teaching materials should be chosen and applied.

The most important function of the teaching materials during the learning-teaching process is making the teaching-learning process successful. In another words, the basic target of the teaching material is providing effective and permanent learning. The teaching material which is the important element of increasing the qualification of education make learning easier during the teaching-learning process and used for permanent and effective learning. The teaching materials trigger studying courses of students by motivating them; provide opportunity for accessing and evaluating of information (Akkoyunlu, 2002). The teaching material makes communication in teaching process easier, prevents forgetting and gives chances for active access. It removes the stuffiness and monotony, makes education productive and economic. Directs the students to the activities in and out of school, increases the attention, prevents the problems of physical environment, and decreases the effects of physical and mental problems (Şahin, 2010).

**Purpose:** The basic target of this research is determining the point of views of teachers related to the functions of teaching Technologies and materials during the process of teaching-learning.

**Method:** The method of the research is a descriptive survey which is based on scanning. The study group of the research is generated by totally 1029 teachers who work in formal and informal education institutions in central province of Çankırı (Central Township). In this research group, 37 of teachers are from preschool education, 254 of them are from primary education, 254 of them are from secondary school, 460 of them are from high schools and 24 of them are from informal education institutions. To all of the teachers in this group, the data collection tool is separated, but 512 data collection tool turn back. Thus, approximately from half of the sub groups of the research group is collected.

The data collection tool which is developed for collecting the data of the research has three main parts. In the first part, personal information, in second part usage frequency of teaching materials (OMKA), in third part the questions related to functions of teaching materials (OMIO) take place. In order to determine the content validity, point of views of three lecturers who have doctorate degree from each of the program developing and education

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technology. The validity of OMIO is followed by factor analysis. The conformity of data to factor analysis is analysed by Kaiser-Meyer-Olkin (KMO) parameter and Bartlett globalism test. The reliability study of OMIO is calculated by Cronbach Alpha internal consistency parameter. Based on the results received, it is accepted that the data collection tool is valid and reliable evaluation instrument in the scope of current research. In the analysis of data, frequency, arithmetical average, standard deviation, percentage rate, t-test and anova calculations are made.

**Findings:** According to the findings of the research, teachers state that they use course books and written documents and board as teaching materials. However, they state that they do not use tape, record, television and Cyclops. It is determined that teachers mostly agree with that the teaching materials take attention, embody information and motivate students, they least agree with that the materials direct them researches, prevent the discipline problems and make easier the

classroom management. The usage frequency of teaching materials of the teachers and their point of views related to teaching materials do not indicate significant difference according to gender and working years. It is seen that there is a significant difference among the point of views of teachers related to usage of teaching material and functions of them from the view of working places and branches. It is accepted that this difference among the groups is generally rise from all sub groups.

**Discussion, Result and Suggestions:** Teachers benefit from course books and written documents generally and benefit from board frequently during the teaching process. It indicates mostly using course books and boards during teaching process that still traditional education and teacher based education application continue in our country. As a result of developing of contemporary information and communication technology, during the learning process the rate of benefitting from course books decrease and they continue to be the resources from which they benefit from generally. It is seen that teachers benefit from projector, electronic boards and videos in minimum level, and they never benefit from tape, record and Cyclops. Today, by becoming widespread of using electronic boards and computers, it is normal not to use Cyclops, tape and records. But it is challenging not to benefit from television and electronic board. Teachers determine their point of view that they accept all the elements of teaching materials in teaching process and this indicate that the awareness level about functions of teaching materials is high. Teachers accept that teaching materials “take consideration” in maximum level and they “prepare cooperation environment” in minimum level. It may be thought that teachers do not care about self-development and they are not sensitive about taking responsibilities to fulfil the needs of teaching materials in schools.

It is seen that there is not an important difference among the frequency of usage of teaching materials and views related to functions of teaching materials according to the gender and working years. This case indicates that there is not a relation among using teaching materials and the functions of them during the learning process and gender of teachers. These results indicate that teachers use technology actively during the courses but they do not follow the developing technologies and they need support and in service education in order to effective usage of these innovations. It is challenging that teacher do not have different views related to using material and their functions because the ability and desire for using materials may change according to the vocational experiences.

It is seen that there is an important difference when the usage frequency of teaching materials and the point of views related to the functions of teaching materials are compared according to working places and branches. It is determined that these differences are derived from generally all sub-groups. Especially, having an important difference between the point of views of teachers who work in preschool education institutions and of teachers who work in other institutions has a confirmative quantity for the research results. By the reason of students in preschool institutions do not know reading and writing, the education materials that teachers use in primary school, secondary school and high schools and public education institutions should be different from the preschool materials.

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# Öğretmen adaylarının akademik usulsüzlük yapma durumlarının ve nedenlerinin belirlenmesi

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## Abstract

The simplicity of the internet use and the fact that the internet eases the access to academic resource has made the act of plagiarism more common. The research carried out in the field has revealed the fact that the academic plagiarism committed with the help of the Internet is done mostly by students. Handling with plagiarism at universities which is accepted to be one of the unethical commitments is very significant with regards to ensuring students' personality development, securing the justice, encouraging information production. The informing of the students attending to Education faculties as those who will train the future generations will help raise future generations appropriately to this culture. 312 pre-service teachers participated in the study. The data showing the degree of academic plagiarism and the reason for that, was gathered through the Internet-Triggered Academic Dishonesty Scale-ITADS). In the analysis of the data, confirmatory factor analysis (CFA), t-test and one-way variance analysis (ANOVA) were used. The findings of the study demonstrate that pre-service teachers' tendency to plagiarism could be evaluated with regards to deceitfulness, plagiarism, distortion, delinquency, unapproved sub-dimensions and the reasons for academic plagiarism, individual factors, corporate policies and peer pressure.

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*Keywords:* Academic plagiarism, pre-service teachers

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## 1. Giriş

İnternet teknolojisinin gelişmesiyle birlikte, web siteleri ve veri tabanları aracılığı ile akademik bilgilere ulaşmak kolaylaşmıştır. Kütüphanelerin yerini veri tabanları büyük ölçüde almış, böylece yaşadığımız yerde bulunmayan kaynaklara ulaşmak için uzun yolculuklar yapmak yerine, bilgisayarın karşısına oturup birkaç fare tıklaması yapmamız yeterli hale gelmiştir. Bu sayede güncel bilginin anında takip edilebilmesine imkan sağlanmıştır. Güncel bilgiye bu denli kolay ulaşabilmek, yeni bilgilerin geliştirilmesine önemli ölçüde kolaylık sağlamakta ve bilimin ve teknolojinin hızlı gelişmesine destek olmaktadır.

İnternet teknolojisinin bu olumlu taraflarının yanı sıra, olumsuz, hatta suç teşkil edebilecek davranışlara kapı aralayan tarafları da bulunmaktadır. Telif hakkı ihlali, banka hırsızlığı, siber zorbalık gibi gündemi oldukça meşgul eden davranışlar bunlara örnek olarak gösterilebilir. Bu tür alışıldık suç davranışlarının yanında ayrıca, akademik usulsüzlük olarak nitelendirilen ve fikir hırsızlığı, bilginin çalınması-aşırılması-çarpıtılması-uydurulması gibi davranışlar da etik dışı, hatta suç teşkil eden davranışlar olarak nitelendirilmektedir. Akademik usulsüzlük, "bilimsel ve akademik çalışmalarda yapılan her türlü aldatma, fikirleri ve bilgileri kaynak göstermeksizin kullanma ve buna benzer etik dışı davranışların tamamı" olarak tanımlanmaktadır (Odabaşı, vd., 2007).

İnternetin kullanımının basit olması ve akademik kaynaklara erişimi kolaylaştırması, internet aracılığı ile yapılan akademik usulsüzlük davranışını yaygınlaştırmaktadır (Lathrop ve Foss, 2000). Öğrencilerin ödevlerini araştırmak amacıyla İnterneti kullanmaları, onları güvenilir olan-olmayan birçok web sayfasına yönlendirmekte, bu web sayfalarından bazıları önceden hazırlanmış ödevlerin indirilmesine izin vermekte, bu ödevleri indirip kullanan öğrenciler de herhangi bir zahmete girmeden ve ödevdeki bilginin doğruluğunu ve güncelliğini araştırmadan kendisi hazırlamış gibi kullanabilmektedir. Buna ek olarak araştırmalar birçok öğrencinin, İnternet sayfalarından kopyalama yapıp kendi araştırmasıymış gibi kullanmanın yanlış olduğunu anlamama ve reddetme eğilimi gösterdiklerini ortaya koymaktadır (Hansen, 2003; Warnken, 2004). Bu tür etik dışı davranışlarda bulunmak, kişilerin gerek ahlaki gelişimlerini, gerek akademik gelişimlerini, gerekse bilimsel bilginin gelişmesini olumsuz yönde etkilemektedir.

Yapılan arařtırmalar genel olarak, internet aracılıđı ile yapılan akademik usulsüzlüđün birçok öđrenci tarafından gerekleřtirdiđini ortaya koymaktadır (McCabe ve Trevino, 1996; Crawford ve Juday, 1999; Scanlon ve Neumann, 2002). Akademik usulsüzlüđün yapılma nedenleri incelendiđinde ise bunlar arasında, atıf göstermekte ve kaynaka yazmakta sıkıntı yařamaları, İnternette temin edilen her türlü bilginin herkes tarafından kullanılabilir olduđuna inanılması (Warnken, 2004), öđretmenlerin öđrencilerinden orijinal fikirler beklemeleri (De Voss ve Rosati, 2002), öđrencilerin üretimlerini deđerli görmemesi, dersin amacına inanmamaları, o dersin gerek hayatla iliřkisini kuramaması (Isserman, 2003) gibi nedenler sayılabilir. Üniversitelerde bilimsel etik dıřı davranıřlardan biri olan akademik usulsüzlük ile ilgilenilmesi, öđrencilerin kiřilik geliřimlerinin sađlanması, adaletin sađlanması, bilgi üretiminin sađlanması (Whitley ve Spiegel, 2002) gibi açılardan dolayı önem arz etmektedir. Özellikle gelecek kuřakları eđitecek olan, eđitim fakültelerinde öđrenim gören öđretmen adaylarının bu konuda bilinlendirilmesi, gelecek neslin bu kültüre uygun bir řekilde yetiřtirilmesine imkan sađlayacaktır.

Bu bağlamda bu arařtırma kapsamında, eđitim fakültelerinde öđrenim görmekte olan öđretmen adaylarının akademik usulsüzlük yapma durumlarının ve nedenlerinin incelenmesi amalanmıřtır. Bu genel ama dođrultusunda alıřmada, ařađıdaki arařtırma sorularına yanıt aranmıřtır:

1. Öđretmen adaylarının akademik usulsüzlük yapma durumları ile cinsiyetleri arasında farklılık var mıdır?
2. Öđretmen adaylarının akademik usulsüzlük yapma nedenleri ile cinsiyetleri arasında farklılık var mıdır?
3. Öđretmen adaylarının akademik usulsüzlük yapma durumlarında öđrenim gördükleri bölüm arasında farklılık var mıdır?
4. Öđretmen adaylarının akademik usulsüzlük yapma nedenleri ile öđrenim gördükleri bölüm arasında farklılık var mıdır?

## 2. Yöntem

Bu alıřma betimsel bir arařtırma niteliğindedir. Dolayısıyla arařtırmanın yöntemini tarama (survey) yöntemi oluřturmuřtur (Büyüköztürk vd., 2008).

### 2.1. alıřma Grubu

Arařtırma, 2012-2013 öđretim yılında Batı Karadeniz’de bir üniversitenin Eđitim Fakültesinde öđrenim gören 312 öđretmen adayı üzerinde gerekleřtirilmiřtir. Katılımcılarla ilgili betimsel bilgiler Tablo 1’de gösterilmiřtir.

Tablo 1. Örnekleme İliřkin Betimsel İstatistikler

Deđiřken	N	%
<i>Cinsiyet</i>		
Kız	213	32
Erkek	99	68
<i>Program türü</i>		
Fen Bilgisi Öđretmenliđi	29	9.3
İlköđretim Matematik Öđretmenliđi	32	10.3
Okul Öncesi Öđretmenliđi	37	11.9
Sınıf Öđretmenliđi	92	29.5
Sosyal Bilgiler Öđretmenliđi	28	8.9
Türke Öđretmenliđi	94	30.1

### 2.2. Veri Toplama Araları

alıřmada veri toplama aracı olarak Akbulut, vd. (2008) tarafından geliřtirilen İnternetle Yaygınlařan Akademik Usulsüzlük Öleđi (Internet-Triggered Academic Dishonesty Scale-ITADS) kullanılmıřtır. Ölek 2 bölümden oluřan, birinci bölümde Sahtekarlık, Ařırmacılık, arpıtma, Kurallara Uymama, Onaylanmayan Yardım

faktörlerinden oluşan akademik usulsüzlük yapma durumlarını; ikinci bölümde Bireysel Faktörler, Kurumsal Politikalar, Akran Baskısı faktörlerinden oluşan akademik usulsüzlük yapma nedenlerini araştırmaya yönelik maddeler içeren 5'li likert tipi bir ölçektir (Hiç=1, Çok sık=5). Ölçeğin iç tutarlığına ilişkin güvenilirlik katsayısı ise .92'dir.

### 2.3. Verilerin Analizi

Öğretmen adaylarının akademik usulsüzlük yapma durumlarının ve nedenlerinin belirlenmesinde, cinsiyete göre farklılaşıp farklılaşmadığını belirlemek amacıyla ilişkisiz örneklemeler için t testi; öğrenim görülen bölüme göre farklılaşıp farklılaşmadığını saptamak için tek yönlü varyans analizi (ANOVA) ve post-hoc Tukey HSD testi kullanılmıştır.

## 3. Bulgular

### 3.1. Birinci Araştırma Sorusuna Yönelik Bulgular

Araştırmanın bu aşamasında öğretmen adaylarının Akademik Usulsüzlük yapma durumları ile ilgili görüşlerinin cinsiyetlerine göre anlamlı farklılık olup olmadığını test etmek amacıyla bağımsız gruplar için t-testi analiz tekniği kullanılmıştır. Verilerin analizi sonucunda elde edilen bulgular Tablo 2'de sunulmuştur.

Tablo 2. Cinsiyete Göre Akademik Usulsüzlük Yapma Durumlarının Karşılaştırılması

Yeterlik Boyutu	Cinsiyet	N	$\bar{X}$	Ss	Sd	t	p
Sahtekarlık	Erkek	99	10.08	3.53	155.27	1.76	.08
	Kadın	213	9.38	2.75			
Aşırımacılık	Erkek	99	9.18	4.25	168.80	2.79	.006
	Kadın	213	7.80	3.68			
Çarpıtma	Erkek	99	4.56	2.03	158.99	2.21	.03
	Kadın	213	4.04	1.63			
Kurallara Uymama	Erkek	99	8.47	2.99	310	1.74	.08
	Kadın	213	7.85	2.91			
Onaylanmayan Yardım	Erkek	99	5.16	2.16	310	2.96	.003
	Kadın	213	4.43	1.98			

p<.05

Öğretmen adaylarının cinsiyete göre akademik usulsüzlük yapma durumlarının karşılaştırılmasında, Sahtekarlık ve Kurallara Uymama boyutlarında anlamlı bir farklılık bulunmamış; ancak Aşırımacılık, Çarpıtma ve Onaylanmayan Yardım boyutlarında anlamlı farklılık tespit edilmiştir.

Aşırımacılık boyutunda erkek öğretmen adayların akademik usulsüzlük yapma düzeyleri ( $\bar{X} = 9.18$ ), kadın öğretmen adaylarına ( $\bar{X} = 7.80$ ) göre daha yüksek olduğu; Çarpıtma boyutunda erkek öğretmen adayların akademik usulsüzlük yapma düzeyleri ( $\bar{X} = 4.56$ ), kadın öğretmen adaylarına ( $\bar{X} = 4.04$ ) göre daha yüksek olduğu; Onaylanmayan Yardım boyutunda erkek öğretmen adayların akademik usulsüzlük yapma düzeyleri ( $\bar{X} = 5.16$ ), kadın öğretmen adaylarına ( $\bar{X} = 4.43$ ) göre daha yüksek olduğu belirlenmiştir. Bu durumda erkek öğretmen akademik usulsüzlük yapma durumlarının, kadın öğretmen adaylarına göre daha fazla olduğu söylenebilir.

### 3.2. İkinci Araştırma Sorusuna Yönelik Bulgular

Araştırmanın bu aşamasında öğretmen adaylarının Akademik Usulsüzlük yapma nedenleri ile ilgili görüşlerinin cinsiyetlerine göre anlamlı farklılık olup olmadığını test etmek amacıyla bağımsız gruplar için t-testi analiz tekniği kullanılmıştır. Verilerin analizi sonucunda elde edilen bulgular Tablo 3'te sunulmuştur.

Tablo 3. Cinsiyete Göre Akademik Usulsüzlük Yapma Nedenlerinin Karşılaştırılması

Yeterlik Boyutu	Cinsiyet	N	$\bar{X}$	Ss	Sd	t	p
Bireysel Faktörler	Erkek	99	22.25	8.32	310	1.51	.13
	Kadın	213	20.75	8.08			
Kurumsal Politikalar	Erkek	99	8.38	4.35	310	.68	.50
	Kadın	213	8.03	4.28			
Akran Baskısı	Erkek	99	3.03	1.62	145.71	3.21	.58

p&lt;.05

Öğretmen adaylarının cinsiyete göre akademik usulsüzlük yapma nedenlerinin karşılaştırılması için yapılan t testi sonucunda, Bireysel Faktörler, Kurumsal Politikalar, Akran Baskısı boyutlarının hiçbirinde cinsiyete göre anlamlı bir farklılık olmadığı görülmektedir.

### 3.3. Üçüncü Araştırma Sorusuna Yönelik Bulgular

Araştırma alt amaçları doğrultusunda yanıt aranan sorulardan biri, öğretmen adaylarının akademik usulsüzlük yapma durumlarına ilişkin görüşleri ile öğrenim gördükleri bölümleri arasında fark olup olmadığını incelemektir. Bu amaçla öğretmen adaylarının, öğrenim gördükleri bölümlerine göre akademik usulsüzlük yapma durumları ile ilgili görüşleri incelenmiş ve bulgular Tablo 4'te verilmiştir.

Tablo 4. Bölümlere Göre Akademik Usulsüzlük Yapma Durumlarına İlişkin Betimsel İstatistikler

Faktörler	Bölüm	N	$\bar{X}$	Ss
Sahtekarlık	Fen Bilgisi Öğretmenliği	29	8.76	3.16
	İlköğretim Matematik Öğretmenliği	32	10.53	3.36
	Okul Öncesi Öğretmenliği	37	9.54	2.67
	Sınıf Öğretmenliği	92	9.73	2.92
	Sosyal Bilgiler Öğretmenliği	28	10.25	4.51
	Türkçe Öğretmenliği	94	9.24	2.47
	<b>TOPLAM</b>	<b>312</b>	<b>9.60</b>	<b>3.03</b>
Aşırımacılık	Fen Bilgisi Öğretmenliği	29	8.45	4.01
	İlköğretim Matematik Öğretmenliği	32	9.63	3.58
	Okul Öncesi Öğretmenliği	37	7.89	3.39
	Sınıf Öğretmenliği	92	8.58	4.43
	Sosyal Bilgiler Öğretmenliği	28	7.71	4.08
	Türkçe Öğretmenliği	94	7.66	3.52
	<b>TOPLAM</b>	<b>312</b>	<b>8.24</b>	<b>3.91</b>
Çarpıtma	Fen Bilgisi Öğretmenliği	29	3.79	1.63
	İlköğretim Matematik Öğretmenliği	32	4.78	1.76
	Okul Öncesi Öğretmenliği	37	4.16	1.56
	Sınıf Öğretmenliği	92	4.36	2.01
	Sosyal Bilgiler Öğretmenliği	28	4.04	1.86
	Türkçe Öğretmenliği	94	4.05	1.64
	<b>TOPLAM</b>	<b>312</b>	<b>4.21</b>	<b>1.78</b>
Kurallara Uymama	Fen Bilgisi Öğretmenliği	29	8.83	2.51
	İlköğretim Matematik Öğretmenliği	32	9.28	3.10
	Okul Öncesi Öğretmenliği	37	8.62	2.87
	Sınıf Öğretmenliği	92	7.54	2.98
	Sosyal Bilgiler Öğretmenliği	28	7.32	3.53
	Türkçe Öğretmenliği	94	7.88	2.66
	<b>TOPLAM</b>	<b>312</b>	<b>8.05</b>	<b>2.94</b>
Onaylanmayan Yardım	Fen Bilgisi Öğretmenliği	29	4.52	1.83
	İlköğretim Matematik Öğretmenliği	32	4.97	1.96
	Okul Öncesi Öğretmenliği	37	4.35	1.55
	Sınıf Öğretmenliği	92	4.50	2.20
	Sosyal Bilgiler Öğretmenliği	28	4.18	1.87
	Türkçe Öğretmenliği	94	5.02	2.23
	<b>TOPLAM</b>	<b>312</b>	<b>4.66</b>	<b>2.06</b>

Öğretmen adaylarının akademik usulsüzlük yapma durumlarına ilişkin görüşlerinin öğrenim gördükleri bölümlere göre farklılığını belirlemek amacıyla tek yönlü varyans analizi uygulanmış, bu analize ilişkin bulgular Tablo 5'te gösterilmiştir.

Tablo 5. Bölümlere Göre Akademik Usulsüzlük Yapma Durumlarına Yönelik ANOVA Sonuçları

Faktörler	Varyans Kaynağı	Kareler Toplamı	Sd	Kareler Ortalaması	F	p	Anlamlı Fark
Sahtekarlık	Gruplar arası	73.62	5	14.73	1.62	.15	
	Gruplar içi	2777.30	306	9.08			
	<b>TOPLAM</b>	<b>2850.92</b>	<b>311</b>				
Aşırımacılık	Gruplar arası	116.92	5	23.38	1.54	.17	
	Gruplar içi	4647.53	306	15.19			
	<b>TOPLAM</b>	<b>4764.45</b>	<b>311</b>				
Çarpıtma	Gruplar arası	20.76	5	4.15	1.32	.26	
	Gruplar içi	966.12	306	3.16			
	<b>TOPLAM</b>	<b>986.88</b>	<b>311</b>				
Kurallara Uymama	Gruplar arası	119.22	5	23.85	2.84	.01	2-4
	Gruplar içi	2573.96	306	8.41			
	<b>TOPLAM</b>	<b>2693.18</b>	<b>311</b>				
Onaylanmayan Yardım	Gruplar arası	28.28	5	5.66	1.34	.25	
	Gruplar içi	1295.71	306	4.23			
	<b>TOPLAM</b>	<b>1323.99</b>	<b>311</b>				

2 = İlköğretim Matematik Öğretmenliği

4 = Sınıf Öğretmenliği

Tablo 5'ten elde edilen bulgulara göre öğretmen adaylarının akademik usulsüzlük yapma durumlarına ilişkin görüşleri ile öğrenim gördükleri bölüm arasında Sahtekarlık [F(5-306)=1.62, p>.05], Aşırımacılık [F(5-306)=1.54, p>.05], Çarpıtma [F(5-306)=1.32, p>.05], Onaylanmayan Yardım [F(5-306)=1.34, p>.05] boyutlarında anlamlı farklılık bulunmadığı tespit edilmiştir. Öğretmen adaylarının akademik usulsüzlük yapma durumlarına ilişkin görüşleri ile öğrenim gördükleri bölüm arasında Kurallara Uymama alt boyutunda [F(5-306)=2.84, p≤.05] 01 düzeyinde anlamlı farklılık bulunduğu test edilmiştir. Bu farklılığın İlköğretim Matematik Öğretmenliği ( $\bar{X}$  =9.28) ile Sınıf Öğretmenliği ( $\bar{X}$  =7.54) arasında ve İlköğretim Matematik Öğretmenliği lehine olduğu görülmektedir.

### 3.4. Dördüncü Araştırma Sorusuna Yönelik Bulgular

Araştırma alt amaçları doğrultusunda yanıt aranan sorulardan biri, öğretmen adaylarının akademik usulsüzlük yapma nedenlerine ilişkin görüşleri ile öğrenim gördükleri bölümleri arasında fark olup olmadığını incelemektir. Bu amaçla öğretmen adaylarının, öğrenim gördükleri bölümlerine göre akademik usulsüzlük yapma nedenleri ile ilgili görüşleri incelenmiş ve bulgular Tablo 6'da verilmiştir.

Tablo 8. Bölümlere Göre Akademik Usulsüzlük Yapma Nedenlerine İlişkin Betimsel İstatistikler

Faktörler	Bölüm	N	$\bar{X}$	Ss
Bireysel Faktörler	Fen Bilgisi Öğretmenliği	29	20.24	5.68
	İlköğretim Matematik Öğretmenliği	32	25.88	7.94
	Okul Öncesi Öğretmenliği	37	23.43	7.23
	Sınıf Öğretmenliği	92	20.48	8.98
	Sosyal Bilgiler Öğretmenliği	28	18.21	6.48
	Türkçe Öğretmenliği	94	20.71	8.24

	<b>TOPLAM</b>	<b>312</b>	<b>21.23</b>	<b>8.17</b>
Kurumsal Politikalar	Fen Bilgisi Öğretmenliği	29	7.83	3.92
	İlköğretim Matematik Öğretmenliği	32	10.41	4.68
	Okul Öncesi Öğretmenliği	37	8.68	4.83
	Sınıf Öğretmenliği	92	7.52	4.13
	Sosyal Bilgiler Öğretmenliği	28	7.21	3.29
	Türkçe Öğretmenliği	94	8.14	4.30
	<b>TOPLAM</b>	<b>312</b>	<b>8.14</b>	<b>4.30</b>
Akran Baskısı	Fen Bilgisi Öğretmenliği	29	2.31	1.17
	İlköğretim Matematik Öğretmenliği	32	2.66	1.41
	Okul Öncesi Öğretmenliği	37	2.14	.48
	Sınıf Öğretmenliği	92	2.79	1.43
	Sosyal Bilgiler Öğretmenliği	28	2.96	1.53
	Türkçe Öğretmenliği	94	2.67	1.42
	<b>TOPLAM</b>	<b>312</b>	<b>2.63</b>	<b>1.34</b>

Öğretmen adaylarının akademik usulsüzlük yapma nedenlerine ilişkin görüşlerinin öğrenim gördükleri bölümlere göre farklılığını belirlemek amacıyla tek yönlü varyans analizi uygulanmış, bu analize ilişkin bulgular Tablo 7’de gösterilmiştir.

Tablo 7. Bölümlere Göre Akademik Usulsüzlük Yapma Nedenlerine Yönelik ANOVA Sonuçları

Faktörler	Varyans Kaynağı	Kareler Toplamı	Sd	Kareler Ortalaması	F	p	Anlamlı Fark
Bireysel Faktörler	Gruplar arası	1230.04	5	246.01	3.86	.002	2-3
	Gruplar içi	19522.81	306	63.80			2-4
							2-5
	<b>TOPLAM</b>	<b>20752.84</b>	<b>311</b>				2-6
Kurumsal Politikalar	Gruplar arası	236.96	5	47.39	2.63	.024	2-4
	Gruplar içi	5508.84	306	18.00			2-5
	<b>TOPLAM</b>	<b>5745.80</b>	<b>311</b>				
Akran Baskısı	Gruplar arası	17.78	5	3.56	2.01	.078	
	Gruplar içi	542.57	306	1.77			
	<b>TOPLAM</b>	<b>560.35</b>	<b>311</b>				

2 = İlköğretim Matematik Öğretmenliği, 3 = Okul Öncesi Öğretmenliği, 4 = Sınıf Öğretmenliği, 5 = Sosyal Bilgiler Öğretmenliği, 6 = Türkçe Öğretmenliği

Tablo 7’den elde edilen bulgulara göre öğretmen adaylarının akademik usulsüzlük yapma nedenlerine ilişkin görüşleri ile öğrenim gördükleri bölüm arasında Akran Baskısı [ $F(5-306)=2.01, p>.05$ ] boyutunda anlamlı farklılık

bulunmadığı tespit edilmiş, bunun yanında Bireysel Faktörler [ $F(5-306)=3.86, p<.05$ ] .002 düzeyinde ve Kurumsal Politikalar alt boyutlarında [ $F(5-306)=2.63, p<.05$ ] .024 düzeyinde anlamlı farklılık bulunduğu test edilmiştir. Bireysel Faktörler alt boyutundaki farklılık İlköğretim Matematik Öğretmenliği ( $\bar{X}=25.88$ ) ile Okul Öncesi Öğretmenliği ( $\bar{X}=23.43$ ), Sınıf Öğretmenliği ( $\bar{X}=20.48$ ), Sosyal Bilgiler Öğretmenliği ( $\bar{X}=18.21$ ), Türkçe Öğretmenliği ( $\bar{X}=20.71$ ), arasında ve İlköğretim Matematik Öğretmenliği lehine olduğu görülmektedir. Kurumsal Politikalar alt boyutundaki farklılık İlköğretim Matematik Öğretmenliği ( $\bar{X}=10.41$ ) ile Sınıf Öğretmenliği ( $\bar{X}=7.52$ ), Sosyal Bilgiler Öğretmenliği ( $\bar{X}=7.21$ ), arasında ve İlköğretim Matematik Öğretmenliği lehine olduğu görülmektedir.

#### 4. Sonuç ve öneriler

Öğretmen adaylarının akademik usulsüzlük yapma durumlarının cinsiyete göre Aşırımacılık, Çarpıtma ve Onaylanmayan Yardım boyutlarının tümünde erkek öğretmen adayları lehine anlamlı fark olduğu ortaya çıkmıştır. Akademik usulsüzlük yapma nedenlerinde ise cinsiyete göre hiçbir boyutta anlamlı farklılık olmadığı belirlenmiştir.

Öğretmen adaylarının akademik usulsüzlük yapma durumlarının bölümlere göre beş boyuttan dördünde anlamlı farklılık olmadığı, yalnızca Kurallara Uymama boyutunda olduğu, bu farklılığın da İlköğretim Matematik Öğretmenliği ile Sınıf Öğretmenliği bölümleri arasında, İlköğretim Matematik Öğretmenliği lehine olduğu belirlenmiştir.

Öğretmen adaylarının akademik usulsüzlük yapma nedenlerinin bölümlere göre Bireysel Faktörler ve Kurumsal Politikalar boyutlarında farklılık olduğu belirlenmiştir. Bireysel Faktörler alt boyutundaki farklılık İlköğretim Matematik Öğretmenliği ile Okul Öncesi Öğretmenliği, Sınıf Öğretmenliği, Sosyal Bilgiler Öğretmenliği ve Türkçe Öğretmenliği arasında, İlköğretim Matematik Öğretmenliği lehine olduğu görülmektedir. Kurumsal Politikalar alt boyutundaki farklılık İlköğretim Matematik Öğretmenliği ile Sınıf Öğretmenliği ve Sosyal Bilgiler Öğretmenliği arasında, İlköğretim Matematik Öğretmenliği lehine olduğu görülmektedir. Bu bulgular ışığında, öğretmen adaylarının akademik usulsüzlük yapma nedenlerinin birçok boyutta bölüme göre farklılık gösterdiği, bu farklılığın Bireysel Faktörler ve Kurumsal Politikalar boyutlarında İlköğretim Matematik Öğretmenliği lehine sonuçlandığı söylenebilir.

Elde edilen sonuçlar erkek öğretmen adaylarının kadın öğretmen adaylarına göre daha fazla akademik usulsüzlük yapma eğiliminde olduklarını göstermektedir. Bu sonuçun nedeninin araştırılmasına yönelik nitel çalışmaların yapılması yerinde olacaktır.

Ayrıca akademik usulsüzlüğün yapılma nedenleri arasında Bireysel Faktörler ve Kurumsal Politikalar boyutunda anlamlı farklılıklar çıktığı görülmektedir. “Ödev yapmanın sıkıcı olması”, “öğretmenlerin çok fazla ödev vermesi”, “sosyal hayatın çok yoğun olması” gibi maddeler içeren Bireysel Faktörler boyutu ile ilgili detaylı araştırmalar yapılarak soruna ilişkin çözüm önerilerinin geliştirilmesi gerekmektedir. Ayrıca “öğretmenlerin akademik usulsüzlük konusuna çok fazla hassasiyet göstermemesi”, “kurumsal cezaların yetersiz olması” gibi maddeler içeren Kurumsal Politikalar boyutu ile ilgili kurumların yapısının incelendiği çalışmalar yapılarak, kurumların politikalarındaki eksiklikler gözden geçirilmeli ve buna yönelik çözüm önerileri geliştirilmelidir.

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İNTE 2014

# Parenting style and its influence on the personal and moral development of the child

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## Abstract

The paper deals with the relationships between educational practices of parents and their estimated impact on the structure of the child's personality and his/her moral attitude. The research method: questionnaire. The research sample: students aged 12 to 17 (N=431). The results show that an adolescent examines him/herself intensely and evaluates him/herself from a number of viewpoints, has a highly critical attitude towards the educational approach of his/her parents and its impact on him/herself. The respondents' views of solving dilemmas have brought information about and evidence of the fact that adolescents express themselves quite individually and freely, regardless of the consequences.

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*Keywords:* parenting style; adolescents; personality; moral development; moral dilemmas

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## Introduction

Parenting style is one of the key factors in the child's socialization process. Parents manage their educational practices both rationally and intuitively, introducing a number of patterns from their own primary families. If they accept their roles, they become subject to cultural stereotypes in which they grew up and those in the world around them. Parents have their own implicit conception of what it is family and parenthood (Havigerová, Haviger, & Truhlářová, 2013). They endeavour to prepare the child for the real life in the world and provide him/her with a number of social skills enabling him/her to cope with difficult situations. Many parents transfer their ambitions into the goals of the education. These can be their own fulfilled ambitions worth following but also unfulfilled ones – in this case, parents expect their child to achieve what they failed to achieve themselves. This may distort a realistic view of the child's capabilities and expose him/her to insolvable situations. One of the spheres in which active parents try to influence the life journey of their children is the training in the internalization of social behaviour norms, including the area of moral development. The child should testify to the appropriate educational practices of their parents chiefly in human interaction, observing the rules and thus demonstrating that the educational process was successful. The present paper focuses on parenting styles, the process of moral development and the characteristics of adolescents. In adolescents aged 15-17 we identified very important connections between the parenting style and a range of personality factors. These include factors related to character, but also temperament, social communication, mental (in)stability, activity/passivity with a strong biological basis.

The primary condition of a desirable personality development is a genuine, humane, positive emotional relationship between the parents and the child. Kendler (1996) proposed three factors labelled warmth, protectiveness and authoritarianism. Rohner (1980) formulated the Parental acceptance-rejection theory (PART), which is a theory of socialization, attempting to explain and predict the main consequences of acceptance or rejection on the part of the parents. It works with the cognitive, emotional and behavioural development of the child, describing certain types of adult personalities and trying to account for different means which help some children to

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cope with the corrosive effects of parental rejection and emotional deprivation better than others. Furthermore, the theory treats the connection between parental rejection-acceptance and expressive behaviour in the society. Acceptance and rejection create a bi-polar dimension in which every child can be placed.

*Accepting parents* are defined by Rohner as parents who show their love physically (cuddling, kissing, caressing), verbally (telling the child nice things, speaking nicely about him/her, rewarding him/her, showing that they are proud of him/her) or by a combination of the two, the ultimate aim being to make the child feel loved and accepted.

*Rejecting parents* compare their children with others in the negative sense; they hate them, are often angry with them and regard them as a burden. The rejection usually results in two forms of behaviour: the first is characterized by aggression and hostility, the second by disregard and neglect. The parents either attack the child verbally or physically or they ignore him/her, do not help him/her, do not satisfy his/her emotional needs and are not interested in his/her happiness, well-being and comfort. They often forget their promises and spend minimal amount of time with the child. Both forms raise the feelings of being unloved and rejected.

The consequences of *PART* manifest themselves in behaviour both during childhood and adulthood. Studies have shown that rejection causes the occurrence of a wide range of negative phenomena: mental and behavioural disorders, neurosis, schizophrenia, delinquency, problems with control and studying, deficient physical development and stammering. A rejected and emotionally neglected child is prone to aggressive behaviour, has difficulties with submitting to guidance of others, is defensively independent, emotionally instable, anxious and incapable of adequate emotional reaction, his/her self-respect is deficient and his/her attitude to the world is negative (Burešová, Steinhäusel, & Havigerová, 2012). Rohner carried out a comparison study in 101 cultures, using the so-called holocultural method and working with two paradigms: firstly with comparative ethnographic and socialization research in the individual communities and secondly with socio-psychological and developmental research among nations. He managed to identify principles of human behaviour in this way. The findings based on the pancultural sample of 101 societies suggest that rejected children are significantly more hostile and passively or actively aggressive than accepted children, they have a more negative self-evaluation and are more dependent. As adults, they are emotionally less stable, more irresponsible and have a more negative attitude to the world than accepted children. We intended to draw attention to the recent views of family, parenting styles and their impact on the development of the child, which is not merely immediate (praise, punishment) but long-term. Parents very often base the education of their children on intuition, relying on the behavioural patterns of their own parents, while teachers should act as professionals in this respect. However, what concerns both is the fact that manifestations of respect for the child, mainly in the case of parents, become an integral part of the child's self-image and determine his/her self-respect to a great extent (Macková, 1999). In the context of self-respect, Deci and Ryan (1996) introduced the term *self-consistency*. It forms the basis of the theory of identity and enables the development towards experiences of unity, independence, predictability and control, providing a framework for the organization of the self and the ability to sense the possibilities and consequences of the interaction with others.

Stets and Carter (2011) from the University of California in their paper "The Moral Self: Applying Identity Theory" use identity theory to account for the understanding of one's own moral principles:

*Individuals act on the basis of their identity meanings, and they regulate of their behaviour so that those meanings are consistent with their identity meanings. An inconsistency produces negative emotions and motivates individuals to behave differently to produce outcomes that will better match their identity meanings.* (Stets and Carter, 2011).

The authors continue the tradition of American psychology, skilfully connecting the theory of the self with moral development and the feeling of identity as the fundamental psychological phenomenon of the self. Thus, they move the traditional understanding of moral development into the deeper layers of the personality and make it possible to study these phenomena with reference to a continuum of the individual's internalized moral values of a given culture instead of the traditional moral-amoral dichotomy of human behaviour.

## Objective

The objective of our research is to study the elements of parental behaviour described by the respondents, their means of dealing with moral dilemmas and the structures of their maturing personalities. The research will be based

on questionnaire methods and will examine potential mutual connections and dependencies of the phenomena in question.

## Method

The data was collected using the following questionnaire methods: the Neo Big Five personality test, the Moral dilemma questionnaire and the Inventory of parental behaviour.

### .1. Description of the Neo big Five personality test

The questionnaire comprises 60 items answered on the Lickert scale ranging from “strongly disagree” = 0 points “strongly agree” = 5 points. The Czech version of this much approved method originating in the U.S. was created by Hřebíčková and Urbánek (2001, Big Five, NEO). The method examines five personality traits: Agreeableness, Neuroticism, Extraversion, Openness to Experience, Conscientiousness. It was created on the basis of the theory of the five factor personality structure (Costa, Mc Crae, 1992), which describes the so-called *Alpha factor* (socialization, social adaptation and good relationships) which covers agreeableness, conscientiousness and neuroticism and the *Beta factor* (plasticity and the goal-directed character of personality growth) encompassing extraversion and openness to experience. The development of the Alpha factor elements depends mainly on socialization, while the Beta factor elements are rooted rather in the genes and temperament.

### .2. The Moral dilemma questionnaire

The moral dilemma questionnaire was inspired by Kohlberg’s research in which he presented micro stories about moral dilemmas to the respondents and subsequently used very thorough qualitative methods to identify their attitudes to the problem in the story. We compared the frequencies of different answers to the dilemmas, formulating the statements which are in the questionnaire with the Lickert scale. The reliability of the method is Cronbach’s  $\alpha = 0,85$ .

Using the orthogonal Varimax rotation (critical value | 0,40 | ) we extracted 3 factors, which are implicitly but also significantly connected with Piaget’s ideas and classification (heteronomous and autonomous morality).

#### **F1: Authoritarian father (heteronomous stage)**

*George should obey his father and give him the money.*

*The father has the right to require his son to help him with his own expenses.*

*The father has the right to want his son to give him the money.*

*The father has the right to change his mind and break the promise to his son.*

At this stage, it is the *father* who is in the spotlight. The respondents have little regard for themselves and their own needs and respect authority. They believe that the father is in a position allowing him to change his mind and they should willingly submit to him. It is interesting that they are not egocentric and interested chiefly in their own needs and the injustice – it is the father who is central, not the subject. Clearly, social perspective is at work already, the child is even willing to subject his/her own desires and needs to the other (the father exerts no great pressure on the son to force him to provide the money). There is a manifest conformity to a close but subordinated person, whose will is respected even though it is disadvantageous for the child who is required to give in.

#### **F2: Keeping the promise (transition from the heteronomous to the autonomous stage)**

*The father set a bad example to his son by breaking his promise.*

*Keeping of promises is one of the most important bases of good relationships between parents and children.*

*The father should cancel his fishing trip in order to be able to keep the promise given to his son.  
One should always keep his/her promises, even those given to people who s/he does not know well and may never see them again.*

At this stage the emphasis is rather on the parent, however, the child also attempts to formulate general principles and roles. S/he desires to express the essence of the norms which would ensure well-functioning social relationships in general. There is a perceptible shift from specific persons to the more general social environment, a sort of social generalization. The child draws attention to the ways of behaviour which s/he believes to be worth observing and whose lack would complicate social interaction. The father gradually loses his privileged position in the eyes of the child and can no longer count on unreserved obedience and conformity. To some extent, he becomes one of the members of the society, who should maybe more than others set a good example and be a model of the right behaviour.

**F3: The rights of the son (autonomous stage)**

*The son does not have to give his money to his father because he broke no promise himself.  
George has the right to refuse to give the money to his father.  
George has the right to be more careful about his father's promises next time*

The third factor groups the statements showing the shift of attention to the child itself. The object of interest here are the facts and consequences affecting rather the son than the father. There are hints at the way in which the son should decide and the means of preventing future situations in which he would find himself disadvantaged. The respondents identify rather with the character which is in a subordinated position similar to their own. They are more interested in the consequences affecting the son than those concerning the father. Nevertheless, the stress is on the aspect of free will and independent decision based on one's own judgement. The resolution of the plot itself disappears and it is the autonomy and independent choice of the solution which become prominent.

*.3. The Inventory of Parental Behaviour*

All the previous research as well as life itself give convincing evidence that the family has a crucial and indispensable influence on the behaviour of its members as well as their development, which concerns not only the more evident case of children but also the parents, who sometimes (consciously or unconsciously) change the methods of education in reaction to its previous results and the achievement of goals. When constructing the inventory, we tried to rely not only on professional literature but mainly on our practical professional knowledge (including our experience as (grand) parents) and children's opinion of the parents whom we meet in our teaching or psychological practice. We tried to include in the inventory a number of common situations typical of everyday, but sometimes also slightly more extreme education in families.

The original version of the *Inventory of parental behaviour* comprised 54 items - a number which was reduced based on factor analysis. Reliability of the method is Cronbach's  $\alpha = 0,91$  and using the orthogonal Varimax rotation (critical value  $| 0,40 |$ ) we extracted 2 factors: F1: Positive parental behaviour of the mother and the father (items 1-25) and F2: Negative parental behaviour of the mother and the father (items 26-38).

**Research sample**

The research sample comprised 431 respondents aged 12 to 17 years (M=14,09, SD 2,21), there were 204 boys and 227 girls. All were students of secondary schools or vocational schools.

**Results**

Table 1. NEOBIGFIVE results

Factors	M	SD	Percentiles
Neuroticism (N)	36,25	5,89	98.
Extraversion (E)	38,81	4,44	99.
Openness to experience (O)	35,16	4,97	88.
Agreeableness (P)	37,26	5,49	93.
Conscientiousness(S)	38,12	4,91	93.

The table shows that the respondents' results in all the five areas were highly above average. The high score in the case of neuroticism seems surprising as well, however, the respondents were in their adolescence, which is often connected with an increased imbalance mainly in the sphere of emotionality (Kučera, Haviger, 2012).

Table 2. Results of the moral dilemma questionnaire

Factors	M	SD	Attainable minimums and maximums
F1: Authoritarian father	10,94	4,15	Min.4; max.24
F2: Keeping the promise	18,94	4,23	Min.4; max.24
F3: Rights of the son	13,64	3,15	Min. 3; max. 18

The respondents regard their fathers as rather less authoritarian, their requirements about keeping the promise are highly above average and the requirements about the rights of the son (child) are above average. It is pleasing to see that the number of authoritarian fathers' decreases and the democratization of educational practices have already prevailed over the traditional paternalistic model of education.

Table 3. Results of the Inventory of Parental Behaviour

Factors	M	SD	Attainable min and max
Positive behaviour of the mother	46,94	13,96	Min.25; max.125
Positive behaviour of the father	55,25	15,42	Min.25; max.125
Negative behaviour of the mother	44,00	7,62	Min. 13; max. 65
Negative behaviour of the father	43,95	7,32	Min. 13; max. 65
+/- Mother coefficient	1,06	0,48	Limit +/- - behaviour 1,93
+/- Father coefficient	1,25	0,70	Limit +/- - behaviour 1,93
Positive behaviour of the mother vs. positive behaviour of the father	t-test = 5,84**		
Positive vs. negative behaviour of the mother	t-test = 2,74**		
Positive vs. negative behaviour of the father	t-test = 9,84**		

\*\*p<0,01

In the case of both parents the respondents' perception of their behaviour is that negative elements prevail over the positive ones. Positive behaviour of the father is felt as significantly stronger than positive behaviour of the mother. Moreover, the positive behaviour of the father is clearly higher than the negative one, which is also the case of the mother.

"Negative" parental behaviour is characterized by severity, enforcement of one's own views, little tendency towards discussion, comparison with more successful peers, friends or siblings, neglect of the child and his/her needs and interests. Our respondents do not deny that there are positive elements in their parents' behaviour but they stress mainly the negative ones. It might be even said that the more severe parents in the eyes of their children, the more severe the children's assessment, which is, moreover, accompanied by increased criticism typical for the period of adolescence. Consequently, the parent is perceived as someone who constantly and repeatedly requires

something, lacks sufficient regard for the experiencing and behaviour of the child in many situations, demands the fulfilment of his/her wishes and exposes the child to continuous dependence. In a typical functioning family in our culture, it is the mother who is responsible for the vast majority of everyday tasks, which include not only cooking and housekeeping, but also supervision of the child's activities, including the assigned daily duties. It is typical for children in this period to protest which becomes manifest in the answers of our respondents. This is one of the reasons why mothers are viewed as being more strict, less approachable and requiring more.

Table 4. Differences in answers dependent on sex (all questionnaires)

<b>Factor</b>	<b>F-test</b>	<b>M boys</b>	<b>M girls</b>
<b>Neuroticism</b>	9,67*	35,33	37,08
<b>Conscientiousness</b>	7,23*	37,46	38,72
<b>Negative behaviour of the father</b>	8,34*	42,89	44,91

\*p<0,05

Girls have higher scores in neuroticism and conscientiousness and perceive the father's behaviour as more negative. Adolescents in general pay a great deal of attention to themselves, often being highly critical. This concerns not only their physical appearance but also the psyche, or "psychic appearance". In the case of our respondents, it is the girls who perceive themselves more intensely and with less stability, moreover, they feel less rebellious, more obedient, tidy, self-disciplined and purposeful, which are all qualities determined rather by education than genetically. The higher score in the case of the negative behaviour of the father is presumably connected with the traditional model of the father's view of the girl's future (or the dangers waiting for her, mainly on the part of males of all ages).

Table 5. Correlations between the factors and the age of the respondents

<b>Factor</b>	<b>correlation</b>
<b>Agreeableness</b>	r = 0,13**
<b>Conscientiousness</b>	r = 0,096*
<b>Authoritarian father</b>	r = 0,091*
<b>Positive behaviour of the mother</b>	r = 0,091*
<b>Negative behaviour of the mother</b>	r = 0,15**
<b>Negative behaviour of the father</b>	r = 0,10*

\*p<0,05; \*\*p<0,01

The older the respondents are, the more they regard themselves as agreeable and conscientious, regard the father as more authoritarian and perceive the positive behaviour of the mother and the negative behaviour of both parents more. In other words, taking the Alpha factor into account, we may state that older respondents view themselves as more "educated", socialized and therefore independent, which (as the respondents see it) their parents apparently fail to notice and appreciate, holding the conservative parental attitudes much criticized by the adolescents.

The results of the Moral dilemma questionnaire: no significant correlations between the results of this method and the others were identified, solving of moral dilemmas can be performed separately from the personality structure and the behaviour of parents. We introduced the term global self-value to refer to the child's self-perception and whether s/he is happy in his/her life as it is – the self-perception should be rather general and independent of the environments in which the child lives. Thus, children with higher values of self-identity are more independent in decision making and the development of his/her moral self is less dependent on the environments (including the family) in which s/he lives.

The fact that the attitudes of the adolescent to moral values are independent of his/her personal profile as well as the behaviour of parents is a typical example of his/her attempt to express his/her personal opinion uninfluenced neither by self-perception, nor by education. The child shows his/her attitudes based on his/her moral self "in effect". This is very private and individual. Nevertheless, the child's attitude to the solving of dilemmas is subconsciously a result of the influence of the value system, mainly in the area of the norms enforced so far, as well as the expression of his/her rational and (even more) the emotional element of his/her personality. This is a typical paradox connected with adolescence. The adolescent perceives him/herself as "the only just individual" and stresses the uniqueness and the perfect purity and independence of his/her attitudes.

## Conclusion

The present research has brought a number of findings concerning the respondents and their attitudes to their parents, their parenting style, solving of moral dilemmas and the own perception of their personality structure. The results are typical of contemporary psychological research: an experienced professional or a good parent reaches the same conclusions through generalising of a great amount of information obtained mainly through observation, following his/her reason, emotions, intuition and apparently also the talent for observation. Our research provides hard evidence of these intuitive findings. An adolescent examines him/herself intensely and evaluates him/herself from a number of viewpoints, has a highly critical attitude towards the educational approach of his/her parents and its impact on him/herself. Here we encounter a number of close links affecting the personality structure, mainly in the area of social development and the ability to maximize the rewards and minimize the sanctions in one's life. The approach of our respondents to solving of moral dilemmas brought information about and evidence of the fact that the development of personality in this important area gives the individual the opportunity to express him/herself perfectly individually, freely and independently of the environments and its effects. The adolescent speaks exclusively for him/herself, which enables him to observe the details of his/her moral development with a critical eye and the resultant findings and confrontations gradually form his/her moral identity.

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# Pedagogical activities with gifted children on primary schools in the Czech Republic

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## Abstract

The article presents a study the aim of which was to evaluate selected forms of pedagogical activities with gifted pupils declared by 681 teachers in the questionnaire. One of the main findings of the research was that the teachers are able to modify the contents of the curriculum, and on the contrary, they have problems with modifying the educational process and introducing selected principles of inclusive pedagogy into practice. Furthermore, it was discovered that the better quality level of the care of gifted pupils is declared by women, pedagogues with a longer practice and pedagogues of humanities.

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*Keywords: giftedness; gifted pupil; modification of curriculum; inclusive education*

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## Introduction and theoretical starting-points

Nowadays, the issue of care of gifted pupils is a very lively topic all over the world which speaks to both laymen and professionals in many fields. The following text focuses on the educational approaches to the care of gifted pupils and it is attempting to connect these approaches with the individual principles of inclusive pedagogy.

When we try to define giftedness, it is most often described as an individual's ability in a selected area recognized by the socio-cultural environment which is quantitatively and qualitatively more developed in comparison with their peers (Heward, 2013). Porter (1999) claims that these definitions may take a more concrete shape depending on their conception. It is e.g. the liberal vs. conservative conception (the estimated amounts of the gifted in the population differ), single- vs. multidimensional (according to the number of criteria during the identification of giftedness), the definition of potential vs. the demonstrated performance. Our conception of giftedness is based on the multidimensional liberal definitions and is focused on the intellectual giftedness. A gifted pupil is not only a pupil diagnosed by pedagogical-psychological counseling center but also a pupil who has not been diagnosed yet, although the pupil manifests the signs of giftedness in the intellectual area.

Let us focus on the education of gifted pupils. For the purpose of respecting specific educational needs of gifted pupils, it is usually recommended to modify curriculum in its content, process, product, environment and evaluation, as its components are usually interconnected (Riley, 2011). The output of this is the so-called enrichment curriculum for the gifted pupils (Riley, 2011). Modifications of the contents of the education concern the qualitative change of the curriculum contents. It is related to the teacher's ability to plan and apply the educational aims and therefore offer the differentiated approach to the gifted pupils using higher aims. Most often, it is the curriculum modification using Bloom's taxonomy of cognitive aims (Smith, 2006). Modification of process is the change in performing education in the sense of using educational methods and organizational forms focused on the strategy of developing critical, problem-solving and creative thinking. Modification of product is a request for the qualitative or quantitative change of results of education when the gifted pupils have the possibility of achieving the highest possible aim of education. Modification of environment involves the personal-relation change (quality communication of all the participants of the educational process, co-operation, etc.) and also the spatial-material change (didactic aids, specialized classrooms, etc.). Modification of evaluation involves the change of evaluation of the results of education which has to motivate and form the gifted pupil. (Hunt & Seney, 2009)

Nowadays, interconnecting the principles of care of gifted pupils and the requirements of inclusive education is becoming more and more important. The pupils are not divided into two groups (i.e. the ones with special educational needs and the ones without) but they form one heterogeneous group with various individual needs. All participants of the educational process are adapting to the various need of all pupils, they aim for creating differentiated conditions for the inclusion of all the pupils (if possible) to all activities related to the school attendance and maximum development of abilities and skills of all individuals. During the education, the pedagogical strategies leading to the inclusion of the pupils are used to the maximum level. The strategies leading to the exclusion of a pupil from the collective are limited to the minimum. (Nind et al., 2013)

If we talk about the principles of inclusive education in relationship with the care of the gifted pupils, a gifted pupil is viewed by the peers as a natural part of the class collective. The gifted pupil is not labeled as “gifted” or by work above the enrichment curriculum which is meant only for the gifted pupil. It is a pupil who, like the others, stands out in some areas and does not in others. Other pupils have the same option to work according to the enrichment curriculum. It is a collective where every child develops its talent; it is a collective where pupils teach and enrich one another. (Machů & Kočvarová, 2013)

Although inclusive education have been penetrating the issue of giftedness for almost ten years, the perception of the basic principles of inclusive pedagogy in relationship with the care of gifted pupils has not been unified yet. It is apparent e.g. in publications about inclusive education of Riley (2011) and Smith (2006), where exclusive tendencies in education, e.g. application of strategies of gifted pupils development in the form of independent studying, working in groups with homogeneous performance levels, the need of a specialized educational program and specially trained teacher for a group of diagnosed gifted pupils, etc., are commonly recommended.

Let us focus on specific empiric studies of educational approaches to gifted pupils at common primary schools. There are foreign studies researching the influence of specific educational programs for development of gifted pupils. It is, for instance, an American research of authors Friedman & Lee (1996), which applied 3 enrichment models – Enrichment Triad Model, Multiple Talent Model and Affective Interaction Model, on pupils aged 11-15. The research did not confirm any significant changes in cognitive and affective parts of gifted pupils’ personalities after absolving the enrichment programs. Looking through the databases EBSCO, Academic Search Complete and ProQuest central, we can also find 2 studies, also from the USA, mapping modification strategies of teachers from common primary schools developing the pupils’ giftedness. The authors Westberg & Daoust (2004) and Van Tassel-Baska & Stambaugh (2005) state that relatively few teachers were modifying their classroom instructions for the pupils identified as gifted in regular classroom.

In the Czech Republic, there is a large area survey from 2007/8 which was conducted by the Czech School Inspection, which is an evaluative and control administrative office in the Czech Republic. The main goal of the research was to give a summary about the creating the conditions for satisfying the educational needs of gifted pupils and about the ways of work leading to further development of their giftedness (Entler et al., 2008). The conclusion of the inspections was that there is a lot of ambiguity, myths, stereotypes, and simplifications. The care of gifted pupils is therefore not satisfactory. The authors of the study asked the pedagogical community to conduct further researches focused on education of gifted pupils with the aim to improve the care of the gifted population.

Uniting the care of gifted pupils with the principles of inclusive education is unique in the area of empiric studies. We decided to build on the aforementioned studies with our own research where we focused on selected criteria of care of gifted pupils connected with the individual principles of inclusive education.

## Methodology

The **main aim** of the research was to describe and evaluate selected forms of pedagogical activities with gifted pupils which teachers from primary schools declared in questionnaires. The partial goals were:

1. Describe and evaluate the level of care of gifted pupils from the viewpoint of individual items (4 factors) and the questionnaire as a whole.
2. Describe and evaluate the level of care of gifted pupils from the viewpoint of selected characteristics of teachers (gender, length of practice, focus of education).

The **research tool** was an original questionnaire. A questionnaire with 37 scale items, which was filled in by 162 teachers, was created in connection with the theoretical viewpoints. Each item was focused on a selected problem of pedagogical practice about the development of gifted pupils with the aid of curriculum. Each of the questionnaire items offered three different solutions. One of the offered options was an unsuitable solution because it was not in concordance with specific educational needs of gifted children and did not respect the possibility to modify the curriculum (the respondent was given 0 points in case of choosing that option). Another option was a compromise where the teachers used a limited possibility to modify the curriculum but not considering the principles of inclusive education (1 point). Another option was considered to be the ideal approach to the care of gifted pupils considering our criteria (2 points). The contents of the questionnaire were consulted with professionals and also with practicing teachers with the emphasis on the fact that the individual options did not directly prompt the respondents to choose the option which had been assigned the highest score.

The following table presents an example of two items from the questionnaire and their scoring.

Table 1. An example of two questionnaire items including scoring.

a) School has not enough didactical aids for the development of the pupils' giftedness (textbooks, prose, encyclopedias, plenty of computers, etc.). (0p)
b) School is comparatively well equipped with didactical aids for development of the pupils' giftedness. These aids may be used by all pupils from the class or year equally. (2p)
c) School is comparatively well equipped with didactical aids for development of the pupils' giftedness. These aids are used by the gifted pupils which they are specifically meant for. (1p)
a) Teachers approach the contents of education equally. They develop all the pupils evenly. (0p)
b) During education, teachers develop the giftedness of the diagnosed giftedness only. (1p)
c) During common lessons, teachers develop giftedness of all the pupils regardless of diagnosed giftedness. (2p)

Questionnaire items were analyzed using factor analysis, based on this analysis, 19 items were selected and structured into 4 factors (F1 - F4). Inner consistence is based on Cronbach's  $\alpha$  coefficient as follows: F1 - 0,61; F2 - 0,68; F3 - 0,63; F4 - 0,72. The final version of the questionnaire included 19 items (+ items asking for demographic information). The name and thematic content of individual factors were as follows:

- Factor 1: "The school's support of the gifted pupils": communication with the gifted pupils' parents; teachers' interest in the issue of giftedness; the material-didactical aids the school is equipped with (see table 1); development of gifted pupils in all parts of their personality; creating innovated didactical materials by the teachers.
- Factor 2: "Curriculum differentiation": the way of revising; application of basic and extended curriculum; differentiation of the results of education; the way of taking notes during education."
- Factor 3: "Differentiation of didactical tools": the use of activating methods in education; ongoing diagnosis of pupils' giftedness; respect and development of pupils' individual learning style; enrichment of education contents (see table 1); modification of pupils' evaluation.
- Factor 4: "The conditions of the realization of the curriculum": updating the enrichment curriculum for the needs of the pupils; enrichment curriculum in the conception of inclusive education; mutual co-operation of pedagogues during creating of the enrichment curriculum; home assignments developing creative thinking; teachers open approach to inclusive pedagogy.

The research sample were teachers from sixth to ninth class of common Czech schools. The research set included 681 respondents from the whole Czech Republic (i.e. teachers filling in the final version of the questionnaire), with most of them coming from the Zlín region, Moravskoslezský region and Jihomoravský region of the Czech Republic. Information concerning the gender, length of practice and the focus of education (humanities or natural sciences) of participants were taken.

## Results of the Survey

The first goal of the research was to describe and evaluate the level of care of gifted pupils from the viewpoint of the individual items (4 factors) and the questionnaire as a whole.

Now, we will focus on the average score for the individual factors. In the individual factors 1, 3 and 4 which have 5 items, it was possible to achieve 10 points max. In factor 2, with 4 items, it was possible to achieve 8 points max. Because the maximum amount of points, which was possible to achieve in the individual factors, was not uniform, we set up differences in the scoring of the factors based on the average of the achieved points (on a scale 0 – 2), not the sum of the points. The factor with the best score was F2 ( $\square$ 1.47), then F3 ( $\square$ 1.36) and F4 ( $\square$ 1.26), the factor with the worst score was F1 ( $\square$ 1.21).

Most pedagogues achieved the highest amount of points in the factor F2 “Curriculum differentiation”. The teachers do not have any significant problems in the differentiation of the curriculum and the results of education. The items with not so positive score, however, need to be emphasized. Almost 36% of teachers use lectures or dictation. 26% of teachers stated that for meeting the enrichment requirements they purposefully lead only the diagnosed gifted pupils, not the others, which is not in concordance with the inclusive education.

The second factor was F3 “Differentiation of didactical tools”. The teachers are therefore able to do an ongoing diagnostics of giftedness, they attempt to modify the evaluation of the pupils. On the other hand, only 20.4% of teachers use mostly traditional educational methods and 19.8% of them base their teaching on their own education style, not on the needs and learning styles of the pupils.

A worse score was achieved by factor F4 “The conditions of the realization of the curriculum”. The results in this area testify that the inner settings of the school rules help the teachers to perform a quality education of the gifted pupils and, if possible, introduce educational innovations into practice. However, we can find signs of problems in this area as well. Almost 37% of teachers stated that the rules of the care of the gifted are created only by certain pedagogues. This is connected with the statement of 27% of respondents that the teachers have the possibility to come up with their own suggestions for innovation but they are not introduced into practice.

From the viewpoint of the individual items, factor F1, named “The school’s support of the gifted pupils”, showed the most contradictory results which seem as if the pedagogues at the schools do not have clearly set priorities in the approach towards the gifted pupils. For instance, only 19% of teachers are interested in further education in the issue of care of gifted pupils.

Now, let us describe the results of the questionnaire as a whole. The maximum score was 38 points and the minimum score was 0 points. In total, the teachers achieved from 6 to 36 points. Considering the total score of the questionnaire, we created the following intervals for the evaluation of the quality of care. The average score of all the respondents stabilized on the value of 22.12, which is the average result on the verge of the result “not satisfactory”.

Table 2. Results of the whole test and the criteria of the test evaluation.

Result:	Amount of points achieved	Amount of respondents	Percent from the research sample
Completely unsatisfactory	6 - 9 points	19	2.79 %
Not satisfactory	10 – 21 points	148	21.73 %
Average	22 – 25 points	179	26.28 %
Successful	26 – 30 points	214	31.43 %
Very successful	31 – 36 points	121	17.77 %

The second aim was to describe and evaluate the level of care of gifted pupils from the viewpoint of selected characteristics of the teachers (gender, length of practice, focus of education).

First, we focused on the results of the teachers from the viewpoint of gender. We stated a hypothesis H1: The level of care of gifted pupils does not differ based on the teachers’ gender. Using the Mann-Whitney U-test, we found out that there is a difference in the male and female teachers’ approach to the gifted pupils and therefore, we rejected hypothesis H1. We also attempted to discover which factors of the questionnaire the differences show in. The results of the U-test for all the factors and the questionnaire as a whole are summed up in the following table:

Table 3. Differences in results between teachers’ genders.

Compared groups	F1	F2	F3	F4	Total
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men & women	<0.001	<0.001	<0.001	<0.001	<0.001
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The grey marked values show the statistically significant differences with all of them being on the surface of significance 0.01. It turned out that the respondents' answers differ in all the factors of the questionnaire depending on the gender, with women achieving higher score.

Another question was whether the level of care of gifted pupils depends on the length of the pedagogues' practice. Hypothesis H2 was stated: The level of care of gifted pupils improves depending on the increasing length of the pedagogues' practice. For the purpose of testing, the length of the pedagogical practice was divided into three basic levels. The beginners were the teachers with less than 5 years of practice (7% of our research sample), the experienced teachers were the teachers with 6 to 22 years of practice (45%). The teachers with more than 23 years of practice were marked as experts (48%). During the testing of the hypothesis, Kruskal-Wallis test and multiple comparison of p-values was used. The results of the test are presented in the following table.

Table 4. Differences in results by the length of the teachers' pedagogical practice.

Compared groups	F1	F2	F3	F4	Total
beginners & experienced	0.019	0.270	0.414	0.253	0.008
beginners & experts	0.004	0.002	0.008	0.026	< 0.001
experienced & experts	1.000	0.002	0.010	0.245	0.014

The grey marked cells show the significant differences on the level of all monitored groups. Although the most differences were found between the beginners and the experts, on the level of the overall results can be said that the level of care of gifted pupils differ significantly among all monitored groups. The discovered differences are in all cases in favor of the more experienced group of respondents, as it can be seen in the following graph. It can therefore be said that the length of the pedagogical practice significantly influences the quality of the care of the gifted and it improves with increasing years of experience in the pedagogical profession.

The teachers also had to state in the questionnaire which area of science (humanities or natural sciences) they are primarily focused on. We formed hypothesis H3: The level of care of gifted pupils does not differ by the prevailing focus of the pedagogues. Mann-White U-test was used for testing the two groups of respondents. The results of the comparison proved a significant difference, as the following table shows.

Table 5. Differences in results by the pedagogues' prevailing focus of education.

Compared groups	F1	F2	F3	F4	Total
humanities & natural sciences	0.801	0.027	0.156	0.029	0.037

The differences manifest in two areas of the questionnaire (F2 and F4) and they are always in favor of the teachers focused on humanities. It shows that in the humanities subjects, the teachers have smaller problems to differentiate the education, they find a bigger space for realization of the activating methods and these teachers also perceive the conditions of the curriculum realization within school more positively. The teachers of natural sciences have probably bigger problems with connecting the contents of a subject with the environment of the education. It is also probable that the results from the viewpoint of the focus of education are partially related to the teachers' gender. While 60% of men from our research sample focus particularly on the area of natural science, 64% of women teach mostly humanities. The teachers focused on natural sciences (men) show a more negative approach to the care of gifted pupils in comparison with the teachers (women) focused on humanities.

## Summary, discussion and conclusion

The main aim of the research was to describe and evaluate selected forms of pedagogical activities with gifted pupils which teachers from primary schools declared in questionnaires. The first partial goal was to describe and evaluate the level of care of gifted pupils from the viewpoint of the individual items (4 factors). The factor with the best score was F2 "Curriculum differentiation". The teachers do not have bigger problems to differentiate the curriculum and the results of the education. The factor with the worst score was F1, named "The school's support of the gifted pupils". From the viewpoint of the individual items, this factor showed the most contradictory results,

which seem as if the pedagogues at schools did not have clearly set up priorities and they were still looking for a way to approach the gifted. Furthermore, the analysis emphasized the worst scored partial items. Most teachers have troubles with modifying the education process, i.e. they use mostly the frontal educational method, they do not create their own innovative didactical materials and they do not respect the pupils' learning styles. Regarding the principles of inclusive education, most teachers declare only in one item of the questionnaire that they purposefully provide the extended education to the gifted pupils only. We can therefore suppose that the teachers overestimated themselves in the other items describing these principles. The analysis also shows that most of the pedagogues are not interested in further education about the issue of the care of gifted pupils and they do not cooperate within the school's academic staff.

We also evaluated the questionnaire as a whole as a part of the first partial aim. We found out that the average score for all the respondents stabilized on the value corresponding with the average result which, however, only slightly differed from the result "not satisfactory". This state testifies about certain deficits in the care of gifted pupils in the Czech Republic. If we compare this result with the aforementioned researches, it is the common worldwide state of the care of gifted pupils in common classes of primary schools.

The second aim was to describe and evaluate the level of care of gifted pupils from the viewpoint of selected characteristics of the teachers (gender, length of practice, focus of education), which is shown in table 6.

Table 6. Overview of the hypotheses for the partial aim of the research.

Hypothesis	Evaluation	Commentary
H1: The level of care of gifted pupils does not differ based on the teachers' gender.	Rejected.	Women show better total results in the questionnaire than men.
H2: The level of care of gifted pupils improves depending on the increasing length of the pedagogues' practice.	Accepted.	Total results are improving with increasing length of practice comparing teachers-beginners, experienced teachers and teachers-experts.
H3: The level of care of gifted pupils does not differ by the prevailing focus of the pedagogues.	Rejected.	Pedagogues focused mainly on humanities manifest better total results than pedagogues with focus on natural sciences.

Rather than confirm our original assumptions, we managed to identify variables in relation with the teachers' characteristics which influence the quality of the care of gifted pupils. They are the teachers' gender, length of pedagogical practice and the main focus of education. Women declare better level of care of gifted pupils which provides a proof of their bigger interest in the monitored issue. The level of care of gifted pupils increases with the teachers' length of practice, which is typical even for other research findings (e.g. Vašutová, 2004). We do not identify with the findings of other professionals (Lazníbatová, 2001) that the most suitable candidates for the work with gifted pupils are young teachers, fresh graduates out of pedagogical faculties.

Teachers of humanities manifested significantly higher level of the care of gifted pupils which we explain by the existence of higher number of issues in humanities which develop affective goals of education and therefore offer bigger space for using innovated didactical strategies. If the quality of the care of gifted pupils is related to the pupils' motivation, even other researches from the identical areas come to the finding that the pupils are less motivated for the natural sciences (Škrabánková & Trna, 2013).

After we presented our findings, it is also needed to point out the limitations connected with the conducted research. The biggest limitation which was manifesting during the whole research is, in our opinion, the simplification of the pedagogical reality into 3 possible answers evaluated with 0, 1 and 2 points and the artificial metrisation of this data. We are aware that all the measuring in education and also in other areas, is considered to be relative, simplifying and serves the paradigm which we do through the evaluation of the teachers' answers. Another problem was that our questionnaire was focused only on selected aspects of pedagogical work with gifted pupils, which were related to the curriculum modification and inclusive education. Furthermore, despite the big amount of validly filled in questionnaires (681) the research cannot be considered to be large area survey and the results cannot be generalized for the whole Czech Republic.

Another limitation of the research is connected with the selection of the research sample. The teachers who voluntarily participated in the research manifested a positive interest in the researched issue. We suppose that with a neutral relationship to the issue, the teachers would hardly dedicate their free time to filling in the questionnaire. The respondent sample is therefore not considered to be comparable with the general teacher population but rather to a positive deviation from the average. For this reason, the results of the research may appear better than the real situation of the care of gifted pupils.

We are also aware that the teachers may have described the application of their educational strategies in the questionnaire to be better than it is in reality. On the other hand, we can look at the results of the research not only from the viewpoint of what educational strategies the teachers use but also which strategies the teachers think are suitable for the development of the pupils' giftedness. For this reason, we consider a subsequent research where the research data would come from the direct observation of the education process by a trained observer.

The overall results of our research therefore did not prove a very quality level of the care of gifted pupils. It is therefore necessary to offer the practicing teachers more suitable conditions for their education processes and motivate them for their further education.

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# Peer mediation in schools

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## Abstract

Mediation is a conflict resolution process run by a specialist third party who called mediator. Mediation process focuses on conflict resolution. Conflict in school setting is a major problem for educators and administrators and it is prevalent and common all over the world. It may induce act of violence. There is a strong tendency to use an accusive and defensive language among people. People are not naturally use these unbeseeing communication patterns but learn it from her/his environment. That's why it's so important to upskill the children to have inclusive, reconciliatory and empathetic attitude. In this study mediation, mediation process and peer mediation will be discussed.

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*Keywords:* Type your keywords here, separated by semicolons ;

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## Introduction

Conflict and violence in school setting is a major problem for students, educators and administrators. Destructive behavioural patterns are quite prevalent and common all over the world in school setting also it is getting hard to create a safe, progress-oriented and socially-oriented schools. Nevertheless it is important to ensure school safety for children and adolescents. In this study, need of building a safe and supportive environment, teaching alternative way of conflict resolution, function of mediation in school setting and peer mediation's components and the peer mediation process will be discussed.

## Nomenclature

- |   |   |
|---|---|
| A | Building a safe and supportive environment          |
| B | Teaching nonviolent conflict resolution to students |
| C | Mediation in school setting                         |
| D | Peer mediation: students as peacemakers             |

### 1. Building a Safe And Supportive Environment

A supportive and safe school climate can help preventing violence. All components of school should feel safe and interact each other everywhere in school campus. However it is not easy to create an order like this. In general,

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school discipline systems are external locus of control. Strong tendency is imposing penalties to students in case of behave improperly in school settings. Students act properly to avoid punishment as it is. Because it makes pressure on them. Such an oppressive attitude undermine students' self-confidence and self-worth. So, it is not the best way to teach effective communication skills nor a desired method for academic and social development. There is more instructive way of learning: peer mediation. This issue will be discussed in detail afterwards.

One of the most fundamental need of human being is "safety". It is determinative in evolution of self-conception and attitudes. If "safety need" does not respond, aberrant behaviours may occur. Similarly, if school setting is not safe nor the school personnel is supportive, then increasing of conflict and violence is inescapable. So, transforming the entire school culture into collaborative and problem solving communities is a vital necessity.

Schools are not just institutions designed for academical improvement but social evolution of children and youth. People mostly learn through their experiences. In this case, school's composition is very important as a primary social environment. Therefore, as Gauley (2006) said, social and emotional learning need to be incorporated and the students must be involved in the process actively. Also it requires collective efforts of all components of school (students, teachers, managers, parents etc.) (Blum, 2005). When safe and supportive environment build up, students strengthen and enhance their coping skills.

## **2. Teaching Nonviolent Conflict Resolution to Students**

Cooperation, tolerance and acceptance of diversity is fundamental to manage a conflict. One of the conflict solution method is mediation. The conflicts have always existed and will be exist in institutions where a wide range of people come together (United Nations Educational Scientific and Cultural Organization [UNESCO], 2002). It is difficult to wipe out but possible to find solutions for creating positive behaviours so positive environment. One of these solutions is peer mediation.

Peer mediation is both a program and a process. This program and process simply involves learning to handle conflict. Peer mediation has a major role of reducing conflict, develop positive behaviours, support student's assertiveness, promote developing of democracy culture etc. Peer mediation helps students to internalize communicate with people in a health manner. The mediation process led by students. By the way, students learn to be neutral and can evaluate the situation in empathic manner and gain internal control over her/his attitudes and behaviours. So, It is important to keep in mind that interaction focused and student centered programs like the peer mediation program can increase social harmony.

## **3. Mediation in School Setting**

Mediation is a conflict resolution process run by a specialist third party who called mediator (The Association for Conflict Resolution [ACR], 2007). Arguments, fights, rumors and partner conflicts are the most common conflicts between friends (Haft & Weiss, 1998). Mediation process focuses on conflict resolution. Conflict in school setting is a major problem for educators and administrators and it is prevalent and common all over the world. It may induce act of violence. There is a strong tendency to use an accusive and defensive language among people. People are not naturally use these unbeseeming communication patterns but learn it from her/his environment. That's why it's so important to upskill the children to have inclusive, reconciliatory and empathetic attitude. Mediation process gives opportunity students to look in through one's perspective.

Peer mediation is a bit different then common mediation in a manner. In peer mediation, mediator is a student too. According to Opffer (1997) who is a trainer for the Community Board Program in San Francisco, peer mediators learn following concepts and skills:

- "The dynamics of conflict, and how to manage it constructively,

- Problem solving steps,
- Effective listening and speaking skills for developing interpersonal understanding,
- and how to work cooperatively”

#### 4. Peer Mediation: Students as Peacemakers

According to Thomas (2008), “peer mediation is a restorative manner of conflict resolution between persons where a neutral third party from one's peer group attends the persons in conflict while the persons in conflict negotiate a mutual agreement.” As emphasized in the statement, student's themselves are active in conflict solution process. Being active strengthen the students' internal locus of control. With this respect mediation process helps one's individualization.

Peer mediator is a student in the same age as conflicted parties. The peer mediator generally nominated by students or school social workers. Peer mediator should have some characteristics like sound judgment, leadership abilities, excellent communication skills, and credibility with peers. It is not necessary to have superior academic achievement (Chittooran & Hoenig, 2010). Ability of making transactional analysis and empathetic listening is more important.

A representative steps of peer mediation sessions are:

- Open the session: Conflicted parties are seated face to face each other and the peer mediator have a seat between them. Both disputants and mediator introduce oneself. The peer mediator explains the purpose of peer mediation, briefly describes the process, and then they states the rules together.
- Identify the problem and gather information: The disputants are asked for their version of the problem. It is important to keeping eye contact, being an empathetic listener, and facilitator.
- Focus on common interests: In this stage, common interests are identify. The prime mover is clarifying the goals
- Generate options for problem solution: Brainstorming is commonly used in this stage. It is important to find solutions as much as disputants can.
- Evaluate options and choose a solution: The disputants evaluate their solutions. The disputants need to get on with the best solution which meets both their needs.
- Develop an agreement and commit to it: The disputants state their roles and responsibilities in problem solution then they make an agreement It is written down and sign by disputants and peer mediator (Chittooran & Hoenig, 2010; IREX, 2013; Johnson & Snow, 2002).

Training students as peer mediators will help to create peaceful school setting by enhancing social harmony.

#### 5. Conclusion

Peer mediation commonly used in school setting, especially in developed country. Because it is known healthy communication's worth. So, it is important to empower students, teachers, managers and parents to build a peaceful environment. By the way, this wave will affect the bigger environment, the community and the whole society. Under the circumstances it is a major need of promoting peer mediation program in school setting to make a change, make a difference.

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# People with autism in society – challenge of 21<sup>th</sup> century.

## Case of Poland

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### Abstract

The below article concerns important social issues. If a social exclusion is becoming a less crucial problem nowadays the general social awareness still does not show the full acceptance of autistic people as members of a society with full rights. A triple aspect of the frame of the reference – pedagogical, legal and sociological shows the interdisciplinary approach of this article. This thesis was completed on the basis of the newest research and the newest available literature.

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*Keywords:* autistic people, autism in a society, social functioning, normative aspect

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### 1. Introduction

The issue of autism is broadly discussed in Polish as well as in English specialised literature. However, there are still some ambiguities and questions about the concept. Recently, the huge intensity of research in the range of the domain, which despite bringing a lot of information, does not make an integral entirety (T. A. Kolevzon, & E. Hollander, 2008; J.J Błeszyński, 2012, E. Pisula, 2013<sup>115</sup>).

Autism brings many difficulties which influence the level of social roles in consequences leading to a social isolation. The higher level of awareness together with taking up appropriate actions in some cases can enable to lower the destructive behaviour and could help better social functioning. The correct verbal and nonverbal communication helps people to enter interpersonal relations in the same time enables realisation of the need of social cooperation. Since the ancient philosophical though the source of perceiving a human being as a social creature has evaluated (Antisthenes, Aristotle) to the modern philosophical and social reflections (F. Znaniecki, E. Goffman) pedagogical (Z. Mysłakowski, B. Suchodolski) and psychological (S. Bailey, J. Brown). The main aim is to make an appropriate effort and to treat an autistic person as a complete human being.

In case of the lack of taking up any actions there exists a probability of occurring a deep social isolation, withdrawal, lack of self-confidence, regress in emotional and social development, more serious problems in communication and the feeling of helplessness. The youngest generation of people with autism will enter the adulthood influenced by the current impact.

The aim of this article is to present the draft of people with autism functioning in a society, to present the essence

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<sup>115</sup> The surnames of the specialists carrying out research about autism appear in the specialised literature.

of the problems connected with the term of autism and the difficulties that autistic people face in their life. The therapy and its meaning in the process of intervention were discussed as they contribute to an adult's life. In view of Polish law autism it is considered as an opportunity to notice a spectrum of subsequent actions which not always are used at a satisfactory level.

### *1.1. Autism in a theoretical and empirical concept*

Autism according to the latest classification of The American Psychiatry Association DSM V, which was approved on May 18<sup>th</sup> 2013, (*Diagnostic and Statistical Manual of Mental Disorders*) is classified as an autistic disorder which belongs to a group of neurological disorders. The level of autism occurrence has increased ten times in the last twenty years according to the data gathered in 2012<sup>116</sup>. The reason of more frequent occurrence of such disorders could be a better global awareness in a medical environment, social, pedagogical and family. Moreover, it could be also a faster detectability of the disorder, more developed and widespread knowledge about the subject of autism. Some English and American Associations have been managing campaigns since the 90s promoting the knowledge about the disorder in the local and global environment. Together with the campaigns, advertising slogans make people aware what an autism really is. An example of such an association could be *The National Autism Society* which shows autism using a slogan describing it as *Always unique, Totally interesting, Sometimes mysterious*<sup>117</sup>. Up to the moment, in Poland there has not been conducted any epidemiological research. In case of the estimated data, which were carried out on the basis of research in other countries of the European Union, the problem refers to one hundred thousand people in Poland ( in this number people with the diagnose and their families)<sup>118</sup>. It mostly concerns boys than girls but generally is diagnosed among one of almost ninety children. Despite the earlier than in the past diagnose the average age of identifying autism in Poland is the age of four. The priority of the early recognition of the disorder and a faster provided intervention is a crucial fact as every year the number of people with autism is growing steadily.

Autism known all over the world for the first time was observed in 1943 by an Australian – American doctor, psychiatrist Leo Kanner among a group of eleven children whose observed symptoms were unknown that time. The psychiatrist introduced autism to a separate diagnostic category and called it as an early childhood autism (Młynarska, 2008). The diagnostic criteria evaluated because of the changing editions of the diagnostic systems: the American Psychiatrists Association (DSM) and the International Classification of Diseases and Health Related Problems; (ICD), until the main two groups of accompanying symptoms were distinguished. The first group describes a disturbed communication and social interaction, the second one includes a limited, repeatable pattern of interests and activeness (Pisula, 2010). Both of the already mentioned systems classify autism as a developmental disorder (Randall & Parker, 2010).

Autism in the specialist literature is defined as a multiform disorder taking into account the fact that there are no two identical people with autism (*ASD- Autism Spectrum Disorders*). The behaviour is schematic and the development is diverse. Thus, an individual approach to people with diagnosed autism is so important (Maciarz & Biadasiewicz, 2000). The characteristic of such a group is complicated because autism is revealed in an individual way in case of different people despite the regular criteria. The occurrence of the two groups of symptoms in the period of early childhood is a condition of formulating a diagnose. The process of diagnosing people with autism on the basis of tools are elaborated after taking into account axis of symptoms focusing on communicative problems, social interactions and limited behaviour patterns, activeness and interests (Młynarska, 2008). H. Krauze – Sikorska (2008) analysing the term of a diagnose concludes that it is not only the activity which explains functioning an individual in a particular domain but it is the process of achieving results in particular conditions. The essence of a good diagnose is processing data not only registering them. The significant is an interactive model which sketches relations between an individual and the surrounding. Getting to know human's needs and looking for activities of a social and helping aspect from the field of psychology, pedagogic is a crucial element too. It helps to create an interdisciplinary picture of a person with autism and presents diagnosing autism is a complicated process (Krauze –

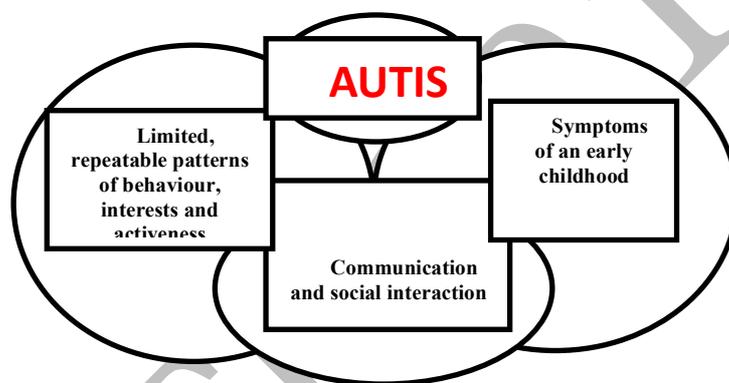
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<sup>116</sup> The data about the occurrence of Autism – The General Secretary of the United Nations Organisation of April 2<sup>nd</sup> 2012

<sup>117</sup> A promoting slogan prepared by *National Autism Society*.

<sup>118</sup> The data prepared by The Centre of Disease Control and Prevention 2012.

Sikorska, 2008). It requires the cooperation between many specialists: a psychologist, an educator, a paediatrician, a neurologist. Thus, there is an early, complex and multiform diagnose which is advisable (Randall & Parker, 2010). It can contain a significant information especially for specialists, therapists, speech therapists undertaking the challenge of therapeutic work with such people (Autism Spectrum Disorders).



Sc.1 . The symptoms of autism

### 1.2. Autistic people functioning in a society

The sociological theory shows a thesis that a human being is a social being who develops and lives according to the stimulus from the external world. The level of live depends on the level of stimulus. The more positive and developmental signals from the outside the better social functioning. Since the ancient times the approach in presenting a human being - as a loner and as a social being - has changed. Antisthenes, an ancient philosopher (445 BC) teaching the idea of trouble (ponos) thought that a human has a need of lust, desire and social illusions. In Antisthenes's view an individual can function alone and without the social interference. In the same way he/she can present a high level of intellectual autonomy. The ancient philosopher claimed that 'a human living out of the society is either an animal or the God' (Urbanski – Korz, 2000). In K. Marks' theory a person is determined by social relations when in Z. Freud's approach the social relations are the reasons of failures and human's suffering.

Modern opinions support the statement that a person is socially conditioned and his /her social and cultural life has an essential influence. Living in a society helps people to create and multiply culture which totally leads to humanity (Turowski, 1993,). ' A human being existing in a social isolation would mean and finish the same as an animal ...' (Turowski, 1993). Individuals living in a particular culture are significantly under its impact. They usually adapt to the social norms and obey the behaviour conventions of a particular society. Social functioning enables to accept norms, acquire the system of values. As a result of this a person can fully take part in social life, coexist and achieve social competences. During the process of social and psychological development a person acquires communicative skills, learns how to establish contacts, maintain interpersonal relations and emotional ties,

which for an autistic person is extremely difficult. The process of adaptation to living in a society by an individual is regulated by his/her relations with the surrounding. In case of the quality of performing roles in the society an important factor is to be able to make coherent actions according to the expectations (Giryński, 1989). The process of functioning of people with autism in a society is difficult since they are the members of the society that have problems with understanding autism and behaviour which it causes. It is essential to be aware of the fact that people with autism perceive the world in a different way.

Autistic people have many problems however, the main ones are connected with verbal and nonverbal communication, interpreting facial expressions of other people which disturbs the process of interpreting emotions. They have also problems with understanding signals, gestures; eye contact is disturbed which often makes it really hard to communicate effectively. There is no social functioning without communication. Nowadays, the correlation between using social skills and functioning in a society is emphasised. The ability to communicate is an essence of interpersonal relations. Communication means sharing knowledge, thoughts and observations with another person. It is a form of exchanging thoughts, ideas and feelings which helps to understand other people (Jenkins, 1993). In the psychology of communication everything that people experience during the process can be a part of an announcement. Thus, communication is a key to create a social system of interaction. Definitely, the majority of communication is carried out by using words but even more is done thanks to nonverbal communication. Communication is a part of life of people all over the world. It occurs intentionally or unintentionally but always. Thus, it is essential to support people with autism, learning and understanding their world. Children learn communication by imitating adults. People with autism learn how to talk and listen in an effective way by modifying commonly known communicative techniques. Together with changing cultural trends the forms of communication change too. It refers to both sending and receiving information. By observation people can acquire and practice communicative skills. The better communication the more probable is to achieve plans and aims. It is important to know how to talk with people and what to do with an announcement which people receive from outside. Communication concerns each aspect of social functioning of a human as it is impossible to communicate with oneself (Rybansky & Prajova, 2010).

Other difficulties refer to initiating and maintaining social interactions, difficulties in imitating other people, acquiring physical manners (Młynarska, 2008). L. Bobkowicz – Lewartowska (2005) claims that half of the autistic people do not communicate in an appropriate way and according to social conventions. The most frequently occurring is the disturbance in a social way of using a language in communicative aims. J. J. Błęzyński (1994) thinks that 'speech is the basis for establishing contacts which enables to take part in evaluation and as a result take part in social life of individuals'. Some people with autism have serious problems with developing speech which is used for communication. What is more, they very often do not compensate this ability in a different way, for example using nonverbal communication, gestures or mimic. Speech of people with autism is often echolalic which is characterised by repeatable sounds, words or even whole sentences (Obuchowska, 1999). It is claimed that considering autism from the view of speech development is a state of inexplicable aetiology. Communication disturbance refers to sending and receiving information from outside and shaping the structure of a language. As a result it leads to withdrawal from the process of socialisation. A person with autism needs support and help from parents, society and first of all he/she needs competent specialists who could take on speech therapy and therapeutic work (Pisula, 1993). Therapy in such an approach is a holistic presentation of actions which are aimed to improve the life of an autistic person not only the speech therapy. The speech therapy is very important in the development of an individual who displays difficulties in the field of communicative and language competences. In most cases people with autism cannot take part in social interactions alternately, they show difficulties in relations based on emotions like expressing emotions. Nonetheless, it should be considered that it is differentiated among people. There are some fixed, schematic symptoms of behaviour. However, they appear in a different way in individual cases. E. Pisula thinks that there are people who live in a social isolation as well as there exist people who establish relations spontaneously. What is important is the good knowledge about a person and an individual approach (Pisula, 2010). In the sphere of sensory disorders the concept of hypersensitivity and insufficient sensitivity is discussed. To carry out the therapeutic process the knowledge in this domain is crucial. Relations with peers are especially difficult for people with autism. What causes problems in interpersonal relations is the fact that some of them ignore the presence of other people, they are withdrawn and absorbed with their own activeness. Others are

good observers who sometimes join the group. The specificity of social functioning people with autism is complicated since the clinic sight is not well defined. Such people display cognitive disorders, which could have a major impact on the quality of functioning in a society. Problems with attention and concentration make the communication even more difficult. It is hard to arouse their interest for a particular situation, to focus their attention on a particular subject. In specialists' view the development of a person with autism is amazing and unpredictable. In some spheres quite normal in others a regress and pause happens, in another ones the development is delayed. Something that needs to become essential nowadays is to take actions aiming to improve the life of people with autism (Randall & Parker, 2010). An aware individual approach, taking into account all aspects of the disorder should be very important in the therapeutic work.

### *1.3. Therapy of people with autism as a key to development*

In an early stage of a support of the development a range of actions towards a human and his / her family are involved. They have to be coherent and coordinated (Lewis, 1998). The essence of a good therapy is complexity and the fact that it has to be multi-faceted. Specialists should cooperate to avoid developmental abnormalities even among young children. It is crucial to support young families by other people from wider surrounding (Kuszek, 2008).

Władysław Dykcik recognises therapy as 'an educational intervention which aim is to individualise help in the process of education, teaching and upbringing to achieve or maintain the appropriate development in all spheres and at each age'. Especially, the term refers to children of a special educational programme – in a special field of pedagogy where a therapy is understood as a kind of different rehabilitation disorders (Dykcik, 1994).

A therapy of children with autism should contain additional aspects like social, communicative and concerning behaviour (Bleszyński, 2005). E. Pisula described a system of good intervention which helps to develop an appropriate therapeutic work with people with diagnosed autism. What is important in a good intervention is to start working with a child as fast as it is possible, just after the justified suspicions of autism. The best time to start a therapy is before 18<sup>th</sup> month of a child's life. The process of therapeutic work and speech therapy should be well thought-out and chosen according to an individual child's needs. These children display problems with attention so, at first the therapy should have an individual relation 1:1 and together with getting to know a child and the development of his/her social skills the child can be included in a group of two, three members.

Autism is a neuro-developmental disorder which very often develops (Winczura, 2008). A child's development is not harmonious and that is why the periods of stagnation and regress happens. The therapeutic programme has to be individually prepared and adjusted to a child's needs. The worked out therapeutic classes have to form an entity as the lack of integration may result in the lack of effects. The programme of work has to have clearly stated aims and concern difficulties resulting from a disorder.

In the field of autism therapeutic work should be related to developing communicative and language competences, social skills, establishing and maintaining social interactions, supporting cognitive development. The therapy has to be systematic and should consist of continuity of actions. The most successful model of working with a child is a 24 hour a week. Various methods and versatility in the process of a child's development is essential since in autism some disorders of different spheres of functioning occur. A complex attention is needed. The therapy should be carried out in a natural and well-known surrounding for a child. Moreover, parents and siblings should take part in it. If a family takes part parents as well as siblings feel better especially those who after the diagnose feel stressed (Randall & Parker, 2010). The task for a therapist is to prepare the surrounding for contacts with the child, to make popular the knowledge and to make the family ready for appropriate interactions with the child. It is important to know the sensory problems which means reception of sensual stimulus, processing sensory information. To create optimal conditions during the process of therapy and adjusting the therapeutic work it is crucial to know hypersensitivity and insufficient sensitivity of a patient. An individual can integrate with a group of peers when they are engaged in the process of the therapy. Children with autism need complex actions, help and support from parents, specialists and a lot of other supportive endeavours (Pisula, 1993). Speech therapy is important which in the view of people with autism carries out a holistic system of support. A speech therapist should aim to develop or improve language competences, which are essential to use a language, as well as to develop communicative competences, which are important in establishing social interactions so crucial in disturbed autism. Starting intervention as quickly as it is possible is a priority to work out self-reliance in an adult life for those people

for whom the therapy lasts sometimes even all their lives (Pisula, 2010). Treatment of an autistic patient just like in case of all psychological disorders with a questionable prognosis contains many different conceptions. A wide spectrum of symptoms requires a complementary approach (Winczura, 2008). Some exemplary propositions for working with an autistic child can be listed: activities for verbal or nonverbal communication, behavioural modification of inadapted child's reactions and stimulating social interactions. In developing language competences the language of signs is used as a person with autism more often thinks using images than words<sup>119</sup>. Using other therapeutic methods is also very important; stimulus therapies, movement, occupational, sensory integration (J. Ayers) auditory practice (G. Berard, A. Tomatis), animal – assisted therapy (AAA – Animal Assisted Activities). Supportive methods are checked and effective; colourful filters methods (H. Irlen) and a lot of other directive methods which are aimed to modify behaviour and adapt an individual to social functioning (behavioural, J. Carr's method, holding method) and also nondirective which are: a TEACCH method (E. Schopler), an option method (B.N. Kaufman), F. Affolter's method. Pharmacological treatment is used only in the case of special symptoms such as overactive reflexes or epilepsy. There are many different therapies which are and always should be chosen according to a particular patient because only those carefully selected bring satisfactory effects (Pisula, 2010). People with autism show many abilities to learn if only the surrounding is adapted. Parents, specialists and the whole society can and should provide them.

#### 1.4. A draft of legal situation people with autism in Polish law

Polish law, especially the civil one, does not distinguish people with autism as a separate law category. In the way of looking for in the field of civil law a basis for functioning in law rotation can be encounter – ability for legal actions. In this principle it is an ability to do some activities in the range, among others making legal contracts.

This ability according to article 12 to 15 of the Civil Code is graduated. A lack of abilities to legal actions is characteristic for people below the age of 13 and people with total incapacitation; partial right to legal actions is characteristic for people between the age of 13 and the age of majority and also people who have a partial incapacitation. The total ability to legal actions have people of full age (18 years old or by getting married) (The Act of April 23<sup>rd</sup> 1964, 2014).

In case of up to 13 year olds all Polish citizens have the same capacity to legal actions. However, in case of the age after 13 years old the situation is much more complicated. The juvenile with autism can function in legal rotation under the same rules as their peers or they can become totally incapacitated. As a result such a person is deprived the abilities for legal actions (The Act of November 17<sup>th</sup> 1964, 2014). Such people have only the capacity to make legal agreements in small, everyday life situations for example doing shopping.

Those who have reached maturity *ex lege* have full rights for legal actions. However, such abilities can be restricted ( a partial incapacitation) or totally deprived them ( a total incapacitation). In case of the considered groups, one of which people with autism form, everything depends on the level of social functioning and life resourcefulness. If an adult person with autism does not deal with simple, easy everyday life activities a court could consider this as a reason to announce the total incapacitation. The court of justice is obligated to justify the decision of incapacitation and its extent. It has to be mentioned that only a special and limited group of people can apply for incapacitation: a spouse ( a wife or a husband), the closest relatives ( consanguinity up to the first lineal) or a statutory agent. From 2012 such application can even prepare an non-governmental organisation which in its status proclaimed, as a main aim, providing help to disabled people and protecting Human Rights. Such a list of entitled people who can apply for incapacitation was created to prevent abuses connected with improper use of the institution of incapacitation (The Act of November 17<sup>th</sup> 1964, 2014).

That is how in a broad outline a law situation of people with autism presents. More precise regulations refer to specific and concrete spheres of activeness. Regulations of the civil law do not distinguish a category of people with autism. However, rules included in the School Legislation refer to such category. According to particular regulations there is a possibility to create special classes or groups for children and youths with autism. Moreover, even entire schools for only people with autism can be created. Polish law provides a wide range of possibilities of supporting the development of an autistic child. From the kindergarten, primary school to junior high school there are many

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<sup>119</sup> The speech of the most famous woman with autism in the world – Temple Grandin; International Conference in New York.

possibilities to provide support and care for the considered category of bodies governed by public law. In case of regular classes at schools and educational institutions, such an institution must employ a supportive teacher (The Regulation of the Minister of Education and Sport, 2007). Nonetheless, everyday practice shows that it is not always used fully and sufficiently.

Regardless the age of a person with autism there is also some help provided by administrative organisations responsible for social assistance. The Act does not distinguish a separate category of people with autism however, a suitable interpretation of the Act should be used, which refers to the term of people with psychological problems. The Act does not precise the term thus, it has to be assumed that psychological problems in the view of the act are *stricte* psychological and connected or derived disorders. A wise and considered, canny regulation puts on the municipality a duty to inter alia organise and provide specialised welfare service at the place of living a person with psychological disorders (here: with autism). A county's aims are connected with running and developing an infrastructure of the centres of assistance for people with autism. Likewise, in this case the Act does not precise how the infrastructure's development has to take place ( The Act of March 12<sup>th</sup> 2004, 2014).

People with autism or their legal guardians can apply for getting the decision of incapacitation in the case of children under the age of 16 (The Ordinance of the Minister of Work and Pensions of February 1<sup>st</sup> 2002, 2010). Those who are over 16 years old are owed an application about the extent of disability ( The Act of The Minister of Economy, Work and Pensions of July 15<sup>th</sup> 2003, 2010). The decisions about the disability or its extent are connected with additional privileges like financial resources form the social assistance intended to disabled people. It has to be noticed that in the case of the considered group the language of law regulations is different from specialist nomenclature used when people with autism are considered. On account of the issues already presented what has to be investigated is the extent of intensity of autism in a category of a high functioning or low functioning person in the society.

Apart from the Polish law, with the international range, particular local government units can introduce their own rules broadening legal and financial privileges for people with autism. In particular, for those with stated incapacity or a degree of disability. As an example of this there can be mentioned some city's regulations connected with payment for transport services in a collective, public transport – for example, in Torun disabled people and their guardians are released from the payment for using the city's means of transport. Moreover, disabled people ( inter alia, people with autism, stated disability or a degree of disability) are entitled to a relief up to 78% of the ticket price for travelling by Polish State Railways and Car Communication Companies (The Act of June 20<sup>th</sup> 1992, 2014).

To summarise, Polish law does not distinguish a separate category of people with autism. The category is composed of other legal terms or like in the case of the disabled people it can become an integral part of the legal terminology. It has to be emphasised that in this thesis only the most significant issues of the legal terms connected with functioning people with autism on the field of Polish law have been considered.

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# Permanent education: Experiences of the Nursing Regional Board of the Ceará, Brazil

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## Abstract

This article has the purpose of describing the experience of the Nursing Permanent Education by the Nursing Regional Board of the Ceará. It is a descriptive study, a kind of report of experience, developed by the Nursing Regional Board of the Ceará, in the district of Fortaleza, Ceará – Brazil, during the year of 2013. To achieve this aim it was performed the qualification of the human resources of the professionals of the Nursing Regional Board of the Ceará. By means of the Nursing Professional Apprenticeship Center (Núcleo de Aperfeiçoamento dos Profissionais de Enfermagem – Napen). It took place from February to December of 2013. There were 10 courses to Nurses, Technical and Auxiliary Nurses to assist the necessity of the health services.

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*Keywords:* Permanent Education; Nursing; Service quality.

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## Introduction

The Nursing Permanent Education constitutes fundamental strategy of working in the sector to create a place of critic, reflexive, purposeful, committed, and technically competent (CECIM, 2005). It needs to be understood as practice of teaching-learning and as a health education policy. This purpose associates the teaching as your working repercussions, the health system and the social participation.

The Nursing Regional Board of the Ceará (Conselho Regional de Enfermagem do Ceará – Coren/CE) has the principal purpose of disciplining, legalizing and inspecting the nursing profession exercise, in your jurisdiction, pursuant juridical and directive rules. Currently this one is included in a Medium Size Board by having 52.000 enrollments.

So, due to the high number of registered professionals, it was created the Nursing Professional Apprenticeship Center (Núcleo de Aperfeiçoamento dos Profissionais de Enfermagem - Napen). It aims to offer, each time more a bigger number of courses and vacancies, to the registered Nursing Professionals with regular situation with the Nursing Regional Board of the Ceará (Conselho Regional de Enfermagem – Coren CE).

The pedagogical strategies used in each course and their content were of complete responsibility of the instructors (Professors), however, it was noticeable the importance of your suitability to the local context and necessity, targetting the experience exchanging through constructive methodologies.

The professional improvement and qualification enabled the multiple formation of the knowledge, producing standard actions and protocol procedures suitable to the new routines, strengthen in the ethical and professional commitment of the nursing exercise.

The availability of the certificates are in the headquarter of the Nursing Regional Board of the Ceará (Conselho Regional de Enfermagem of the Ceará – Coren/CE) in the end of each course. But only for those, student and

professionals, who had obtained 75% of presence through the signature in the attendance list, taking in consideration each shift of the course performance.

The human resources qualification in the nursing area, majority component in the health service system of the Brazil (Sistema de Saúde – SUS), has represented an important resource to the consolidation of the Health Unique System and assistance free of damage to the population. In this scenery, the Nursing Professional Apprenticeship Center (Núcleo de Aperfeiçoamento dos Profissionais de Enfermagem – Napen), elaborated 11 courses including different subject matters, that it had the objective of supporting the improvement necessities of the professionals: Nurses; Technical and Auxiliary Nurses.

In virtue of the facts mentioned, it was objected to describe the experience of the Permanent Education by the Nursing Regional Board of the Ceará (Conselho Regional de Enfermagem – Coren/CE).

## **Methodology**

This is a descriptive study, based on report of experience, developed by Nursing Regional Board of the Ceará, in the district of Fortaleza, Ceará – Brazil, during the year of 2013.

By means of Nursing Professional Apprenticeship Center, it was performed, from February to December 2013, 10 courses with different subject matters with the objective of supporting the improvement necessities of the professionals: Nurses and Technical and Auxiliary Nurses to the: Health service need, Nursing professional development and Social management about the health public policies.

The courses were offered free of charge to the interested professionals according to determined schedule. The registration could be done through the institutional site of the Nursing Regional Board of the Ceará (Conselho Regional de Enfermagem – Coren/CE) with specific date and limited vacancies. These availabilities were distributed according to the previous established criteria of enrollment, conform the rules of the Nursing Professionals Apprenticeship Center (Núcleo de Aperfeiçoamento dos Profissionais de Enfermagem – Napen) to participation in the courses.

From the Nursing Permanent Education, were elucidated the following subject matters in the courses: Pharmacology to nursing; Nursing Care to critical patients; Medicine administration; Nursing care in urgency and emergency; Hemotherapy; Elementary attention to health; Woman's health; Child's health, Man's health and Immunization.

In all the courses, the instructors used methodologies to the nursing professional updating, with focus on the prevention of working or mistake accidents, through the class presentation and dynamics. The activities occurred inside the selected Auditoriums, with nursing professionals and students. As part of it was established an intense interaction between instructors and nursing professionals and students.

In the last moment, were delivered the certificates to the nursing professionals and students that acquired 75% of assiduousness, with the purpose of motivating these professionals about the seriousness and importance of performing these courses. And to better comprehension of the results, were conducted a survey among the nursing professionals to evaluate the courses and the developed actions by the Nursing Professional Apprenticeship Center (Núcleo de Aprendizagem Profissional de Enfermagem – Napen) with the objective of becoming them didactic and systematic. There were 04 criteria: Professor accomplishments; Event organization; Course subject matter and Location of the Course.

## **Results and Discussions**

The achieved results enabled the satisfaction of the nursing professional means of the improvement of a humanized and contextualized assistance (Holistic) to the population of the Ceará, Brazil, based on the use of protocol procedures of assistance, with the purpose of consolidating of the reference system and against the one of the Health Assistance System, consolidating integrated educative actions to the organs and institutions of the health

and education area, connected with all the Nursing Federal Board System (Conselho Federal de Enfermagem – Cofen) System/ Nursing Regional Board (Conselho Regional de Enfermagem -Coren).

In conclusion, among analyzer elements to think and take action to the Health Permanent Education are the components of the quadrilateral formation (CECCIM; FEUERWERKER, 2004): Analysis of the health professional education , searching to change traditional hegemonic, logical rationalist, elitist and dominant conception of the knowledge production; Analysis of health attention practices, aiming to integralize and the inclusion of the user participation in the therapeutic project as new health practice; Analysis of sectional management, objecting creative and original ways of organizing the service system, according to the user accessibility and satisfaction; Analysis of the social organization , targeting the effective contact and social system that become the health actions more human and of great benefit to the citizen.

#### COURSE: PHARMACOLOGY CLINIC APPLIED TO THE NURSING.

This course took place in February, 2013 in the district of Limoeiro do Norte, situated at 250 kilometers of Fortaleza, CE. It had 132 participants with an Auditorium with capability to 150 people. It was established a moment of updating of knowledge, searching the capacitation of nursing professionals, that in the future will go to put in practice this apprenticeship. This moment established a relation between the Nursing Professionals and the Regional Board, essential to break the barriers and myths about the purpose of the Board.

Regarding the evaluation of this course, it was obtained the following results: 1. Accomplishment of the professors: 66,94% of the registered participants considered them Excellent; 27,27% as Very good and only 5,78% as Good. 2 Event organization: 33,05% indicated it as Excellent; 50,43% as Very good, 15,7% as Good and only 0,82% as Regular; 3 Subject matter of the course: 61,15% assessed it as Excellent; 34,71% as Very good 3,30% as Good and 0,82% as Regular 4.Place of the course: 52,06% evaluated it as Excellent; 38,01% as Very good ; 9,09% as Good and 0,82% as Regular.

#### COURSE: UPDATING IN MEDICINE ADMINISTRATION

This course happened in March, 2013, in the General Hospital of Fortaleza (Hospital Geral de Fortaleza - HGF), in the city of Fortaleza CE. There was an average of 56 participants, with an Auditorium with capacity to 100 people. In it there was a updating of knowledges, aiming the Nursing Professional capability of those that work in the mentioned hospital, enabling them then to put this acquired learning in practice in their daily routines.

Considering the evaluation of this course, it was evidenced: 1.Accomplishment of the professors: 57,70% of the registered evaluate them as Excellent; 33,30% as Very good and only 8,88% as Good. 2.Event organization; 22,205% evaluate it as Excellent; 31,10% as Very good 37,7% as Good and only 8,88% Regular. 3. Subject matter of the course: 44,40% evaluate as Excellent; 40% as Very good;17,70% as Good and 0% as Regular or Bad. 4. Location of the course: 42,2% indicated it as Excellent, 40% as Very good and 17,7% as Good.

#### COURSE: CLINIC PHARMACOLOGY TO THE NURSING PRACTICE

This course was performed in April 2013, in the district of Quixaxá, situated at 166km of Fortaleza CE. It had 32 participants with an Auditorium with capacity to 80 people. In it there was a moment of updating of knowledges, targeting the nursing professional capability, allowing them to put it in practice in their work routine.

Relating to the assessment of this course, it was obtained: 1. Accomplishment of the professors: 28% considered it as Excellent; 48% as Very good e 20% as Good. 2. Event organization: 36% of it as Excellent; 52% as Very good and 12% as Good. 3. Subject matter of the course: 36% considered as Excellent; 52% as Very good and 4% as Good 4. Location of the course: 16% evaluated it as Excellent; 80% as Very good and 4% as Good. In this course arised the curiosity of enquiring the participants about their opinion regarding this initiative, Nursing Regional Board (Conselho Regional de Enfermagem- Coren) and Nursing Apprenticeship Center (Núcleo de Aprendizado de Enfermagem – Nepen). The result of it ,was the satisfaction of the participants by the following replies: 72% of the registered evaluated this initiative as Excellent; 24% as Very good and 4% as Good.

#### COURSE: HEMOTHERAPY BASIC

This course happened in May, 2013, in the city of Fortaleza-CE. It had 80 participants with an Auditorium with capacity to 100 people. The course had a moment of updating of knowledges, aiming the nursing professional capability with the purpose of putting it in practice their apprenticeship in practice.

About the evaluation of this course, it was verified: 1. Accomplishment of the professors: 26,8% of the registered considered them as Excellent; 51,2% as Very good and 21,9% as Good. 2. Event organization: 17,7% indicated it as Excellent 44,4% as Very good, 34,1% as Good and only 7,31% as Regular. 3. Subject matter of the course 43,9% evaluated it as Excellent, 48,7% as Very good, 7,31% as Good and 2,22% as Regular. 4. Location of the course: 53,6% considered it as Excellent 39,02% as Very good and 7,31% as Good.

#### COURSE: UPDATING IN PRIMARY ATTENTION

Course was performed in June, 2013 in the city of Fortaleza- CE. It had 56 participants with the Board Auditorium with capacity to 80 people. It indicated a moment of updating of knowledge, searching the nursing professional capability. Then they will go to put it in practice.

Retarding the assessment of this course, it was verified the following results: 1. Accomplishment of the professors: 42,1% of the registered considered them Excellent 36,41% as Very good and 21,5% as Good. 2. Event organization: 36,8% considered it as excellent; 39,4% as Very good and 23,6% as Good; 3. Subject matter course: 36,8% indicated as Excellent; 34,4% as Very good and 23,6% as Good. 4. Place of the course: 42,1% indicated as Excellent; 39,4% as Very good and 10,5% as Good.

#### COURSE: NURSING ASSISTANCE TO THE CRITICAL PATIENT.

It happened in June, 2013 in the city of Fortaleza-CE. It had 61 participants with the Board Auditorium with capacity to 80 people. It was a moment of updating of knowledges, aiming the Nursing Professional capability. Then they will put their apprenticeship in practice.

About the evaluation it was verified the following results: 1 Accomplishment of the professors: 41% considered it as Excellent; 37% as Very good and 22% as Good. 2. Event organization: 22% indicated it as Excellent; 52% as Very good and 26% as Good. 3. Subject matter of the course: 45% indicated it as Excellent; 44% as Very good and 11% as Good. 4. Location of the course: 52% considered it as Excellent; 33% as Very good and 15% as Good.

#### INSTITUTIONAL SEMINARY OF THE REGIONAL BOARD – CEARÁ SECTION

Course took place in July, 2013, in the district of Beberibe, situated at 90 kilometers of Fortaleza - CE. It had 50 participants. This one was developed to connect the collaborators, employees, associates and board advisors, in the Coliseum Hotel Auditorium. It was a moment of integration and updating, of the client with effectiveness, searching the employee capability and updating to the employees effectivity of their services that it will made to the registered of the Nursing Regional Board (Conselho Regional de Enfermagem: Coren-CE).

About the evaluation of this course it was observed: 1. Accomplishment of the speaker: 95% of the employees, collaborators, associators and boards considered it as Excellent and 5% as Very good. 2. Event organization: 73% indicated it as Excellent; 20% as Very good and 5% as Good. 3. Subject matter course: 98% evaluated the subject matter as Excellent and 3% as Very good. 4. Location of the course: 70% indicated it as Excellent, 28% as Very good and 3% as Regular.

#### COURSE: URGENCY AND EMERGENCY

It was performed in September, 2013 in the district of Sobral, situated at 238 kilometers of Fortaleza-CE. It had 188 participants with a Auditorium with capacity to 200 people. The Course enabled a moment of updating of knowledges, targetting the nursing professional capability. After it they were motivated to put it in practice their work procedures.

About the assessment of this course it was identified: 1. Accomplishment of the professors: 47% of the registered evaluate them as Excellent, 33% as Very good, 18% as Good and only 2% as Regular. 2. Event organization: 26% evaluate it as Excellent 43% as Very good, 27% as Good and 4% as Regular. 3 Subject matter course: 45%

considered it as Excellent; 38% as Very good and 17% as Good. 4. Location of the course: 68% evaluate the course as Excellent ; 27% as Very good and 5% as Good.

#### COURSE: CUSTOMER SERVICE WITH EFFECTIVITY

Course happened in October, 2013, in the city of Fortaleza, CE It had 16 participants . It was for collaborators and employees of the Board. It occurred in the Board Auditorium. It was a moment of updating about the customer service with effectivity, aiming the employee capability and updating of the Nursing Regional Board (Conselho Regional de Enfermagem: Coren/CE).

About the evaluation it was observed: 1. Accomplishment of the professors: 67% considered it as Excellent; 25% as Very good and 8% as Good. 2. Event organization: 42% indicated it as Excellent; 42% as Very good; 12% as Good and 4% as Regular. 3. Subject matter of the course: 63% indicated as Excellent, 29% as Very Good and 8% as Good. 4. Location of the course: 79% considered as Excellent, 17% as Very good and 4% as Good.

In this course it was enquired the opinion of the employees of this initiative of the Nursing Regional Board (Conselho Regional de Enfermagem-Cofen) and Nursing Apprenticeship Center (Núcleo de Aprendizado de Enfermagem – Napen). The obtained results overcome the expectations: 84% considered it as Excellent; 12% as Very Good and 4% as Good.

#### COURSE: THIRD MEETING OF THE TECHNICAL RESPONSABLE OF THE CEARÁ

This course happened in November, 2013 in the district of Fortaleza-CE. It had 81 participants, Institution Technical Responsible (Responsável Técnico -RT) of the Ceará, with the Board Auditorium with capacity to 80 people. It enabled a moment of knowledge updating, of knowledges, targeting the capability of these institution Technical Responsible (Responsável Técnico -RT's) RT'S that then they will go to actuate in safe way in the work environment .

Considering the evaluation of this course it was verified: 1) Accomplishment of the professors: 5% of the registered Technical Responsible institution (Responsável Técnico -RT's) evaluated them as Excellent; 22% as Very good; 43% as Good, 25% as Regular and 5% as Bad. 2. Event organization: 28% assessed it as Excellent: 38% as Very good, 31% as Good and 3% as Regular. 3. Subject matter of the course :30% considered it as Excellent, 44% as Very good, 23% as Good and 3% as Regular. 4. Place of the course: 18% evaluate the place as Excellent; 29% as Very good 39% as Good and 3% as Regular.

In this updating to the Technical Responsible(Responsável Técnico -RT) there was the curiosity of researching the participants about what they thought of the initiative of the Nursing Regional Board (Conselho Regional de Enfermagem- Coren) and Nursing Apprenticeship Center (Núcleo de Aprendizado de Enfermagem – Napen) to the performance of this type of updating with 8 hours. As result of this, to the satisfaction it was acquired the following results: 59% of the participants evaluated the initiative of the Nursing Regional Board (Conselho Regional de Enfermagem- Coren) as Excellents; 35% as Very good and 6% as Good.

In a research to analyze the effects of the actions of Permanent Education in the nursing service quality, in a private hospital, of big size, in the city of Belo Horizonte – MG, it was revealed that the educative actions are not articulating the work process and that there's the necessity of management improvement of the nurses, allowing the performance of the problematic pedagogy. It must be revised and inserted of the nursing professionals in the work process context articulated with the capability based on the permanent education strategies (RICALDONI; SENA, 2006).

To sum up it is noticeable that the permanent education in nursing is adopted as a continuous work learning actions that occurs in a work production education space in health, based in a situation (Generally a problem situation), and direct to overcome, change, become a wished and different situation (HADDAD; ROSCHKE; DAVINI, 1994).

According to what was stated it is important to say that this work performed by the Nursing Regional Board (Conselho Regional de Enfermagem – Coren) and the Nurse Apprenticeship Center resulted in a Nursing professional capability and updating as a way of prevention of mistakes in the work environment. the population. This happen because of the adopted methodology by the napen and instructors allow them to observe the initiative

of the Nursing Regional Board (Conselho Regional de Enfermagem- Coren) and Coren-Napen to the improvement of the service quality. Nursing Apprenticeship Center ( Núcleo de Aprendizado de Enfermagem – Napen).

## Conclusions

According to what it was stated it is possible to conclude that Nursing Permanent Education strengthens and increases the health service quality offered to the populations. It is worth to mention the importance of it in the search of educative proposals that stimulate the self knowledge, apprenticeship and updating.

Thus, it enable to declare that the proposed Permanent Education and adopted by the Nursing Regional Board of Ceará (Conselho Regional de Enfermagem do Ceará – Coren/CE) and Nursing Apprenticeship Center ( Núcleo de Aprendizado de Enfermagem – Nepen) constitute in nursing professional qualification and improvement that allow the multiple formation of the knowledge, resulting in standard actions and protocol procedures suitable to the new routines, strengthen the ethical and professional compromise of the Nursing exercise.

It is worth to remind that the achievement of the aim of the Permanent Education Project depends of the interest of the professional in performing a work with quality and authenticity. This requirement of the professional character is what is necessary to confirm the Health Public Policies, when dealing with health quality service. As the humanized and individualized belong to any nursing professional that can help the user with service quality service. The main reason is that the user is the main actor, directly favored in your well being, about the health disease process.

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# Personal and professional attitudes of architecture students

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## Abstract

The aim of the present study is to determine "personal and technical capacities of architecture students to execute architecture as a profession". 75 Architecture students of Konya Selcuk University Architecture Faculty, Department of Architecture joined in this qualitative study. Data collected using open ended questions were analysed using content analysis. In this study our aims were to first determine information of the participants about "architecture profession and the required abilities to become an architect" before enrolling to the Architecture Department, then their opinions about technical and personal skills which are vitally necessary for being architect and finally the technical and personal qualities which they think they possess and their perceptions about their skills which make them efficient or in efficient architecture students. These assessments of the students about their self efficacy were given as the findings of the research. The findings of our study are important as they exhibit how the architecture students consider themselves, their professional development and the reflections about the education they receive.

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*Keywords:* Architecture Students, Self Efficacy, Technical Skills, Personal Skills.

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## 1. Introduction

The century we live in is a particular period of time when any advance is rapidly experienced, cities augment and the necessities to be met accordingly both outnumber and diversify to a great extent. All these evolvments alter students' expectations from the future. Business life changes swiftly and so do the requirements in the realms of employment correspondingly. These rapid movements have also caused changes in the choice of profession. Making up one's mind about profession beginning to be identified during childhood period encapsulates developmental stages elapsing until having a profession (Özgan, 2006). As a result of these changes, students' individual, social, professional and academic developments are constantly influenced (Hiebert, Kemeny&Kurchak 1998; akt:Lee, 2007, s.1). Another vital change experienced in accompany with these biological alterations is the evolvments experienced during an individual's own developmental stages. The most significant period of vocational tendency of an individual is the period of education. Concept of Self-efficacy is preconditioned in the individual development within the developmental stages of a child. This concept means that the individual is able to tackle with a matter and acquire desirable outcomes (Pajares, 1996).

Belief in Self-efficacy is defined as the major determinant of behaviours and behavioural changes; Bandura's studies put forward that beliefs respecting individual skills not only change behaviours, but influence motivation and success (Henson, 2001). According to Albert Bandura (1994, 2004), while self-efficacy is the belief in the feeling of 'I can', desperation is just the reverse of this feeling, 'I can't'. Children whose self-efficacy is rather high can use such expressions as 'I can succeed in this subject' or 'I can carry out this study' in their lessons and studies. We can,

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in the same way, expect those who have rather high self-efficacy to use such expressions either during deciding on majoring architecture or already studying in architecture department (Kurbanoğlu, 2004).

Barry Zimmerman (2002) has adjusted the concept of self-efficacy to a number of aspects of students' success. Through this point of view, self-efficacy influences students' activity preference as well. Students whose self-efficacy related to learning is low may avoid many learning tasks, especially those which are assumed to challenge them. Those with quite high self-efficacy, on the contrary, willingly take part in learning activities. As a result of these studies, their confidence obtained through improvement tasks rises to a great extent. This accordingly intensifies their belief in their self-efficacy (Zimmerman2002). Students with quite high self-efficacy also tend to make more efforts to study and struggle more, compared to those with low self-efficacy. These efforts turn accordingly into contentment when they get the feedback.

Students' self-efficacy and their awareness of it is of utmost significance, since the education provided in architecture department aims to improve both knowledge and skills, so it is possible to expect this increased awareness to improve students' success in this department correspondingly.

The objective of this study is to analyse the students' perceptions of self-efficacy related with technical skills they assume to be required for the profession of architecture and to have already in themselves in accordance with the students' point of view. In this sense, the students were asked for their comments to the following questions:

- What technical skills do you think are required in order to be a successful architect?
- Do you think that you possess the technical skills required for being an architect? Or which technical skills do you think you behold more, compared to others?
- What individual skills (talents) do you think are required to be a successful architect?
- Do you think you behold the necessary individual skills? which individual skills do you think you are more competent on, compared to others?

## **2. Research Method**

The research is based on qualitative research method. The most significant characteristics of this type of method are the ability to adapt to natural environment, beholding a holistic approach, researcher's undertaking a participative role, flexibility in the pattern of the research and having an inductive analysis (Yıldırım and Şimşek,2005). Qualitative researches focuses much on the meanings of searched themes, experiences and descriptions. The study consists statements made and observed completely by participants including sophisticated and elaborate data (Coolican,1992; Yıldırım and Şimşek,2005).

### *2.1. Participants*

In this research, purposeful sampling method had been used. The reason for the preference of this method is simply gathering more detailed information as to the perception of technical skills and individual features that students who prefer to study architecture at university and studying already at the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> or 4<sup>th</sup> grades consider to have with them required for architecture as a profession.

In order to select students for purposeful sampling, a particular criterion has been identified (Yıldırım ve Şimşek,2005). The criterion for selecting students and the study group is applying this process on architecture students eager to participate in the study after gathering enough information about the research. The research has been carried out with 80 students who have been interviewed in Architecture Department at the Faculty of Architecture, Selçuk University. 5 students decided not to go along with the interview and the study has been completed with 75 students in total 56 of whom are female and 19 are male. 44 of these students are observed to have preferred to major architecture at university upon graduating from Anatolian High School, 8 from Science High School, 2 from Super High School, 12 from High School, 7 from Anatolian Teacher Training High School and 2 of them from Anatolian Islamic Divinity High School.

### *2.2 Semi-Structured Interview Method*

Semi-structured interview method has been used as the data gathering technique and the related literature has been scanned. Occupational choice, vocational development process, architecture as a profession, technical skills required

by architecture profession and individual characteristics as well as perception of self-efficacy were especially focused as literature elements. Based on these data, themes of technical skills required for architecture and individual characteristics which students of architecture consider to have were focused on. Semi-structured interview form has been developed with the questions able to measure these themes. The interview form have been reverted to five postgraduate lecturers at the Faculty of Architecture, Selçuk University so as to confirm its validity and the semi-structured interview form has been formed in accordance with these lecturers' assessments. The form has been then subjected to pilot scheme with ten participants and made ready for application after the last corrections made according to the results. The interview forms were given back to the participants in case they had things to add or remove from the form. Some of the students removed some of the information from the form, while others had extra to add. Including direct quotations from the participants and making expressions via them over the results are of much importance for the validity of the form. Therefore, some of the data gathered from this research were directly released in order to boost its credibility (Wolcott, 1990).

### 2.3 Gathering Data

Participants for the interviews were identified based on willingness. The way the study would be carried out and the objective of the research were explicitly stated via an introduction during the interviews. Moreover, the fact that participants' credentials were not demanded was focused and written interview forms were used during the interviews lasting taking between 30 and 45 minutes.

### 2.4. Analysis and Assessments of the Data

These data gathered via content analysis method have been analysed. Reaching the concepts and correlations that can explain the gathered data is the essence of content analysis. Content analysis is carried out by organizing and assessing the data that are akin to each other in the framework of certain concepts and themes. For this reason, regulations were made in harmony with the concepts came up after conceptualizing the gathered data and accordingly the themes that were to explain the data were identified (Tavşancıl&Arslan,2001; Yıldırım &Şimşek,2005). Views of interviewees were written on the semi-structured forms and each form put into order in successive numbers. Words, sentences and paragraphs were coded via conceptualizing in order to detect the expressions intended to be explained during assessing of the data (Tavşancıl&Arslan,2001). Coding was carried out in the framework of the objective and questions of the interviews. Categories are to be used for analysing and comparing varied meanings in a sub-category formed at the lowest rank. Wide varieties of these articles in categories conveys the qualitative analyses just as they are (Coolican,1992). Such themes as 'technical skills considered to be required for architecture', 'technical skills students consider to already have with them', 'characteristics required for an architect', 'characteristics students consider to already have with them' which were determined in accordance with the related literature were formed for this research. These themes were divided into sub-categories. Percentages were also computed in order that the categories can be more explicit and easy to understand. Each category includes both percentages and views of sample students. However, these percentages were not included to enable statistical comparisons as in quantitative researches. Percentages in qualitative researches are typically and naturally used for processing and suggesting ideas (Coolican, 1992).

## 3. Findings

Table 1: Technical Skills Considered to Be Required for a Successful Architect

	The number of Students Beholding this view (N=75)	Values of categories in percentage	Examples of Students' Thoughts
Ability To Draw- Drafting (Perspective, Freehand Pencil Drawing...)	38	50,67	"It is necessary to learn drawing techniques to be a successful architect." (A1's point of view)
3 Dimensional Imagination- Skill To Draw 3 Dimensional	27	36,00	"must see in 3 dimensions" (A8's point of view)

Being Competent With Computers And Computer Programs (Autocad, 3dmax...)	25	33,33	'Must be able to use computer programs properly' (A2's view)
Model Making	16	21,33	(Being able to make models' (A5's view)
Digital (Mathematics) Skills	15	20,00	'Must have high level of mathematical intelligence in order to be a successful architect' (A1's view)
Hand Craft	14	18,67	'Should have a considerably delicate hand craft. (B5's view)
Design Intelligence (Layout Design Etc.)	10	13,33	'Should have a high level of design intelligence and creativity' (A5' view)
Planning Competence	2	2,67	'Should have an ability to procure a spatial organization' (I3's view)
Ability To Detect Details	1	1,33	'Should be able to look in more details when looked at a building or a project rather than only seeing doors and windows just like ordinary people do. (H8' view)
A Good Knowlwdge Of Materials	1	1,33	'Knowledge of materials is isignificant for the ability to choose' (I2's view)
Ability To Find Solutions	1	1,33	'Being able to find the best and easiest solutions to problems' (J1's view) (J1 in görüşü)

Analyzing Table 1, 11 categories are seen to have been formed pertaining to the theme of 'Technical skills required for an architect'; percentages for Ability to draw- Drafting (Perspective, Freehand pencil drawing...) is %50,67, 3 dimensional imagination- Skill to draw %36.00, Being Competent with computers and computer programs (Autocad, 3dmax...) %33.33, Model Making %21.33, Digital (Mathematics) Skills %20.00, Hand Craft %18.67, Design Intelligence (Layout design etc.) %13.33, Planning Competence % 2,67, Ability to detect details % 1.33, A good knowlwdge of materials % 1.33 and Ability to find solutions is % 1.33. There are also example sentences about the categories in the table.

Table 2. Technical Skills Students Consider They Already Have

	The number of students sharing this view (N = 75)	Percentages of categories	Examples of Students' Thoughts
Ability To Draw- Drafting (Perspective, Freehand Pencil Drawing...)	18	24,00	'I think I have the ability to draw among technical skills.' (A4's view)
Being Competent With Computers And Computer Programs (Autocad, 3dmax...)	11	14,67	The fact that I love using computer may be advantageous for learning computer programs.' (D3's view)
Model Making	10	13,33	'I can be competent with model making and calculating' (A3's view)
Digital (Mathematics) Skills	8	10,67	'I think I have the digital intelligence required to be a good architect' (A1's view)
3 (2) Dimensional Imagination- Skill To Draw	8	10,67	I'm good at thinking in 3 dimensions' (A1's view)
Designing	5	6,67	I can design in all dimensions and imagine its 2 and 3 dimensions (A7's view)
Hand Craft, Coordination Of Eyes And Hands.	2	2,67	(I'm good at coordinating my eyes and hands' (I3's view)

In Table 2, 7 categories were formed pertaining to the theme of 'Perceived Technical Skill'. These are ability to draw- Drafting (Perspective, Freehand pencil drawing...) %24.00, being competent with computers and computer programs (Autocad, 3dmax...) % 14.67, model making % 13.33, digital (mathematics) skills % 10.67, 3 (2) dimensional imagination- skill to draw %10.67, designing %6.67 and hand craft, coordination of eyes and hands %2.67.

Table 3: Individual Features Required For a Successful Architect

	The number of students sharing this view (N = 75)	Percentages of categories	Examples of Students' Thoughts
Effective Communication Skill, Self-Expression	38	50,67	Language skills should be remarkably high' (B5's view)
Being Patient, Ambitious, Determined	24	32,00	'Should be ambitious and determined' (A1's view)
Creative Thinking (High Imagination)	18	24,00	'Should have a considerable imagination power to be a successful architect' (A1's view)
Being Social, Inclined To Group Work	14	18,67	'Should be inclined to group work' (B4's view)
Developing Empathy	13	17,33	'Should develop empathy' (B2's view)
Being Respectful	12	16,00	'Should be respectful to both nature and people' (A1's view)
Being Extraordinary (Authentic), Thinking Inventively	12	16,00	'Should have a distinct point of view to life, events, everything' (A2's view)
Being Open To Innovations (Open To Learning)	12	16,00	'Should be able to adapt to innovations' (A6's view)
High Level Of Leadership	10	13,33	'Should have a leader's qualifications and compatible with group work' (A7's view).
Being Dependable, Honest	8	10,67	'According to me, an architect should be able to give confidence to those who are concerned' (D3's view).
Being Deliberate, Tidy, Meticulous	7	9,33	'Should be or at least try to be meticulous' (A8' view)
Being A Good Observer	5	6,67	'Should read a lot and make constant observations (D2's view)
Welcoming Criticism	4	5,33	'Should be able to criticize him/herself and trust his/her work' (D4's view)
Being Tolerative	3	4,00	'Should be tolerative' (A3's view)
Making Practical Solutions	3	4,00	'Should be able to make practical solutions. (D1's view)
Being Forward-Looking, Making Accurate Prognoses	3	4,00	'Should be able to foresee the results of the work'. (D9's view)
Being Sympathetic	1	1,33	Should have a sympathetic character (I3's view).
A High Sense Of Aesthetic	1	1,33	Should have a high sense of aesthetic. (I3's view)
High Self-Confidence	1	1,33	'Having high level of self-confidence is another crucial matter. (I7's view)
Being Resistant To Stress	1	1,33	'Should be resistant to stress. (I7's view)

In Table 3 there exist 20 categories under the theme of 'Individual Features Required For a Successful Architect'. These are Effective Communication Skill, Self-expression %50.67 , Being Patient, Ambitious, Determined %32.00 , Creative Thinking (High Imagination) %24.00 , Being Social, Inclined to Group Work %18.67 , Developing Empathy %17.33 , Being Respectful % 16.00, Being Extraordinary (Authentic), Thinking Inventively % 16.00, Being Open to Innovations (Open to Learning) % 16.00, High Level of Leadership % 13.33, Being Dependable, Honest % 10.67, Being Deliberate, Tidy, Meticulous %9.33, Being A good observer %6.67, Welcoming Criticism %5.33, Being Tolerative %4.00, Making Practical Solutions %4.00, Being Forward-looking, Making Accurate Prognoses %4.00, Being Sympathetic % 1.33, A High Sense of Aesthetic % 1.33, High Self-Confidence %1.33 , Being Resistant to Stress %1.33.

Table: 4: Individual Qualifications Students Consider to Behold

	The number of students sharing this view (N = 75)	Percentages of categories	Examples of Students' Thoughts
Effective Communication Skill, Self-Expression	11	14,67	'I'm improving in terms of communication and exchanging ideas' (E6 's view)
Creative Thinking (High Imagination)	10	13,33	'My imagination is highly improved' (A1 's view)
Being Social, Inclined To Group Work	9	12,00	'I'm good at group work and organisations' (C3 's view)
Developing Emphaty	8	10,67	'I don't have all. I can develop emphathy (A5 's view)
Being Patient, Ambitious, Determined	6	8,00	'I'm a patient and determined person.' (D1's view)
High Level Of Leadership	4	5,33	'I think I have the soul of a leader.' (B2 's view)
Loves And Enjoys Working	3	4,00	I enjoy projects and working. These make me superior to others. (D5's view)
Being Open To Innovations (Open To Learning), Loves Making Research	2	2,67	'I'm good at suggesting new ideas and I welcome innovations'. (A1's view)
Crisis Management, Problem Solving Skills	2	2,67	'I'm gradually improving in crisis management'.(B5 's view)
Careful, High Level Of Awareness	2	2,67	'I'm careful'.(H2's view)
Tolerative	1	1,33	'I think I'm tolerative. Furthermore, my tolerance sometimes overwhelms my ideas and makes me give in. (A8 's view)
Distinct (Original) Being Able To Think Authentically	1	1,33	'I think I'm authentic. At least, I can blend my own design out of other works. (A8's view)
Able To Foresee	1	1,33	I think I'm patient and good at systematically thinking and foreseeing'. (E1's view)
Merciful	1	1,33	I think I'm better than many people in terms of mercy.' (E7 's view)
Interest For Fashion And Decorations, Aesthetic	1	1,33	'I'm very interested in modern decorations and fashion' G2's view)
Planned, Tidy	1	1,33	'The field I'm the best for certain is planned working and tidiness'.( H7's view)
Responsible	1	1,33	'My individual competence is being hardworking and responsible' (H8's view)

In Table 4, there are 17 categories in the theme of 'Perceived individual qualifications'. These are Effective Communication Skill, Self-expression %14.67, Creative Thinking (High Imagination) % 13.33, Being social, Inclined to Group Work %12.00, Developing Emphaty % 10.67, Being patient, Ambitious, Determined %8.00 , High Level of Leadership % 5.33, Loves and Enjoys Working %4.00, Being open to Innovations (Open to Learning), Loves Making Research % 2.67, Crisis Management, Problem Solving Skills %2.67, Careful, High Level of Awareness %2.67, Tolerative %1.33, Distinct (original) Being able to think Authentically %1.33, Able to Foresee %1.33, Being merciful %1.33, Interest for Fashion and Decorations, Aesthetic %1.33, Being Planned, Tidy %1.33, Being Responsible %1.33.

#### 4. Discussions

The perception pertaining to technical skills and individual qualifications students of architecture consider to be required by architecture as a profession and consider they already have pose many variations and diversities in the themes related with this perception and in the categories of the themes. The discussion part of the research has been built based on the four themes (Technical skills required for an architect, perceived technical skills, Individual qualifications required for an architect, Perceived individual qualification) and the categories of these themes. A proper discussion has been made based on these themes.

#### *4.1. The Theme of Technical Skills Required For an Architect*

Over an half of the students participated in in the research have stated that the most important technical skill is Ability to draw- Drafting (Perspective, Rough Copy, Pencil drawing)...), 3 dimensional imagination- Skill to draw follows it and Being Competent with computers and computer programs (Autocad, 3dmax...) is the third one in rank. It is figured out from this theme that skills related with drawing are the most important skills required for an architect. The article in UIA/UNESCO's record of educational requirements of an architect which focuses on the fact that teaching computers and softwares and using them efficiently are of utmost importance during the education of an architect has parallels with the findings of our research. Model Making comes the fourth in rank as students regard as the supplementary of the formers. The reason why they think so is that the courses they had to do during their architecture education led them to question their technical skills on this subject. Another striking category in this theme chart is the ability to detect details, a good knowledge of materials and ability to find solutions; although they are essential for an architect's education, students do not pay that much attention.

#### *4.2. Theme of Perceived Technical Skills*

This theme comprises seven categories. This category is paralleled with the categories of the previous theme. Students think that they already have the skills they consider essential for an architect. Almost half of the students who think Ability to draw- Drafting (Perspective, Freehand pencil drawing...) is essential for an architect consider they are already competent with this skill. However, although Being Competent with computers and computer programs (Autocad, 3dmax...) is also regarded essential for an architect by half of the students, the number of students considering they behold this skill is about the half of this ratio. The main reason for this is the fact that the students do not have the adequate confidence in themselves required for this skill. This also may be caused by the lack of experience, so students should be encouraged to various practising environments where they can improve these skills and do more practice.

Another striking element arises in the category of '3 dimensional imagination'. While students regard this category as the second the most significant skill required for an architect, the number of the ones considering to have this skill is less than the one-thirds of these students. In other words, two-thirds of the students feel insufficient on this subject. The reason for this is also thought to be the lack of experience. These qualifications which could be supported during education period are projected to be skills rather than talents.

#### *4.3. The Theme of Required Individual Qualifications for an Architect*

The category of "Effective Communication Skill, Self-expression" is prominent in the theme of required individual qualifications for an architect. Half of the students think that this matter is significant to be a successful architect. They regard this matter important as they are of the opinion that expressing one's opinions in a proper way to others, presenting his projects both verbally and in black and white and persuading others on his own views are of utmost significance to be a successful architect. Another category of " Being Patient, Ambitious, Determined" is also considered as important by the participants. This competence is constantly tested in their studio studies during their education.

Being creative and having a high level of imagination is observed to be an eye-catching qualification for an architect to create an architectural design in the students' remarks. Creativity and being critical is making new suggestions. It is also building new relations between things between which there have never been connections before (Yurtsever, 2011). It is, rather different from the usual, being distinct, innovative, authentic, problem solving and drawing new conclusions out of different solution methods (Çellek, 2002). Students in a notable number illustrate this category. 'Being open and inclined to group study' follows this category. An architect is supposed to work with people from different professions. Students are able to foresee the fact that exchanging ideas with their colleagues or other technical professionals from other engineering branches during their projects they conduct when they start off their career will undoubtedly oblige them to work in groups in certain periods.

#### *4.4 Theme of Perceived Individual Qualifications*

When the table of this theme is studied, it is evident that ‘Effective Communication Skills and Self-expression’ category is highly prominent. Some of the students are of the opinion that they behold this quality required for an architect and the one to be open to different views and express thoughts to the concerned person in a proper way. This category is followed by ‘Thinking creatively (high level of imagination). One of the main qualifications enable an architect to be successful and eye-catching is suggesting interesting ideas and conducting your project by performing new approaches different from others including your own colleagues. The study made by Ayyıldız Potur in 2007 on the subject of relations between an individual’s level of creativity and performance of designing in the beginning of architecture education is paralleled with the perceptions of architecture students on this issue. Some of the students participated in the research believe that they already have this qualification. After creativity, ‘being open to group study and social’ category follows. Architecture, as a profession, may require working with different people from other professions during a production process. As stated in UIA/UNESCO’s record of educational requirements of an architect, architecture is an important interdisciplinary branch including such important branches as demography, social and positive sciences, technology and creative arts. An architect, either during or after an architectural projects, may have to exchange ideas about his project with engineers of construction, technical and electricity as well as other experts of different fields in accordance with the context and qualifications of the project. Some of the students consider themselves competent with this quality. These categories are succeeded by categories of ‘developing empathy’, ‘being patient, ambitious and determined’. some students assert that they are able to understand others by place themselves in other people’s position and work patiently and determinedly during a project without giving in at all. Such qualities as high level of leadership, loving and enjoying working, being open to innovations and learning, interest in research, crisis management and problem solving skills, high level of care and awareness, tolerateness, quality of foreseeing, thinking authentically, being merciful, interest in fashion, decoration and aesthetic, planned and tidy working and responsibility are not that much taken into consideration by the students.

## 5. Suggestions

- Students consider that the requirements of an architect are thinking in 2 and 3 dimensions and being competent with computers. In order to be more competent with such kind of technical skills, the number of courses like model making, perspective and computer drawing programmes such as auto cad etc.should be augmented.
- More practice opportunities should be allowed so that the students can boost their self-confidence in their drawing competence. More convenient physical conditions for drawing both by hand and computer should be provided. Thus, they can increase their self-trust by doing more practice. Furthermore, lecturers can also be more influential by encouraging their students on such kind of matters.
- Students’ designing abilities should also be improved by adapting courses related with thinking strategies into the schedule. There also be a course on techniques of presentation so that students can improve their self-expression skills and present their studies more efficiently.
- More practices enabling students to improve their creativity and imagination should be allowed in studio courses in order that students can come up with outstanding projects.

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# Personal development in engineering schools in Morocco

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## Abstract

Why personal development in schools of engineering. The lack of self-awareness about personal and Professional projects push us teachers and coaches to guide students to have a clear vision about their future and discover their potential and the power of creativity by acquiring self-esteem, self-confidence and self-actualization. And also by helping them to overcome procrastination by managing their time and accepting and dealing with change positively .

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*Keywords:* Personal development; coaching; personal project and Professional project

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## Introduction

Nowadays our environment is full of deep and important change and movement. We focus more on the technical teaching of our engineers than on their personal development which must be coherent with the professional qualities. The education of our engineers is a systemic operation which must involves at the same time strong learning in his field of specialties and also his know-how and his well-being which help him to develop his proper personality.

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Hence our students need miscellaneous and varied learning which will take into consideration both social and human dimensions of the student without neglecting the most important component which is the psychological one. The engineer-student doesn't have to strengthen only his technical level but he must reinforce his competences, reveal his hidden talents and boost his personality.

So personal development is a process of understanding and developing oneself awareness and identity. This process enhances the student's talents and potentials it motivates him to think positively and to prioritize. So ignoring and neglecting one's personal capacities, lack of self-esteem, self-confidence, lack of motivation, procrastination and also lack of clear professional project are the basic reasons that block the personality of most of the students and let them lost in the designing their life project. Personal development allows the student to overcome the psychological and spiritual barriers. It helps him to reach Excellency by offering him practical methods of personal and professional strategic planning.

Unfortunately, the focus is more oriented to an academic professional achievement rather than to personal growth. That why we find them suffering from emotional problems. The main reason is the lack of "SOFT SKILLS" which are the key to success and happiness. We say "Hard skills will give you an interview but you need soft skills to get (keep) the job. So personal development facilitates also employability.

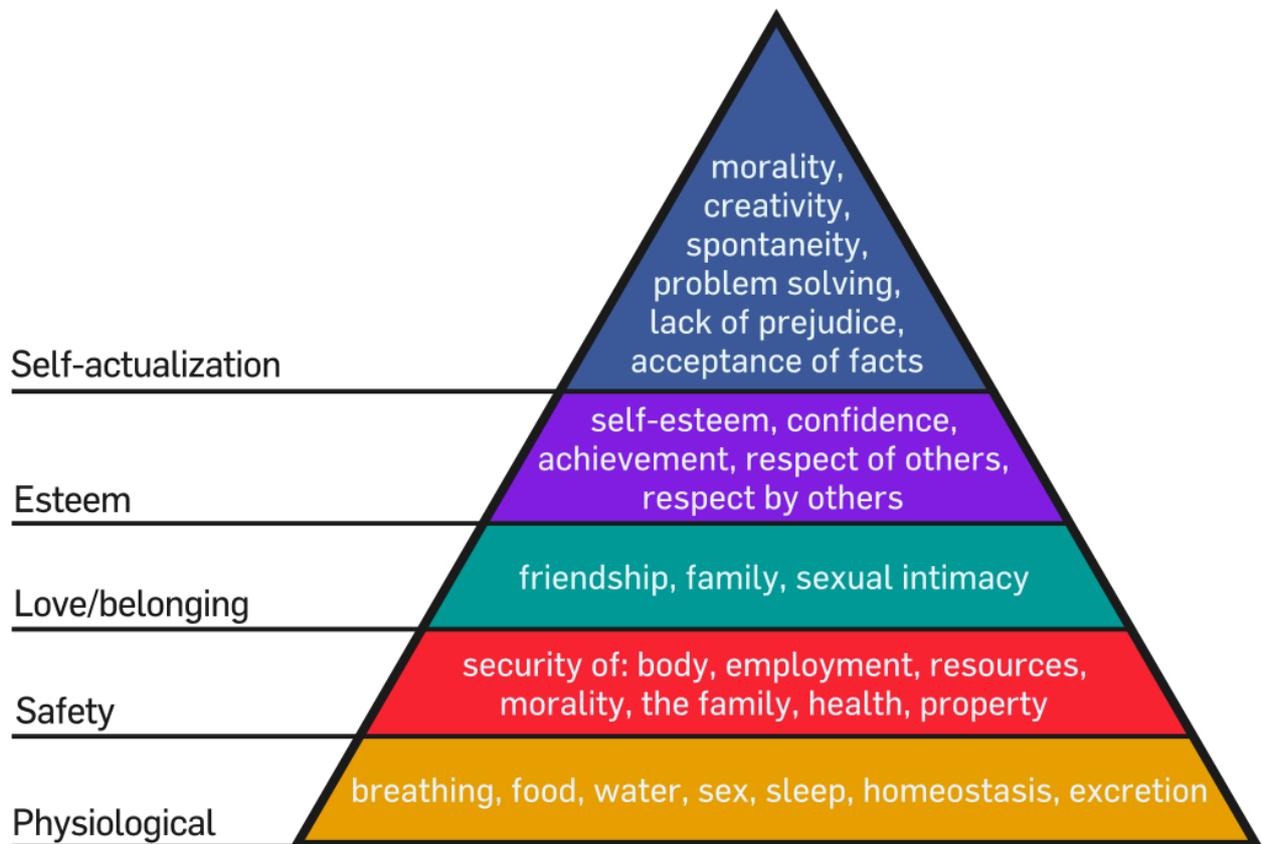
The most important things that we are going to discuss in this article about personal development that can help engineer to become more practical and realistic and see his life as his blue print moreover minimizes the degree of perfectionism and idealism are: self-confidence, self-actualization Personal project, professional project, and overcoming procrastination. Adlous Huxley said "There is only one corner of the universe you can be certain of improving and that's your own self. So you have to begin there, not outside, not other people. That comes afterward, when you've worked on your own."

Self-actualization: Maslow's process of self-actualization 1970 is one of the ideas surrounding personal development. Maslow suggests "that all individuals have an in built need for personal development which occurs through a process called self-actualization». The extent to which people are able to develop depends on certain needs met and these needs form a hierarchy. Self-actualization is achieved after we have developed our self-confident and our self-esteem.

### **What is self-actualization?**

Self-actualization involves being in touch with feeling, it refers to self-fulfillment and the need to reach full potential as a unique human being. Once one level of needs is satisfied a higher one can be developed. Everyone is subject to change so the level of need motivating someone's behavior at any time will change.

"Here is Maslow's pyramid:



So self-actualized people are characterized by the following features: Acceptance and realism, Autonomy, problem-centering, spontaneity and continuous freshness and appreciation. Those people have moment of intense joy they feel strengthened and inspired.

Personal project: the process of planning, investigating and evaluating helps student to create his personal project which offers him the opportunity to discover his potentials and encourages him to discover himself and his environment in order to have a clear vision of what he may do in his life. This personal project is an independent research done by the student and neither the teacher nor the parents have to interfere in the design of this project. It's an opportunity for the student to show his sense of individuality and initiative, his ability to make into practice his skills and knowledge, to make inquiry and realize a personal target or goal.

### **Professional project**

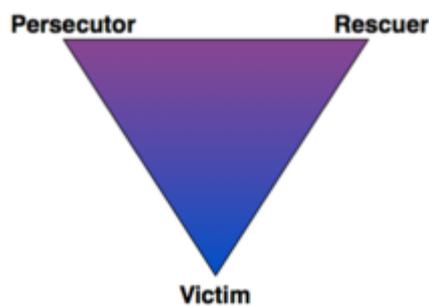
Professional project: Professional project has a great dimension it helps the student to design his future career; moreover it's the basis of orientation and the key to success and professional insertion. The professional project pushes the student to take time to think, to analyze oneself and environment. Once the student has a clear

idea about his personal project this will help to structure his CV and letter of motivation and be ready and able to convince during the interview .It's a necessary compass to guide him in his strategy of job searching.

However, the student evaluates all the competences he has acquired during his education, training, summer jobs and his associative work at this moment he can detect the environment where he could work and which is adequate with his competences. The student does a kind of introspection in order to find his professional way. The student must have an objective that is SMART.

### **Procrastination**

Who has never procrastinated in his life? if it didn't occur frequently it may occur once or twice; as procrastination is a psychological behavior that affects everyone to some degree or another It can be a source of stress and anxiety because it lets the student live frustrated and describing himself as a victim” Karpman triangle”



Procrastination is the first enemy of time management it makes the student feel helpless, weak, having a lack of skills and knowledge, besides this it causes low self-esteem. The aim of organizing workshop on personal development “PROCRASTINATION” is to overcome this phenomenon, to gain peace of mind and personal self-satisfaction, to regain strength and to be well organized.

Introducing personal development in schools of engineer is a great initiative because the student will have a positive outlook; he will design his professional project by becoming more proactive than reactive. By personal development he will give sense to his life, lifestyle; relationship and strengthen his talents. Not only future engineers need to develop soft skills but also all students of different fields of learning and education. It's a passport to discover new horizons.

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# Phenomenon of excellence at future teachers training

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## Abstract

The training of future teachers in the Czech Republic requires modern approaches. Modern trends in education involve: creation of new sorts of electronic study texts, using of information systems and dynamic computer systems and implementation of English language in classes. The training of future teachers requires top special knowledge both educators and students and the mastering of English is required too. The top level of both factors contributes to creation of excellence phenomenon in training of future teachers to their job.

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*Keywords:* Electronic study texts; implementation of English in classes; Programm Excellence

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## 1. Introduction

In 2012, the Czech Ministry of Education (Ministry of Education, Youth and Sports) implemented a new program called Excellence at Czech universities. Supporting and developing high-quality education being regarded as essential within the framework of Czech tertiary education system, the main objective of this initiative has been to promote excellence in university education and thus increase their competitiveness in the national and international context, which, consequently, shall result in a support for innovations in the Czech economic system and in an improvement with respect to the employability and employment of graduates on the labor market. (Ministry of Education: Program of Excellence, 2012), see also (Vinš et al., 2000).

Universities willing to apply for support in the form of projects, have to fulfill demanding quality criteria based on excellent results in research and development, an efficient transfer of knowledge and technology into the application sphere, and an international competitiveness and cooperation. Supported projects shall significantly contribute to a significant increase in quality of educational at universities, which is directly linked to provably high quality research and development activities. Projects which are to succeed in the Excellence Program have go through two rounds of selection, the first being about identifying the best universities in terms of their scientific output in particular fields of study. Subsequently, these schools shall be asked to submit their projects, the contents of which shall mainly be ideas and suggestions on how the highest possible quality at particular universities and with respect to particular fields might be achieved. In addition to a proven scientific output, yet another criterion shall be taken into consideration during the projects' assessment process, and it shall be the one regarding the transfer of knowledge, innovations and technologies, their global competitiveness, international recognition and cooperation. (Ministry of Education: Program of Excellence, 2012), (Gavora, 2003) and (Eger & Dvořáková, 2003).

The aim of Palacký University in Olomouc, Faculty of Education (PdF UP Olomouc), Mathematics Department is to contribute to putting the Excellence Program into practice at universities by means of a high quality preparation of the graduates. In this paper, we would like to inform on the activities of the above mentioned Department of Mathematics staff, which, we believe, is directly related to the Excellence program. Over the past years, we have focused on improving the quality of education in the Mathematics focused on education and Mathematics for junior

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high (middle) schools fields of study, in both full-time and in distance study modes. The Department of Mathematics members have recently submitted several projects aimed at improving the undergraduate preparation of students of teaching. The projects are stated below.

## **2. Projects**

### *2.1. The innovation of the mathematical component of future teachers' at primary schools undergraduate preparation at Palacký University in Olomouc Faculty of Education (January 2011 - December 2013)*

The principal investigator of the project is Eva Bártková, Ph.D. The aim of the project is to improve the quality of the mathematical component of future teachers' at primary and special schools training. The improvement in the quality shall be achieved by means of a content innovation of all mathematics, both technically and didactically oriented, subjects. Along with the latest findings in pedagogy as well as other sciences, above all the didactics of mathematics, the project outcomes shall contribute to the desired content innovation. The innovation is focused on the changes of the content of the 7503T047 study program for future teachers at elementary schools (both full-time and part-time) and 7506T026 study program for future teachers at elementary school combined with special pedagogy (full-time and part-time) study plans so that the latter reflect the requirements of teaching experience as well as the needs of the labor market. In total, 12 subjects shall be innovated and 2 newly created within the framework of the 2 above mentioned study programs.

Sub-objectives:

- Based on the analysis of individual subjects' contents, the curricula of all subjects of the mathematical component of the study shall be redesigned.
- E-learning support materials to all subjects shall be created, and, furthermore, flash animations of selected key terms to technical subjects shall be made.
- Teaching aids shall be procured to support full-time teaching.
- An electronic bank of mathematical problems to practice shall be developed to check study progress.
- Final didactic tests in electronic form used as a tool for verifying knowledge acquired by the students shall be created.
- The innovated subjects shall be subject to evaluation.
- A conference focused on current issues in primary education shall be held.
- A series of educational seminars shall be arranged.

### *2.2 The innovation of the Mathematics focused on education study program in distance mode (May 2011 – February 2014)*

The principal investigator of the project is David Nocar, Ph.D. The project is aimed at the innovation of the Mathematics focused on education bachelor degree study program in distance mode so that the latter can meet the current requirements of the educational process thus implemented and so that its graduates are ready to carry out teaching profession. The goal set is for the graduates of this study program to be competitive face to other candidates, not only in Olomouc Region. Another objective of the project is to sufficiently prepare the students for the follow-up, master degree study program Mathematics for junior (middle) high schools. It is necessary to update the existing educational process not only in terms of its contents, but also with respect to the attractiveness of the form of study itself. By their character, the accredited study programs as well as the explicitly call for the preparation of high-quality e-learning study materials. Multimedia learning materials in LMS (Learning Management System), online learning, and communications are prerequisites for successful learning not only within the framework of distance study programs. These modern approaches to developing new learning materials represent motivating factors for making education more modern and attractive.

### *2.3 Extending professional skills of mathematics study programs' graduates by means of teaching in a foreign language (June 2012 - May 2015)*

The principal investigator of the project is Jitka Hodaňová, Ph.D. The aim of the project is to innovate the accredited Mathematics focused on Education, Mathematics for junior high (middle) schools and Mathematics focused on Education in distant mode study programs. The aim shall be achieved by creating bilingual study texts (in Czech and English) in order to expand and improve technical math as well as language skills of the graduates. During math seminars, the students shall be provided with bilingual texts. Subsequently, they shall be able to make use of thus improved language skills while studying at foreign partner institutions and, at the same time, to study professional English literature in the original. Yet another objective of the project is to raise the level of education in mathematical courses via preparing multimedia supports, which shall be available to students online by means of appropriate LMS. The created bilingual learning materials shall thus be accessible to all students in the Czech Republic as well as abroad.

This project builds on the concept of CLIL (Content and Language Integrated Learning) related to teaching at primary schools. The graduate implementation of CLIL to Czech schools brings along the implementation of foreign languages teaching incorporated into a wide range of junior high (middle) school subjects' curricula. In the broadest sense of word, CLIL, or Content and Language Integrated Learning refers to teaching of a non-linguistic subject using a foreign language as a means of communication and sharing of the educational content. The educational content of a non-linguistic subject is thus developed with the help of a foreign language, which, at the same time, helps to mediate the educational content. This type of integrated teaching aims at two objectives - content and language, which are often supplemented with yet another, third objective, defining the skills and strategies to be developed and the way CLIL represents a new pedagogical approach across the school system. CLIL reflects today's globalized worldview. Individual fields and disciplines tend to blend, interconnect and enrich each other. In this respect, the classic type of education, which prefers teaching individual subjects separately, no longer keeps up with the times. The current curricula allow the integration of subjects and educational fields, reflected by CLIL. In addition, the implementation of CLIL brings along new approaches that encourage a more active role of the learner in the learning process. (CLIL in Teaching - How to engage foreign languages in teaching; National Institute of Education, Education Counseling Centre and the Centre for Continuing Education, 2012)

CLIL is rapidly spreading (not only) in the European context, doing so in two forms. One of them is so called hard CLIL representing such teaching, where a part or the whole curriculum of one or more training courses are taught in a language other than the students' mother tongue. This form is often subordinated to the educational content (content target) and is conducted primarily by teachers of non-linguistic subjects. The so-called soft CLIL implies the incorporation by linguistic subjects teachers of the thematic content of the non-linguistic subject, provided that that the selected content is subject to the language (language target). To make CLIL an innovation to education, an interlinked and elaborated teaching of both non-linguistic content and a foreign language as the most efficient form of teaching is needed. If one wants to use a foreign language as a communication tool, the language cannot determine the content component of training. Can only be considered a true integration such where linguistic elements provide the students with the information they need and thus help them to better analyze ideas, work with them, adapt them and produce new ones. Suitable implementers of CLIL are teachers qualified to teach in a particular field and at the same time, in a foreign language. In teaching practice, CLIL is often applied by teachers of a technical (non-linguistic) subject with very good language skills. On the other hand, CLIL is used by foreign language teachers who teach a foreign language on a particular content. However, these teachers often pursue only one educational objective, the linguistic one. They monitor mainly students' progress in the foreign language, the assessment being carried out only from the linguistic point of view, too. In this sense of word, we therefore rather talk about the implementation of interdisciplinary relations in foreign language education. (CLIL in Teaching - How to engage in teaching foreign languages , National Institute of Education, Education Counselling Centre and the Centre for Continuing Education, 2012).

The term CLIL was established in 1994 and was first used in 1996 in Unicom, University of Jyväskylä, Finland, within the framework of the European program for education in the Netherlands. CLIL was intended to describe the teaching methods, based on teaching technical subjects in a foreign language, the given educational content being taught simultaneously with the teaching of the foreign language. Later on, CLIL was extended by teaching via any

language different from the students' first or mother language. Many authors refer to CLIL as an "umbrella term" that encompasses a variety of approaches within different learning contexts.

The creators of the concept of CLIL believe that it is an innovative approach to education which will have a long lasting impact on the quality of education. In 1995, the European Commission adopted an educational document called White Pages, which emphasizes a multilingual education in Europe, within the framework of which CLIL can play a vital role according to experts. At the time of its creation, the benefits of CLIL for the development of foreign languages knowledge were emphasized. However, nowadays its significant benefits and innovation for teaching non-linguistic subjects are known as well, especially in the context of traditional education system.

The definition of the concept of CLIL, or more precisely of the character of teaching implemented via CLIL, was continually modified in the 1990s, when it became a specific type of teaching, integrating didactic methods of teaching foreign languages as well as the didactics of the non-linguistic subject. Its characteristic feature has been the use of many forms of organization and methods of work involving the use of various teaching strategies in order to develop learning strategies, encourage critical thinking of the students, develop their creativity, and increase their motivation. It is based on the well-known assumption that foreign languages are better taught on a really specific content, mediated by the foreign language, the focus not being only on the language itself, its structure and form, as it is often the case in language teaching. (CLIL in Teaching - How to engage in teaching foreign languages , National Institute of Education, Education Counselling Centre and the Centre for Continuing Education, 2012).

Find below outlined positive aspects of integrated teaching, as well as potential difficulties, which schools may face in practice.

#### Benefits of CLIL

- Increased demands placed by CLIL on cognitive processes of students, which are not commonly contained in foreign language textbooks.
- Compensation strategies practiced and communication skills developed effectively.
- Work with real content and information, usable in everyday practice.
- Increased chances with respect to the employment of the students on the labor market (as well as abroad) and better preparation of the latter for further education.
- Enlargement of intercultural competences of the students.
- Improvement of teachers' professional qualification.

#### Risks of CLIL

- Insufficient language skills with respect to the use of a foreign language in technical subjects.
- Lack of relevant teaching materials and assessment tools for CLIL.
- Uninformed school management and unsystematic implementation of CLIL.
- Time-consuming and difficult preparation for teaching with CLIL.
- Lack of language skills or insufficient field competence of teachers.

(CLIL in Teaching - How to engage in teaching foreign languages, National Institute of Education, Education Counselling Centre and the Centre for Continuing Education, 2012) . See also (Laitochová, Uhlířová & Wossala, 2013), (Wossala, 2013) and (Laitochová, Nocar, Wossala & Jánková, 2014).

Despite the above stated risks, we can say that should the school system respond flexibly to the changing reality of the 21st century education, it is vital for it to integrate learning courses and subjects not only through project methods, but also in combination with a foreign language. The development of key competencies, the support of teaching strategies, curricular links and overlaps class among the main goals of modern curriculum. If a school intends to promote foreign languages, it is highly advisable for it to include an integrated language teaching in its curriculum, which implies that future teachers have to be prepared for it. Bilingual materials are important not only

for full-time, but also, and above all, part-time courses, as it was recommended by the Accreditation Commission of the Ministry of Education, Youth and Sports that at least 30 % of the full training program be implemented in the form of distance education. (Vinš, V. et al., 2010), (Průcha, Walterová & Mareš, 2001).

Following the restructuring of Palacký University in Olomouc Faculty of Education study programs, the number of degree courses in distance modes has increased and the efficiency of the learning process augmented, too. The number of students interested in distance mode study courses at Palacký University in Olomouc Faculty of Education has been constantly rising, too (see Fig. 1), (Klement & Dostál, 2010).

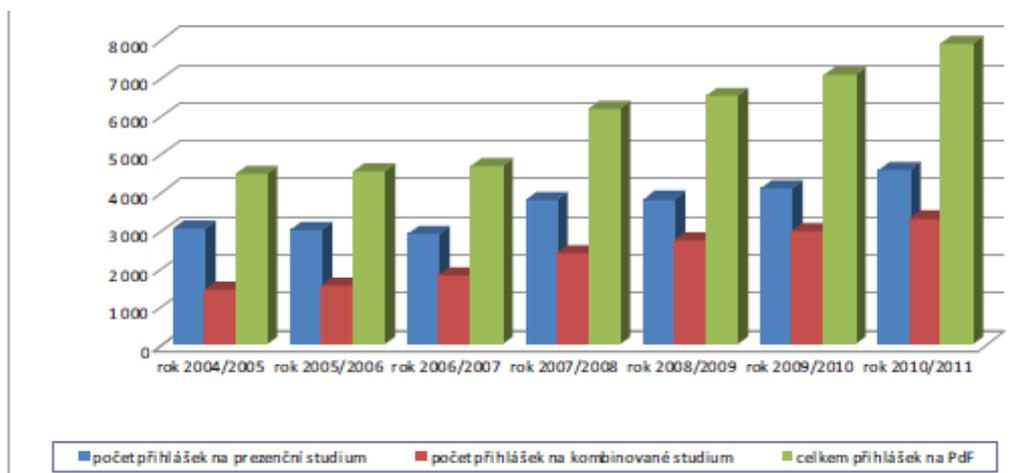


Fig. 1. Number and structure of the applicants for study at PdF UP Olomouc (Klement, M., Dostál, J. E - learning and its application to PdF UP Olomouc. Education - Journal of technology and Information, str. 21, 2010, Ročník 2, číslo 1).

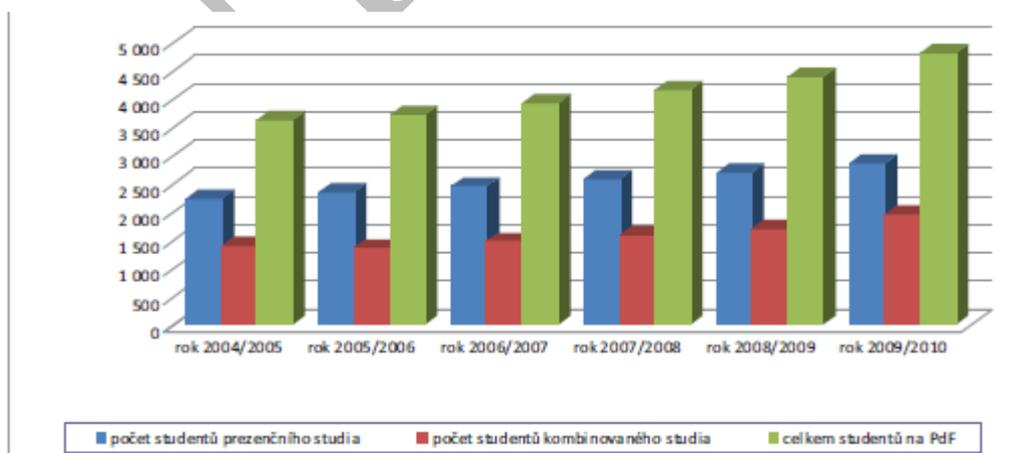


Fig. 2. Number and structure of the students at PdF UP Olomouc: students in full-time study modes, students in distance study modes, total number of students at PdF (Klement, M., Dostál, J. E - learning and its application to PdF UP Olomouc. Education - Journal of technology and Information, str. 21, 2010, Ročník 2, číslo 1).

Students in distance modes of study have at their disposal a wide range of learning materials in the form of e-learning or multimedia support materials (see Fig. 3).

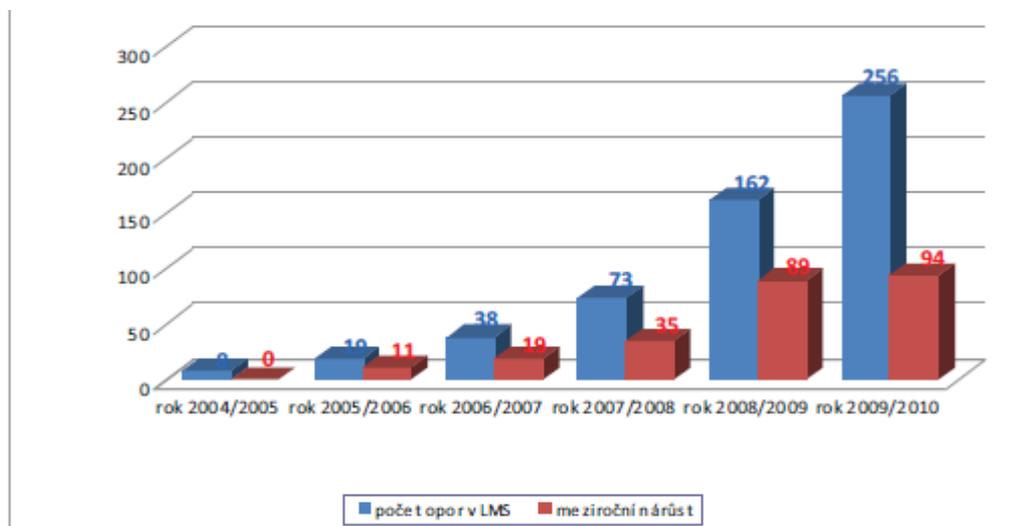


Fig. 3. Increase in number of e-learning support materials at PdF UP Olomouc: number of support materials in LMS, year-on-year increase (Klement, M., Dostál, J. E - learning and its application to PdF UP Olomouc. Education - Journal of technology and Information, str. 21, 2010, Ročník 2, číslo 1).

### 3. Summary

The above mentioned graphs show how rapidly the number of students in distance modes of study has been rising, along with the increase in the number of e-learning materials. As soon as since the year 2006, the Faculty of Education of Palacký University in Olomouc has supported a wider use of study programs in distance modes, also in combination with full-time bachelor's degree and postgraduate studies. The learning supports are available to students via LMS (Learning Management System - a system of managed learning), (Klement & Štencel, 2008)

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# PHRASE NOMINALE : ECONOMIE ET AMBIGUITE

Ece KORKUT<sup>122</sup>

Dans ma communication, je vais essayer de montrer

- que les phrases nominales portent souvent autant d'informations que les phrases verbales ;
- pourquoi et dans quelles conditions les phrases brèves, dont les phrases nominales, peuvent créer des problèmes de compréhension chez les apprenants étrangers ;
- et pourquoi faut-il enseigner à part ce genre de phrases.

Contrairement à ce que l'on pense en général, ce ne sont pas seulement les phrases longues qui provoquent des difficultés de compréhension chez les apprenants étrangers. Dans le cas des phrases brèves et des phrases nominales, les problèmes de compréhension relèvent davantage du domaine contextuel ou situationnel que de la syntaxe<sup>123</sup>, puisqu'il s'agit, la plupart du temps, d'éléments langagiers au nombre limité. En effet, devant l'absence du « sujet » et du « verbe », éléments indispensables dans une phrase canonique française, les apprenants de cette langue peuvent se sentir en terrain glissant. Dans ce cas, le couple sujet - verbe sera remplacé par thème (le point de départ) - rhème (information nouvelle) ou uniquement par le rhème.

Notamment par les enseignants de grammaire qui mettent en avant les problèmes morphosyntaxiques, quelquefois au détriment du sens, la phrase nominale est considérée comme un écart à la norme. Et pourtant, elle fait partie de la langue de tous les jours, autant que les phrases verbales qui peuvent être plus ou moins longues. Depuis que Saussure a défini la langue comme un instrument de communication propre à une communauté humaine, tout ce qui est au service de la communication interindividuelle mérite d'être étudié ; toutes les formes de communication, langagières ou autres, doivent être prises en compte si l'on a l'intention d'analyser et d'enseigner la communication humaine d'une manière exhaustive et méthodique.

Grammaticalement parlant, une phrase canonique française doit avoir au moins un sujet et un verbe. La phrase nominale est ainsi appelée du fait que, même sans verbe conjugué, un ensemble de mots, voire un seul mot peut jouer le rôle d'une phrase canonique.

## 1. PHRASE NOMINALE

Contrairement aux phrases verbales, les phrases nominales s'organisent autour d'un nom et sont notamment utilisées dans les exclamatifs, les slogans publicitaires, politiques, les titres de presse, les titres d'ouvrages...

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<sup>122</sup> Prof. Dr., Université de Hacettepe, Ankara.

<sup>123</sup> Excepté quelques cas où la place de l'adjectif change le sens de l'énoncé : « *Sacré voyage !* » / « *Voyage sacré !* ».

## 1.1. Les traits propres aux phrases nominales

1- Les phrases nominales ont souvent une **forme brève**. Ce qui tantôt facilite la communication par *économie* dans la langue, tantôt complique la compréhension, notamment pour les allophones.

2- Les phrases nominales de nature laconique<sup>124</sup> sont généralement **elliptiques** ou lacunaires. L'omission de la copule (et celle du verbe « être ») est fréquente, et elle ne provoque pas trop d'ambiguïté. Cependant, le manque du verbe autre que « être » attend un certain effort de participation active de la part de l'allocutaire, car l'absence du verbe s'accompagne forcément d'effacement de la personne, du temps, de l'aspect, de la modalisation et de la modalité, etc. Néanmoins, deux phrases nominales, fussent-elles coupées du contexte peuvent comporter certains de ces éléments : « Deux longues années d'attente. / Et puis, la bonne nouvelle ! ». Dans la *première* phrase ; **Temps** : passé ; **Aspect** : duratif ; **Modalisation** : subjective (avec l'adjectif évaluatif non axiologique : « longues ») ; **Modalité** de la phrase : déclarative. Et dans la *seconde* phrase : **Temps** : passé ou présent ; **Aspect** : semelfactif<sup>125</sup> + ponctuel ; **Modalisation** : subjective (avec l'adjectif évaluatif axiologique : « bonne ») ; **Modalité** de la phrase : Exclamative.

3- Les phrases nominales, plus que les phrases canoniques, risquent de causer une **ambiguïté**. C'est le cotexte et le contexte qui aideront le récepteur du message à lever cette ambiguïté. Par exemple, le titre d'actualité suivant indique un événement réalisé : « Irak : attentat suicide contre une université de Bagdad, trois morts ». Par contre, un titre tel que « Elections municipales en Turquie » posera un problème de temporalisation dans l'interprétation : passé récent ou futur proche ?

Dans l'exemple cité tout à l'heure, « Deux longues années d'attente. Et puis, la bonne nouvelle ! », l'absence du sujet peut créer une ambiguïté : *Après* deux longues années d'attente, *j'ai/ tu as / il-elle a/ on a reçu* (?) la bonne nouvelle. L'identification du sujet-agent ne pourra se faire qu'avec le recourt au contexte ou à la situation en question.

La même ambiguïté concernant le sujet apparaît dans l'énoncé : « Dans ces conditions, aucune raison d'être candidat. » (pour moi / toi / il-elle / on ?)

4- Les phrases nominales se servent, dans certains cas, de la créativité langagière du locuteur. Ainsi, entrent en jeu des **figures de style**. C'est ainsi de nouveau au récepteur de procéder à une interprétation pour donner du sens à l'énoncé. Par exemple, dans le titre suivant, l'auteur a recours à la métaphore faite par *analogie* : « La chasse aux billets est ouverte<sup>126</sup> » (*Le*

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<sup>124</sup> Qui est exprimé de manière concise et sans détails.

<sup>125</sup> Semelfactif (qui se produit une seule fois) ≠ Itératif.

<sup>126</sup> « L'article détaille les différentes façons d'acquérir des billets pour les matchs de la Coupe du monde de football 1998, en France. Toutefois, l'auteur souligne le fait que l'achat de billets est difficile, car il y a une demande importante.

« Ce titre utilise l'image de la chasse pour suggérer un fait qui préoccupe beaucoup de supporters : la vente des billets. Et, cette image de rappeler que l'achat des billets est loin d'être facile. Chacun doit les

*Monde*, 4 décembre 1997) (« La saison de chasse (aux animaux) est ouverte » → chasse aux billets).

5- Malgré certains problèmes de communication que peuvent poser les phrases nominales, elles créent un certain effet de sens par leur **force d'expressivité**.

### 1.2. Les modalités des phrases nominales

On trouve des phrases nominales dans toutes les modalités de phrase, définies pourtant essentiellement en fonction du verbe :

*Phrase assertive (ou déclarative)* : « Bientôt les vacances. »

*Phrase interrogative* : « Problème ? » / « A quand le voyage en Suisse ? »

*Phrase exclamative* : « Excellente attitude ! » ; « Bonne chance ! » ; « Attention à la marche ! » ; (Un verre, ça va. Trois,) bonjour les dégâts !<sup>127</sup> » ; « Deux heures sur la plage : bonjour les coups de soleil ! » ; « Pas besoin de longues explications ! »

*Phrase impérative (ou de requête)* : « Animaux domestiques interdits » ; « Protection obligatoire de la vue ».

### 1.3. Phrases nominales dans divers types de texte

De même, les phrases nominales se trouvent insérées dans tous les types de texte au même statut que les phrases verbales :

**Prescription** : « Réservation par téléphone » ; « Réservation non remboursable » ; Sur des panneaux : « Entrée payante » ; « Chien autorisé » ; « Parking interdit ».

**Description** : Si on avait de longs paragraphes pour décrire un appartement à louer ou à vendre, peu de gens seraient volontaires pour lire le texte jusqu'au bout. Pour cause de manque de place et du coût des annonces, les textes contiennent presque entièrement des phrases nominales (ou non verbales), juxtaposées et coordonnées : « Proche des commodités et des transports en commun, 2 P situé au 2<sup>e</sup> étage avec ascenseur comprenant : un séjour, une cuisine indépendante, une salle de bains, un WC indépendant et une chambre. Un beau balcon. Eau chaude, eau froide et chauffage compris dans les charges. »

**Narration** : « Au lendemain des élections, déception totale. » / « Après deux ans de patience, voilà la victoire. »

## 2. LES PHRASES NOMINALES ET LA DIDACTIQUE DES LANGUES

Ce qui rend nécessaire l'insertion des phrases nominales dans l'enseignement des langues (ici, étrangères, et particulièrement du FLE), c'est que tout d'abord, nous sommes entourés de

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chercher, les pister et faire preuve de ruse pour se les approprier car ils se font rares. L'image semble donc appropriée à la situation. » (<http://www.culture.gouv.fr/culture/dglf/clemi/analyse-titres.htm>)

<sup>127</sup> « Bonjour les... » : s'emploie pour annoncer que quelque chose (généralement de fâcheux) va se produire.

phrases nominales dans la vie quotidienne et sociale plus que l'on ne l'imagine. S'il en est ainsi, l'enseignement / apprentissage de ce phénomène langagier ne doit pas être négligé, ni passer devant les phrases canoniques.

## 2.1. Domaines d'utilisation

- L'une des huit parties du discours est l'**interjection** permettant l'expression d'un sentiment ou reproduisant un bruit. Personne ne dira « Je vous appelle à mon aide parce que je suis en danger » ! Quelqu'un qui est en une situation pressante n'aura d'ailleurs ni le temps ni le courage de faire une telle phrase aussi correcte que longue. Il criera tout simplement « au secours ! ». Il s'agit là d'un mot dit d'un seul souffle comme il en est d'ailleurs, dans plusieurs langues : en anglais : « Help ! », en allemand : « Hilfe ! », en finnois et en hongrois « apua! (auttakaa!) », en italien « Aiuto! », en turc, « İmdat ! ».

De la même manière, une personne que l'on vient de déposséder de son bien et appelant à l'aide criera *instinctivement* : « Au voleur ! ». Signalons que cette forme figée a acquis une signification particulière en Turquie dans un contexte politique : à la suite des opérations de corruption survenues le 17 décembre 2013, les manifestants turcs ont crié à l'unisson, dans les rues, cette fois-ci de manière *réfléchie* : « Au voleur ! », en désignant bien les autorités gouvernementales.

- Par ailleurs, les **titres de presse** tendent à attirer l'attention en créant un effet de sens et à annoncer en résumant ce qui suit. Ainsi, dans un article d'information, nous lisons : « Le tiers des aliments produits chaque année dans le monde pour la consommation humaine, soit environ 1,3 milliard de tonnes, est perdu ou gaspillé, selon un rapport préparé par la FAO à la demande de l'Institut suédois pour l'alimentation et la biotechnologie. » (*Togo Politique*<sup>128</sup>, 25.01.2014). Le titre de cette information est tout simplement : « Quel gâchis ! », ce qui explique et interprète, en deux mots, le contenu de toute l'information qui suit. C'est donc une phrase nominale qui fonctionne comme une cataphore *résumante ou résomptive*. En effet ce titre n'aura un sens précis qu'avec le texte qui le suit.

- Par ailleurs, on observe souvent le recours aux **expressions figées** dans les phrases nominales. A titre d'exemple, prenons l'expression traduisant une certaine superstition, « Jamais deux sans trois » qui désigne le fait qu'une chose qui s'est produite deux fois se produira une troisième.

- En outre, nombre de **maximes**<sup>129</sup> (atemporelles ou intemporelles ; et exprimant des vérités générales) se présentent sous forme de phrase nominale : « Paix dans le pays, paix dans le monde » est une devise prononcée par Atatürk pour la première fois le 20 avril 1931 durant son manifeste de vote et est devenu la devise de la Turquie. Un principe intégrant, qui énonce que nul ne peut rester neutre vis-à-vis d'un malaise quelconque dans le monde en considérant que le monde entier y est impliqué (<http://fr.cyclopaedia.net>).

- **Slogans politiques** : « Non à la violence contre la femme ! » / « Oui à un environnement durable ! ». Pour donner un exemple d'actualité, les manifestations antigouvernementales en Turquie se sont déclenchées le 31 mai 2013 suite à une décision d'abattre les arbres dans un jardin public, Gezi Parkı de Taksim, à İstanbul. Lors des

<sup>128</sup> <http://www.republicoftogo.com/Toutes-les-rubriques/Politique/Quel-gachis> (consulté le 25.01.2014)

<sup>129</sup> Proposition, phrase généralement courte, énonçant une vérité morale, une règle d'action, de conduite.

manifestations qui se sont succédé et répandues dans tout le pays, les manifestants dans diverses villes ont tous crié un slogan pour se référer à l'origine de la crise politique : « Partout Taksim, partout la résistance ! ».

- **Slogans publicitaires** : « André, le chasseur sachant chasser » est un slogan produit en 1932, par allusion au dicton « un chasseur sachant chasser sans son chien est un bon chasseur », lui-même basé sur un virelangue (ou fourchelangue), locution à caractère ludique, et caractérisée par sa difficulté de prononciation.

## 2.2. Pourquoi réserver une place aux phrases nominales dans l'enseignement des langues étrangères ?

Ceci, parce que :

- leur emploi est loin d'être moins fréquent que celui des phrases canoniques ;
- elles offrent un moyen d'expression économique ;
- elles permettent une expression efficace ;
- par ailleurs, étant donné que la temporalité et l'aspect contenus dans le sémantisme des verbes s'y trouvent effacés ou implicites, elles doivent être enseignées en y portant une attention plus particulière que les phrases canoniques.

## 2.3. Les activités de classe à partir des phrases nominales

1- Faire découvrir le propos d'origine auquel fait allusion un slogan : **activité heuristique / d'association**.

2- Du fait que les phrases nominales sont elliptiques, l'apprenant complétera les lacunes selon les circonstances dans lesquelles elles sont produites. Les phrases nominales peuvent ainsi permettre à une **activité de paraphrase**, allant de la phrase nominale à la phrase verbale. Ce que l'on fait depuis longtemps dans des cours de langue avec surtout des titres de presse ; activité contraire de la nominalisation.

3- Demander aux apprenants de créer des situations dans lesquelles une phrase nominale peut être énoncée. Si « Bon voyage » est une phrase nominale utilisée dans une situation unique ou sans alternative ; « Bonne chance » ou « Excellente attitude ! » en revanche sont des expressions nominales, utilisées dans toute une panoplie de situations quotidiennes. Par ailleurs, dans le code écrit, sur des panneaux signalétiques, les situations se diversifient plus ou moins largement : « entrée interdite ! » (aux personnes non autorisées), « zone interdite » (suite à des accidents nucléaires ; dans un terrain militaire ; dans un aéroport ; entre les pays frontaliers ; dans un site Internet...) ; ou « protection obligatoire de la vue », « de la tête », « des pieds », « de l'ouïe », « des mains », « de la figure », « du corps » ou « des voies respiratoires » sont des signalisations de santé et de sécurité, en particulier, sur les lieux de travail. En revanche, on observe l'indication « Photographies interdites » dans un musée ou une exposition ; et « Usage de la calculatrice interdit » dans un examen de sciences. **Activité de créativité**.

4- Jouer avec les mots à partir des slogans pour en faire produire d'autres, en phrase nominale : **activité ludique** et activité de créativité. (« Notre plaisir, votre satisfaction » <Carlsberg> »).

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# PISA scores from 2003 to 2012: A comparison of Turkey with the three countries which have been successful in each term in field of science

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## Abstract

This study was conducted with a view to comparing Turkey with the most successful three countries of each term according to PISA science scores from 2003 to 2012. The study used document analysis as a qualitative research technique. The study revealed significant differences between Turkey and the countries examined in terms of economy, pre-school education, length of compulsory education, transition to secondary and higher education, teachers' education, decision-making power of teachers and in-service training.

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*Keywords:* PISA, science, Turkey

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## 1. Introduction

PISA (Program for International Student Assessment) was developed by OECD in order to determine how efficiently the students at the 15 year-old age group are educated and trained in the face of the challenges of today's information society at the end of the compulsory education (MEB, 2014). The quality that PISA is in pursuit of measuring is not to what extent students learn the subjects under the curricula at schools, but their ability to use their knowledge and skills under the circumstances they may encounter throughout their lives. The PISA Project covers three main fields such as mathematics, science and reading skills. Furthermore, PISA also measures problem solving skills in relation to these three main fields (NCES, 2012). The PISA Project, which is applied in three-year terms, gives weight to a field of subject at every individual term.

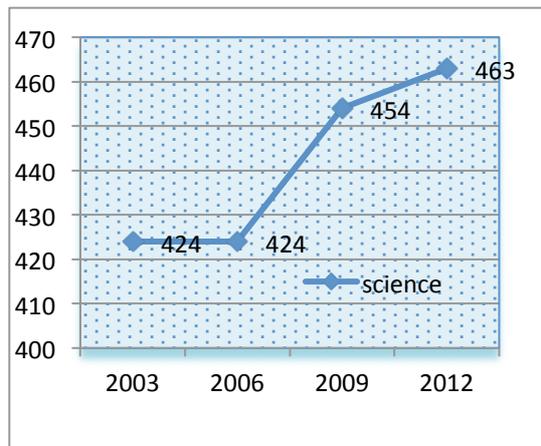
The PISA Second Cycle Project, which Turkey participated in, too, covered the years between 2000 and 2003. In this term, the weighed field of subject was mathematics while students were also measured for their knowledge and skills in science, reading and problem-solving. 41 countries, including Turkey, participated in this project. Thirty countries were OECD members whereas the other eleven countries were non-members. Turkey ranked in the 28<sup>th</sup> position with a score of 424 points in science in 2003. Although this score was regrettable for Turkey, it turned into positive as it led to initiate a process towards making radical reforms in the education system. A new education system based on a constructivist approach that was put into practice gradually in the educational year of 2005-2006 has replaced the old education system based on a behavioural approach that had reigned for many years. After such developments, Turkey has started to take PISA examinations regularly.

For the purpose of this study, one can find here information about situation of Turkey only in field science under

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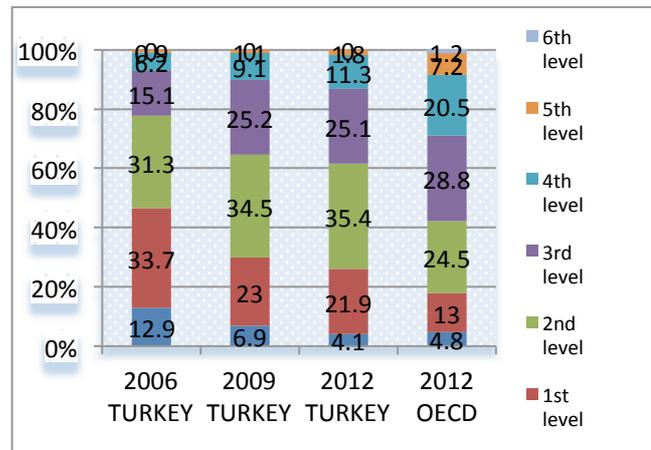
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the PISA Project. Figure 1 shows the scores of Turkey in the field of science in the PISA examinations that Turkey took and Figure 2 displays the break-down of students by science competence levels in PISA examinations between the years of 2006 and 2012.



Note: Works of MEB (2010, a), MEB (2010, b) and MEB (2013) were cited when making the Figure 1.

Figure 1. Science scores of Turkey in PISA



Note: Works of MEB (2010, a), MEB (2010, b) and MEB (2013) were cited when making the Figure 2.

Figure 2. Breakdown of students by science competence levels in PISA examinations between the years of 2006 and 2012

According to Figure 1, the scores were similar between the years of 2003 and 2006 whereas there was an increase of 30 points during the 2006-2009 period. Although this increase was the largest one among OECD members, Turkey performed far below the OECD average at every term. A significant increase has not been observed in the scores of the period of 2009-2012 when compared to the previous period. Figure 2 points to the percentage of students who are below the level 2 corresponding to basic skills. It points out that almost half of Turkish children at age of 15 do not have basic skills according to the 2006 scores. In 2009 and 2012, this percentage displayed a tendency of gradual decrease. From 2006 to 2012, percentage of students at and under level 1 decreased while the percentage of students at and over level 2 has increased. Particularly in the transition between 2006 and 2009, the decrease of the percentage of students at and under level 1 supports the increase of 30 points in Figure 1. Nevertheless, the percentage of students who performed outstandingly by receiving points corresponding to level 5 in Turkey is sizably lower than the OECD averages. It is a pity that Turkey had no student who performed at level 6.

Although the low scores in the PISA examination in 2003 were explained by our education system based on a behavioural approach, controversies arose in educational circles because the scores after 2003 could not bring a smile on faces either. Considering that it would shed some light on this debate, this study was conducted with a view to comparing Turkey with the most successful three countries according to PISA physical science scores from 2003 to 2012.

## 2. Method

This study used document analysis as a qualitative research design. At the data collection phase, we have examined the physical sciences scores of PISA examinations from 2003 to 2012. To this aim, three most successful countries were analyzed. These countries were found to be Finland, Canada, Japan, Estonia, China (Hong-Kong and Shanghai) and Singapore. China was examined as a whole because there was not any elaborated information about Hong-Kong and Shanghai. Under the light of the information obtained at the data collection phase, a table was established about countries for a more facilitated comparison.

### 3. Findings

Table 1 gives us general information regarding economies, education and teachers' education systems of Turkey and three countries that were the most successful at every term in PISA science examination.

Table 1: Economies education and teachers' education systems of countries

Country	Attributes	ECO NOM Y	PRE- SCHOOL	PRIMARY EDUCATION	SECONDARY EDUCATION	HIGHER EDUCATION	EDUCATION OF TEACHERS
TURKEY		<b>GDP:</b> USD 560 billion <b>Incom e per capita :</b> <b>\$15.00 1</b>	It is not compulsory preschool education is encouraged and promoted by government and relevant authorities.	There is a 4+4+4 year gradual compulsory education. Children go to primary school as they are 66 months old. The first 4 years are primary school while the second 4 years cover secondary school. There is a national curriculum. Course books are selected by Ministry of National Education.	Secondary education (high school education): Transition to the high school is at the end of the 8 <sup>th</sup> grade (the 4 <sup>th</sup> year of the secondary school) via the Examination of Transition from Basic Education to Secondary Education (TEOG). Secondary education covers all general, vocational and technical education institutes that render a four-year compulsory, formal or informal education after the basic education. Graduates of these schools receive a high school degree.	Those who graduate from high school or equivalent schools must pass a national examination in order to go to higher education institutes. Higher education covers institutes that render at least two-year higher education after high school.	Students must pass the national examination made after secondary education in order to enter a teachers' education institute. To be a teacher requires graduation from a four-year faculty of education or a faculty of science or letters as well as getting the required scores in the Civil Servants Selection Examination. Ministry of National Education is in charge of in-service training.
FINLAND		<b>GDP:</b> \$ 250 billion <b>Incom e per capita :</b> <b>\$34,58 5</b>	Since 2001, all children at age of 6 are entitled to preschool education free of charge. In 2002, 98% of 6 year-old children	Children must start compulsory primary education in the year when they finish their 7 <sup>th</sup> age. Compulsory education is for 9 years. Course books and curricula are determined by schools themselves.	Students who successfully graduate from compulsory education are eligible for general and vocational education and training. Applications to secondary education are through a national application system.	Higher education is rendered in universities or vocational collages that are higher education institutes for a professional life. Both have their own profiles.	Each institute of education of teachers has their own examinations. Teacher who work in the first six years of basic education teach all subjects in general (classroom teachers) while subject teachers work in the last three years and the second phase of secondary

	attended preschool education.				education. Classroom teachers have a master's degree on Education while subject teachers have a master's degree not only on pedagogical subjects but also on their field of speciality.
CANADA	<p><b>GDP:</b> Licensed baby-sitters and nurseries render basic and social education to children younger than five years old. Children start to go to kindergarten when they turn in five years old. In many states, preschool education is mandatory.</p> <p><b>USD</b> 1,821 trillion</p> <p><b>Income per capita :</b> \$39,057</p>	<p>Although the age for compulsory education varies from one state to another, in general it starts at the age of 5-7 and finishes at the age of 16-18. Primary school is from the 1<sup>st</sup> grade to the 6<sup>th</sup> or 8<sup>th</sup> grades. It varies from one region to another. If a student fails, he/she must repeat the class. States, local administrations, school regions and school boards are very influential in structuring the educational system. The curricula vary from one state to another.</p>	<p>Vocational or academic education is rendered. Students can be classified according to their skills. Curriculum is rather heavy and there are compulsory subjects.</p>	<p>Higher education institutes include universities, colleges and the institutes that are opened by different educational institutes. Administration of these higher education institutes is under the legal responsibility of states or regions. In Canada, students must take many required courses. It is about not only specialization in one single subject but being well-furnished in many subjects.</p>	<p>There are two models in education of teachers: undergraduate and graduate degrees. Teachers of secondary education must have a license degree. In-service training is important. In-service training is under the responsibility of Ministry of Education, Universities, School Boards and Teachers' Union.</p>
	<p><b>GDP:</b> It covers children at the age group of 1-6 years. It is not compulsory.</p> <p><b>USD</b> 21,85 billion</p> <p><b>Income per capita :</b> \$16,88</p>	<p>Basic education is compulsory at level 1. Education is for 9 years and level 1 is composed of primary and secondary schools. Education is free of charge at state and local basic</p>	<p>Phase 2 general education is not compulsory. The second phase of secondary education covers a 3-year education. Schools at this phase prepare their own curricula by themselves in</p>	<p>Higher education system is composed of universities that render academic and vocational education as well as</p>	<p>In general, teachers have higher education degrees. Education of teachers at universities is composed of general educational science, psychology, art of teaching and practical trainings. Education of teachers is at</p>

ESTONIA	0	and special administrative institutions. Moreover, government and families contribute in funding.	education institutes. Each school prepares its own curriculum in line with the basic national curriculum. Teachers select the course books by themselves. Students must pass three exams to complete the level 1.	accordance with the national one. The number of students in classrooms is 36 in average. Students should pass five graduation examination in order to complete the second phase	vocational colleges that have vocational higher education curricula. Higher education institutes are autonomous. Thus, each higher education institute can define their special terms and conditions.	undergraduate and graduate levels. (ERYDICE, 2007) In-service training is important.
JAPAN	<b>GDP:</b> USD 5,96 trillion <b>Income per capita</b> : \$45,774	Preschool education is given at kindergartens and day-care centres. Children do not fail a class in kindergartens.	Primary education is composed of primary schools for 6-12 year-old children and secondary schools for 12-15 year-old children and it is compulsory.	These are the educational institutes where graduates of primary and secondary schools attend. There are three types of high schools in Japan: Full time, part time and correspondence high schools.	There are three types of higher education institutes in Japan: Universities, colleges and technical schools.	Candidate teachers apply to the Regional Board of Education to be a teacher. Director of Education asks for the opinion of the principal of the relevant school, and the principal conveys his/her opinion. Board of education invites candidates to a written examination. Candidates who pass the written exam are invited to an interview. Successful candidates are appointed as candidate teachers. Those who complete the six-month candidacy period quality to be a civil servant. In-service training is important. Ministry of Education, Regional and Local Education Units, Schools and the staff are responsible for in-service training.

<b>CHINA</b>	<p><b>GDP:</b> USD 9,020,3 trillion</p> <p><b>Income per capita:</b> \$ 1,926</p>	<p>They just provide special care for children without any academic curriculum. Furthermore, any child older than 36 months can go to kindergartens which are in the official education system.</p>	<p>Children start to go to school at age of 7 and according to the “Compulsory Education Act” primary school is for 6 years (still 5 years in some regions) and secondary school is for 3 years. Primary education is for 9 years in total. There are two types of schools.</p>	<p>Students who graduate from nine-year compulsory education attend high schools for three years. The system is configured as 6+3+3 years and 5+4+3 years. Private secondary education institutes are for two, three and four years, and their durations and entrance terms depend on their curricula.</p>	<p>In China, there is a higher education system that contains almost all fields in many levels and forms. However, many young people are still deprived of a chance to go to a university.</p>	<p>Primary school teachers are educated at vocational high schools where they study the regular courses and vocational courses together. Teachers of secondary schools are educated at 2 or 3-year vocational institutes after high school. In-service training is important. Every teacher must receive in-service training for certain amount of hours specified by the Government.</p>
<b>SINGAPORE</b>	<p><b>GDP:</b> 324,6 billion SAGP dollars</p> <p><b>Income per capita:</b> \$51,709,45</p>	<p>Kindergartens provide three-year education for children from 3 to 6 years old and they are not compulsory. Nurseries also provide kindergarten education for children at age of 3-6 years.</p>	<p>In primary education institutes, education is compulsory for 6 years. The first 4 years is the basic stage while the last two years are for professional guidance. At the end of grade 4, students are grouped according to their scores in the primary school leaving exam measuring their English, mathematics and native language skills and knowledge (PSLE=primary school leaving examination). Parents have right to a word at the final grade while decision-maker is the principal of the school at grade 5 and 6. At the end of</p>	<p>Secondary education institutes render education for four or five years. It is compulsory and free of charge. Students have three choices based on their learning skills and areas of interest: special, fast and regular (academic or technical). Students are placed in high schools according to their score in primary school leaving exam.</p>	<p>It is composed of two or three-year associate colleges as well as polytechnic and technical universities or institutes. These schools enrol students according to their scores in the secondary education graduation examination.</p>	<p>When students are accepted in to pre-service education and training programmes, the number of teachers needed is taken into consideration and quotas are determined accordingly. Therefore, students are often employed directly after graduating from these programs. Students must take a written examination and an interview where they are measured for their teaching skills (sample lecturing) as well as their interest and aptitude for the profession and their communication skills. In general, students accepted to the program receive the education free of charge and even they are paid. In-service training is important.</p>

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grade 6, students  
take primary school  
graduation exam.

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Note: Works of Balcı (2009), Aydođan (2008), Özođlu, Gür and Altunođlu (2013), Eurydice (2008) and Erginer (2007) were cited when making the table.

As we analyze the economies and income per capita of countries in Table 1, we can see that all countries in the table except China have a higher income when compared to Turkey. We also observe that, in all countries including Turkey, preschool education is not compulsory. The length of primary education varies from 9 to 12 years. In all countries examined, there is a two-tier compulsory education whereas compulsory education is 4+4+4 years in Turkey. Considering the secondary education, in Turkey there is an examination for transition to secondary education while other countries make a secondary school graduation examination. Turkey makes a national examination for university entrance and uses the score of this examination to place students in departments of universities. In other countries, there is generally a high school graduation examination and each university has a specific examination for itself. Especially in education of teachers, there are great differences between Turkey and other countries. In Turkey, teachers' education institutes accept students only according to their scores in the university entrance examination whereas all other countries have additional examinations. Successful countries mostly require a four-year undergraduate degree for primary school teachers and a graduate degree for secondary school teachers. Considering in-service training, each country has its own in-service training practice while there are differences in units rendering in-service training and the content of in-service training.

#### 4. Discussion

Findings of the study have shown that successful countries are mostly strong in socioeconomic terms. Although national income levels of countries do not have a definite impact on educational quality, educational qualities and outputs may have a direct impact on economic performance of a country. According to the PISA scores, we observe a correlation between the successful performance of countries in PISA and economic growth and development of the countries (ERG, 2010; Acar, 2012). Although we take into consideration that the national income level of Turkey is low, scores of Turkey in PISA examinations are still far from the expectations (ERG, 2010). The score difference between students in the lowest and highest socioeconomic quarters is too high (92 points according to the 2009 scores) (ERG, 2010), which displays the correlation between socioeconomic status and education. As we examine the countries in Cluster 3 such as Finland, Hong-Kong, China, Japan and etc. in the clustering analysis according to the 2009 PISA scores, we see that the countries in this cluster have equality of opportunity, qualified teachers and direction of students according to their skills in their educational systems (Acar, 2012; Çobanođlu and Kasap, 2010). On the other hand, as we analyzed the countries in Cluster 1 where you can also find Turkey, the most striking aspect is the share that these countries allocate to national education out of the general budget. Accordingly, one of the improvements Turkey needs to carry out in order to perform successfully in international examinations like PISA is to reach up to EU averages in terms of socio-economic figures (Acar, 2012).

When we examine the successful countries, we observe the great importance attached to preschool education in these countries. Preschool education is one of the most important tools to cope with the decisiveness of socio-economic level. However, the PISA scores show that preschool education does not fully utilize such a tool in Turkey (ERG, 2010). It is a pleasing fact that the Government in Turkey has been attaching more importance to preschool education in recent years. Primary education is compulsory in all countries. However, we can observe differences in the length of compulsory primary education. The model of 4+4+4 years has been controversial in Turkey. In particular, many circles have strongly reacted against the condition of completing 66 months to start primary school. In other countries, primary school starting age is 6 or 7 except in some states of Canada.

Although there are national examinations in each country for transition from primary to secondary education, the purposes of these examinations are different from one another. In Turkey, these examinations are used for placing students in secondary education institutes whereas they are made in all other countries to graduate from primary education. It is also the case in transition to higher education institutes. In Turkey, students are placed in to

departments of universities according to their scores from the national university entrance examination while these examinations are made in other countries to finish high school and each university has its own examinations when selecting the students to enrol, which points out that students who will go to a university carry attributes that are specific and appropriate to the department where they will study. In other words, there are professional practices in all those countries right to the purpose unlike the ones in Turkey where students select their university department merely according to their scores in the examination.

One of the success factors of all these countries examined is perhaps the way they educate and develop their teachers. In these countries, institutes that educate and train teachers after secondary education make specific examinations in addition to the general examination. These specific examinations include interviews and sample lecturing to measure academic knowledge as well as the interest and aptitude for teaching profession and communication skills of candidates. Countries such as Finland and Singapore take into consideration the number of teachers needed when accepting students in to higher education institutes and they only accept students as many as they need, which facilitates direct employment of candidate teachers who graduate from the teachers' education departments (Özoğlu, Gür & Altunoğlu, 2013). However, in Turkey, the need for teachers is not taken into account and placement of students in to education departments of universities depends merely on the examination scores, which results in many problems. First of all, the system does not care about whether a candidate who is accepted to the education department bears the attributes and characteristics required for teaching profession. It leads to problems about education and development of quality teachers. Secondly, since the need for teachers is overlooked, there are pilings in education departments of universities and it cannot be possible for every graduate to be employed. Any graduate must take an examination called as "the civil servants selection examination" (KPSS) which consists of educational sciences, general knowledge and an additional field examination introduced two years ago. Candidates who get the required score in this examination are directly appointed as teachers without any further condition. Another important aspect in education of teachers is the quality of trainers of candidate teachers. According to the Eurydice (2006), in Europe including Finland and Estonia, trainers' standards have been set to educate and train candidate science teachers at schools. According to these standards, trainers of candidate teachers must have a PhD degree in physical sciences and must be well-experienced in educational research. The trainers who will serve as a mentor for candidate teachers in practices must have at least five-year experience. Despite such a professional approach to education of teachers, it is obvious that the quality of the staff tenured in education faculties in Turkey is highly questionable. Özoğlu, Gür and Altunoğlu (2013) emphasized two important aspects about education of teachers. First, due to giving education to too many teachers, there are pilings in pre-service programs and we encounter very serious problems to find both qualified trainers for candidate teachers and schools for practical education that are indispensable for translation of theory into practice. Secondly, in addition to all these problems, profession of teaching has started to lose its attraction in recent years in Turkey. There is a strong relationship between respectability of a profession and its social status. Professions with a higher status will be preferred by more people and there will thus be a higher chance to select the most successful ones. Since it is the Ministry of National Education who specifies what teachers will do and how they will do it, it is very difficult to speak of autonomy. In Turkey, due to all these problems listed, we observe significant decrease in base points and there are serious changes in the profiles of students who prefer this profession. However, the teacher profile in the successful countries is fairly different from that in Turkey. For instance, in countries such as Finland and Estonia, school-teaching is a very respectable profession, which is easily observed in social status and income levels of teachers as well as the vast powers and authorities given to teachers in decision making processes about educational issues such as school policies, selection of course books and formulation of the curriculum (Özoğlu, Gür & Altunoğlu, 2013; Eurydice, 2008).

Another important aspect of successful countries is the importance attached to in-service training. These countries take significant steps to ensure professional development of teachers. For instance, Chinese Ministry of Education required primary and secondary school teachers to receive at least 240 hours of in-service training in a period of five years in 1999 for professional development of teachers. China thus updated its curriculum and facilitated professional development of teachers. Finland is another country who attaches great importance to in-service training. What makes Finland different is that in-service trainings are determined by the school themselves. In Turkey, these programs are regulated centrally (Özoğlu, Gür & Altunoğlu, 2013). Ministry of National Education

is responsible for development of educational staff in Turkey. Nevertheless, the central structure of the ministry restrains the in-service training activities from achieving up to desired levels (Aydoğan, 2008). For example, in a study conducted with Turkish teachers, teachers stated that they deemed insufficient the in-service training program rendered by the ministry, the mandatory participation condition was a problem and trainers who render these trainings were not qualified enough (Çelik, 2012). In another study conducted with teachers, teachers stated that barriers such as there are not motivating elements to carry out activities for professional development, there are not so many activities for professional development at schools, they were not asked for their opinions in selection of in-service training subjects and they are not free to select the program they want to take part and etc. hindered their professional developments and in-service trainings (Özer, 2004).

## 5. Conclusion and Recommendations

This study was conducted with a view to comparing Turkey with the most successful three countries of each term according to PISA physical science scores from 2003 to 2012 in field of physical sciences. The study used document analysis as a qualitative research technique. The study revealed significant differences between Turkey and the countries examined in terms of economy, pre-school education, length of compulsory education, transition to secondary and higher education, teachers' education, decision-making power of teachers and in-service training. We can recommend the followings in the light of findings of the study:

- Pre-school education should be attached more importance.
- 4+4+4 year education system should be revised.
- Serious reforms are highly needed in education of teachers. First, the number of students to be accepted in education faculties should be determined in line with the needs. Secondly, as is the case in other countries, additional examinations specific to the profession should be made when students enter in education departments.
  - Teachers should be allowed to be directly involved in educational issues such as formulation of curriculum and selection of course books.
  - In-service training programs of successful countries should be analyzed and in-service training activities in Turkey should be more professional.
  - As directly related with all the above-listed issues, budget of education should be increased.

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# Place engine: A dynamic model of integrated human-oriented GIS and urban media

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## Abstract

Urban media is widely used to provide citizens with public information, commercial ad, entertainment content, and pure artistic expression in some cases. However, as most of current urban media projects have been usually implemented without understanding human activities and spatial context, they do not reflect humanities-related context of the city. A place is woven with human activities, emotions, and its social context together, thus urban media should be implemented by reflecting the identity of the place. Furthermore, as the paradigm changes from the possession to the sharing, shared memory, knowledge, and experience are now recognized as important social capital. The basic assumption is that sharing of place experience can be a key element to construct the sense of place. Such sharing possesses important value as it may enhance the social amenity among the citizens. This research aims to propose a systematic framework where urban media plays a critical role in creating the sense of place. The urban media interacts with people through sharing experience, knowledge, and memory of the place within the framework. To realize augmented place, the Place Engine system is proposed as a key component of the framework. The logic structure of Place Engine is constructed by using ontology rules. Lastly, the possibilities as an educational application are presented by providing 'Digital Palimpsest' which can generate multi-faceted contents through the Place Engine. Moreover, a method of contents configuration and delivery is presented by applying proposed 'Digital Palimpsest' in a real example, a traditional teahouse Gui-Cheon 'Back to Heaven.'

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*Keywords:* Urban Media; Collective Memory; Social Engagement; Human-Oriented GIS

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## 1. Introduction

Urban media is an integration of hardware and software installed in a city space. It conveys urban information through various kinds of media contents. It is widely used to provide citizens with public information, commercial ad, entertainment content, and pure artistic expression in some cases. Being implemented without incorporating human activities and spatial context, most of current urban media projects fail to reflect humanities-related context of the city. Therefore, it is hard to find the sense of place from superficial form and content delivered through the urban media.

Edward Relph argued that a space becomes a 'place' when it imbues with human activities, cultural and physical meanings of the environment (Relph, 1976). Things, emotions, activities, and its context are intermingled into the sense of a place. Diverse cultural groups, communities, and people are given their meanings from the place, in turn (Anderson, 2010). Also, a place is recognized as socially important as it contributes to the formation of self-identities of individual and group (Jeon *et al.*, 2012). A place is woven with human activities, emotions, and its social context together, thus urban media should be implemented by reflecting the identity of the place. For the urban media to reflect the identity of a place, it should communicate such elements with the users in a synergistic way. The urban media in this paper refers to personal media as well as intelligent street objects both of which provide citizens with various interaction channels supported by sufficient bandwidth and multimedia functions. Here, the intelligent

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street objects include ICT technology-integrated media facades as well as intelligent streetlight or information kiosks. They have been adopted as typical intelligent street objects or what is called street-ware in most of current smart city examples (Kim & Cho, 2010; Shin & Kim, 2008). On the other hand, the personal media includes various kinds of emerging wearable devices as well as smart phones.

The concept of experience as a market product has been around for a long time. It meant something sharable yet remained as an abstract entity. The experience has recently emerged as highly profitable lifestyle product along with the technological advances and material affluence (Pine & Gilmore, 1999). Furthermore, as the paradigm changes from the possession to the sharing (Rifkin, 2001), shared memory, knowledge, and experience are now recognized as important social capital. An experience or a memory is regarded personal in its nature. It is, however, also a social product that utilizes, stores and conveys the collective symbols or stories (Olick, 2007). Therefore, sharing experience through other generation's memory makes it possible to encounter abundant and vivid history of the community. Also, experience and memory have significant potential in place making process. It is because human can use the memory and the experience to sublimate personal idea into collective knowledge (Frank & Schneekloth, 1994). Joel Kotkin argued that what is more important than adding a new building to the city is to encourage people to appreciate living experience in a city (Kotkin, 2006). The basic assumption in this paper is that sharing of place experience can be a key element to construct the sense of place. Such sharing possesses important value as it may enhance the social amenity among the citizens.

In conclusion, next generation urban media for smart green city should; 1) reflect the identity of place, 2) make people aware the value of memory and experience, and induce people to share them in a sustainable manner, 3) facilitate citizens' social engagement.

## 2. Research Objectives

This research proposes a systematic framework where urban media plays a critical role in creating the sense of place. The urban media interacts with people through sharing experience, knowledge, and memory of the place within the framework. Harnessed with the cutting-edge technologies from various industries, the new breed of urban media is empowered to augment the sense of place through the combination of interactive communication, sensing and actuation with smart devices, and knowledge engineering. Wearable devices have been added to this biosphere interplay, and their potential seems immense enough to change existing application scenarios from the ground. They can support crowdsourced data collection and the integration of multi-sensory information with unprecedented mobility. Accordingly, it seems possible to create an information environment which spans both real and virtual spaces. It is significant to propose an urban media framework integrating above mentioned technologies and concepts. Especially, a logic model to organize the information behind the presentation layer is crucial. This logic formalizes classifications and relations among place making components. The modelling requires the enumeration and classification of multi-faceted data related with the place. The ontology engineering is indispensable for this work. The concept of 'Digital Palimpsest' was introduced as a combination of various information objects. As in the multi-layered meaning of the *palimpsest*, a parchment of from which text has been scraped or washed-off so that it can be used again, the digital palimpsest is used to create an artificial history and narratives of the place by interweaving related information with the help of ontology engineering.

## 3. Modeling the Augmented Place

This research proposes a sustainable framework of urban media for the implementation of the augmented place. Proposed framework consists of three processes (Fig. 1).

- Process 1: Diverse forms of urban media such as wearable devices, street furniture and media facades exist in an urban space. People can contribute to the collection of urban data through urban media in voluntary or unconscious ways. Most of contents are various types of multimedia digital data objects containing place memory and experience. This collection is called *place data*.
- Process 2: Place data is composed of the citizen-created media content coupled with GIS data. Types of media

objects may vary ranging from simple text to digital movie clips. They are fragments of urban memory and experience, being used as raw material for the Place Engine. Ontology provides knowledge structure to process contents required urban media by defining logical relationships and forming semantic networks between these data objects. This research builds ontology-based rules to create mixed-media contents (combination of media objects) for user adaptive.

- Process 3: Place Engine is a platform that dynamically composes and processes contents to be delivered to urban media nodes for the purpose of sharing memory and experience of the place. The Place Engine system consists of core program modules including directory service, ontology system, digital palimpsest, and place data warehouse. Each module corporates to process humanistic data, geographic data and citizen-created data to generate media contents to be supplied to relevant urban media. These media contents generated through Place Engine are basic element that composes artificial narratives and history, creating the desired sense of place.

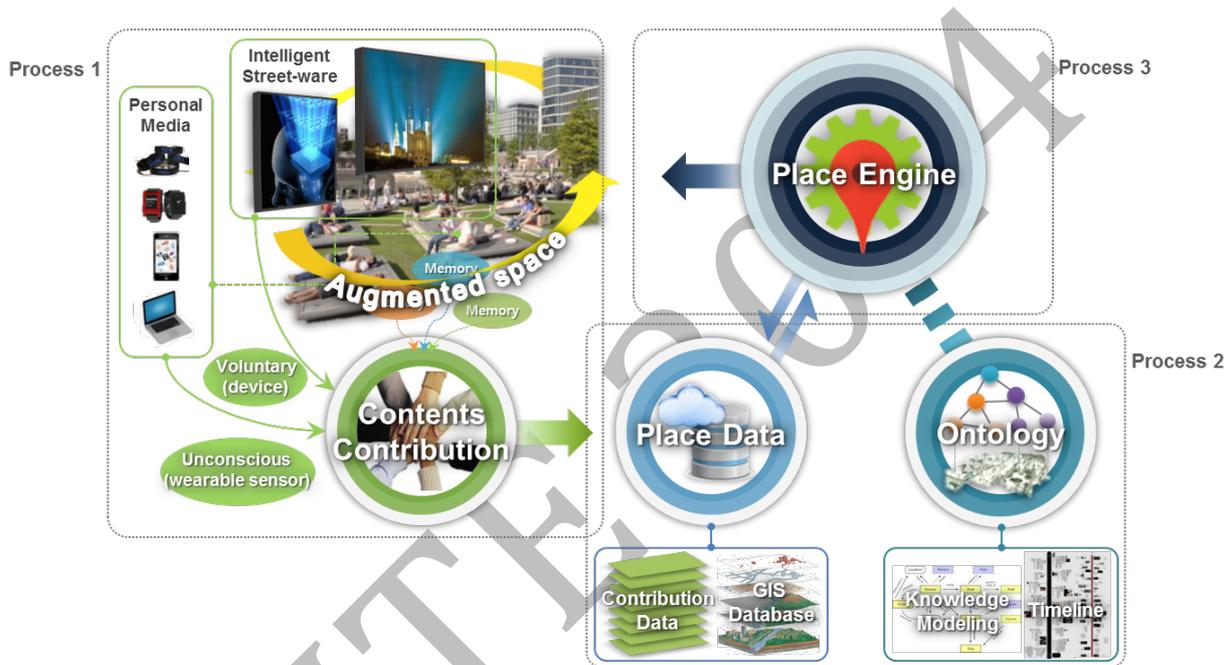


Fig. 2. Conceptual Framework for Augmented Place

The system framework with the data processing flow is shown in Fig. 2. User requests desired data (query) to digital palimpsest synthesizer of Place Engine through the interaction with personal media or intelligent street-ware. This request, in its core, contains the information about the situated context and profile data of the user. Digital palimpsest synthesizer locates necessary data objects from the data cloud with the help of the directory service. Found data objects are dynamically referenced and processed by the digital palimpsest synthesizer. The directory service manages meta-information to keep track of multimedia data distributes in the data cloud. Digital palimpsest synthesizer comprehends the technical specifications of an urban media node and suitable media format through the directory service. The synthesizer then creates the digital palimpsest object which describes the correlations of media objects, related data resources, and procedures to create thematic configurations of information. The palimpsest object is to be interpreted by the media content generator module. This module, residing in the synthesizer, is to generate media contents stream tailored to a specific urban media node. The palimpsest objects are also to be stored in the data warehouse for reuse. The once-processed yet reusable information objects stored in the place-data warehouse consist of various types of media contents set, palimpsest objects, and meta-data associated with specific request. It is possible to reuse cached datasets without data processing operations or additional information search if

the data request is similar to previous one. Therefore, it maximizes efficiency of the system and the reproduction of knowledge is better supported.

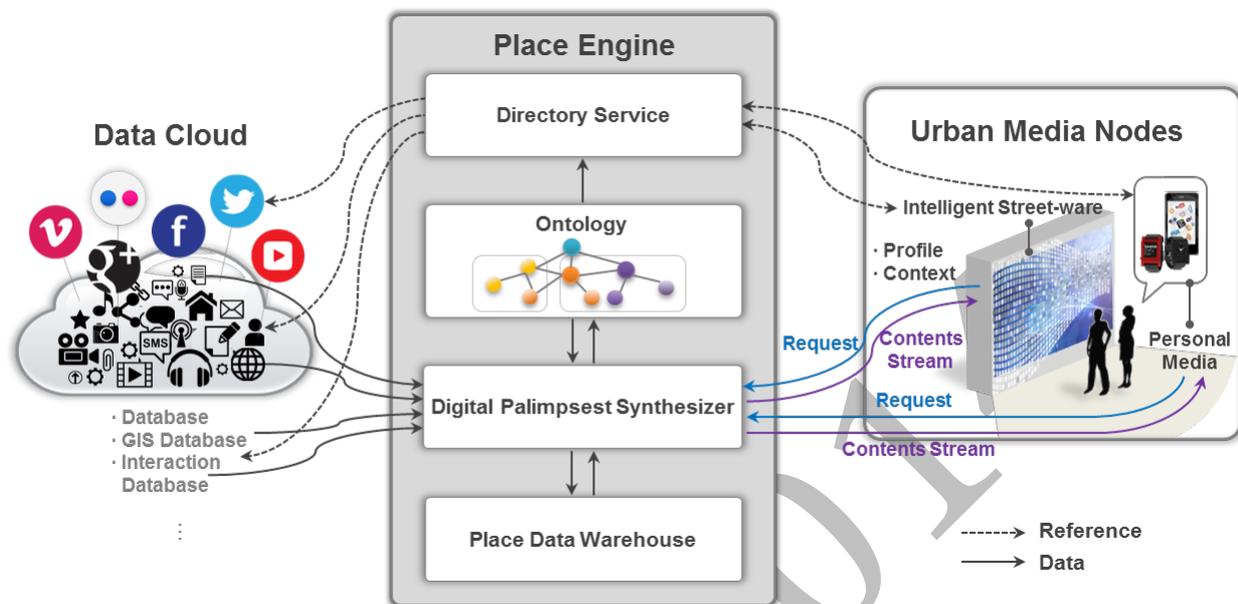


Fig. 3. System and Data Process of Place Engine

#### 4. Implementation of the Place Engine System

The proposed Place Engine needs a logic structure model built around the concept of place. This logic structure model is effectively implemented by introducing the ontology technology. To construct the place ontology, elements related to the sense of place need to be identified and their properties and relations should be defined. The logic structure embodied in the ontology model provides a generic skeleton for modeling different types of places (Fig. 3). Four concepts, PLACE, PEOPLE, TIME, and EVENT are defined as main elements for structuring ontology model of the sense of place. The PLACE is a physical area that acquires meaning through experiences and activities of human. Therefore, the formation of the sense of place is closely related to human activities. All human activities are modeled to belong to the concept of EVENT. The EVENT is always associated with TIME and PLACE. Also, for something to be qualified as an EVENT, it has to be related with PEOPLE, the main agent of the activity making the event. Also, PEOPLE is connected to other PEOPLE and group (community, generation, and society). LOCATION INFORMATION is a kind of PLACE and every PLACE is defined as a kind of THING in the place ontology. The THING does not form a PLACE directly. However, it constructs a concept of PLACE by related elements such as OBJECT, ART, and etc.

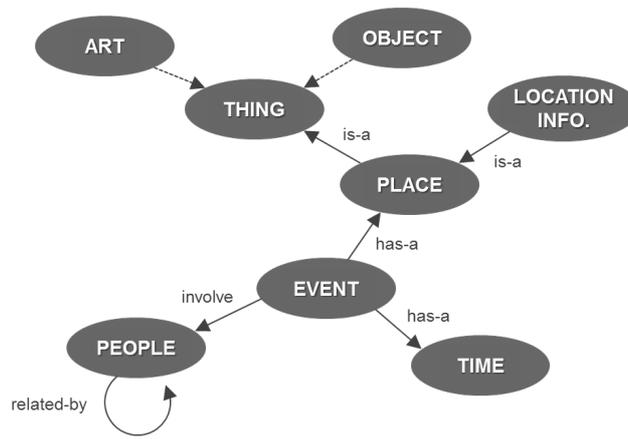


Fig. 4. Logic Structure of Place Engine

Processed datasets in Place Engine support various media contents formats configured for urban media types (AUM, PM). Personal media and ambient urban media transmit information about user context (profile, location, media type of user, other users, etc.), physical context (around buildings and media facilities, etc.), and time context. Place Engine composes appropriate media contents stream by interpreting this context-related information. Media contents stream is categorized into three types: thematic digital movie, AR content, and urban media content description. These types are determined by urban media type, personal background and taste of the user. The composition and delivery method of media contents stream for each urban media type is shown in Fig.

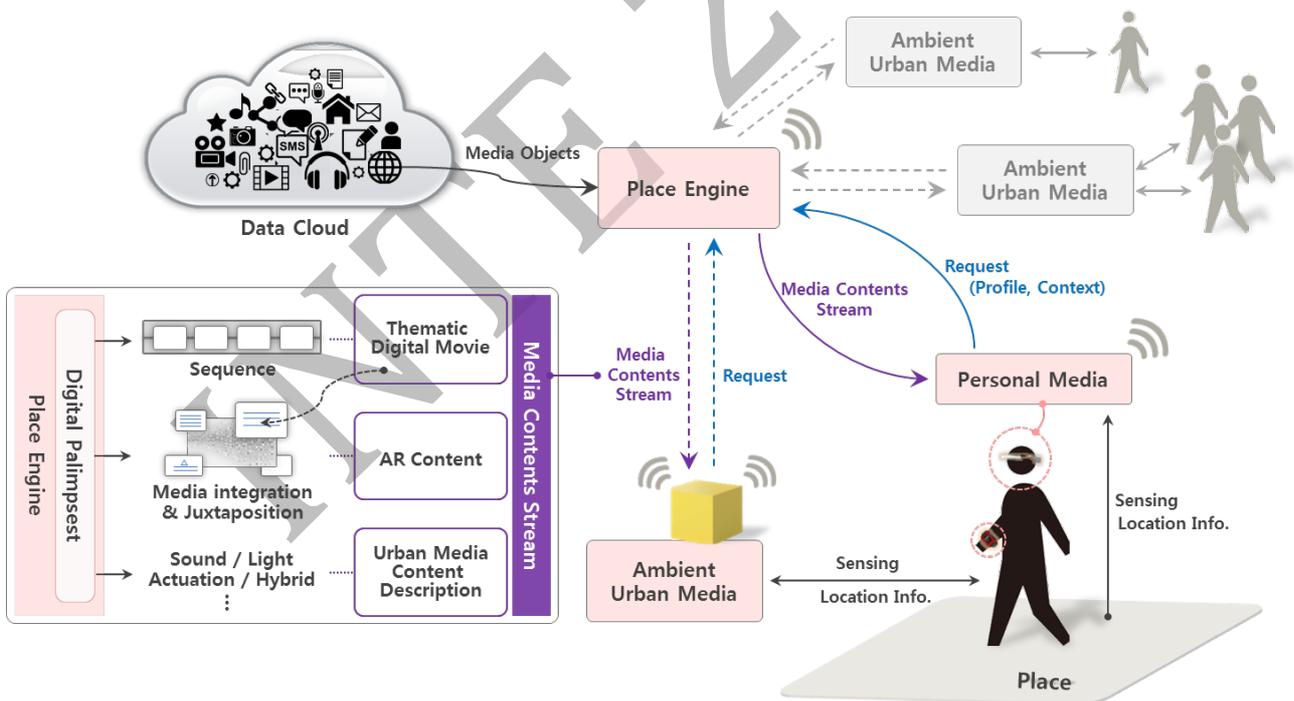


Fig. 5. User Interaction and Media Contents Stream Composition of Place Engine

- **Thematic digital movie** - A sequence of movie clips is synthesized according to the composition rules. The synthesizer selects digital movie objects, and interweaves them to create a thematic movie. In this way, almost

endless creation of different movies is possible with a limited set of movie objects. This type of intelligent composition rules was introduced in several previous research works (e.g. Kim 1997). The thematic digital movie is appropriate for the screen-type urban media such as media façade.

- **AR content** - This representation and contents structuring method is suitable for AR (Augmented Reality) media such as Google Glass™. Contents are shown through overlapping three-dimensional virtual multimedia related place. While the thematic digital movie displays a sequential method, AR content presents artificial image of place by superimposing related diverse media objects on top of real world object view.

- **Urban media content description** - This method uses multiple physical effects to express media contents rather than depending on screens or visual effects. The physical effect utilizes various actuations (ex. sound, light, and etc.) or hybrid way which combines several actuations.

## 5. Application in the Learning Environment

‘Digital Palimpsest’ is proposed as a core element of the learning environment. This ‘Digital Palimpsest’ digitizes accumulated memories and existed traces of a place with time and reconfigures this place data by reflecting intention of a user. To fully meet the individual learning demands, its environment should be adaptive to the learner. Thus, the development of intelligently adaptive learning environment is desirable, which is customizable in response to its circumstance and demand in learning process (Kim, 2005). Therefore, to learn knowledge such as culture or history of a place, the learning environment of palimpsest concept can acquire novel and creative perspectives to user instead of simple fragments of information. It is because ‘Digital Palimpsest’ enables user to view sequential and fragmentary information in different ways according to user’s intention or multi-faceted contents. Therefore, user can create intended artificial history of a place by recomposing the traces and memories accumulated in it. As a result, using this method; 1) creates novel urban storytelling and sense of place (augmented space), 2) induces affinity and interaction with other generations by sharing time, 3) promotes creative knowledge reproduction by transforming urban data with other users constantly. The composing process of ‘Digital Palimpsest’ consists of five circulated stages as shown in Fig. 5. ‘Collecting’ is a stage to congregate memory, experience, and knowledge information of a place. This contributed data has various mixed context and perspectives in a massive and unstructured form of data. ‘Structuring’ is then needed to sort and systemized the data. The main conceptual elements of the classification are those related to the place – person, event, space, and time. They are organized in the form of ontology as in Fig. 3. Thus, collected massive data is structured rather metaphorically into four place-knowledge layers. ‘Processing’ is the stage where the classified data of each layer is re-composed according to the request by urban media. The extracted data from each layer recasts the place information and creates one dataset. ‘Delivering’ is a stage where the completed dataset is transmitted to user by contents streaming. The completed dataset is the ‘Digital Palimpsest’. This place storytelling exists as another content to explain the place. It is also shared by citizen. The stage of ‘Reproducing’ is to recombine the finished ‘Digital Palimpsest’ by sharing with other users. Although other users encounter the same ‘Digital Palimpsest’, they are to generate new stories and different interpretations.

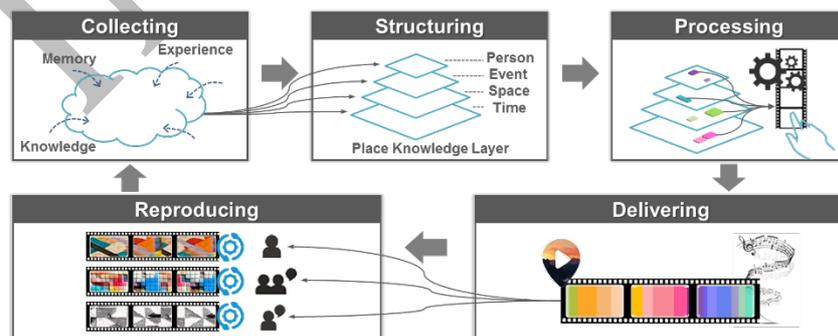


Fig. 6. The Composition Process of ‘Digital Palimpsest’

• **Pilot Case - Teahouse Gui-Cheon ‘Back to Heaven’**

A method of contents configuration and delivery is presented by applying proposed ‘Digital Palimpsest’ in a real example, a traditional teahouse Gui-Cheon ‘Back to Heaven.’ This place has a significant educational value as an important place with historical and cultural background stories. Also, this place can be read in a variety of context as follows. First, the poem ‘Back to Heaven’ which has same name with the teahouse and poet Cheon Sang-byeong are considered great cultural assets in Korea literature. This poem motivated many artists’ works. Also, an annual art festival is held to commemorate the poet. Second, the teahouse ‘Back to Heaven’ has significant social meaning as a place. Many famous Korean literateurs used to discuss life and philosophy in the place.

For these reasons, the history of the teahouse is worthy of sharing, because it has memory, emotion, and knowledge of several generations. Therefore, this research represents ontology and scenario view how recasts the multiple context of this place by using ‘Digital Palimpsest’ (Fig. 6). The ontology model of the Gui-Cheon ‘Back to Heaven’ builds based on the logic structure of Place Engine in Fig. 3. The teahouse ‘Gui-Cheon’ has upper categories as PEOPLE/ PERSON, ARTIFACT, TIME (temporal property), SPACE (spatial thing), and EVENT.

The scenario view is organized into the AR content setting among conveyance methods of media contents stream in Fig. 6. The user perceives to enable place contents by confirmed a Place Engine sign or informed alarms through urban media. In this scenario, the user selects PEOPLE and ARTIFACT among the configurable main keywords (upper categories). Also the user activates ARTWORK of poet Cheon Sang-byeong in the ARTTIFACT with juxtaposed way. Place Engine receives this request and provides reframed information with place ontology.



Fig. 7. An Example View in the AR-based Application Scenario and a Place Ontology Example

## 6. Conclusion

A comprehensive urban media framework with application scenarios was proposed in this paper. The framework envisions an ecological sphere where citizens produce and consume media contents through the interaction with urban media, and the urban media plays a critical role in enhancing the sense of place by incorporating more humanities related information in creative ways. Place Engine is the central component in this framework. Place Engine, in response to the user's interactions with a specific urban media node, locates media objects from the information cloud, and synthesizes them into a structured document object called digital palimpsest. The digital palimpsest specifies necessary media objects and linked data, their relations, and composition rules to be used for constructing multimedia contents for urban media nodes. The place ontology defines the relationships of place elements, providing the logic structure of the engine.

Most of components of the proposed system are in an early development stage. Core logics of the place ontology also still needs to be further refined. Suggested media delivery methods such thematic movies or AR-based information overlay are also at the stage of conceptual prototypes. They are to be, however, fully integrated and better implemented along with the development of various application scenarios as presented in this paper. Learning of place-centered history seems to be one of the most promising areas.

In the long run, this research will contribute to the development of next generation LBS (Location Based System) as well as more friendly urban media. Therefore, next step of the research will expand the application scenarios while focusing on the implementation of components of the system more in depth.

## Acknowledgement

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# Political games in universities: A case study

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## Abstract

Power has a great importance in organization life, which has intense social relations. People working organizations might play various political games in order to get power or maintain the control they have over other people. The purpose of this study is to elicit political games that academicians play in universities. In this study data were collected through semi structured interview method and analysed with descriptive and content analysis. One of the results is that academicians working in universities challenge to formal authorities from time to time. Especially they react to the authorities when the problem is about their rights and duties...

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*Keywords:* power; politics; universities; political games

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## 1. Introduction

It is generally believed that power effects many decisions in life, and it cannot be denied that power exists in workplace also. There are different definitions of power in literature. Deaconu and Lefter (2007) defined it as "the ability of an individual or groups of individuals to act on other individuals or groups and to influence the functioning and the results of an organization." Max Weber (2006) defined power as "the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance." Power also can be defined as "the capability of one social actor to overcome resistance in achieving a desired objective or result" (Pfeffer, 1981). Power, as social term, characterizes interpersonal interactions and may differ according to people and occasion (Özkalp and Kirel, 2001).

There are different classifications about power but especially the one done by French and Raven received wide acceptance (Bayrak, 2001). They divided power into five separate and distinct forms which are: coercive power, reward power, legitimate power, referent power, expert power and informational power. Also Erçetin (1993) classifies power, which is used to influence people as authority, personality, concern, expertise, reward, punishment and weakness (cited in Titrek and Zafer, 2009).

Power, which is one of the main factors in every organization, is needed to maintain the effectiveness of personal relations and organizations. It cannot be perceived as good or bad on its own but it can be used both for malicious and good aims (Bayrak, 2001). When power is turned into action politics shows up. Power can be thought as the base of politics. While political behaviours enhance the power, power eases the execution of politics (Bursalı, 2008). If power is the source, politics is the act used to develop that source (Lewis, 2002).

### 1.1. Power and Politics

Politics in organizations is simply a fact of life. Personal experience, hunches, and anecdotal evidence for years have supported a general belief that behaviours in organization often political in nature (Ferris and Kacmar, 1992). Employers behave politically to get the power or maintain it. Political activity in organizations is

sometimes described in terms of 'games' (Mintzberg,1985). Many different political games are played in organizations at the same time. For this reason it is important to determine a criteria to categorize and to define the games (Samuel, 2005). In this study, political games defined by Mintzberg (1983) are taken as a basis. According to Mintzberg, reasons of playing political games can be grouped under the following headings, as: opposing to organizational authority, preventing the rebellion against authority, overcoming rivals, effecting organizational changes (cited in Samuel, 2005). Also, Mintzberg (1985) classifies the political games played at organizations, as: insurgency, disapproval of insurgency, power building, nullifying rivals and changing organization. In this respect, when the literature (Sykianakis and Bellas, 2011; Johnson, 2009; Samuel, 2005; Deaconu and Lefter, 2007) is dealt with, it is seen that these political games played at organizations are explained as follows:

1. *Insurgency*: This game aims to challenge authority or dominant ideology.
2. *Counter insurgency*: It is a game played by authorities against resisting people.
3. *Sponsorship*: It is played between the managers and younger professionals to build power base with superiors or subordinates.
4. *Alliance building*: The people who seek mutual support play this game.
5. *Empire building*: This game is played by the people who want to enhance their power by using the potentials of groups and subordinates.
6. *Budgeting*: This game is related to empire building game. Main aim of this game is to secure the resources and using them for a specific group.
7. *Expertise*: In this game experts try to secure their positions by using their specialized knowledge.
8. *Lording*: In this game people tries to get power by using their legal power on their subordinates.
9. *Line vs. Staff*: In this rivalry game both sides use legal power in illegal ways to defeat rivals.
10. *Rival camps*: This game, which has the aim of defeating rivals, is seen between professional departments or groups who have different specialized knowledge.
11. *Strategic candidates*: In this game people who have power try to gather the people they choose around them to maintain their success.
12. *Whistle blowing*: Actors of this game is generally the subordinates. They inform about the people who abuse their duty and do illegal things, to the people outside of organization or to the press. The aim of this game is to affect the strategies and internal politics of organization.
13. *Young Turks*: This game is played to make big changes in organization's strategy and culture.

All the games above may not be seen in organizations at the same time or they can be seen in different ways. Also organization's being public or private effects the types of the games played (Hoy & Miskel, 2012). Within this context, the aim of this study is to find out the views of academicians within the frame of insurgency, power building games, alliance building game, empire building, expertise, lording, rival games, rival-camps game, change games, whistle-blowing games and young Turks game played in universities.

## 2.Method

In the study phenomenological method was used as the purpose of phenomenological method is to illuminate the phenomena that we are familiar but do not have deep understanding (Yıldırım and Şimşek, 2008. 72). The study group consisted of (n=16) academicians working at one of the universities located in the western part of the Black Sea region of Turkey during the fall semester of 2013-2014 academic years and during the selection of the participants maximum variation sampling was used. When the academicians were analyzed in terms of their genders, it is seen that while 37,5% (n=6) of them were female, 62,5% (n=10) of them were male. When the year of experience is concerned, it is observed that even though 12,5% (n=2) of them was working for 6-10 years and 11-15 years, 43,75% (n=7) of them were working for 21 or more years. In terms of their academic affiliations, 12,5% (n=2) of them were full professors while, 62,5% (n=10) of them were assistant professors. The qualitative data were collected through semi-structured interview forms developed and prepared by the researchers. During the development and preparation of the semi-structured interview forms, the political games defined by Mintzberg (1985) were taken as a base and followed. The researchers performed the pilot study of the interview forms. For this purpose, the interview questions were asked to subject-specialists (n=3), the questions were reviewed and were reorganized and the final form of the interview questions (20 item) were obtained and were grouped under the headings, as: insurgency, power building games, alliance building game, empire building,

expertise, lording, rival games, rival-camps game, change games, whistle-blowing games and young Turks in order to elicit the political games played at university.

The interviews were either recorded or written down by the researchers lasted about 25 minutes. Later on each researcher coded the data separately in order to form the concepts. According to the descriptive and content analysis results the concepts related to each other were put together under the themes of insurgency, power building games, alliance building game, empire building, expertise, lording, rival games, rival-camps game, change games, whistle-blowing games and young Turks. Analysis was done by two researchers separately to ensure the internal validity and also providing the step by step process of the research shows the reliability of the research (Yıldırım and Şimşek, 2008).

### 3. Findings and Discussion

The findings in relation to the views of academicians about the political games are presented under certain themes in Tables.

**Insurgency game:** The first game that people play in organizations can be defined basically as challenging to the formal authority. These kinds of behaviours may not be a problem on its own but they can be the indication of other problems in organization (Hoy and Miskel, 2012). In this game employers in organization oppose to the implementation of decisions made by their superiors. Delays in schedules, disturbances in the regular workflow, work absence, disruptions of rules and procedures are some of the tactics employed in this game (Samuel, 2005). Within the frame of insurgency game that workers play against power, the views of the participants related to their reactions they give to the injustice are presented in Table 1.

**Table 1.** Academicians' views about reactions given when people think their superior do them wrong

	Using legal rights	1
<b>Legal procedure</b>	Writing a petition	3
	Sue	1
	Apply to academic supreme board	1
	<b>Interpersonal relations</b>	Get in contact with the person who does injustice
<b>Mild reaction</b>	Making self-assessment first	1
	Thinking the situation will get better on its own	1
	Postponing the reaction if its harmful for the person or organization	1
	Thinking that person who does injustice had no other choice	1

The categories (see Table 1) in relation to academicians' views about reactions given when people think their superior do them wrong were grouped as: "legal procedure", "interpersonal relations" and "mild reaction". As seen in the Table 1 most of the participants preferred to solve the problem with interpersonal relations (n=7). They thought that it is more helpful to talk in person about the job given. This situation is related to the values people have. The values, which effect human behaviour, also form the organizational culture and direct the organizational movements. Therefore people expressing themselves and the self-esteem they have effect the value they give to their co-workers and their superiors (Vurgun and Öztop, 2011). One of the participants takes into consideration that the problem could arise from other reasons. Using legal rights in the first place when superiors do wrong may cause cold climate between people and in organization. Still some people (n= 6) thought that using legal rights in written or oral forms is the only way to solve the problem. In this context the impact of organizational climate needs to be mentioned as the climate has effects upon the behaviours of organization members (Forehead and Gilmer, 1964). Water, Roach and Batlis (1974) emphasise the importance of employer's perception while defining the organizational climate. They define the climate as the entire properties which are perceived individually by the staff and which effect their organizational behaviour. From this point of view it can be said that people behaviour can change according to their perceptions of organizational climate. In relation to this subject, participant (p13) indicates his opinions like this: "... even though I know that there is injustice I think that there was no other things that my superior could do. I think that my superior do the injustice to me not to the other people which is because I am more close to them. So I don't get this as I'm being punished..." If the participant (p13) perceived the climate in his organization in a different way, his comments might be adverse. In this case, it can be claimed that perceiving the organizational climate in a positive way and being close to the management affect people's point of view.

Power that people have can change according to their position in organizations (Robbins and Judge, 2012). Formal personal power may arise from enforcement or awarding authority. Within the frame of insurgency game, as shown in Table 2, the reactions of academicians when they are being asked to perform a duty which is not their own duty.

**Table 2.** Academicians' reactions when they are being asked to do a job, which is not their own duty

<b>I do not do the job</b>	Everybody's job definition is restricted by law	6
	Everyone should do their own duty	2
	If it is not in my job definition it is angary.	1
<b>I do the job</b>	It depends on the job, if it's something I can do then I do it	1
	If there are rational reasons for doing the job...	2
	If it's something beneficial for the organization	1
	If it is beneficial for everyone	1
	I do not want to get up against manager so...	1
	If it is related to my expertise	1

The categories about the reactions of participants when they are being asked to do a job which is not their own duty were grouped under two categories, as: "I do not do the job" and "I do the job" categories (see Table 2). As seen in Table 2, most of the participants (n=9) indicated that they do not do the job. They considered it as an angary and they believed that it is a waste of their own time. One of the participant draw attention to constitution 18th entry that says, "*Nobody can be forced to work. Angary is forbidden*". Because everybody's job is defined beforehand so it is unacceptable to do some other people's job. Quite a few of the participants (n=7) thought that they do not turn it into a big deal, they do the job if it is beneficial for the organization. This can also be related to the person's and organization's values. In broad sense, values form the subjective, internal aspect of the culture and shows reasonable, proper ways to solve the organizational problems (Şişman, 1994). People, who are faithful to their organization, believe organization's aims and values strongly and they fulfil orders and expectations voluntarily (cited in Balay, 2000). Therefore they may do the job even if it is not their own duty. As a result it can be said that, from time to time participants challenge authorities, especially when the subject is about their own rights and duties, they do not refrain from react.

**Power building game:** This game is used to gain the power and in this game superiors impose upon peers and subordinates. They make use of sponsorship game. When forming power center. In sponsorship game subordinates associates themselves to superiors and state their commitment. Superiors be sponsor for subordinates and they fight for their benefit in organization and support them in official environment. But when the sponsor loses his power problem starts for protected subordinate (Hoy and Miskel, 2012). In Table 3, the views of the participants about their attitudes towards people who can ease their aims are presented.

**Table 3.** Academicians' views about their attitudes towards the people who can ease their advance in organization

<b>I build a relationship</b>	People who can ease my advance in organization is probably would be my superior so I do not.	3
	I do not try to build a relationship with anyone.	4
	I do not have an aim like this.	2
	I treat equal to everybody.	2
<b>I do not build a relationship</b>	My manners would be democratic.	1
	I build good relations. I make them understand my efforts.	1
	If it's for my advance in organization, I do whatever it takes.	1

The academicians' views about their attitudes towards the people who can ease their advance in organization were grouped under two categories, as: "I build a relationship" and "I do not build a relationship" (see Table 3). As seen in Table 3, almost all of the participants (n=14) indicated that they do not prefer to build a relationship. They thought that they couldn't realize their aims by treating people differently. The participant (p8) explains his thoughts about this issue as follows: "*I'm not good at building relations just for my profit but I'm good at doing my own work. If people find my work useful then they somehow enter my life...*" He thinks that he would not behave differently to other people just for his own profit and believes his own works and efforts is the only way to be successful. On the other hand, participant (p2) believes that advancing in organization is only possible with playing games and people never reach their goals by deserving it. She also adds that: "*In order to come up in organization life everybody plays some games. It is so clear that being an apple polisher can change many things. It is impossible to come up by deserving it with your own efforts. Work quality is falling down, people only get the job title and nothing else and that is the big*

problem.”

During the interviews, when the participants were asked if the people who helps them to achieve their goals loses his authority will there be a change in their behaviours towards them or not. All of the participants stated that there would be no change in their behaviours towards them. About this participant (p1) put his views as follows: *“I get closer to them even if they lose their authority. You need to be there not only when they are successful but also they lose their power.”*

In relation to this, participant (p12) expressed his thoughts in that way *“Everybody must show respect to the some specific positions in organization and I also behave according to that. Showing respect is not about the person, it’s about the position he represents. Whoever comes to that position he deserves the same respect. But I do not build a closer relationship with those people. And my behaviours do not change when they lose their authority.”* With his words it is understood that it is much more correct to show the respect to the position not to the person. People losing their authority should not change other people’s behaviour towards them. He also emphasises that everybody who comes to some specific positions in organization deserves respectful behaviours.

**Alliance building game:** When people think that they don’t have enough power to accomplish their goals they choose the way to form an alliance. It is a kind of political game, which is seen between peers. In this process people search for support and they try to form a group. They gather around an informal leader. And also they try to bring other groups into the fold and in this way group continues to expand as long as there is no rival group (Hoy and Miskel, 2012). The findings related to academicians’ views about forming an alliance to realize their goals are presented in Table 4.

**Table 4.** Academicians’ views about forming an alliance in order to achieve their goals

<b>I form alliance</b>	I try to persuade them	8
<b>I do not form an alliance</b>	I do not try to form alliance with people who I do not have relations.	1
	I do not make an effort for that.	4
	I do not look for an alliance; I care for my own success.	3

The findings, academicians’ views, seen in Table 4, about forming an alliance in order to achieve their goals revealed two categories, as: “I form an alliance” and “I do not form an alliance”. As seen in Table 4 half of the participants said that they do not try to make an alliance. They thought that it is much better to concentrate on their own success instead of getting support from others. In relation to this, According to participant (p2), *“only legal ways are good to realize the goals not the games”* and she continued stating her beliefs as follows: *“ You submit a petition to the people who are in a responsible position, whether it is accepted or not...You should do it in a legal way. I cannot behave mockish to those people to get my work done. If I do that I lose my self-respect.”* Besides, as Bayrak (2001) points out using the persuasiveness successfully requires impressive communication. People who do not communicate cannot effect anybody since they do not express themselves to other people.

**Empire building game:** Empire building game can be defined as people’s efforts to enhance their power by using potentials of groups or subordinates (Mintzberg, 1983 cited in Johnson, 2009). The findings related to academicians’ views about taking other people to their side for gaining power are presented in Table 5.

There were two categories in relation to academicians’ views about taking other people to their side, as: “I want to do that” and “I do not want to do that” as seen in the Table 5. The findings revealed that above more than half of the participants (n=9) say that they do not make an effort to take other people to their side. In relation to this, participant (p8) expressed his opinion, as: *“I do not think that I would try for those things that much. I always think broadly. I never wanted to be like a fish looking through the aquarium. Temporary success stays only inside of organization. But I always think about my own success in domestic and international fields. Since I worked for another organizations I can easily look to the place where I work from an external perspective. So I do not go after this kind of small success.”*

**Table 5.** Academicians’ views about taking other people to their side

<b>I want to do that</b>	As long as they are not my superior.	2
	As long as it is about academic works.	1
	In order to learn about other peoples’ views.	3
	In order to work with well-adjusted people.	1
<b>I do not do that</b>	I am not in need of support.	5

There are also people who want to take other people to their side and work with them but they also have criteria to take other people to their side and work with them. The analysis of the words of two participants revealed that they do not prefer to be at the same side with their superiors as this kind of relations can be misunderstood in organization. It can be said that the participants' main purpose in this game is to get different views from all people and to do good academic works. When doing this, they think it is much better to work with the people who they feel close.

Participants are asked about if they use potentials of their subordinates to enhance their power or not. The findings related to academicians' views about using potentials of their subordinates to enhance their powers are presented in Table 6.

**Table 6.** Academicians' views about using potentials of their subordinates to enhance their powers

<b>I benefit from their potentials</b>	I do it if it is good for everyone and organization.	2
	I want to work with the people who have potentials.	1
	Success of my subordinates enhances my power too.	1
<b>I do not benefit from their potentials</b>	I never do that.	9
	I try to get power with my own effort.	1
	The only way to get power is to behave everyone equal and fair.	1

The analysis of the data (see Table 6) revealed two categories in relation to academicians' views about using potentials of their subordinates to enhance their powers, as: "I benefit from their potentials" and "I do not benefit from their potentials". Most of the participants stated that they would not prefer to use the potentials of their subordinates to gain power. Accordingly, participant (p7) said "*When working in university we get our power from our scientific researches and work experience so there is no other power beyond these. And there is no need to get power as long as you and your colleagues do your own jobs.*" to express his thoughts. Also participant (p16) said "*The only way for me to enhance my power is to behave equal and fair to everyone. I don't want to gain power by separating people.*" and participant (p16) added "*Some administrators try to get power by guarding some people or by giving the lion's share to them. My opinion is to make people understand my attitude by behaving equal to everyone. Sometimes this can be seen as weakness. But I never do something bad against someone.*"

**Expertise game:** People can make use of their expertise from time to time. Expertise game is played by the people who has the knowledge and skills that organization needs. Those people emphasise the importance of their abilities and underline that organization needs them. And they try to keep all these skills to themselves (Hoy and Miskel, 2012). Expertise power gradually becoming more importance since it is rare, democratic and flexible (Bayrak, 2001). Participants' thoughts on people's applying them about their profession are presented below.

**Table 7.** Academicians' views about people's applying them about their profession

<b>I am pleased with that</b>	I am pleased but sometimes it can be tiring.	2
	I am satisfied academically.	3
	I love sharing my knowledge.	3
	I am okay with it but there is no advantage or disadvantage of it.	1
	I am bored when I do not work so I am pleased with this situation.	1
<b>I do not feel comfortable with that</b>	I am not pleased with it the only good side is you have good relations.	2
	This wastes my own time.	1

The data analysis (see Table 7) revealed two categories in relation to academicians' views about people's applying them about their profession, as: "I am pleased with that" and "I am not comfortable with that". As seen in Table 7, most of the participants were pleased with this situation (n=10). This can be interpreted as even though they spare their own time they don't feel bad about it. In relation to this participant (p12) expressed his thoughts as follows: "*People apply me about my profession. This does not show that I am better than the others. Everybody has their own fields of study. My students or my colleagues apply me and I try to do my best to help them and share my knowledge. This makes me happy. Actually people like us who choose teaching profession should be glad about this situation. Yes it is tiring from time to time but I do not complain about it*".

When the participants were asked about if they think that they are irreplaceable for the organization or not. The findings indicated that most of them thought that nobody is irreplaceable (n=9). In relation to this, while 6 participants thought that they are needed in organization, only 1 participant thought that she is irreplaceable.

**Lording game:** This game is played between the superiors who has legal power and the subordinates. Superiors can dominate and impose on subordinates in illegal ways (Hoy and Miskel, 2012).

When the participants were asked about the ways they choose when they assign tasks to their subordinates. Mainly they believed that (n=11) it is better to kindly request. Also, there are other people (n=2) who preferred formal ways like sending an official writing / notice. 2 of the participants said that they do not assign task to anybody if it is not their fundamental duty. Participant (p12) expressed his thoughts with these words: *"I request kindly. If the person is available to do the job, I will be glad if not then there is nothing that I can do...."*

Even if everybody's duty is stated by law sometimes people need to work beyond this duties. When the participants were asked about the ways they chose when they assign tasks their subordinates out of their duty. Most of the participants (n=10) stated that they would not want them to do the job if it is not their own duty. But yet if they need to assign them, they preferred to behave fair (n=2), request kindly (n=2) or use formal ways (n=1). One of the participant stated that this situation depends on his intimacy with the subordinate.

**Rivalry games:** In this kind of games rivals aim to defeat each other (Hoy and Miskel, 2012). Rivalry comes up when one group try to accomplish their own demands by damaging other group. In that situation rivals is away from negotiation and assertive. They see the conflict as a game, which needs to be win. Losing means failure and weakness, rivals thinks that there must be a winner and loser. (Can et al. 2006:216 cited in Aslankutlu, Temel & Dirlik, 2010).

When participants were asked about facing opposition of their friends to gain power, many of them (n=11) stated that they do not do that. This shows that participants do not prefer to establish competition environment in organization and want to gain power by conflicting with other staff. Some of the participants (n=4) said that they can face the oppositions of their friends and colleagues even though they think that they are right, they do not give harm to anyone and their success is prevented. This shows that sometimes people can create competitive environment in organization. This might stem from desire for success and power. Because desire for power and desire for rivalry is associated. According to the McClelland's "Need for Achievement" theory people who needs significant achievements have a specific desire for being successful in rivalry environments and meeting high standards of achievement (Burger, 2010). So it is clear that desire for success may lead to create competitive environment. In relation to the subject, participant (p15) said the followings, as: *"I do not think that somebody's success is related to some other person's failure. This is not the success if I oppose someone. There is no need for that to have success."* With these words it is seen that he emphasises that it cannot be a success if it is gained by giving harm to others. In sum, it can be said that participants do not prefer to play rivalry games in which there is a winner and a loser.

**Rival camps game:** In this game two sides face each other. Game can be played between two people or two groups (Hoy and Miskel, 2012). Each group try to overcome the other about a specific issue (Samuel, 2005). Real aim of the game is to decrease the opponent's power rather than enhancing their own power (Deaconu and Lefter, 2007). When asked about if their relations with their friends would change in case of being successor and predecessor to each other, many of the participants (n=11) indicated that their relations would not change. This may be because that they do not want to create conflict in the organization as many organizational factors are related to organizational climate. Excessive socialising, having the ability of solving problems on time, insufficient communication, excessive control created by strict organization and other factors may affect the problem solving methods. Also, not having the ability to solve the problems on time may prevent the organizational growth, innovative movements and the development of the organization (Balay, 2010: 59). Even though in the present study participants stated that they prefer not to reflect the problems in organization in order to maintain power of organization, some of the participants (n=5) indicated that they do not prefer to remain unresponsive. Concerning this, they said that they would be effected by the situation and their relations with their friends would change. As Özdem (2010) pointed out having trouble with someone in organization and maintaining the relations with this person may lead to worse outcomes and this can effect the organizational climate and performance. On the other hand, if there are many uncontrollable conflicts in organization this may lead to chaos (Hampton, Summer & Webber, 1982: 634 cited in: Akkirman, 1998). These conflicts may cause not being able to make a decision on time, disappearing of collaboration and faith between departments or groups and setback of communication (Akkirman, 1998).

In relation to this, participant (p16) expressed his thoughts by saying: *“I do whatever it takes to maintain my relations with my friends. I never want people to hurt each other. If I change as a result of being hurt by others of course I defend myself. I do whatever is needed. Administrative function is temporary but being an academic member is a fundamental duty. Organization should change itself to refresh. If changing is carried out by normal ways I do not take offence, but if someone slanders to me I do whatever I must do.”* From these words, it can be seen that the participant tries to maintain his relations with other in the same manner in order not to create a negative climate. But when there is a personal offensive, he implies that he will develop a defence mechanism accordingly. Defence mechanism is an unconscious process, as denial, that protects an individual from unacceptable or painful ideas or impulses (Dictionary.com). In this study, it can be said that participants develop different defence mechanisms like severance, aloofness and reacting in order not to get harm.

**Change games:** Change games have the aim of renovating organization and administration. People who can start a successful period of change may have a great power (Hoy and Miskel, 2012). When the findings of the present study are concerned, it is observed that participants’ preferences about renewing and changing the organizational procedures were different. Many of them (n=8) used academic and legal ways when they wanted to change or renew something in organization. Choosing formal ways may be the results of people giving importance to ethical values. “Occupational ethics can be defined as the behaviour rules that people need to obey especially in human related jobs” (Aydın, 1998, p.85). In management process ethics include some behavioural patterns, which aim to reach the good, the pleasant, and the true. Ethics rules that learned and internalized by workers may lead them to use same behavioural patterns for different cases (Gül and Gökçe, 2008). As seen in the study, participants behave in accordance with the ethical rules they internalize and use legal ways when they want to change things. Some of the participants (n=5) prefer telling the reasons for renewal and change to other people working in organization. This shows that they prefer using interpersonal relations to change the things they want in organization. One of the participant stated that if he cannot get a result from his own efforts, he might look for support from others. Another participant stated that he prefers to put someone who has the best ideas about change in charge. And he added that *“I am reformist and I want everything to be good. If I cannot make good things happen, I leave my position. Because there is no need for me. I want to put someone who have the best ideas about change in charge.”* In sum, it can be said that participants have different thoughts about changes in organization but generally they tend to realize them in legal ways.

**Whistle - blowing game:** Whistle-blowing game, which is common in organizations, means informing the outer authorities when employers or managers break a rule or a norm. Because of the fact that whistle blowers skip over the legal channels and they can be exposed to retaliation the game players conduct this attempt secretly. (Hoy and Miskel, 2012).

**Table 8.** Academicians’ views about their reactions of when faced with an undesirable situation in organization

<b>I report to higher authorities</b>	I don't avoid reporting.	1
	I explain my reaction to higher authorities.	3
	I use verbal and written ways to report.	2
<b>I do not report to higher authorities</b>	First, I talk to people who I have a problem. If I cannot solve, I go to higher authorities.	7
	First, I talk to head of department. If I cannot solve with him/her, I apply to higher authorities.	1
	I share with my friends. If I cannot find another solution, I go to higher authorities.	1

When academicians’ views about their reactions of when faced with an undesirable situation in organization is concerned, there are two categories as: “I report to higher authorities” and “I do not report to higher authorities” as seen in Table 8. Most of the participants (n=7) stated that when they are faced with an undesirable situation, first, they prefer to talk to the people causing the undesirable situation or the people related to this situation; if they cannot take the expected results from their efforts, they will report the situation to higher authorities (Table 8). These preferences of the participants showed that firstly, they try to solve the problem by talking. Confidences in problem-solving skills are in the same direction with person’s interest, curiosity and positive efficacy; and in the opposite direction with his/her anger, concern and depression (Çetin, Basım and Karataş, 2011). And this shows that personal characteristics of individuals can effect their reactions in negative cases and situations. Right along with this, trying to solve all the problems by legal ways may have negative effects on organizational climate. And this thought may lead people to be moderate and be wiser in these

situations. Because the individuals' beliefs regarding the state of his/her organization highly influences his/her attitudes towards the organisation. (Alparslan, 2010) On the other hand, some of the participants (n=6) stated that they prefer to report immediately to higher authority when they are faced with an undesirable situation. Reasons of this may be the fact that they believe it would be faster to solve the problem by this way or they believe legal ways are the only way to solve the problems.

In relation to this, participant (p13) expressed his belief about the subject like this: "*First, I do not react too much, I think about 'Is it for the benefit of faculty?' I try to be patient thinking that this is not done intentionally by the person. I do not report the situation at first or second time but if these problems come together too much, first I negotiate the situation personally and generally solve it. But still if I cannot solve it and if I am close to higher authority, I do it. I don't report my superiors to higher authorities directly. This is not suitable to my own character. Even if the situation is not related with me, I still talk to people about the thing bothering organization. And again the situation is insolvable and getting worse, I talk to higher authority.*" It can be understood from the statements of the participant (p13) that he prefers solving problems through personal relations before applying to legal ways.

It is seen that all of the participants look for a solution when there is a problem in organization. However; the means they solve the problems are different. In this respect, while some of them prefer to solve the problem through interpersonal relations, others prefer the legal ways directly.

When participants were asked if they inform the press about organizational problems or not, it is seen that most of the participants (n=12) pointed out that they do not do it. They generally (n=10) stated that problems in organization should remain inside of it and use the idiom 'a broken arm should remain inside the sleeve.' Participants' preferring not to inform the press about problems may be because they think organization can get harm because of this. One of the participants that prefer not to inform the press thinks that press cannot solve the problem and another participant stated that problems can be solved with managers. Some of the participants (n=3) said that according to the importance of the problem they might inform the press.

Reporting the ethical problem to the manager in organization and all the other disclosure in organization is "inner" and revealing the ethical problem seen in organization to the non-organizational agencies is "exterior" classification. When inner statement is not enough, exterior statement should be used (Mansbach and Bachner, 2010). Participants' choosing this way may be because not being able to solve the problem inside organization. Accordingly, participant (p8) said, "*If your professional honour is effected in a bad way and if whistle blowing can provide benefit then you do it. I know that in organization you do not let things go any further. But if your rights are exploited all the time and there is no other way and you believe that you are right I prefer struggling... Maybe you would seem like a loser at first but when the same problems happen then you become the actor. You need to know how to defend yourself. If you stay cowed and weak people always try to overwhelm you.*"

It can be said that the number of academicians who think that problems should be solved inside organization is more than the number of academicians who think that releasing the problems to press is a solution.

When the participants were asked about if they prefer reporting the manager to higher authorities. The findings indicated that half of them would report their manager (n=8). This shows that people demand justice. If it is needed they do not step back from reporting even if the person is their manager. Some of the participants (n=3) preferred using only verbal ways while reporting. One of the participant stated that he reports his manager only if the problem would be solved. Ethical aspect of this behaviour is controversial. But a person who has work ethics is thought to be sensitive for the misapplications and corruptions and that he reports the manager to higher authorities if needed (Çiğdem, 2013).

Some of the participants (n=5) stated that they would try to solve the problem with manager first. If they cannot solve it than they would report. Two of the participants said that they would be really patient about the problems stemmed from manager but if they cannot take it anymore they would report the manager. Here we can see that some participants do not prefer reporting immediately. This might be because they do not want to effect the organizational climate badly.

In a study by O'Connor and Morrison (2001) relation between organizational climate and organizational perception of organizational politics is researched. It is found that organizational climate is a very strong determiner in terms of political perceptions and there is negative relation between them. It is confirmed that when the participants evaluate the climate negatively, they tend to perceive workplace more politically. From this point of view, it can be concluded that the participants who do not prefer reporting manager and who show mild reaction tend to evaluate organizational climate positively and perceive the organization less political. In

relation to this, participant (p12) stated his thoughts as: *“At first I try to solve the problem with manager but if I cannot, I report this with verbal and written ways. In the past I have seen that even though verbal reports are not that much more effective, written reports are much more effective as they lead to a solution. So from now on I prefer written reports.”*

In conclusion it can be said that, people have different preferences to solve the problems they encounter. While most of them use all the legal and alternative ways in order to solve the problems, some of them prefer to report problems out of organization, some prefer to keep it inside of the organization and try to solve it with interpersonal relations.

**Young Turks game:** Young Turks game is the hardest and the most dangerous game of all games. The aim of this game is changing organization and management wholly. Actors of this game call themselves reformist and call their ideas innovatory (Samuel, 2005).

**Table 9.** Academicians’ views about their preferences on taking action about undesirable things right after they become executive

<b>I do right away</b>	I make changes according to common ideas	6
	I eliminate inequality and I regard rights and justice.	1
	I do the changes according to order of importance	2
	I make changes about the difficulties	3
	I do not wait if it’s important for organization	1
<b>I do not do right away</b>	I collect data and discuss lengthy and largely	1
	I do not change traditions and culture, I do the changes gradually	1

The data analysed (see Table 9) revealed two categories in relation to academicians’ views about their preferences on taking action about undesirable things right after they become executive , as: “I do it right away” and “ I do not do right away”. When the participants were asked about if they become executive in organization, they choose to change the things immediately or not, it is seen in Table 9 that most of the participants (n=13) stated that they change undesirable things in organization right after they become executive. Six of them choose to do that according to the common ideas of other people working in organization. Other participants expressed different opinions (see Table 9). In general it can be said that participants who obtain position power tend to use this power for changes immediately. Privileged state of position power is defined as legal power (Sezgin and Koşar, 2010) and legitimate power is defined as official authority (Hill et all, 2005 cited in Sezgin and Koşar, 2010). If the people who have the required position don’t use the legitimate power and authority, the power they have will have no value and other people in organization would like to use it (Aytürk, 2007). For this reason participants may want to use their power immediately and become effective. Power cannot be ignored because incentive of using power can be seen at every level in organization (Bayrak, 2001).

Some of the participants stated that (n=2) they would not do the changes right away after they become executive. One of them preferred to do a research before taking action and the other just wanted to do the things gradually and slowly. As seen in Table 9, people paid attention to different kind of things before making changes but they gave importance to one thing in common which is making changes for the sake of organization. It can be said that there is no political approach hereunder. If a person uses the influence tools approved by organization while doing something and wants to obtain the results that organization wants at the end of this, his/her behaviour cannot be accepted as political (Mayes and Allen, 1977). Also as in here, it can be said that most of the participants want to make changes about the things that organization approves.

Participant (p8) expressed his thoughts with these words, as: *"Yes, I want to do the changes immediately but this is not a disruptive swiftness. I try to act positive. I be patient and active. If you combine them all, sooner or later you will be successful and you can convince the other people."* Here it is seen that the participant emphasises to be patient while making changes. And about the changes he added, *“I believe that quality of academicians should be higher. I wish there was a rotation. People working in the same place for a long time should go to different universities or countries. People coming from small universities try to advance here immediately and try to manage this university. I think this is wrong. Those people should go to some big universities and should try to survive there. Then they should try to come back and work for organization's benefit.”* In short, it can be said participants are tend to change the things they want when they get the authority but they should consider this changes in many aspects and then they should take action.

**Table 10.** Academicians’ views about the efforts they would make to secure their position

<b>I do not make an effort</b>	I do not have a thought like this.	3
	People stay in their position as long as they work well.	1
	I do whatever the job needed.	2
	I do not do anything illegal.	1
<b>I make effort</b>	I do whatever it takes to be a good executive.	2
	Every behaviour, which makes academicians and student happy, secure my position.	1
	I want to show my works, I want people say that I do good things for organization.	1
	I act fair.	2
	I give importance to people's problems and try to solve them.	1
	I try to enhance productivity.	1

The data about the academicians' views about the efforts they would make to secure their position indicated two categories, as "I do not make an effort" and "I make effort" as indicated in Table 10. When the participants were asked about the efforts they would make when they get a higher position, most of the participants (n=8) said that they make an effort to secure their positions. When people get a good position in organizations they tend to strive for securing their positions. And they may play political games for that because for their own profits those people try to impress other people by using their power and this leads a political ambiance (Bursalı, 2008). Some of the participants (n=6) indicated that they would not do anything to secure their position. This might be because of their values (see Table 10). Values effect human behaviour and when it comes to organization it effects organizational behaviour (Vurgu-Öztop, 2011). There is a direct relationship between people's values and their organizational behaviours (Yılmaz, 2010). So, they may not want to make an effort that can lead controversial circumstances about their legal power. People who have different values may have different attitudes for the same situation (Doğan et al., 2007:23 cited in Vurgun and Öztop, 2011). And this leads employers' react differently to the same situation.

Participant (p13) expressed his thoughts in that way *"When I came to a higher position in organization. I would not have good relations just with the people supporting me. My attitude would be same for everyone even to the people dissenting me as long as they are not backbiting or slandering. Even if I have bad relations with some people I do not break with them... People may have different political views but I still talk to them and take their opinion... If there is someone else who would be more useful to organization than me, I want this person to take the lead."* Here it is seen that the participant would not play any games and would not behave any different from his own.

In short it can be said that when participants come to a higher position in organization, they may use different kinds of methods in order not to lose their positions and the power it brings.

**Table 11.** Academicians' views about their preferences on collaborating with other people in order to make big changes and ways to do this

<b>I collaborate</b>	I collaborate only with people I am close.	1
	I collaborate with experts and I do whatever I believe even if it bothers other people.	1
	I tell the reasons to other people and try to convince them.	4
	I bring changes up for discussion with other people.	3
	I give responsibility to the person who can do best for organization.	1
<b>I do not collaborate</b>	I do not collaborate because everybody has his or her own ideas.	2
	I do not think that my aim should be this.	1
	I do not collaborate to change the management but I do want to keep the person who does their job good in their place.	1

There were two categories in relation to academicians' preferences on collaborating with other people in order to make big changes, as: "I collaborate" and "I do not collaborate" as seen in the Table 11. The findings revealed that above more than half of the participants (n=10) choose to collaborate. While, one of them preferred to collaborate with the people they are close, other preferred to collaborate with all the people who would be effected by the situation. It is seen that when participants want to make big changes in organization, they want to include other people in this process. It can be said that these people know there is politics inside of organizational decision-making. Because they are tend to be more sensitive about taking political environment into consideration in order to enhance the effectiveness of decisions (Demirel and Seçkin 2009). Moreover by taking the other people in organization into change process they might want to minimise the negative ideas of

them. Because attitudes and applications that encourage participating in decision making, is considered as a method, which passivates avoidant perceptions in decision making (Yang, 2003).

Participants who do not prefer collaborating (n=4) think that everyone in organization has their own personal ideas or they said that they do not have an aim to change the things in organization. It can be said that those people choose to keep silent in the presence of different situations and problems. These kinds of attitudes in organizations are labelled as organizational silence, which is a topic inside of organizational behaviour. There may be many different reasons under remaining silent. Especially in public institutes, ideas are restricted to authority ideas (Clapham and Cooper, 2005). So people do not participate to change process ideationally, they prefer staying passive. People thinking that their ideas are not regarded, they cannot make any difference, their feeling insufficient personally, their forming their own behaviours according to the decisions and norms and accepting all of these is defined as careless and submissive silence behaviours (Alparslan and Kayalar, 2012). For this reason, the behaviours of participants who prefer to remain away from collaborating can be associated with careless and submissive silence behaviours.

In relation to this, participant (p8) expressed his opinion, as: "*I do not like ideological collaborations. I prefer occupational collaborations. We need to reach our goals and try to achieve more creative and great things together.*" As can be seen here, the participant prefers occupational collaborations to reach the objectives.

As seen in Tables 9, 10 and 11, the academicians prefer to take action right away when they get the power, they use different kinds of methods to secure their positions and they collaborate with other people when they want to make big changes in organization.

#### 4. Concluded Remarks

Regarding these, the dynamic nature of power in all human relations and communication activities in general but in managerial and administrative dimensions and levels in particular needs to be taken into account (Bayrak, 2001). As seen in every organization, power effects the relations among the academicians. Based on this, it can be stated that the effects of the games are closely related to the levels of the games played at the organizations. In this study it is found that academicians play the insurgency game especially when their rights and duties are concerned. They do not prefer playing power building games. They generally want to be successful with their own efforts. From time to time they want make an alliance to provide the support they need for the things they want to achieve. Also, they play empire building games generally not for their own profit but for the sake of organization. They do not use their specialized knowledge against other people on the contrary they like sharing what they know. When giving tasks to their subordinates they generally prefer to do it by kindly requesting. Academicians do not think that rivalry is needed in organization. They stated that one people's success should not be related to the failure of others and they do their best to keep their relations good with their friends even if they become successor and predecessor to each other. They do not want to ruin the organizational climate. Generally they try to solve their problems inside of the organization and with interpersonal relations. But from time to time if needed they use legal ways and they may play whistle-blowing games. When they get the executive power, they generally choose to change the problematic things right away. But about the changes they don't forget to take the opinions of their colleagues. Additionally, they believe that to secure the position they have in organization best way is making their job right and fair. When there are really big problems happening in organization and when they want to make big changes, people do not avoid collaborating with other academicians.

#### Suggestions

- This study may be applied to a larger group
- Managers should create an environment, which they can use the positive effects of political games in organizations.

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# Political preferences of generation Y university student with regards to governance and social media: A study on march 2014 local elections

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## Abstract

Governance denotes transparency, clarity, accountability, participation, effectiveness, respect to law and social responsibility. These aspects necessitate that everybody should be aware of their right and responsibilities and also claim them. Thus, a new citizenship consciousness has been developing. This consciousness symbolizes a new individual identity claiming their rights for problems and demanding high standards. In this context, the means of social media are getting used more and more by young publics to realize governance, especially Generation Y.

Generation Y in Turkey has drawn attention during the Gezi Park protests emerged as an activist movement. Accused of being totally out of politics, even 'apolitical', Generation Y has shown that they have something to say about the world as well as the society they are living in and also they are not afraid of expressing their opinions.

Social media are particularly preferred because of fast and easy access to the electorate, one-to-one and intimate communication opportunity, providing correct information spontaneously and preventing rumors. Particularly Twitter, as one of the means of social media, is preferred in election propaganda due to providing instant messaging and effective communication. The aim of this article is to manifest the way that the youth called Generation Y express their political preferences during a local election period through their use of social media. With regard to the hypotheses above pertaining to political source, political preference and political action, this study intends to present how effectively these young people demonstrate their political preferences as a way of expressing their political sources during March 24, 2014 local elections as well as their political action attitudes by comparing the election results and the discourses in social media. Thus, a research study will be implemented to Generation Y university students.

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## Introduction

To some extent, the use of social media by the public functions as governance. Therefore, governance refers to transparency, straightforwardness, accountability, participation, effectiveness, respect to the rule of law and social responsibility. These aspects necessitate everyone to be knowledgeable about their rights and responsibilities

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as well as demand for them. As a result, a new consciousness of citizenship has begun to develop. This consciousness represents a new individual identity that demands for the solution of their problems and requiring high standards, but at the same time, plays an active role in determining and implementing these standards apart from finding solutions and generating structures (Argüden, 2005: 1).

The power of social media has been noticed by politicians and incorporated into the communication strategies during the election periods in Turkey, as in the world. It can be discerned that particularly social media has a special feature in contemporary election strategies. Social media is particularly preferred for reaching the electorate easily and quickly, providing one-to-one and intimate communication opportunity, conveying correct information instantaneously and also preventing rumors. It is seen that politicians use the means of social media extensively to strengthen the ties among the electorate, give information about their political stances and encourage participation. These means are the most important elements of the campaigns during election periods. Twitter, as one these elements, is especially preferred as it provides the opportunity of instant messaging and effective communication. Generally speaking, when Twitter use is considered, the practices of Turkish politicians cannot go beyond the watchword: "it is necessary to be in social media."

In this study, the Twitter messages of the candidates for the municipalities of three metropolises during 2014 local elections from the governing party along as well as the opposition parties will be analyzed with content analysis method with respect to interaction, information and agenda.

### **Governance and Social Media**

Governance is a system of rules independent of the objective meanings seen in the imposed rules and regulations. In other words, "governance is a system of rules that gains functionality only if it is accepted by the majority...however governments usually launch their policies notwithstanding stiff opposition. Considered from this point of view, governance is always effective in realizing a systematic continuity; otherwise, governance cannot survive, because ineffective governance will lead to anarchy and chaos" (Rosenau, 2000: 4-5). In the same way, "the proponents of global governance generally accept that the need for governance is derived from the global process" (Mingst, 1999: 94). According to Aktan (2005), good governance denotes a political and economic order compatible with representation in state administration, participation and control, an effective society, the rule of law, central administration, explanation in accordance with quality and ethics, responsibility for transparency, methods for providing alternative services, competition and market economy and finally digital revolution, i.e. the recent developments in fundamental technologies (Mengü, 2012: 86).

The countries that can implement good governance are also those that can perform their economic and social developments best. Nevertheless, good governance may lead to the risk of being governed by the others. By assessing the sources carefully, citizens should be assisted through production, democracy and legislation. Thus, the power and function of non-governmental organizations play a crucial role in realizing these objectives. Civil society or democracy necessitates a convenient area in the public sphere, so the interests in conflict should have an opportunity to get into market. However, the intensity in the media and institutional globalization has distorted the balance of this playground. As a result of not only economic, but also political factors, the mass media does not provide equal opportunity of access (Hiebert, 2005: 3).

Public opinion directs and constrains the actions of individuals. Hence, "the institutions and methods influencing public opinion assume importance...the source of the values that public opinion depends on is generally customs and traditions. Even though public opinion is influential on laws, it, in fact, goes beyond the commands in laws" (Bottomore, 1970: 261). Similarly, it can be argued that the mainstream media in Turkey has a noticeable dominance. Public broadcasting is getting difficult due to legislative regulations. As a consequence, public broadcasting is losing power against private broadcasting. In such an atmosphere, it is quite difficult for individuals to express themselves. As a result of pursuing a magazine prone policy, the media gives rise to the emergence of individuals who are unaware of their rights and responsibilities in judicial and political areas and who can easily be directed by social changes. "The mass media continuously increases the volume of the information that individuals want to obtain about what is going on in a society; however, the media also prevents them from transforming this knowledge into action" (Sennet, 1996: 352). In this regard, individuals always have the potential of transforming knowledge to action. Blumer, defines the preliminary groupings where these behaviors appear as crowd, mass and public: Crowd is a group of individuals got together with an effort to obtain certain results, to experience collective

delectation from a particular experience and express themselves. Mass; on the other hand, consists of individuals, each of whom acts consciously, but, perform it only for sharing a common point that they can reach simultaneously. Conveying the same message to the homes of the individualized entities simultaneously, the mass media also create similar actions for them. In addition to these, public is a group of people who have come together in order to discuss a common point, over which they have a dispute, but who have had no interaction so far. This can be regarded as the vision of rational discussion pertaining to the public sphere (Crossley, 2002: 28).

The media has been the most important element of the public sphere in network society (Castells, 2008), the power of the social movement initiated by activist groups to change public opinion is mainly based on the ability to shape the discussions in the public sphere. "New communication technologies create platforms based on participation and discussion for public to share their opinions and activities. According to Vural and Bati, identified as social media, this world has a significant position as it can bring people together and improve interaction between individuals apart from being individual oriented. In fact, during the process in which new information technologies provide a fast exchange of knowledge, social media appears as an important element for not only the formation and organization of the publics, but also enable their participation in these organizations by increasing their level of consciousness and awareness."

New communication technologies are gradually providing greater opportunities to have interaction with the electorate through the applications in social networks. Apart from easing the interaction with citizens or electorate, the technologies provide an important contribution to reach the electorate out of the mainstream media, motivate the independent political agenda and strengthen the solidarity of active supporters. Social media is now regarded as 'an indispensable element of modern campaigns' (Panagopoulos 2009: 9; Grusel, Nord, 2012). Twitter messages are open to the access of everyone and the users can have interaction with each other without any prerequisites, such as accepting a friendship and so forth. Such a design facilitates the message exchange and makes Twitter a vast domain of discussion. Twitter functions as an appropriate means for strategic campaigns. It can easily be seen that Twitter has a potential of providing news, organizing a large number of followers and enabling direct communication between politicians and citizens. "In broad sense, social media is conceptualized as various digital means facilitating the interaction and message exchange of publics among themselves as well as with organizations (Liu et al, 2011). Hence, according to Khanfar, publics are now seen as powerful communication groups rather than conceptualized as "researched", "classified" and "communicated."

### **Activism and Generation Y**

In any situation, publics act according to three independent variables: recognizing the problem, recognizing the limitations and the level of being related to the situation. According to the situational theory of publics, these three variables affect the active (seeking information and passive (processing information) communication behavior of a public. The higher the problem recognition and the lower the limitation recognition level of a public is, the more effectively this public tries to reach information, which in turn, enhances potential effects of an organization. The situational theory of publics helps public relations practitioners to perform measurements, definitions and classifications towards publics in order to understand their structures and also plan organizational communication better. J. E. Grunig and Hunt (1984), publics pass through a three-level development process and reach an organizational level, namely from the phase that "they do not possess public aspects" to still inactive (hidden), then, totally aware and displaying active communication behavior. Later, J. E. Grunig and Repper (1992) have classified publics into four theoretical categories: the publics interested in all issues, uninterested publics, the publics interested in only one issue and those interested in the issues on the agenda (p. 50-51).

As publics pass through these stages in order to be more effective, they generally get organized in groups and as they have more opportunities to voice themselves, they get more powerful. When it is achieved, their behaviors and ways of communication become mature enough to be identified as "activist" (J.E. Grunig, 1997). As defined by L.A. Grunig et al., "an activist public is composed of two or more individuals who have been organized another public or other publics through an action consisting of education, convention, persuasion, pressure tactics or power" (p. 446). Activists, at the same time, can be considered as special interest, pressure or issue groups, the organizations composed of ordinary people, social movements or furious publics. Based on the views of Smith (1997), D. P. Ferguson (1997) has

determined that getting organized in groups to attain certain objectives and using communication strategies are the basic principles of activism. On the other hand, determining that publics provide a significant power to the groups that are particularly more effective or activist, and even those with relatively more resources as well as the groups creating pressure in order to get into dialogue about the issues causing perturbation in a study conducted by J. E. Grunig (1997) and L. A. Grunig et al, can be regarded as a reply to the respective criticisms.

By forcing organizations to harmonize themselves with their environments and as consequence, to be more effective, activists “try to improve the functions of organizations externally” (L. A. Grunig, 1992: 504). If activists perceive organizational communication ineffective or insufficient wend their way to some other areas in order to meet their need for acquiring knowledge (Anderson, 1992). Several researchers (J.E. Grunig & L.A. Grunig, 1997; Lerbinger, 1997) have analyzed the strategies that the activist publics launch to attain their objectives. Lerbinger argued that activists follow a certain path for enhancing communication and behavioral pressure by expressing their “complaints” and “requirements” (individually or as a group), organizing groups to “impose their demands,” having an overall public consent, launching “the tactics creating crisis” and motivating the news media (p. 120).

According to Michael McQueen from Australia, “Generation Y live in a period that information technologies dominate everything by transforming the world to a global village and human beings live in an era that businesses change everything, including lifestyles. In other words, they live along with change and grow up with digital technologies.”

- Generation Y likes to ask “why,” which indicates that they do not yield to authority. Therefore, obedience without adoption seems to be quite difficult.
- Being conscious of their rights and quite recalcitrant, this generation knows how to fight with the uninterested and unjust ones.
- Generation Y is interrogative and has awareness.
- Generation Y thinks that respect should be earned and acts according to this philosophy.
- They are the ones who express their complaints and can see that surviving in this world is not easy.
- Being rather impatient, Generation Y stands against authority through social networks, such as Facebook and Twitter.

## **Purpose and method**

### **Purpose**

The purpose of this study is to determine the interest of young people in politics and how they use their political sources with respect to their practices in following the global political events. Thus, it has been intended to find replies to the following questions:

1. What is the distribution ratio of the total tweets sent to the candidates running for mayor?
2. What is the distribution ratio of the content (positive, negative or neutral) of total tweets sent to the candidates in local elections?
3. What is the distribution ratio of positive, negative or neutral messages according to the number of the followers of those who sent tweets (considering the mass that was reached)?

### **Mthod**

The election results have been analyzed regarding the three questions above with comparative content analysis method and the results have been discussed in accordance with the general purpose of the research. The tweets sent every four hours between February 20 and March 6, 2014 were semantically analyzed as positive, negative and neutral over randomly selected 200 tweets for each candidate. According to a news item in *Sabah*,

“Twitter in Turkey and Figures (Keser, 2014), “although there is not a detailed statistic open to public about the age profile of Twitter users, it is known that approximately 50 % of the users are between 19 and 25. In addition, 70 % of those use Twitter via smart phones or tablets. In this regard, during the period before the elections Twitter Monitoring was administered and 9.000 messages were monitored, in which the names of the candidates for the mayor of Istanbul Metropolitan City were mentioned. Of the respective messages, those sent by the candidates as well as the news channels were eliminated. Then, through a secondary analysis, more than one messages belonging to a particular user was disregarded. As a result, the same number of tweets sent by 2.888 users was semantically examined and the comments about the candidates were semantically classified as positive, negative and neutral.

## **Findings**

In this section, with regard to the secondary objectives, the results of the analysis on Twitter as the sampling of this study use most are presented:

### **1. *Distribution ratio of the total tweets sent to the candidates running for mayor***

For each user, one tweet has been analyzed. Thus, Kadit Topbaş received 1173, Mustafa Sarıgül; 825, Rasim Acar; 400 and Sırrı Süreyya Önder: 490 tweets.

### **2. *Distribution ratio of the contents of total tweets (positive, negative or neutral) sent to the candidates running for mayor***

- According to the negative tweets the candidates received, Kadir Topbaş got 123, Mustafa Sarıgül; 109, Rasim Acar; 8 and Sırrı Süreyya Önder; 49 messages.
- According to the positive tweets the candidates received, Kadir Topbaş got 95, Mustafa Sarıgül; 36, Rasim Acar; 84 and Sırrı Süreyya Önder; 59 messages.
- According to the neutral tweets the candidates received, Kadir Topbaş got 955, Mustafa Sarıgül; 680, Rasim Acar; 308 and Sırrı Süreyya Önder; 382 messages.

### **3. *Distribution of positive, negative and neutral tweets according to the number of the followers of those who sent messages (considering the masses that were reached)***

- According to the approximate number of users reached through tweeters about Kadir Topbaş, the number of negative tweets are 84.460, positive tweets: 796 and neutral tweets: 872.146.
- According to the approximate number of users reached through tweeters about Mustafa Sarıgül, the number of negative tweets are 107.460, positive tweets: 43.978, and neutral tweets: 526.415.
- According to the approximate number of users reached through tweeters about Rasim Acar, the number of negative tweets are 1903, positive tweets: 54.799, and neutral tweets: 413.433.
- According to the approximate number of users reached through tweeters about Sırrı Süreyya Önder, the number of negative tweets are 19.855, positive tweets: 62.107, and neutral tweets: 275.736.

## **Comparative Analysis:**

With regard to the ratio of positive, negative and neutral tweets, those who received the most tweets in the respective categories are successively Sırrı Süreyya Önder, Rasim Acar, Kadir Topbaş and Mustafa Sarıgül. Having received the most tweets, Sırrı Süreyya Önder is followed by Mustafa Sarıgül, Kadir Topbaş and Rasim Acar. Moreover, Sırrı Süreyya Önder is again the one who received the most negative tweets. However, it should be noted that the number of these messages is less than the ratio of negative messages in all categories. Having received a rather close ratio of tweets to Sırrı Süreyya Önder, Rasim Acar is followed by Kadir Topbaş and Mustafa Sarıgül.

When the positive, negative and neutral tweets were examined according to the number of the followers of those who sent messages about the candidates, Sırrı Süreyya Önder ranked first and was followed by Kadir Topbaş, Mustafa Sarıgül and Rasim Acar. According to the same findings, the candidates who received negative tweets most are Rasim Acar, Sırrı Süreyya and Kadir Topbaş. In addition, with regard to the followers of those who sent tweets,

Mustafa Sarigül seems to have received no negative messages.

## Discussion and conclusion

As a result of the analysis, it can be concluded that with regard to the total number of messages, exact reflections of the elections results were obtained. Similarly, the candidate of AKP ranked first, CHP second, HPD third and MHP fourth. Thus, it could be inferred that the when total dialogues on Twitter are analyzed with correct filters; it would be possible to make realistic predictions about election results.

Furthermore, when the messages were semantically classified, it was found out that the users avoided making positive or negative comments on the candidates to a great extent; thus, neutral tweets had a rather high ratio with respect to total number of messages.

Finally, in the light of the findings obtained by calculating the arithmetic mean of the Twitter followers, another analysis was implemented towards the masses that the respective messages reached. As a result, the comments about the candidate who ranked third after the elections; in fact, reached rather large masses and became the first regarding the number tweets. Likewise, the number of the masses that the comments about the candidate who became the fourth after the elections closely followed those mentioned above. Nevertheless, it was also determined that the number of the masses that these messages reached did not display parallelism with the election results. Therefore, it might be argued that positive and negative messages shared over Twitter are not so influential on the political preferences of the readers.

Based on the hypothesis that “as a means of social media preferred especially by Generation Y, Twitter can be an element of political activism enabling young people to express their political choices and decisions,” the three fundamental questions of this study have been answered as follows:

1. Generation Y consider themselves rather influential on political decisions and reflect it in their correspondence in Twitter.
2. Political preferences of Generation Y, which is reflected in their correspondence in Twitter shows parallelism with the election results.
3. Generation Y have utilized Twitter not only as a means of political action, but also a domain for expressing themselves and having discussions.

To sum up, in this study, the use of Twitter, as the most widely utilized means of political activism in Turkey, has been analyzed. Moreover, it can be inferred that chosen as the sampling, Generation Y consider Twitter as a platform of free social and political expression and also believe in its power to stimulate masses.

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# Positioning in business administration education at universities established in 2006: a content analysis on strategic drivers and curriculum

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## Abstract

In 2006, 15 new universities were established within the scope of the Law, No. 5467 in Turkey. Business administration departments have been established in 14 of these 15 universities. These departments have been either initiated or transferred from older to the newly established universities. These departments have been studied to find out whether they have positioned themselves to train personnel for either private sector or public organizations. A conceptual content analysis has been carried out on lesson plans and courses have been evaluated on the concept of "business administration course". Departments have been categorized based on the density of business administration course among all other courses. While classifying, mission and vision declared by the department and curriculum along with the curriculum of Department of Business Administration of Istanbul Culture University, which allege to train human resources for businesses, are taken as a control variable. In addition, general information, mission and vision of departments which are classified based on course density have been examined and they have been analyzed whether their personnel education declarations show linearity with curriculum. As a result of all these analyses, it has been concluded that some departments can be classified in terms of course density; all departments actually try to train human resources as much as their own possibilities and that of the country permit; departments do not position themselves especially in a field and there is no linearity between course densities and mission and vision declarations of departments.

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## 1. Introduction

The process of opening of new universities has essentially gained momentum after 2006. 93 universities were established in Turkey from 2006 until 2013 (Doğan, 2013). Most of these 93 universities have been separated previously established universities. We can say that there are both benefits in separating from previously established universities in terms of both academic and administrative organization as well as in the context of execution board. On 01.03.2006 fifteen State Universities were founded in accordance with Article 5 of the Law No. 5467 adopted by the General Assembly of the Parliament. Some of these 15 universities took over the Faculty of Economics and Administrative and thus the Departments of Business Administration from other universities and these departments had long been continuing their academic life. Some have been re-established as a department and faculty.

The goal of study is basically to analyse whether these departments have been positioned train personnel to the private sector or public sector organizations by conducting a content analysis of the courses covered in curriculum of Business Administration departments, which are under the roof Economics and Administrative Sciences Faculty or other faculties of 15 universities established especially in 2006, as well as conducting the analysis over strategic drivers such as vision, mission and other objectives of the departments. As a result of the study, differences, if there are, between formerly established departments and those established in 2006 will be found out. In addition, there will be the possibility to mention to the problems of all newly established departments.

In order to achieve the goal of study, main concepts of the study, positioning, vision, mission and strategic objectives which form primarily the theoretical framework are explained and are evaluated in the context of the

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Business Administration Department. Then, the research method is described. The data obtained using this method is reviewed.

As a marketing concept, positioning is basically the image of any product or service in businesses against directly competing products or services to them or even against the other products or services that the same company produce (Tek, 1997). According to another definition, positioning is the activity of designing image and offers regarding products and services of companies in order to arouse a distinctive image in the minds of individuals in the target market. Essentially, positioning is a strategic administration decision regarding to where the products or services will be addressed within a particular market (Hiam & Rastelli, 2007). The concept of positioning is not merely the concept of marketing a product or service. For example, a political party can be said to be positioning itself in the political arena. This issue is examined in terms of political science. According to Denton (1988), who has conducted studies on this subject, parties position themselves depending on the desires and determination of party leaders. Based on this positioning process, parties conduct image studies and identify policies to be applied. How will we define the positioning of a department at a university in the context of these definitions? The most simple answer of this problem is, expressed by Arlı (2012), if positioning is an activity imposed in the minds of people regarding any image, then, it is an the image clarification activity in the minds of people concerning the specific section. Who are the people interested in the business departments? First of all potential students, current students, parents of students, faculty members, market of demand for labour, other authorized people or bodies. The positioning of the business departments is an effort to detect in the minds of individuals that we have mentioned for what purposes those departments offer education and more importantly to identify for which sectors these departments train personnel.

If we consider in this context, areas in which graduates of business departments are employed gain importance. Business departments can offer education for one or several or all of those departments. Graduates of business departments generally are employed in/as:

1 Private Sector: as officers or managers in departments such as business marketing, accounting, finance, human resources, foreign trade, etc.; as clerk, manager or specialist in banks; as officers or expert in accounting and auditing firm; as expert in insurance companies; as private sector employees in many areas such as advertising and public relations expertise.

2 Public Sector: as staff in the public sector based on the scores obtained in public examinations, with the Type A (Assistant Expert, Expertise, Inspectors, District Administrative Judges) Squad or Type B (Computer Operator, Clerical Work, etc..).

3 Entrepreneurship: as the owner of his/her own business

4 Academician: as research assistant or teaching assistant at schools offering administration education.

Do business departments prepare educational program choosing some of these four areas? This question is the basic question of our research. In order to answer this question, a content analysis will be carried out covering 4-year curriculums of business departments in 15 universities mentioned above, and –if there are- written statement regarding strategic drivers and employment opportunities of each university.

Strategic drivers are vision, mission and basic goals. Because when an organization creates a corporate strategy, its work is identified with internal and external environmental analysis as well as mission, vision and objectives; hence, the work will be clearly defined. Mission statement explains why an institution established and why it exists. In the context of mission statement, one can find which goods or services are produced how and for which markets and one can also find the business philosophy, values and approaches that distinguish the organization from others. Vision statement is a declaration on where and how an organization sees itself in the future. In the context of mission statement, one can find dreams are visions that the organization carry out good work in the future. The objectives are the conclusions expressing what an organization has done and why it has done so to get what. The objectives are conclusions which are more obvious, tangible, measurable, comparable and free of time limit (Ülgen & Mirze, 2010).

As well as four-year course content of Business Administration Departments, mission, vision and objectives statements related to departments, given in the general information section on the website of the departments, are covered into content analysis and this study tries to find out for which sector - private sector, public institutions or entrepreneurship- the departments train personnel. Some can clearly think that Business Administration Departments are units training personnel for private sector. However, in recent years, despite witnessing that it has changed a little, one of the most important realities of our country is that people dominantly see the state by which they “ensure their position”. We can say that especially mothers and fathers see the employment in public

organizations as "job guarantee" and "fixed income guarantee" for their children. What we say is valid especially for lower and middle income group families. Our aim is not to criticize this approach or reveal the fallacy of this approach, but to analyse what level business administration departments respond to this approach.

On the other hand, the fact that business administration departments train personnel to be employed in public institutions cannot be the only explanation of the understanding above. Public institutions in Turkey are clearly still one of the most important employment institutions and issues such as "job guarantee", "wage" or "career blockage" drive our young people to be employed in public institutions. In addition, employing personnel into prestigious occupations such as expertise, inspector, and administrative judge or district governors from business administration departments attracts both the business department managers and young people studying at business administration departments to public examinations.

## **2. Research**

### *2.1. Methodology*

Content analysis method has been used in the research. The analysis which is carried out by following a certain path, sticking to impartiality and making use of numbers is called content analysis and the aim is to determine the variables in a text and the relationships between these variables (Wimmer and Dominick, 2000). Including a series of rules, content analysis is a research method carried out to draw conclusions from the texts. The desired result to be obtained may be related to the message itself and it may also be related to the sender of the message and its counterparts. Content analysis can be applied when to code answers given for open-ended questions; to detect the intention or other features of those giving a message; to identify an existing propaganda. Content analysis can be applied in reflecting cultural motifs of a group, an organization or a community; besides, it can be applied to detect the intentions and goals of individuals, groups, organizations or communities (Weber, 1990). In this study, content analysis is applied to determine the objectives of business administration departments.

To carry out content analysis on the text covered in the sources, we need to code the texts or categorise or disassemble these texts in a way we can use. Given encoding may be in the form of words, the meanings of words, phrases or themes, that is topics. In the process following this encoding, one of three kinds of content analysis, 1. Thematically (conceptual) analysis; 2. Semantic Analysis; 3. Network Analysis can be used (Leblebici & Kılıç, 2004). Conceptual analysis technique is used in the study. Conceptual analysis is an analysis on the concept which is the subject of a discussion or document. In this analysis, concepts and topics of texts are primarily examined. Without being limited with some certain frameworks, whether any subject exists in a text or not can be examined with broader implementation feasibility through conceptual analysis; besides, the density of existing concept or concepts can be measured. (Leblebici & Kılıç, 2004a) It is also possible to classify words or phrases units through conceptual analysis. Word or phrase units related to a certain subject or concept can be gathered under certain categories (Leblebici & Kılıç, 2004b). In this context, courses covered in the curriculum in our study are categorized based on each business administration department and are determined how much is their density for each department. For example, law courses density of business administration departments is determined regarding the department of law. The weight of law courses shows us that part is given importance in public examinations.

According to Article 5 of Law No. 5467; Ahi Evran University, Kastamonu University, Düzce University, Mehmet Akif Ersoy University, Uşak University, Rize University, Namik Kemal University, Erzincan University, Aksaray University, Giresun University, Hittite University, Bozok University, Adiyaman University, Ordu University, Amasya University were established. According to Article 1 of Law No. 5467; Ahi University took over Faculty of Economics and Administrative Sciences from Hacettepe University, Uşak University from Afyon Kocatepe University, Aksaray University from Nigde University, Giresun University from Karadeniz Technical University, Hittite University from Gazi University, Bozok University from Erciyes University, Ordu University from Karadeniz Technical University

By examining how much courses covered in the curriculum intensify around 5 subjects composed of Business, Economics, Law, Finance, and other areas, we try to make inferences on whether there is positioning or not. If courses of Economics, Law, Finance, and other areas in the departments are more intense, this will give us the information that there is an inclination for public examination in those departments. When deciding this, we will need control variables. The density of courses of the departments which especially state to train human resources to

the private sector will be studied and the density of departments founded in 2006 can be assessed with this comparison.

## 2.2. Results and Assessments

In order to better review the collected results, we show whether education initial years, general information, mission-vision-objectives and curriculums of business administration department in 15 universities covered in this study in Table 1 are available or not.

**Table 1. Available Information Related to the Department of Business Administration Departments**

Name of the University	Establishment Year	Available Information about the department
Ahi Evran	2012-2013	Curriculum
Kastamonu	2011-2012	Course Content and General Information
Düzce	2011-2012	Curriculum, Statement of Head of Department, About the Department
M. Akif Ersoy	2012-2013	ECTS, Statement of Head of Department, Mission and Vision Statements
Uşak	2003-2004	Curriculum, General Information
Rize (R.T.Erdoğan)	2009-2010	Curriculum, Objective of the Department and About the Department
Namık Kemal	2010-2011	Course Credit Scheme, About Business Administration Department
Erzincan	2009-2010	Syllabus, About the Department- Mission and Vision Statements
Aksaray	2003-2004	Curriculum, About the Department
Giresun	2008-2009	Curriculum, Information form of Business Administration Department
Hitit	1998-1999	Syllabus, Statement of Head of Department
Bozok	1995-1996	Curriculum, Introduction of the Department
Adıyaman	2009-2010	Curriculum, About Our Department, Mission and Vision Statements
Ordu	1994-1995	Curriculum, Message of Head of Department, Mission and Vision Statements
Amasya	Not Open	---

As can be seen in Table 1, four-year curriculum of all departments are available, while data on general information of many departments are not available. Mission and vision statements of five departments are available, while objective statements of two of the departments are available. In almost all departments, mission and vision statements of not the department itself but the faculty of the department are available (as a result of the screening of the main pages of faculties to which the departments belong as of 05/21/2014). Therefore, it can be expressed that departments of business administrations have mission and vision statements generally shared with departments such as public administration, economics, finance, labour economics, and international relations. This fact shows us that most of the business administration departments in the universities established in 2006 have not a particular statement that they train human resources for the private sector. In Table 2, we study how much the course of business administration intensifies in the departments of law, economics, finance and others. Course intensity apart from business administration department shows us that the department give importance to education for public examination.

**Table 2. The distribution of courses to the areas**

Departments University	Business		Law		Economics		Finance		Other	
	F	%	F	%	F	%	F	%	F	%
<i>Istanbul Culture</i>	<u>60</u>	<u>71,42</u>	<u>4</u>	<u>4,76</u>	<u>5</u>	<u>5,92</u>	<u>0</u>	<u>0</u>	<u>17</u>	<u>17,90</u>
Ahi Evran	37	57,81	9	14,06	6	9,37	0	0	12	18,75
Kastamonu	89	70,07	13	10,23	8	6,29	1	0,78	16	12,59
Düzce	60	61,85	7	7,21	8	8,24	2	2,06	20	20,64
M.A.Ersoy	49	70,00	7	10,00	5	7,14	1	1,42	8	11,44
Uşak	46	60,52	5	6,57	6	7,89	2	2,63	17	22,39
R.T.Erdoğan	69	68,31	6	5,94	7	6,93	2	1,98	17	16,84
Namık Kem.	23	48,93	6	12,76	5	10,63	0	0	13	27,68
Erzincan	43	53,08	10	12,34	11	13,58	1	1,23	16	19,77
Aksaray	71	62,28	7	6,14	18	15,78	1	0,87	17	14,93
Giresun	62	72,94	6	7,05	3	3,52	1	1,17	13	15,32
Hitit	35	44,30	11	13,92	12	15,18	0	0	21	26,6
Bozok	49	55,68	10	11,36	9	10,22	0	0	20	22,77
Adıyaman	57	63,33	6	6,67	9	10	3	3,33	15	16,67

Ordu	80	74,76	5	4,67	6	5,60	2	1,86	14	13,11
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As seen in Table 2, business administration departments of universities established in 2006 are assessed considering course density of business administration department of Istanbul Kültür University (İKÜ). This is because business administration department of Istanbul Kültür University has presented in its Course and Program Outcomes Matrix that the university train professional managers for businesses (Course-Program Outcomes Matrix, iku.edu.tr). Therefore, business administration department of İKÜ will be considered as a control variable.

As seen in Table 2, density of business administration courses among all other courses is 71.42%, while the total weight of the other departments is 28.58%. At the same time, when the curriculum of business administration department is analysed (Program Curriculum, iku.edu.tr), courses taken from other departments are generally about functions and activities of administration. When stating this, of course, we do not mean that other courses of other departments do not support business functions and activities. Yet, we can say that it is directly related with the areas from which questions come in public examinations.

As seen in Table 2, departments which are related business- courses up to the level of 70% or over are in Ordu, Giresun, Kastamonu and Mehmet Akif Ersoy universities. Those which are between the levels of 60% and 70% are the departments of Recep Tayyip Erdogan, Adiyaman, Duzce, Usak and Aksaray universities. The levels are between 50% and 60% in Erzincan and Bozok universities, while it is between 40% and 50% Hittites and Namik Kemal universities. When we compare them with İKÜ business administration department which we taken as control variable, we see that there are departments mainly train professional managers for the private sector as well as considering the public sector. In this context, the information given about the department along with mission-vision statements of departments are analysed whether the departments are positioned to train human resources for the public or the private sector.

When we look at the Department Chair Message, Mission and Vision Statements (unyeiibf.odu.edu.tr) of Ordu University which 70% or over of courses are related to business administration, we see an emphasis on the objective of training personnel both for private and public sector. If business administration department Information Form and statements of objective-mission-vision and core values of departments at Giresun University are analysed (iibf.giresun.edu.tr), they emphasise that they have created a curriculum equivalent to those at European universities within the framework of Bologna process in 2010-2011 academic year and they do not emphasize whether they train human resources for the private or the public sector. If we look at the departments of Kastamonu University, it is emphasized in the general information (General Information, iibf.kastamonu.edu.tr) that there is a selective course structure which can prepare students for public examinations, business professionals in organizations, scholarship. When Message of the Head of the Department, Mission and Vision Statements (iibf.mehmetakif.edu.tr) of Mehmet Akif Ersoy University, Department of Business Administration Department are analysed, the department primarily aims to train personnel for the organizations, but the graduate can also be employed in the public sector or even they can be entrepreneurs. As seen from the statement of these departments, all departments apart from that of Giresun, they emphasize that they train human resources for the public sector.

When we analyse About Department of Business Administration and Department Objectives (iibf.erdogan.edu.tr) of Recep Tayyip Erdogan University at which the density of courses in business administration is about 60% to 70%, we see that training managers for the organizations is emphasized. When we look at About Department of Business Administration at Adiyaman University and Mission and Vision statements (işletme.adiyaman.edu.tr), an emphasis is made, without mentioning whether for the public or private sector, to train human resources to the business world in general. When the Message of the Head of Business Administration and About the Department of Düzce University are analysed (if.duzce.edu.tr), we see they emphasise that they train entrepreneurs and professional business managers. The emphasis on the public sector is only limited to human resource needs of public enterprises. When we look at general information statement of Department of Business Administration at Usak University (iibf.usak.edu.t), they emphasise that they train human resources for the public and private sector. Aksaray University declares with About the Department of Business Administration (isletme.aksaray.edu.tr) statement that its objective is to train individuals for the private and public sectors. As seen, in this group, comparatively have a lower level of business administration course density than the former group, only departments of Aksaray and Usak Universities put an emphasis that they train human resources for the public sector.

When we look at Mission, Vision statements (erzincan.edu.tr/birim/?git=12) at the Department of Business Administration of Erzincan University at which 50% to 60% of courses are about administration, we cannot say the department positions itself to train human resources for the business or the public sector. In general, all employment areas are discussed. When we read the introduction of Business Administration Department in Bozok University

(iibf.bozok.edu.t), they emphasize that the department train personnel for today's organizations without segregating any area. We cannot reach any mission and vision statement or the introduction of Department of Business Administration in Ahi University.

Administration courses cover about 40% to 50% of the total. In his presentation, Head of Department of Business Administration at Hittite University (in.iibf.hitit.edu.t), the education is given to train business professionals, yet graduates can be employed in enterprises and public institutions. When the declaration of Department of Business Administration in Namik Kemal University (iibf-is.web.nku.edu.tr) is analysed, especially, the importance of training human resources to businesses is highlighted; besides, the public sector is also taken into account.

## Conclusion

When the business administration course in business management departments is mentioned, one should not infer that "other courses are not related to administration". Of course, members and administrators of faculty of business administration department are experts in the field. Their thoughts and applications about how students should be trained are complete and in place. The result we want to achieve here is that some of business administration departments are to determine their courses to enable their students to be successful in public examinations. Some of the faculty members in business administration consider management education as a training process which should be structured to train human resources solely for the private sector. According to them, advanced level of public law and private law or economics courses are not suitable for business administration departments and they do not serve the purpose. Some faculty members, however, think that it is not suitable to say that I merely train business administrators or personnel for the organizations in our country's current conditions (for example; business department students can be administrative judges, governors or inspectors; besides, employment is a hardship in the country). Therefore, it is necessary to train students to be employed in the public or private sector.

If we evaluate the issue in this context, we can say that departments emphasize the objective of training human resources for businesses. However, under the terms of employment in Turkey we can say that there is also an emphasis on training professional managers for public institutions in accordance with law regarding the right of Faculties of Economics and Administrative Sciences in the public examinations.

With elective courses particularly in 3rd and 4th classes, departments focus on training students in a particular area. However, these areas are often one of departments of business administration such as management and organization, accounting and finance, quantitative methods; therefore, the focus is on business functions. This practice can be regarded positively in terms of specialization of student who can work in different parts of businesses as well as loading information.

On the other hand, it would not be very proper to ask the department of business administration to adapt itself to train personnel for the private sector or position itself to train human resources for the public sector. As a result of some reasons caused by both inner environment of the department itself (faculty member quality and quantity, etc.), and outer environment (the university, city, region in which the department exists, socio-cultural conditions, etc.), we can say that departments can position themselves to train human resources for both public and private sector.

In order to increase the reliability and validity of the findings, chosen sample may need to be further expanded. At the same time, it may be necessary to explore the level of words and concepts covered in the curriculums more depth. A comparative analyse can be conducted by studying the curriculums, department introduction, mission and vision statements of business administration departments established before 2006 and those of more prestigious business administration departments in Turkey. Thus, the answer for the question whether the departments position themselves to train human resources or not can be sought. However, is it necessary for departments to position themselves based on this study conducted on a limited ground? What is lost if not what is gained if there is positioning in newly established departments or not? How the course structure should be at a department which have positioned itself? These and similar questions may give some clues for this study.

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INTE 2014

# POST MODERN EĞİTİMDE YENİ EĞİLİMLER

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## Özet

Değişim çağında yaşıyoruz. Hayatın değişik alanlarında dinamik değişimlere şahit oluyoruz. Tüm bu değişimler, kapsayıcı büyük paradigmaların etkisi altında meydana gelmektedir. İçinde yaşadığımız dönem, birçok otorite tarafından modernite sonrası dönem olarak değerlendirilmektedir. Post modern yeni kavramların hayatın tüm sektörlerini etkileyip değiştirdiği gibi, eğitim Dünyasını da etkileyerek yeni eğilimlerin ortaya çıkmasına neden olmaktadır. Bu çalışmada, yeni kavram ve eğilimlerin ışığı altında eğitimin, öğrenci kabiliyet ve sınıflarına göre, cinsiyet farklılıklarına göre, didaktik eğitime bedel sorgulayıcı eğitim yöntemleriyle nasıl icra edilmesi gerektiği sorgulanarak incelenmiştir. Örgün eğitimde toptancı bir yaklaşımla kitle eğitimine karşılık, bireylerin farklılıklarını, cinsiyetlerini, temel beceri farklılıklarını dikkate alarak, post modern bir yaklaşımla, mutlakliyetin olmadığı, göreceli olma gerçekliği ve aynı zamanda Gödel'ci bir bakışla eksikliği ve tutarsızlığı ontolojik bir gerçeklik olarak ele alarak eğitimi genel yaklaşımdan öze indirgeyerek çok boyutlu ele alınması gerekmektedir. Bu yönüyle, küreselleşme sürecinde değişen değerler ve yeni eğitim paradigması bu çalışmanın temel konusunu oluşturmaktadır.

**Anahtar kelimeler:** Post modernite, küreselleşme, eğitim.

## 1. Giriş

Dinamik bir değişimin ve dönüşümün yaşandığı günümüzde toplumlar, sosyal, siyasal, kültürel, ekonomik vb. yönlerden çeşitli gelişmelere tanıklık etmektedirler. Şüphesiz, bu değişimden ve dönüşümden en çok etkilenen alanların başında eğitim gelmektedir. Bilimsel bir tanımla bireylerde istenilen yönde davranış değişikliği meydana getirme süreci olarak tanımlanan eğitim, formal ya da informal olarak, insanlık tarihi ile paralel uzun bir geçmişe sahiptir. Düünden bugüne insanoğlu temel yaşam ihtiyaçlarını gidermenin yanında çevresini tanıma, keşfetme, anlama gibi gereksinimlerini de gidermeye çalışmaktadır. Bu yönüyle, bilginin üretilmesi, geliştirilmesi ve yarımlara aktarılması için insanlar yoğun çaba göstermişler ve hala da göstermektedirler. Bilginin karmaşıklığı, onu daha fonksiyonel hale getirebilme yaklaşımlarının sonucu olarak çeşitli bilim dallarının doğmasına neden olmuş; eğitim de sosyal bilimlerin uygulamalı bir alanı olarak yerini almıştır.

Uygulamalı bir sosyal bilim dalı olarak eğitim, bilginin gerek edinilmesi ve gerekse yayılmasıyla hemen her alanda yapılması gereken değişim ve gelişmelerin temel aracıdır.

Pozitivist bir anlayışta gelişen modern paradigmaların genel özelliği, bilimsel olarak nitelendirilmeleri ve deney sonuçlarını esas kabul eden bir düşünceye dayanmalarıdır. Fen bilimleri alanında gerçekleştirilen, deney ve gözlemlerle varılan sayısal ve deneysel sonuçlar, yönetim alanında da uygulanmaya başlanmış, eğitim ortamlarının da bu anlayışla düzenlenmesi yoluna gidilmiştir. Bilimsel bir yaklaşımla fizik, tıp, astronomi, matematik gibi alanlarda deney ve gözlem sonucunda ulaşılan bulgulara dayalı genellemeler yapmak, ortak doğrulara ulaşmak, objektif doğrular üzerinde kurallar üretmek mümkün olmaktadır. Fakat aynı durum sosyal bilimlerin alanında, konusu insan veya örgütlerin yönetimi söz konusu olduğunda geçerliliğini yitirmektedir. İnsanlar duygu, düşünce, davranış, eğilim ve yaşam tarzları bakımından birbirlerinden ayrıldıkları gibi, aynı kişinin zamana ve zemine göre bile farklı davranabildiği göz önünde bulundurulduğunda, sosyal bilimlerin alanında, fen bilimleri alanında olduğu gibi kesin tanımlamalara ve sayısal sonuçlara ulaşmanın mümkün olmadığı görülmektedir.

Sosyal bilimlerin, tabiat bilimlerine indirgenmesinin sakıncalarından söz eden toplum felsefecisi Popper (1995),

tabiatla ve fiziki dünyayla ilgili fen bilimleri kapsamına giren konuların daima ve her yerde aynı olmasına karşın, sosyal hayata ilişkin verilerin ve çıkarsamaların yer ve zamana göre değiştiğini belirtmektedir. Çünkü sosyal olgular, tarihi gelişmelere ve kültürdeki farklılıklara göre değişebilmektedir. İnsan, tarihselliği olan, aynı zamanda kültürü üreten ve kültürün ürettiği bir varlıktır.

20YY. ikinci yarısından itibaren tartışılmaya başlanan postmodern paradigmanın, her alanda olduğu gibi eğitim ve okul yönetimi alanında da bazı dönüşümlere yol açtığı söylenebilir. Büyük anlatıların geçerliliğini yitirmesi olarak tanımlanan (Lyotard, 1996) postmodernizm, modern paradigmanın etkisinde oluşan örgütsel yapıların pozitivist ve rasyonel niteliklerine yönelik eleştiriler getirmektedir. Postmodern toplum savunucuları, postmodern çağın yeni kavramlar ve teoriler gerektiren yeni bir tarihsel dönemi, yeni bir tarihsel-kültürel biçimlenme oluşturduğunu ileri sürmektedir (Best ve Kellner, 1998). Paradigma karşıtı olarak da tanımlanan postmodernizm (English, 2001), modern bilimin hâkim merkeziliğine karşı meydan okumayı temsil etmektedir. Genellikle pozitivist, teknoloji merkezli ve rasyonalist (Birch, 1993; Hoy ve Miskel, 1996) eğilimli olarak algılanan modernizm, doğrusal gelişmeye ve mutlak doğrulara inançla, toplumsal düzenin rasyonel olarak örgütlenmesiyle ve bilgi üretimini standartlaştırılmasıyla özdeşleştirilir. Buna karşın postmodernizm, kültürel söylemin yeniden tanımlanmasında farklılığı, çeşitliliği ve zenginliği ön plana çıkarır. Parçalanma, belirlenemezlik ve bütüncül söylemlere karşı derin bir güvensizlik, postmodern düşüncenin temel özelliklerindedir (Erdemir, 2000).

“Rousseau ve Modern Eğitim” konusunu tartıştığı makalesinde Oelkers (2002,688), modernliği üç kavramla tanımlamaktadır: ilerleme, iyimserlik ve teknik bilgi. Ondukuzuncu yüzyılda gündeme gelen modern eğitimin en fazla vurgu yaptığı kavramlar ise ilerleme, eğitim alanındaki iyimserlik ve yeni yöntemler. Bu anlamlarıyla teori olmaktan çok bakış açısını yansıtan modern eğitim, geleneğin karşısında yer almakta; politik, sosyal ve ekonomik bağlamdan bağımsız düşünülmemektedir. Bu nedenle yirminci yüzyıldaki bolşevik, faşist, liberal, sosyalist ve demokratik hareketler eğitimsel bağlamda modern kabul edilerek politik bir değerlendirmeye tabi tutulmaktadır. Kısaca eğitim alanındaki her türlü reform modern kabul edilmektedir.

Modernizmin çatısını oluşturan bireyselleşme, sekülerleşme, endüstrileşme, kültürel farklılaşma, metalaşma, kentleşme, bürokratikleşme ve rasyonelleşme (Best ve Kellner, 1998) süreçleri, modern toplumlardaki eğitime ve yönetime ilişkin bakış açılarını yansıtmaktadır. Buna bağlı olarak, kültürel mirasın taşıyıcısı ve mevcut statükonun devamını sağlayacak insanların yetiştirilmesi gibi amaçları bulunan modern okulların temel fonksiyonu, ideolojik bir amacı gerçekleştirmeye indirgenmektedir. Okulları ideolojik bir yaklaşımla değerlendiren modern paradigma, öğrenci, öğretmen, yönetici ve yardımcı personeli, kurallar ve görev tanımları karşısında edilgen bir konuma itmiştir. Pozitivist bir düşüncenin ürünü olarak okullar, kurullarla işleyen, belirlenmiş programları uygulayan, hâkim ideolojiye göre insan yetiştirmeyi hedefleyen kurumlar olarak düşünülmüştür. Öğretmenin rolü, kendisine verilmiş müfredatı uygulamak ve belirlenen doğrultuda bilgi aktarımını sağlamak olarak sınırlandırılmış; öğrenciler ise, statükonun devamını sağlama amacına yönelik olarak rasyonel eğitimden geçen birer hammadde ya da girdi olarak değerlendirilmiştir.

Bürokratik, pozitivist, merkezietçi ve statükocu bir anlayış içinde gerçekleştirilen modern eğitim anlayışı, okullarda bazı gerginliklerin oluşmasına sebep olmaktadır. Endüstri devrimi sonrası, aydınlanma düşüncesinin insanlığa vaat ettiği mutluluğu gerçekleştirmek için okullardan beklenen insan tipi yetişmemiş; aksine, savaşların, sefaletin, kaos ve korkunun hakim olduğu bir dünya düzeni ortaya çıkmıştır. Bilimsel ve teknolojik devrimlerin sonucunda 20. yüzyılda ortaya çıkan modern dünya düzeni, bilimsel ve rasyonel eğitim aracılığıyla etkinliğini devam ettirmeye çalışmaktadır.

Bunun sonucunda standart, herkes için geçerli, hiyerarşik olarak düzenlenmiş yetki basamakları, merkezietçi olarak yürütülen eğitim politikaları, yönetici-öğretmen-öğrenci-yardımcı personel görev tanımlarının kurullarla belirlenmesi, belgencilik ve kayıt işlemlerinin öğretim hizmetinden öncelikli olması, belirlenmiş amaçların ve kurulların kişisel tercih ve duygulara baskın hale gelmesi gibi noktalar, modern örgütlerin ve okulların temel özellikleri olarak ortaya çıkmaktadır. Fabrika ve işletme ortamlarından eğitim ortamına aktarılan anlayışa göre, kurulların işleme ve mevcut durumun devamı, insanın iş doyumundan, beklentilerinden, ihtiyaçlarından ve sahip olduğu değerlerden daha önemli kabul edilmektedir.

Eğitimin amacı ve okulların işleyişini yeniden tanımlamak bir zorunluluk halini almış, böylece yeni bir kavramlar dünyası oluşturulması gerekliliği ortaya çıkmıştır (Genç ve Eryaman, 2008).

## 2. Post Modern Dönemde Öğrenime Yönelik Yeni Eğilimler

Bilim yapma geleneğindeki paradigmatik değişme ve buna bağlı olarak bilginin doğası hakkındaki yeni değerler öğrenme ve öğretme süreçlerinde değişmeler meydana getirmiştir. Bu alandaki başlıca değişme, öğrenme ve öğretme süreçlerindeki ilgi odağının “kişiye yönelik öğrenme” merkezinden yana kaymasıdır. Öğrenme ve öğretme hakkındaki yeni bilgiler öğrenmenin parmak izi kadar kişiye özgü bir olgu olduğunu, uygun öğrenme olanağı sağlandığında öğrenemeyecek kişinin olmadığını ortaya çıkarmıştır.

Eğitimde ilgi odağının öğrenmeden yana kaymasında toplumsal yapıda meydana gelen değişmeler de etkili olmuştur. Demokratikleşme ve insan hakları alanlarındaki gelişmeler öğrenmenin de demokratikleşmesine, kişinin ilgi, yetenek ve tercihlerinde odaklanmasına, alternatif eğitim programları ve okul çeşitliliğinin artmasına ve öğrenmenin bireyselleşmesine yol açmıştır.

Bu değişmeler öğretim programlarının içerik ve sunumunu da etkilemektedir. Yeni değerlerin içerik üzerindeki etkileri müfredata köklü değişiklikler öngörmektedir. Yeni değerler ders sayı ve türünün yeniden belirlenmesini; buna paralel olarak da içeriklerin yeni değerlere göre düzenlenmesini zorunlu kılmaktadır (Özden, 1999: 20). Bu yönüyle, yeni eğitim paradigması ve buna bağlı olarak bilginin doğasındaki değişim ile ilgili gelişmeleri şu şekilde ele alabiliriz (Özden, 1999: 20-32; Erdoğan, 2000; Hesapçıoğlu, 2001):

Modern ders içerikleri yetersizdir: Müfredat ve ölçme değerlendirme araçlarımız okur-yazarlık, ezberleme, kelime hazinesi, genel anlayış, kalıp algılama vb. yetenekleri geliştirmeye programlanmıştır. Bireysel yetenekler, iletişim becerileri, ekip çalışma yeterliği, sezgi, muhakeme, yaratıcılık ve hayal gücü yetenekleri ne programlarda yer almakta, ne de test araçlarımızca ölçülmektedir. Oysa günümüzde bu tür yetenekler değer kazanmaktadır. Bu sebeple, ders içeriklerinin ve ölçme değerlendirme araçlarının bu yeni değerlere göre yeniden dizayn edilmesi gerekmektedir.

Modern ders müfredatı düşünsel analizi köreltmektedir: Düşünme; gözlem, tecrübe, sezgi, akıl yürütme ve diğer kanallarla elde edilen malumatı kavramsallaştırma, uygulama, analiz ve değerlendirmenin disipline edilmiş şeklidir. Düşünme “mevcut bilgilerden başka bir şeye ulaşma” ve “eldeki bilgilerin ötesine gitme” şeklinde de tanımlanmaktadır. En çok bilinen düşünme şekilleri arasında eleştirel düşünme, problem çözme, bilimsel düşünme, analitik düşünme, hüküm çıkarmaya yönelik (dedüktif, indüktif) düşünme şekilleri olarak sıralanabilir.

Her öğretim düzeyinde ders, içerik ve sunumu, öğrencilere eleştirel düşünmeyi öğretecek şekilde düzenlenebilir. Lise öğrenimini tamamlayan birey önyargı, tutarsızlık ve sunulan bilginin güncelliği konusunda bir değerlendirme yapabilmelidir. Lise mezunu bireyler olgu ile görüşü ayırt etme, temelsiz varsayımları saptama, önyargı ya da propagandayı fark etme, mantıklı çözümler üretme ve olası sonuçları tahmin etme gibi yetenekleri okul yıllarında kazanmış olmalıdırlar.

Hangi bilginin öğretilmesi gerektiği konusunda yoğun eleştiriler mevcuttur. Müfredatın çok geniş kapsamlı fakat yüzeysel bilgiler yerine, konuları derinliğine işleyecek şekilde düzenlenmesi savunulmaktadır. Yani dersler, konuları ve olayları derinliğine anlamayı ve eleştirel düşünmeyi esas almalıdır. Çünkü bilgi çok fazladır, hepsini öğrenciye kazandırmak imkan dışıdır.

Öğrenciler hayata açık olmalıdır: Öğrencilerin sadece diploma için değil, gerçek hayatta anlamlı olması için derslerin ve içeriklerinin hayat ile ilişkilendirilmesi gerekmektedir. Bunun için öğretmenin, öğrettiği konuların hayattaki izdüşümlerini öğrenciye göstermesi gerekir. Ders konuları, kitap sayfaları veya sınıfın duvarları arasında sıkışıp kalmamalı, öğrenilen bilgiler gerçek hayat ile ilişkilendirilerek öğrencinin öğrendiği şeylerin değerini görmesi sağlanmalıdır.

### 3. Postmodern Eğitim ve Yönetimi.

Postmodernizm tartışmaları, 20. yüzyılın ikinci yarısından itibaren düşünce dünyasında modern eğitim anlayışının sorgulanması sonucunu doğurmuştur. Yaklaşık üç asır boyunca hakim olan modern anlayışların sorgulanması sonucu, alternatif bir paradigma olarak gündeme gelen postmodern eğitim ve yönetim tartışmaları, yeni anlayışların doğmasına zemin hazırlamıştır. Pozitivizm sonrası oluşan bilimsel değişimde, bilginin yeniden değerlendirilmesiyle, aşağıdaki konular kritiğe açılmıştır (Özden, 1999):

- Bilim, evrensel ve mutlak mıdır, yoksa bireye göre izafimidir?
- Bilgi monolog bir biçimde empoze mi edilmeli, yoksa eleştirel olarak mı ele alınmalı?
- Lazım gelen bilgi mi yüklemeli, yoksa öğrenme mi öğretmelidir?

Bu bağlamda, bilgiyi aktaran öğretmen yerine, bilgiye ulaşma yollarını öğretmeyi esas alan öğretmen modeli, bilginin mutlaklığından ziyade, kişinin bilgiyi algılaması üzerine yoğunlaşan bir metodolojiye ihtiyaç bulunmaktadır (Aslanargun, 2007).

Örgüt kuramı ve örgütsel yaşamla ilgili son yıllarda üzerinde en çok tartışılan kavramlardan bir olarak kültüre vurgu yapan Şişman, değişik çalışmalarında (Şişman, 1995; 1996; 1998) postmodernite tartışmalarını kültür bağlamında sürdürmektedir. Belli bir kültürün ürünü olan ve kültürel bir varlık olarak değerlendirilen insanların oluşturduğu örgütlerin, kültürel içerikle yönetilmeleri gerekliliğinden söz etmektedir. Örgütlerin, dolayısıyla eğitim örgütlerinin yönetilmesinde salt pozitivist paradigma temelli bakış açılarının kullanılması, felsefi ve kültürel sorunların ön plana çıkmasına neden olmakta; sonuç olarak postmodernite bağlamında yorumcu, kültürel ve yerel değerleri önemseyen eğitim yönetimi yaklaşımlarına doğru bir dönüşümün yaşandığı dile getirilmektedir. Balcı, Eğitim Yönetimi Araştırmalarının durumunu saptamayı amaçladığı çalışmasında (1988, 422), eğitim yönetimi araştırmalarının pratik ağırlık olduğunu, oysa asıl araştırmanın kurama dayalı hipotezleri test etmek için yapılması gerekliliğine vurgu yapmaktadır.

Modern eğitim anlayışının sorgulandığı, bunun açmazlarına yönelik geliştirilen eleştiriler ışığında, postmodern bir bilim ve eğitim anlayışından bahsetmek mümkün olmaktadır. Postmodern paradigmanın savunduğu eğitim anlayışı, modern okullarda görülen gerginliklerin, çatışmaların, ihmallerin ve yetki kümeleşmesinin giderilmesi temelinde ortaya çıkmaktadır. Merkezileşme, standartlaşma, değerden arınma ve rasyonelleşme gibi temel parametreleri olan modernleşme projesi, modern eğitim anlayışına da bu hâkim renklerini yansıtmıştır. Postmodern eğitim anlayışı ise, modern eğitim düşüncesinin okulları ve eğitim sistemlerini açıklamakta yetersiz kaldığını savunmaktadır. Postmodern bilim ve eğitim, durağan olmayıp mevcut statik bilgiler üzerine yeni düşünce ve kavramları araştırmak suretiyle üretkenliğini sürdürmektedir (Fritzman, 1995). Postmodernizm, bütün öğrencilerin kendi kültürleri dışındaki kültürler hakkında bilgilerle donanmaları gerekliliğini savunmakta, kendi toplumlarındaki cinsel, ırksal, sınıfsal ve etnik farklılıklara sadece hoşgörülü olmayı değil, aynı zamanda onlara değer vermeyi de vurgulamaktadır. Bu anlamda gündeme gelen çok kültürlü eğitim ideali, modern toplumalarda egemen olan tarih ve doğruluk anlayışıyla uyuşmamaktadır (Nicholson, 1995).

Postmodern bir dönemde modern kurumlar olan okulların varlığını nasıl sürdüreceği noktasında bazı çelişkiler bulunduğu ileri sürülmektedir Bates (1992). Bates'e göre kitlesel eğitimin bir sonucu olarak ortaya çıkan okullar, basit teknoloji eksenli toplumları ileri teknoloji eksenli, hiyerarşik, bilgi üreten toplumlara doğrudan bağlayan sınıf eksenli kurumlardır. Aynı zamanda beceri ve motivasyonların oldukça özel bir şekilde işlendiği politik ve ekonomik kurumlardır. Buna karşı postmodernistlerin gündeme getirdiği sınıfların ortadan kalktığı ve kültürlerin olabildiğince çoğullaştığı bir ortamda politik, ekonomik ve teknik bilgi üretiminin bağlı olduğu modernist eğitim projesi nasıl

etkili olmayı sürdürebilir? Çok kültürlü ve demokratik eğitim anlayışının temel felsefe olarak savunulduğu (Kanpol, 1995) postmodern eğitimde ortak duygu, diyalog ve özneler arası iletişimin insanları birbirine bağlayacağı ümit edilmektedir. Ayrıca postmodern eğitim, mevcut tarihi, ekonomik ve kültürel bunalım ortamında yetişen yeni neslin beklentilerine, arzularına ve değişime yönelik davranışlarına hitap etmelidir (Giroux, 1994). Bu özellikleriyle postmodern eğitim, standart ve homojen eğitim anlayışını eleştirmekte, herkes için geçerli genel ilkeleri benimsemek yerine bireysel ihtiyaçlara, beklentilere ve değer sistemine hitap edebilecek, esnek ve yorumsamacı (Şişman, 1998) bir felsefeyi ön plana çıkarmaktadır. Eğitim, sadece teknik bir karar alma ve organize etme süreci olmayıp, bireysel gelişimin ve tercihlerin önemsendiği bilişsel ve duyuşsal bir alandır.

Aydınlanma düşüncesine bağlı olarak bilginin kullanımının ve yaygınlaşmasının dünyada daha iyi örgütlere ve toplumsal başarılar katkı yapacağını ileri süren Terren (2002,161), bunun modern politik kültürün oluşturduğu bir eğitim anlayışıyla gerçekleşebileceğini savunmaktadır. Postmodern toplumsal dönüşümün yol açtığı belirsizliğin etkili vatandaşlığı aşındırdığı, demokratik eğitim düşüncesini sekteye uğrattığı ve okullardaki sosyalleşmeyi olumsuz etkilediği ileri sürülmektedir.

Süregelen tartışmalara karşın, postmodern paradigmanın öğretmen rol ve davranışlarında, öğrenci ihtiyaç ve beklentilerinde, müfredat programlarında, genel olarak bütün eğitim anlayışında önemli dönüşümlere yol açtığı ileri sürülmektedir. Buna göre postmodern eğitim anlayışında öne çıkan bazı hususlar şöyle sıralanabilir:

- İnsanı, farklılıklara karşı duyarlı hale getirir.
- Bilginin ulaşılabilir bir olgu olduğunu vurgular.
- Temel hak ve özgürlüklerin ortaya çıkmasına zemin hazırlar.
- Bilginin bağımsız olduğu düşüncesini güçlendirir.
- Birbirinden ayrı, değişken, zamana ve zemine göre farklılaşan değerlendirmeleri savunur.
- Yeni eğitim paradigması statik değildir, sürekli yeni kavram ve düşünce esasına dayanır.
- Bireysel farklılıkların bir göstergesi olarak öznel gerçeklik anlayışıyla hareket eder, buna bağlı olarak nesnel ve objektif eğitim anlayışını eleştirir.
- Öğrenmenin, bilişsel ve duyuşsal yönünü ön plana çıkarır.

#### **4. Post modern dönemde Okul**

Örgün eğitim kurumlarının ana özellikleri olan program, sınıf, dersane, ders kitabı, öğretim metodu gibi unsurlar Ortaçağda oluşmuştur. Sanayi devriminden sonra bu unsurlara laboratuvar, sınav ve işyeri uygulaması da katılmıştır. İlkokullar ve üniversiteler Ortaçağın, ortaöğretim ve mesleki-teknik öğretim sanayi devriminin ürünüdür (Ergün, 1989,112).

Bugün yeni toplum düzeninin değişen ve gelişen eğilimlerine cevap vermenin çok ötesinde olan okulun yeni bir kimliğe ihtiyacı vardır. Bilgi toplumunun en büyük sermayesi olan eğitilmiş insana şekil verecek kurum olarak okulun işlevi, içeriği ve amaçları yeniden değerlendirilmelidir. Ekonominin bilgiye dayandığı bu yeni toplumda okulların performanslarından ve sorumluluklarından da beklentiler farklılaşmaktadır. Her ne kadar bunun için geçerli tek bir standart çözüm yoksa da Drucker (1993: 278) bu konuda şunları ileri sürmektedir:

—Post modern toplumunun ihtiyacı olan okul, yüksek düzeyde evrensel okur-yazarlık sağlamak zorundadır.  
—Her düzeyde ve her yaşta öğrencilere öğrenme motivasyonunu aşılmalıdır.

—Tüm toplum katmanlarına açık olmalıdır.

—Bilgiyi hem içerik hem de süreç olarak aktaran okullara ihtiyaç vardır.

—Post modern toplumda eğitimin tüm topluma nüfuz etmesi, her türlü kuruluştan yararlanması gerekir.

Bilgi artık her yerdedir. Onu sınırları belli kurumlara hapsedmek mümkün değildir. Bu nedenle okulların artık bilgi aktaran kurumlar olmaktan çıkarılıp bilgi üretebilen ve bireylere anlama, analiz etme ve problem çözme gibi becerileri kazandırır hale getirilmesi gerekmektedir. Örgütsel öğrenme kuramına göre, örgütlerde tıpkı canlı yapılar gibi öğrenirler ve öğrenmenin temelinde bilginin bir şekilde algılanması şarttır (Şimşek;1997:89).

Post modern toplumunda yeni kimliğini kazanmaya hazırlanan okulun önemle üzerinde durması gereken bir diğer konu ise ait olduğu toplumun kültürünün özünü koruması ve devamlılığını sağlaması gereğidir. Toplumun değer yargıları eğitim yoluyla yeni nesillere aktarılarak sürdürülmelidir. Her şeyin hızla değiştiği bu dönemde, her şey aynı hızla tükenmekte ve en büyük motivasyon unsuru başarıya ve üstün olma duygusu yeterince yaşanmamaktadır. Gittikçe hızını arttıran bilgi üretme mekanizmasının içinde insanları bir sabitede tutan etken husus da toplumsal kültür ve inançlar olsa gerektir.

## 5. Sonuç

Hızla değişen yeni Dünya şartlarında, eğitim yönetimi alanında da dikkate değer dönüşümlerin yaşanmasına yol açan postmodern eğitim ve yönetim tartışmaları, insana ve insanın oluşturduğu toplumsal yapılara, bilimsel ve olgusal esastan yaklaşan pozitivist paradigmanın değer kabul etmeyen anlayışına ve bunun neden olduğu problemlere yönelik eleştirilerde bulunmaktadır. Yorumcu, yerel ve insan merkezli yaklaşımların hakim olduğu postmodern yönetim anlayışının eğitim yönetimi alanında önemli dönüşümlere imkân tanıdığına inanılmakta; bu çalışmada, eğitim yönetimi alanındaki yeni dönüşüm ve anlayış değişikliği, postmodern eğitim ve okul yönetimi temelinde incelenmektedir.

Pozitivist ve rasyonalist düşünce yapısı, insanın son derece kompleks ve kısmen otonom özyapısını açıklamakta ve onun toplum içerisindeki davranışlarını yorumlamakta yetersiz kalmakta ve bütün insanlar için ortak kalıplar üretme yoluna gitmektedir. Zihni yapısı tekillikçe dayanan modernizmin egemen olduğu okullarda, genellikle tek doğru ve tek otorite anlayışına dayanan merkeziyetçi bir yapı mevcuttur. Bireysel tercih ve değerler, amacın gerçekleştirilmesi uğruna yok sayılmakta, rasyonal ve bürokratik bir anlayışın ifadesi olarak belgeliğe önem verilmektedir. Doğası gereği farklılığa ve çoğulluğa karşı olan modern eğitim kurumlarında bilgi, yönetim, otorite, yöntem ve program merkeziyetçi bir mantığın ürünüdür.

Bir insan bilimi olarak eğitim yönetimi, yıllarca doğa bilimleri üzerine formüle edilmiş pozitivist ve rasyonal felsefenin etkisinde kalmıştır. Sebep-sonuç ilişkisi içerisinde, deney sonuçlarına bakılarak genellemelere ulaşılmış, insanla makine arasında herhangi bir ayrıma gidilmemiştir. İnsanın güven, his, sevgi, inanç, bağlılık, değer ve eğilimleri gibi duyuşsal yönüne gereken önem verilmemiş, bütün insanlar makinenin parçaları gibi standart kabul edilmiştir. Böylece okul yöneticisi, örgütün amaçlarını gerçekleştirmek için insan kaynağını etkin kavramında, aşağıdaki konuların öne çıktığından bahsedilebilir:

- Öznel değerlendirmelerin, bireysel yorumların ve niteliğin ön plana çıktığı; nicelik, nesnellik ve mutlak doğru anlayışının şüpheyle karşılandığı bir anlayış egemen olmalıdır,

- İzafe olarak zamana ve şartlara göre deęişen, esnek eęitim ve yönetim anlayışı benimsenmelidir.
- İdare eden ve edilenler arasında çift yönlü, doğal ve içten bir iletişim ortamı hakim olmalıdır.
- Örgütsel hedeflerin gerçekleştirilmesi ve üretimin artırılması için rasyonel kararlar almak yerine, örgüt içindeki bireylerin duygu ve düşüncelerine önem vermek suretiyle hedefler belirleyen bir yönetim anlayışına doğru eğilim gözlenmektedir.
- Bilgi aktaran öğretmen yerine, bilgiye ulaşma yolları üzerine bakış açısı kazandırmayı hedefleyen öğretmen modeli; yetkilerin toplandığı okul yönetici yerine, yetkilerin paylaşıldığı bir liderlik modeli önem kazanmaktadır.
- ‘Öteki’ önyargısının olmadığı, çok kültürlülüğün benimsendiği, yerel değerlerin önemsendiği bir eğitim ortamı oluşturulabilir.
- İstikrarın ve statükonun korunması düşüncesi yerine, deęişime yol açabilecek kaotik ve çalkantılı ortamları yönetmeye aday, eğitim liderleri olmalıdır.
- Modern dönemde ekonomiye hizmet eden örgün eğitim düşüncesine karşı, postmodern dönemde, bireysel tatmini hedefleyen bir eğitim düşüncesi savunulmaktadır.

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# Precedence analysis of the relations in the segment of private higher education in the Czech Republic.

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## Abstract

Private higher education has an important position in the educational process. It is a significant part of the education system in the Czech Republic. Penetration of business into the education system and its commercialization has two main implications. The first one is positive. Private sector specifies requirements for degree courses and employability of graduates in the natural way. The negative implication is the penetration of property and ownership relations in order to profit rather than to provide quality education.

The paper deals with the relations between business entities operating in the segment of private schools, mutual penetration of individual entities and with ownership relations. The aim is to uncover ownership relations and making them transparent. This can lead to substantial savings in funding. By finding linkages between entities, ownership priorities can be revealed and prioritization of profit over the education can be prevented. At the same time, proprietarily conditioned duplicities in the structure of degree courses and interconnectedness of high schools or colleges can be traced. The paper could contribute to the improvement of the educational process in the segment of higher education. Data used in this paper comes from the Czech business register podnikani.cz.

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*Keywords:* university; private schools; firms and companies; property management.

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## 1. Introduction

At present in The Czech Republic are 44 private colleges, 26 public colleges and 2 state universities. On colleges are together studying 368 394 students, date on 20.1.2014. In public universities were registered 325 171 students, in private colleges were 43 710 students. The best part of the students had Czech citizenship (look tab. 1).

Despite of rate of students, in public universities and private colleges students, is approximately 7, 5 to 1, in segment of private colleges is sizable rate of population. We could submit that on private colleges studys approximately every 200th citizen in ČR, at average this form of study is applying to every 60th family. It stands on the reason, that financial flows and owner relations in this segment significantly influence the level and the contents of study and it significant will influence the education and it will formed the mind of appreciable part of the population. The goal of this paper is therefore to map and to show the connection of special interest groups and owner relations in this segment of university education.

## 2. The search aim

The running research appears from intention to map several relations and from research question, if existed in CR potential group of subjects which controlled the private education. The research is stands of basic goals, which are to

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map of relations among subjects and to find the major groups of subjects. The tested hypothesis is, that current private high education is connected with private subjects in so far, that the major is the profit, not education.

Table 7 Numbers of student with Czech citizenship<sup>134</sup>

	Natural person – total										
	Total	Full-time study				Part-time study					
		Total	Program study			Total	Program study				
		Bachelor's degree	Master's degree (long cycle)	Master's degree (follow on)	Doctoral degree		Bachelor's degree	Master's degree (long cycle)	Master's degree (follow on)	Doctoral degree	
<b>Universities - total</b>											
First registered	58 974	47 660	45 191	4 355	23 674	3 122	11 320	12 071	263	9 051	913
Women	33 575	26 330	24 612	2 886	13 402	1 520	7 247	7 651	238	5 676	356
Students total	327 495	242 785	152 085	24 717	56 967	10 895	87 865	52 396	1 695	23 531	10 421
Women	185 108	135 708	82 894	16 291	32 519	5 126	51 457	31 367	1 556	14 346	4 292
Graduates	83 351	59 090	33 296	4 571	20 801	498	24 369	13 443	334	9 011	1 589
Women	51 286	35 452	20 088	3 140	12 049	224	15 915	9 082	289	5 861	689
<b>Public universities</b>											
First registered	53 036	44 405	41 896	4 355	22 257	3 117	8 637	9 250	263	6 633	901
Women	29 680	24 216	22 476	2 886	12 471	1 518	5 466	5 787	238	4 163	349
Students total	292 168	227 455	139 852	24 717	53 823	10 869	67 538	38 914	1 695	16 729	10 353
Women	163 732	126 271	75 511	16 291	30 436	5 111	39 290	23 485	1 556	10 080	4 258
Graduates	70 744	54 094	29 509	4 570	19 593	498	16 753	8 657	334	6 186	1 582
Women	42 848	32 068	17 573	3 139	11 181	224	10 857	5 923	289	3 964	686
<b>Private universities</b>											
First registered	5 939	3 256	3 296	–	1 417	5	2 683	2 821	–	2 418	12
Women	3 896	2 115	2 137	–	931	2	1 781	1 864	–	1 513	7
Students total	35 819	15 516	12 351	–	3 168	26	20 376	13 512	–	6 811	68
Women	21 671	9 533	7 446	–	2 092	15	12 190	7 894	–	4 271	34
Graduates	12 616	4 998	3 789	1	1 208	–	7 619	4 787	–	2 826	7
Women	8 445	3 386	2 517	1	868	–	5 060	3 160	–	1 898	3

### 3.Summary of private college in ČR

At present in CR these following private colleges have accredited study program<sup>135</sup>:

1. Bankovní institut vysoká škola, a.s. - Praha 7
2. Evropský polytechnický institut, s.r.o. - Kunovice
3. Vysoká škola hotelová v Praze 8, s.r.o.
4. Vysoká škola finanční a správní, o.p.s., Praha 10
5. Vysoká škola Karlovy Vary, o.p.s.
6. Vysoká škola podnikání, a.s. - Ostrava
7. ŠKODA AUTO Vysoká škola o. p. s - Mladá Boleslav
8. International ART CAMPUS Prague, s.r.o.<sup>136</sup>

<sup>134</sup> The statistics are assumed from [http://dsia.uiv.cz/vystupy/vu\\_vs\\_fl.html](http://dsia.uiv.cz/vystupy/vu_vs_fl.html),

135 Středočeský vysokoškolský institut, s.r.o. – Kladno college discontinues the activities,

Vysoká škola aplikovaných ekonomických studií v Českých Budějovicích, s.r.o. college discontinues the activities,

ŠKODA AUTO a. s. Vysoká škola - Mladá Boleslav college discontinues the activities till 1. 9. 2013, current students continue study on ŠKODA AUTO VYSOKÁ ŠKOLA o. p. s. (change of legal form)

<sup>136</sup> First name of college was "Literární akademie (Soukromá vysoká škola Josefa Škvoreckého) s.r.o.", on 24. 7. 2013 was college called "International ART CAMPUS Prague, s.r.o."

9. Soukromá vysoká škola ekonomických studií, s.r.o. - Praha
10. Vysoká škola obchodní v Praze, o.p.s.
11. Akademie STING, o.p.s. - Brno
12. Metropolitní univerzita Praha, o.p.s.
13. Univerzita Jana Amose Komenského Praha, s.r.o.
14. Vysoká škola Karla Engliše v Brně, a.s.
15. Anglo-americká vysoká škola, o.p.s. - Praha 1
16. Pražská vysoká škola psychosociálních studií, s.r.o. - Praha 4
17. Vysoká škola aplikovaného práva, s.r.o., Praha 11
18. Vysoká škola ekonomie a managementu, o.p.s. - Praha
19. University of New York in Prague, s.r.o., Praha 2
20. Vysoká škola manažerské informatiky, ekonomiky a práva, a.s., Praha 5
21. Vysoká škola mezinárodních a veřejných vztahů Praha, o.p.s.
22. Mezinárodní baptistický teologický seminář Evropské baptistické federace, o.p.s. - Praha 6
23. Západomoravská vysoká škola Třebíč, o.p.s.
24. Academia Rerum Civilium - Vysoká škola politických a společenských věd, s.r.o. - Kolín
25. Vysoká škola evropských a regionálních studií, o.p.s. - České Budějovice
26. Rašínova vysoká škola s.r.o. - Brno
27. Vysoká škola regionálního rozvoje, s.r.o., Praha 6
28. Filmová akademie Miroslava Ondříčka v Písku, o.p.s.
29. Vysoká škola tělesné výchovy a sportu Palestra, s.r.o., Praha
30. NEWTON College, a.s. - Brno
31. Vysoká škola logistiky, o.p.s., Přerov
32. Vysoká škola zdravotnická, o.p.s., Praha 5
33. B.I.B.S., a.s. Brno International Business School
34. Soukromá vysoká škola ekonomická Znojmo, s.r.o.
35. Moravská vysoká škola Olomouc, o.p.s.
36. Vysoká škola obchodní a hotelová, s.r.o. - Brno
37. CEVRO Institut, o.p.s. - Praha
38. Unicorn College s.r.o. - Praha
39. Vysoká škola realitní - Institut Franka Dysona, s.r.o.
40. Vysoká škola sociálně-správní, Institut celoživotního vzdělávání Havířov, o.p.s.
41. AKCENT College, s.r.o. - Praha
42. Archip, s.r.o.
43. Vysoká škola aplikované psychologie, s.r.o.
44. ART & DESIGN INSTITUT, s.r.o.<sup>137</sup>

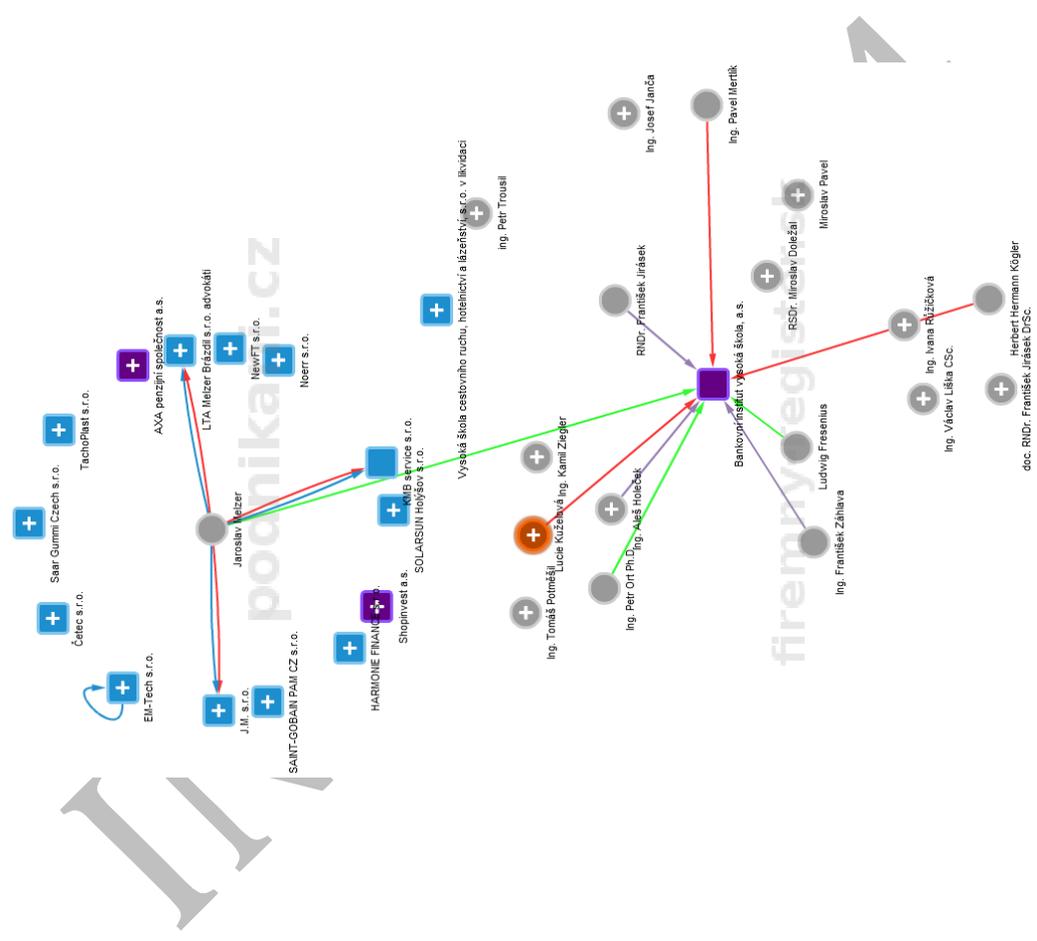
#### 4. Selected dependence and relations – exemplary set

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<sup>137</sup> ART & DESIGN INSTITUT, s.r.o. – The state agreement was licensed in July 2013, college start up in 2014.



On the picture nr 1 are schematically illustrated some relations among the subjects and Bankovní institut. The left part of the picture shows the relations, which are validly in 2014, the right part shows the relations in an interval of years 1990 – 2014. The basic relations are between subjects with relations abreast of executive council, supervisory council, founder and relations of property. The picture nr 2 shows branching among the subjects. In the system we could see the cohesion different length and precedence. In some cases are already evident relations in the level of first precedence (immediate predecessor), for example between Bankovní institut and Vysoká škola cestovního ruchu.



4.2. Evropský polytechnický institut, s.r.o. – Kunovice

On picture nr 3 (Evropský polytechnický institut, s.r.o. – Kunovice) we could see proximate relations in connecting, for example with private grammar school. Trough Oldřich Kratochvíl we could see the connecting with Vyšší odborná škola správní (picture nr 4). The complexity of the relations and attachment are evident from picture nr 5, when the company EDUKOMPLEX by Easy Support indicates more than 1300 relations and ownership.

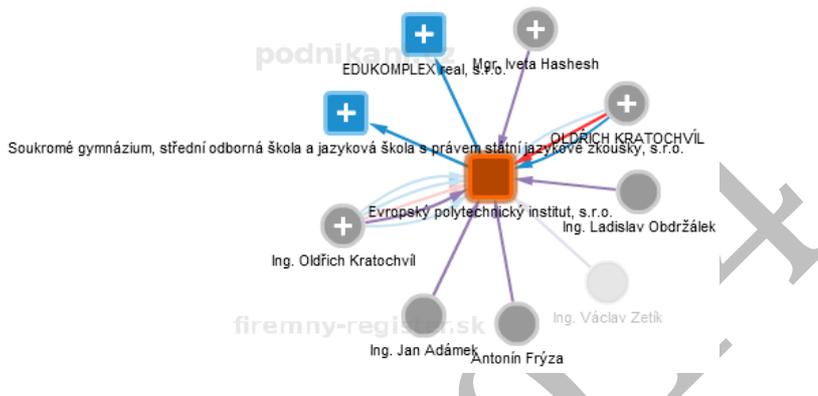


Figure 10 Multiple of correlation

Figure 9 The connecting of ownership relations

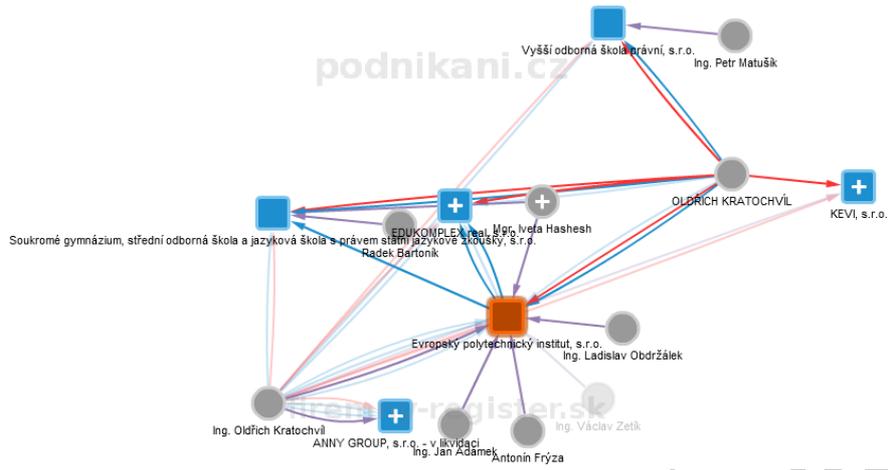


Figure 12 The proximate relations among education subjects

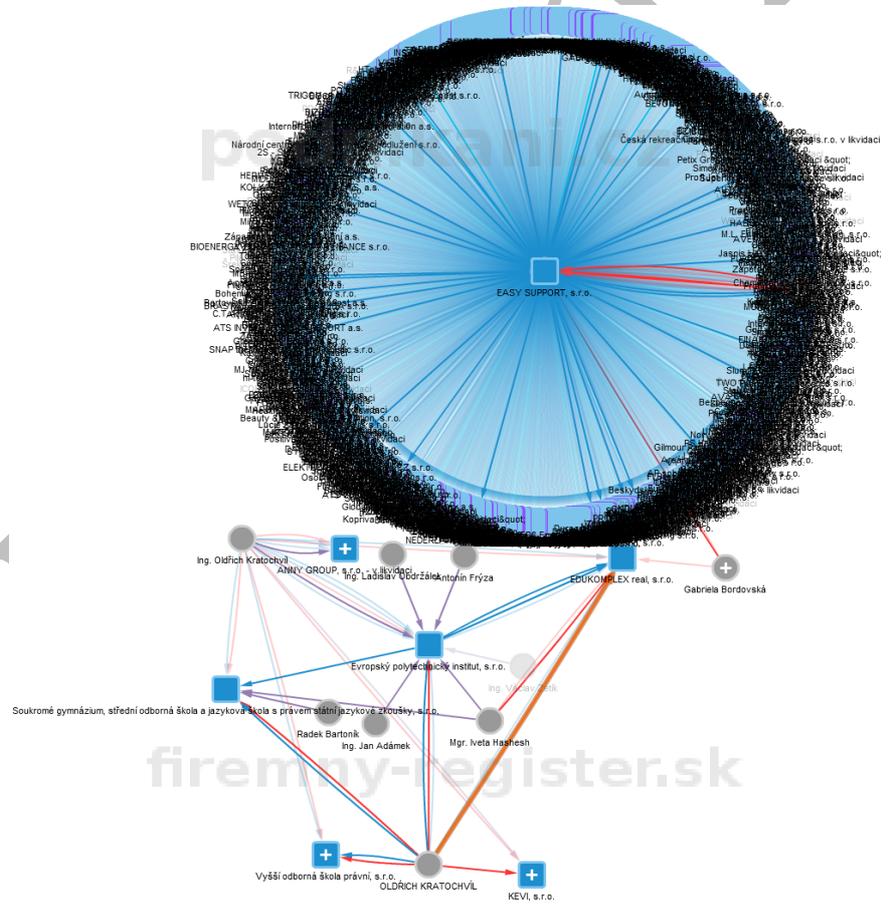


Figure 11 Unvalued ownership relations

#### 4.3. Vysoká škola hotelová v Praze 8, s.r.o.

The connecting of the educations institutes and the subjects is evident by Vysoká škola hotelová in Prague. Proximate relations (first precedence) are here with První soukromá hotelová škola, s.r.o. the relations and attachment then complicated a multiple relations, for example evident relationship between Ing. Čertík or Ing. Procházka, whereas reciprocal relations are again abreast of subjects, which are relating with education or educations institutes (First Academic Services, or The company for support of private hotel school), as is evident from picture nr 6.

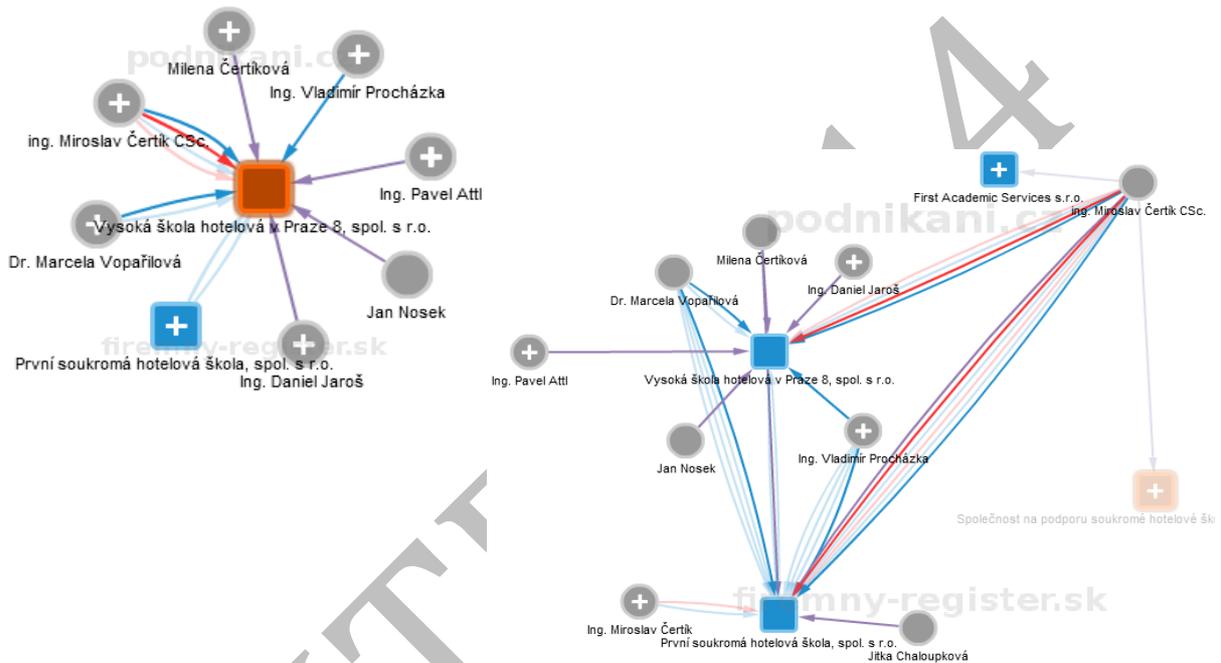


Figure 13 Multiple relations of Vysoká škola hotelová

#### 4.4. Vysoká škola finanční a správní, o.p.s.

On picture nr 7 is the next of existing scenario of development mutually relations. There are evident relations with another educations institutes (Bankovní akademie, Educo Uni Group, Educo Uni Service and so on), more fundamental is the inherency of relations with financial institutes (Kooprativa pojišťovna) or with enterprises with state participation (CEZ). On the picture we could see relatively high number of subjects without proximate relation.



INTE 2014

# Predictor effect of parental acceptance-rejection levels on resilience of preschool children\*

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## Abstract

The purpose of this study is to put forth the predictor effect of parental acceptance-rejection levels on resilience of preschool children. The sample group of the study consists of 100 children, who received pre-school education in the center of Denizli, and their parents (100 mothers and 100 fathers). The Children's Ego Resiliency Scale (Teacher form) and Parental Acceptance-Rejection Questionnaire (mother-father forms) were used as data collection tools. According to results, there is a positive significant relationship between the score that the mothers' warmth and affection levels and children's resiliency levels. In other words, it can be said that as the warmth and affection level increased, the resiliency level increased. Also, the warmth and affection level decreased, the children's resiliency levels decreased. There is not significant relationship between the scores that mothers neglect/indifference, undifferentiated rejection, aggression/hostility levels and children's resiliency levels. Mothers' warmth and affection levels significantly predicted children's resiliency levels. Mothers' neglect/indifference, undifferentiated rejection and aggression/hostility levels didn't not significantly predicted children's resiliency levels. Additionally there is a positive and strong significant relationship between the score that the fathers' warmth and affection levels and children's resiliency levels. There is a negative and strong significant relationship between the scores that fathers neglect/indifference, aggression/hostility levels and children's resiliency levels. Also, there is not significant relationship between the score that fathers undifferentiated rejection and children's resiliency levels. Fathers' warmth/affection, neglect/indifference, aggression/hostility levels significantly predicted children's resiliency levels. According to results, children's resiliency levels most predicted by the aggression/hostility levels of fathers.

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*Keywords:* Parental acceptance-rejection, resiliency, preschool period.

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## Introduction

Parental Acceptance-Rejection Theory tries to predict and explain the basic reasons, outcomes and other variables of being accepted and rejected by parents. In other words, it investigates the possible outcomes of parental acceptance and rejection on the behavioural, cognitive and emotional developments of children (Khaleque, & Rohner, 2002). In parental acceptance, parents love, caress, cuddle their child, share her/his feelings and meet her/his needs. In parental rejection, on the other hand, parents delay meeting the physical and mental needs of the child and become hostile towards her/him (Yavuzer, 2000). In parental rejection, parents fail to exhibit affinity and love towards the child, ignore her/his interest and care, and cause both physical and psychological damage in her/him (Rohner, & Khaleque, 2005). Parental acceptance or rejection affects the childhood and other periods of life. There are more than 200 studies that were conducted by a number of researchers in different societies with various methods, which supports the importance of the theory (Khaleque, & Rohner, 2001).

The relationship between parents and the child is able to affect all the developmental areas of the child at all ages. One of the most important concepts that are important in terms of personality development is resiliency.

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Psychological resiliency is the process in which the person is adapted to present negative condition with the interaction of protective factors and risk factors when exposed to a negative condition (such as divorce, terror, natural disasters, poverty, dysfunctional family order, change of city, indigence) (Gizir, & Aydın, 2006; Karairmak, 2006. Cited in Gülay Ogelman, 2014). The number of studies that discuss the effect of parental acceptance-rejection on the developments of preschool children in Turkey (Altay, 2012; Erkan, & Toran, 2010; Erler, 2011; Kasuto, 2005) has increased especially for the last 5 years; however, they have not had a sufficient number. Development is very rapid during the preschool period and its effects may last for long years. Thus, it is required to investigate the effect of parental acceptance-rejection on the development of young children with different variables more. In Turkey, there has been no study examining the relationship between the parental acceptance-rejection and the resiliency levels of preschool children. Therefore, the study is thought to possibly set an important example concerning the subject. Considering from this point of view, the purpose of this study is to reveal the predictor effect of acceptance-rejection levels of the parents of preschool children on the psychological resiliency levels of children. Sub-goals of the study are as follows:

- Do mothers' warmth and affection levels predict pre-school children's resiliency level?
- Do mothers' neglect and indifference levels predict pre-school children's resiliency level?
- Do mothers' undifferentiated rejection levels predict pre-school children's resiliency level?
- Do mothers' aggression and hostility levels predict pre-school children's resiliency level?
- Do fathers' warmth and affection levels predict pre-school children's resiliency level?
- Do fathers' neglect and indifference levels predict pre-school children's resiliency level?
- Do fathers' undifferentiated rejection levels predict pre-school children's resiliency level?
- Do fathers' aggression and hostility levels predict pre-school children's resiliency level?

## **Method**

### *Research design*

A relational survey method was used for this study.

### *Participants*

The sample group of the study consists of 100 children, who received pre-school education in the center of Denizli, and their parents (100 mothers and 100 fathers). Among 100 children in the sample group, 40 (40.0%) were girls and 60 (60.0%) were boys. The sample group comprised of children who belonged to families with low socio-economic levels in the city centre and showed a normal development. While selecting those children, a list was received from the Provincial Directorate of National Education in Denizli concerning the kindergartens of primary schools where children with low socio-economic levels attended. Nine schools were selected among schools on the list by lot and a permission note was obtained concerning those schools. When the schools were visited with the permission notes, three schools rejected to participate in the study. Six schools were included in the study. It was determined that mothers of all children in the sample group were housewives. On the other hand, 89.0 % of fathers were workers and 11.0 % were retirees. Parents of children lived together.

### *Instruments*

2. 3. 1. Parental Acceptance-Rejection Questionnaire (PARQ) (Mother-Father Forms): The questionnaire was developed by Rohner, Saavedra and Granum in 1980 (Rohner, & Khaleque, 2005). The questionnaire assesses acceptance-rejection as perceived by the mother and father. The scale consists of 60 items measuring 4 dimensions of Parental Acceptance Rejection Questionnaire (PARQ):

a) Parental warmth and affection (20 items): This subscale refers to the parent child relationship where parents are perceived to give love or affection without qualification.

b) Aggression and hostility (15 items): This subscale assesses the conditions where individuals believe their parent is angry, bitter, or resentful toward them, whereas perceived aggression assesses the conditions where individuals believe their parents intend to hurt them, physically and verbally.

c) Neglect and indifference (15 items): This subscale assesses conditions where individuals see their parent as unconcerned or uninterested in them.

d) Undifferentiated rejection (10 items): This subscale assesses the child's feelings of being rejected or unloved, although there may be no observable indicator for rejection (Yıldırım-Ekmekçi, 2008, p. 39).

PARQ is a self-report questionnaire that can be applied to mothers and fathers. The scores change between 4-1, with 4 standing for "almost always true", and 1 standing for "almost never true". Higher scores indicate higher perceived rejection. It was translated and adapted into Turkish by Anjel (1993).

2. 3.2. Children's Ego Resiliency Scale: Eisenberg and colleagues adapted Block's Q-Sort method in 1996 to develop the Children's Ego Resiliency Scale, which is a measuring instrument that identifies the resiliency level of children. The 12-item scale is used to assess the resiliency level of preschool-primary school children. Evaluation of the scale is scored between 1 and 9; where 1 is "not at all descriptive of resiliency" and 9 is "most descriptive of resiliency." The scale has no sub-scale. While the lowest score to be obtained from the scale is 12, the highest score is 108. A high score obtained from the scale indicates that children in the study group have a high resiliency level. Items of the scale measure the resiliency properties of children in various situations, their reactions and behaviours when faced with difficult stressful situations. For example: "When under stress, he/she gives up and backs off". Every item expresses reactions given towards different stressful situations, as the scale has no sub-scale. The Cronbach's Alpha coefficient for the Teacher Version of the original scale form is .87, and .65 for the Mother-Father form. The test-retest reliability of the Teacher Version of the original scale form is .87, and .75 for the Mother-Father form (Eisenberg, Fabes, Guthrie et al., 1996). The adaptation of the scale into Turkish was conducted by Önder and Gülay-Ogelman in 2011. Within the scope of this study, the cronbach's alpha coefficient of the scale was determined as .80 in the mother form, .82 in the father form and .87 in the teacher form (Önder, & Gülay Ogelman, 2011).

#### *Procedure*

As stated previously, before collecting data, the permission was requested from the Provincial Directorate of National Education in Denizli in order to get in touch with the schools. Kindergarten teachers, fathers, and mothers were informed about the study. They completed these scales.

#### *Data analysis*

A SPSS 18.0 package programme was used to analyse data obtained from the research. The Pearson Product-Moment Correlation Coefficient and Basic Linear Regression Technique were used to analyse data.

### **Results**

Table 1. Descriptive statistic, means, standard deviations

Variables	N	Mean	Std.Deviation
Children's resiliency levels	100	57.75	6.44
Mothers' warmth and affection levels	100	68.45	8.25
Mothers' neglect and indifference levels	100	22.57	6.32
Mothers' undifferentiated rejection levels	100	16.49	4.21
Mothers' aggression and hostility levels	100	24.17	6.15

Table 2. Correlation matrix between children's resiliency levels and mothers' acceptance-rejection variables

Variables	Resiliency levels	Mothers' warmth and affection levels	Mothers' neglect and indifference levels	Mothers' undifferentiated rejection levels
Children's resiliency levels	-	-	-	-
Warmth and affection levels	.231*	-	-	-
Neglect and indifference levels	-.160	-.770**	-	-
Undifferentiated rejection levels	-.047	-.534**	.615**	-
Aggression and hostility levels	-.131	-.601**	.696**	.623**

\*p < .05 \*\*p < .001

Table 2 illustrates a positive significant relationship between the score that the mothers' warmth and affection levels and children's resiliency levels ( $r=.231$ ,  $p<.05$ ). In other words, it can be said that as the warmth and affection level increased, the resiliency level increased. Also, the warmth and affection level decreased, the children's resiliency levels decreased. According to table 2, there is not significant relationship between the scores that mothers neglect/indifference ( $r=-.160$ ), undifferentiated rejection ( $r=-.047$ ) aggression/hostility ( $r=-.131$ ) levels and children's resiliency levels ( $p>0.05$ ).

Table 3. The results of the basic linear regression analysis between children's resiliency levels and mothers' acceptance-rejection variables

Variables	B	Standart Error	$\beta$	t
Children resiliency levels Mothers' warmth and affection levels $R = .231$ $R^2 = .05$ $F(1,98) = 6.340^{**}$	.168	.067	.23	2.518**
Children resiliency levels Mothers' neglect and indifference levels $R = .16$ $R^2 = .03$ $F(1,98) = 2.931$	-.163	.095	.16	1.712
Children resiliency levels Mothers' undifferentiated rejection levels $R = .05$ $R^2 = .00$ $F(1,98) = .247$	-.072	.144	.05	.497
Children resiliency levels Mothers' aggression and hostility levels $R = .13$ $R^2 = .02$ $F(1,98) = 1.951^{**}$	-.137	.098	.13	1.397

Note: n = 100 \* p < .05, \*\* p < .001

Table 3 illustrates that mothers' warmth and affection levels significantly predicted children's resiliency levels ( $\beta=.23$ ,  $p<.001$ ). The level of significance was 0.05 and 0.001 for each basic linear regression analysis conducted in this study. The warmth and affection levels accounted for .05 % of the children's resiliency levels. Mothers' neglect/indifference ( $\beta=.16$ ,  $p>.001$ ), undifferentiated rejection ( $\beta=.05$ ,  $p>.001$ ) and aggression/hostility ( $\beta=.13$ ,  $p>.001$ ) levels didn't not significantly predicted children's resiliency levels.

Table 4. Descriptive statistic, means, standard deviations

Variables	N	Mean	Std.Deviation
Children's resiliency levels	100	57.75	6.44
Fathers' warmth and affection levels	100	68.13	9.51
Fathers' neglect and indifference levels	100	23.97	6.59
Fathers' undifferentiated rejection levels	100	15.26	3.90
Fathers' aggression and hostility levels	100	23.95	7.13

Table 5. Correlation matrix between children's resiliency levels and fathers' acceptance-rejection variables

Variables	Resiliency levels	Fathers' warmth and affection levels	Fathers' neglect and indifference levels	Fathers' undifferentiated rejection levels
Children's resiliency levels	-	-	-	-
Warmth and affection levels	.260**	-	-	-
Neglect and indifference levels	-.272**	-.854**	-	-
Undifferentiated rejection levels	-.178	-.672**	.724**	-
Aggression and hostility levels	-.294**	-.680**	.755**	.767**

\*p < .05 \*\*p < .001

Table 5 illustrates a positive and strong significant relationship between the score that the fathers' warmth and affection levels and children's resiliency levels ( $r=.260$ ,  $p<.001$ ). In other words, it can be said that as the warmth and affection level increased, the resiliency level increased. Also, the warmth and affection level decreased, the children's resiliency levels decreased. According to table 5, there is a negative and strong significant relationship between the scores that fathers neglect/indifference ( $r= -.272$ ), aggression/hostility ( $r= -.294$ ) levels and children's resiliency levels ( $p< .001$ ). Also, there is not significant relationships between the score that fathers' undifferentiated rejection and children's resiliency levels ( $r= -.178$ ,  $p > .05$ ).

Table 6. The results of the basic linear regression analysis between children's resiliency levels and fathers' acceptance-rejection variables

Variables	B	Standart Error	$\beta$	t
Children resiliency levels Fathers' warmth and affection levels $R = .26$ $R^2 = .07$ $F(1,98) = 8.104^*$	.176	.062	.26	2.847*
Children resiliency levels Fathers' neglect and indifference levels $R = .27$ $R^2 = .07$ $F(1,98) = 8.925^{**}$	-.265	.089	-.27	-2.988**
Children resiliency levels Fathers' undifferentiated rejection levels $R = .18$ $R^2 = .03$ $F(1,98) = .247$	-.072	.144	-.18	-1.915
Children resiliency levels Fathers' aggression and hostility levels $R = .29$ $R^2 = .09$ $F(1,98) = 10.061^{**}$	-.27	.082	-.29	-3.256**

Table 6 shows that fathers' warmth/affection ( $\beta=.26$ ,  $p<.05$ ), neglect/indifference ( $\beta=-.27$ ,  $p<.001$ ), aggression/hostility ( $\beta=-.29$ ,  $p<.001$ ) levels significantly predicted children's resiliency levels. The warmth and affection levels accounted for .07 % ( $p<.001$ ), neglect/indifference levels accounted for .07 % ( $p<.001$ ), aggression/hostility levels accounted for .09 % ( $p<.001$ ), of the children's resiliency levels. Fathers' undifferentiated rejection level didn't not significantly predicted children's resiliency levels ( $\beta=-.18$ ,  $p>.001$ ). According to results, children's resiliency levels most predicted by the aggression/hostility levels of fathers.

## Discussion

According to results, there is a positive significant relationship between the score that the mothers' warmth and affection levels and children's resiliency levels. In other words, it can be said that as the warmth and affection level increased, the resiliency level increased. Also, the warmth and affection level decreased, the children's resiliency levels decreased. There is not significant relationship between the scores that mothers neglect/indifference, undifferentiated rejection, aggression/hostility levels and children's resiliency levels. Mothers' warmth and affection levels significantly predicted children's resiliency levels. Mothers' neglect/indifference, undifferentiated rejection and aggression/hostility levels didn't not significantly predicted children's resiliency levels. Additionally there is a positive and strong significant relationship between the score that the fathers' warmth and affection levels and children's resiliency levels. There is a negative and strong significant relationship between the scores that fathers neglect/indifference, aggression/hostility levels and children's resiliency levels. Also, there is not significant relationship between the score that fathers undifferentiated rejection and children's resiliency levels. Fathers' warmth/affection, neglect/indifference, aggression/hostility levels significantly predicted children's resiliency levels. According to results, children's resiliency levels most predicted by the aggression/hostility levels of fathers.

The study results demonstrated that perceptions of parents regarding the acceptance-rejection of their children may have a predictor effect upon the resiliency levels of preschool children. This study showed that fathers had a higher and greater effect compared to mothers. This finding is remarkable in terms of revealing the effect of fathers upon the psychological, emotional and personality development of their children in Turkey. The fact that parents support, accept their children and exhibit affection and love towards them may enable them to be stronger towards risk factors, stressful conditions and events. Rejecting attitudes of parents including hostility and aggression towards their children may decrease the psychological resiliency levels of children.

## Conclusion

This study has some limitations. According to limitations and results, the following points could be paid attention in future studies:

As well as collecting information from different people with broader sample groups, it is possible to conduct studies using techniques such as observation, sociometry. It is required to conduct studies involving different variables (gender, sibling relationships, temperament, variables concerning families etc.) that might affect the resiliency levels of children and parental acceptance-rejection. There are a very limited number of scales and research aimed at determining the resiliency levels of preschool children in Turkey. It is required to develop relevant scales and/or conduct scale validity-reliability and more studies. It is required to develop projects and training programs and extend the practices to increase the ego resiliency levels of young children.

Trainings and seminars should be organized for parents and expectant parents regarding the pediatric development, training and care. Preschool teachers are required to carefully carry out the studies involving the involvement and training of parents throughout the year. These studies should include trainings for parents regarding discipline and communication. In both schools and national educational policies, arrangements should be made for fathers along with mothers to participate in educational activities of their children, spend time with them, increase

and diversify their responsibilities in care and training. Longitudinal studies that follow the resiliency levels of young children and parental acceptance-rejection should be conducted.

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# Preliminary investigation on recreation and leisure knowledge sharing by LINE

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## Abstract

This study probes into current recreation and leisure knowledge sharing of university students in Department of Leisure and Recreation Management by LINE, and explores the key factors and related issues of knowledge sharing attitude and behavioral intention. Based on the results, it proposes suggestions for the problems as reference for LINE users to enhance the effectiveness of community participation. Based on the Theory of Acceptance Model (TAM), this study included self-efficacy and subjective norm as the framework. Through questionnaire survey, it collected 324 samples from Department of Leisure and Recreation Management in university of southern Taiwan, constructed data files, and performed statistical analysis by SPSS. After validating the hypotheses, this study found that perceived ease of use, perceived usefulness and self-efficacy significantly and positively influence attitude toward knowledge sharing. Subjective norm and attitude toward knowledge sharing significantly and positively influence behavioral intention to share knowledge. The findings can serve as references for recreation and leisure knowledge sharing through using LINE, thus improving the feasibility and practicability to share knowledge of recreation and leisure by LINE.

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*Keywords:* LINE, recreation and leisure, knowledge sharing, Theory of Acceptance Model, behavioral intention

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## 1. Introduction

### 1.1. Research Background and Motives

With vigorous development of information communication, network technology and smart mobile devices, development of community websites and social network system (SNS) is rapid. Hence, people's life style changes dramatically. Social network system (SNS, such as "Facebook", "Twitter" and "Plurk" are considered as social media. Upon social network technology, users have connection and dependency of social network and it results in socialspace manifestation) (Kreijns & Kirschner 2001). Currently, the popular APP in the world includes WhatsApp, WeChat, Facebook, Google Search, Google Maps, LINE, etc. Global users are several hundred million. In 2014, global users of LINE have broken through 400 million (Wikipedia, 2014). Although it is not the most in the world, number of registered users in Taiwan has reached 17 million and it is more than half of population in Taiwan (23 million). It is the more significant free communication software in Taiwan. Since telecommunication liberation in 1997 in Taiwan, development and growth of mobile phones are dramatic. In 2014, mobile phone users in Taiwan have reached 29.85 million. 127 mobile phone numbers are owned by every 100 people (NCC, Taiwan, 2014). With the generation of Smartphone, mobile communication reaches another stage. Touch screen, video, internet and mobile personal entertainment, as well as online community and friends' interaction, Smartphone become more prevalent.

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The former Chief of Information Officer of Google, Douglas Merrill, suggested that “knowledge is not the power and knowledge sharing is”. In past research, Davenport and Prusak (1998) suggested that people’s intention to share knowledge with others usually does not match human nature. Therefore, how to make community members to spend plenty of time and efforts to provide others with valuable knowledge in community is a worthy issue. It is the motive of this study.

## *1.2. Research Purpose*

Among studies in Taiwan, the Technology Acceptance Model (TAM) related theories are widely adopted by scholars to research of information technology. Some research focuses on community APP, but there lacks study on recreation and leisure knowledge sharing by LINE through the TAM and knowledge sharing theory. Hence the purposes of this study are below: (1) to find current recreation and leisure knowledge sharing by LINE; (2) effect of TAM on behavioral intention to share recreation and leisure knowledge by LINE; (3) effect of self-efficacy and subjective norm on attitude toward knowledge sharing; (4) effect of attitude toward knowledge sharing on behavioral intention of knowledge sharing.

## **2. Literature Review**

### *2.1. LINE*

LINE (Korean: 라인; Japanese: ライン) is the popular immediate communication software of Smartphone and PC. It was published in June 2011. Users can have voice communication or send messages to other users through internet. In November 25, 2013, the official announcement suggested that number of global users have broken through 300 million. On April 2, 2014, the number of users was more than 400 million, (Wikipedia, 2014).

### *2.2. Recreation and leisure*

Lin (1984) defined leisure as follows: (1) leisure is a kind of goal-oriented behavior, with the purpose of personal physical, social and psychological needs; (2) leisure is the participation in idle time or leisure time; (3) leisure activities must be based on individuals’ free intention; (4) leisure is a kind of activity or experience. Based on the previous explanation, “recreation and leisure” is defined below. In daily lives, through information media, people have some activities benefiting their physical and mental states. Through the activities, they can accomplish certain goals or satisfy some needs in order to release mental and physical fatigue.

### *2.3. Knowledge sharing*

Knowledge is the most valuable resources of organizations. Knowledge management has become the key factor for organizations to acquire and maintain competitive advantages (Davenport & Prusak 1998). Hence, organizations support knowledge management by related system upon information technology (Sherif et al., 2006). In the fifth discipline, Senge (1994) defined knowledge sharing as “all behaviors to help others develop action capacity”. Ryu et al. (2003) found that knowledge sharing means “knowledge is switched from a person, group, or organization to another person, group or organization”. It means individuals share the knowledge with others.

### *2.4. TAM*

TAM was proposed by Davis et al. (1989) and it is based on Theory of Reasoned Action. It suggests that external factors of users’ acceptance of new technology are through the key moderators, Perceived of Usefulness (PU) and Perceived Ease of Use (PEOU) to influence users’ behavioral intention. The statements are as follows: (1) perceived usefulness and perceived ease of use will influence users’ attitude toward use of technology; (2) perceived ease of

use will influence usefulness; (3) usefulness will directly influence behavioral intention (Chang, 2012; Davis et al., 1989; Lee, 2010; Lu et al., 2009). TAM is shown in Figure 1.

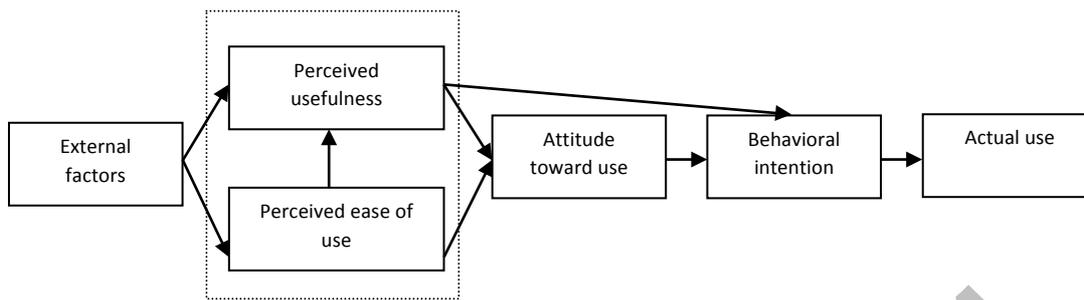


Fig. 1. Framework of TAM (Davis et al., 1989)

Attitude Toward the behavior (AT) is the attitude toward specific behavior. It means individuals' positive or negative feelings toward behavior. It is their evaluation toward specific behavior. Ajzen and Fishbein(1980) suggested that attitude is a kind of learning intention which results in "like" or "dislike" of certain things. Behavior Intention (BI) means a person's intention intensity to practice certain behavior. Ajzen and Fishbein(1980) defined behavioral intention as follows "according to subjective probability, individuals judge the advantages and disadvantages of certain behavior to lead to intention". Related research demonstrated that attitude positively influences behavioral intention (Cheon et al., 2012; Lee, 2010).

### 2.5. Subjective Norm

Ajzen & Fishbein(1980) suggested that subjective norm means the pressure on individuals' specific behavior. In other words, when a person practice certain behavior, he (she) perceive agreement of important others with their behavior or expected social pressure. According to research of Cheon et al. (2012) and Lee(2010), subjective norm significantly influences action and digital learning behavioral intention.

### 2.6. Self-efficacy

Self-efficacy theory is originated from social cognitive theory and it emphasizes that when having certain behavior, individuals will evaluate their capacity and it influences individuals' behavioral motive (Bandura, 1982). In research on information management, Compeau and Higgins (1995) defined self-efficacy as "computer self-efficacy". As personal belief, in use of information technology, it means users' capacity to accomplish tasks by information system.

## 3. Research design and implementation

### 3.1. Research Hypotheses

According to the previous literature review, this study develops the following five hypotheses:

- H1: Perceived ease of use significantly influences attitude toward knowledge sharing.
- H2: Perceived usefulness significantly influences attitude toward knowledge sharing.
- H3: Self-efficacy significantly influences attitude toward knowledge sharing.
- H4: Subjective norms significantly influence intention of knowledge sharing.
- H5: Attitude toward knowledge sharing significantly influences intention of knowledge sharing.

This study adopts quantitative method and is based on questionnaire survey. The retrieved questionnaires are analyzed and validated by SPSS. This study treats TAM developed by Davis et al. in 1989 as theoretical base to construct research framework. It aims to find if perceived ease of use and perceived usefulness of recreation and

leisure knowledge sharing by LINE will influence attitude toward knowledge sharing. According to research motive and purposes and through theoretical perspectives of literature review, it includes dimensions such as self-efficacy to establish research framework, as shown in Figure 2.

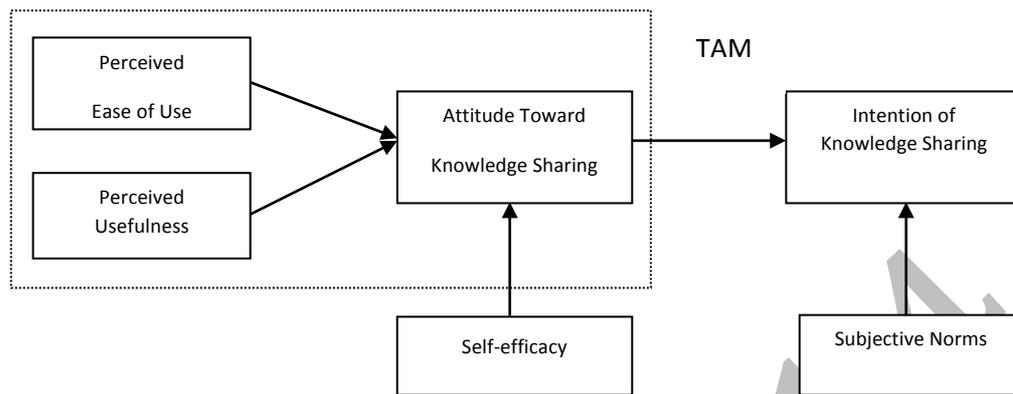


Fig. 2. Research framework

### 3.2. Research Subjects and Tools

- Research Subjects

This study treated the sophomores and juniors of Recreation and Leisure Department in four public and private universities, KH, PC, CS and ST, in southern Taiwan as subjects. By cluster sampling, the researcher obtained a total of 339 students as population. The research tool was “investigation on recreation and leisure knowledge sharing by LINE” designed by the researcher. It probes into current behavioral intention to share recreation and leisure knowledge by LINE to learn the students’ satisfaction with behavioral intention to share recreation and leisure knowledge by LINE, effects among dimensions and prediction.

- Research Tools

As to research tools, the scales include investigation of personal basic information and basic literacy of computer information, “TAM”, “subjective norm”, “behavioral intention” and “use behavior”. The scales are based on items developed by Davis (1998), Roca et Al. (2006), Ajzen & Fishbein(1980), Bock & Kim(2002), Bock et al.(2005). Upon literature review, reorganization and screening, this study develops scale of “recreation and leisure knowledge sharing by LINE”. The measurement was based on a Likert 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree). When the scores are higher, it means are more satisfied and positive about dimensions of recreation and leisure knowledge sharing by LINE.

- Reliability and validity test of scales

After designing the questionnaires, the researcher first invited 8 experts and scholars of technology education, educational statistics, digital learning, knowledge management and information system technology management for consultation in order to test the validity of scales. After analysis, eight experts agree with consistency test. It means the internal consistency of the scale is good. Pretest is conducted on ST and 108 questionnaires are distributed as reliability test of scale. After retrieving the questionnaires, the researcher eliminates the invalid ones and obtains 101 valid questionnaires.

- Item analysis

Item analysis of pilot test is based on SPSS. Items are selected according to mean, standard deviation, skewness absolute value, extreme value, item and total. According to the result, Item 28 and Item 44 do not match suggested level of scholars. They are eliminated. Cronbach’s  $\alpha$  of sub-scales in this study is from .877 to .930. Cronbach’s  $\alpha$  of total scale is .940. It means that the scale has internal consistency. Finally, the questionnaire is formally conducted by 57 items.

## 4. Data analysis and discussion

### 4.1 Analysis of sample structure

In March 2014, this study distributed paper-based questionnaires to sophomores and juniors of Recreation and Leisure Department with experience of LINE in four universities in southern Taiwan, KH, PC, CS and ST. A total of 339 questionnaires were retrieved. After eliminating 15 invalid questionnaires, there were 324 valid samples, with a valid return rate of 93%. Samples' basic information was analyzed by frequency scores of descriptive statistics and percentage, as shown in Table 1.

Table 1. Descriptive statistics analysis

Demographic variables	Names of category	Number	Percentage
Gender	Male	64	19.8%
	Female	260	80.2%
Public and private	Public	158	48.6%
	Private	166	51.4%
Grade	Sophomore	181	56.2%
	Junior	125	38.8%
	Others	16	5.0%
How long have you used LINE?	Less than 6 months	37	11.4%
	6 months~1 year	108	33.3%
	1 year~1 year and half	90	27.8%
	More than 1 year and half	86	26.5%
What kind of immediate communication software have you used (multiple choices)	QQ	22	6.8%
	Skype	239	73.8%
	Yahoo messenger	291	89.8%
	MSN	181	55.9%
	What's APP	101	31.2%
	WeChat	132	40.7%
	Google talk	16	4.9%
What are your reasons to use these software (including LINE) (multiple choices)	Facebook talk	273	84.3%
	Free	288	88.9%
	Influence by peers	262	80.9%
	Work	40	12.3%
	Learning	35	10.8%
	Convenient	262	80.9%
	Interesting	149	46.0%
Diverse pictures	136	42.0%	
Your average daily use of LINE	Less than 30 minutes	58	17.9%
	30 minutes~1 hour	64	19.8%
	1 hour~1.5 hours	48	14.8%
	1.5 hours~2 hours	34	10.5%
	More than 2 hours	117	36.1%
What are the functions of LINE you have used	File delivery and sharing (video file and document sharing)	286	88.3%

(Multiple choices)	Non-verbal communication function (delivery of text files and images of facial expression)	313	96.6%
	Verbal communication function (video)	264	81.5%
	Group discussion	283	87.3%
	Social connection function(searching friends by QRcode and sharing and connection of address book)	249	76.9%
	Entertainment function of game	170	52.5%
	Functions of practical tools (protractor, editing of pictures and notebook)	97	29.9%
	Information/knowledge communication function (newsletter, English learning and video messages)	110	34.0%
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What is your needs to use LINE?(multiple choices)	Chatting with friends	322	99.4%
	Social needs	238	73.5%
	Conference discussion	164	50.6%
	Immediate learning	44	13.6%
	Immediate control of information	128	39.5%
	File delivery	233	71.9%
	For entertainment	159	49.1%
	<hr/>		

Among valid samples, as to gender, most of samples are females (260, 80.2%); most of them are in private universities (166, 51.4%). As to grade, most of them are sophomores in university (181, 56.2%); as to time to use LINE, most of them is 6 months~1 year (108, 33.3%); as to the immediate communication software used, Yahoo Messenger is the highest (291, 89.8%). The following are Facebook talk (273, 84.3%), skype (239, 73.8%) and msn (181, 55.9%). What are the reasons to choose these immediate software? “Free” is the most (88.9%) and the second is convenient and influence by peers (80.9%). It shows that most of students use LINE since it is free. As to average daily use of LINE, at least 2 hours is the most (117, 36.1%); as to the functions of LINE used, non-verbal communication functions (text files and images of facial expression) are the most (313, 96.6%). The following is file sharing (video and document sharing) (286, 88.3%). It shows that most of students use non-verbal communication as the main function of LINE.

#### 4.2 Mean and standard deviation

Top three means of dimensions are perceived ease of use (6.38), perceived usefulness (5.54) and knowledge sharing (5.33). Hence, the subjects are more satisfied with ease of use of LINE and attitude toward recreation and leisure knowledge sharing. In addition, the dimensions with lower means are the following: subjective norm (5.05), self-efficacy (5.07) and knowledge sharing. It shows that students are independent when sharing recreation and leisure knowledge by LINE. They adopt their preference, as shown in Table 2.

Table 2. Results for the measurement model

Construct	Mean	Std dev	Cronbach's alpha(>.70)	Composite reliability (>.70)
Perceived Ease of Use			.920	.924
peu1	6.36	.768		
peu2	6.46	.714		
peu3	6.33	.843		
Perceived Usefulness			.877	.614
pu1	5.57	1.193		
pu2	5.56	1.209		

pu3	5.50	1.154		
Subjective Norms			.941	.903
sn1	5.12	1.120		
sn2	4.93	1.169		
sn3	5.04	1.139		
sn4	5.11	1.195		
Self-efficacy			.931	.925
se1	5.03	1.067		
se2	5.06	1.036		
se3	4.93	1.101		
se4	5.03	1.046		
se5	5.30	1.087		
Attitude Toward KS			.923	.925
aks1	5.46	1.036		
aks2	5.49	.987		
aks3	5.24	1.042		
aks4	5.13	1.015		
Intention of KS			.937	.953
iks1	5.27	1.044		
iks2	5.12	1.139		
iks3	5.13	1.092		
iks4	5.31	1.095		
iks5	5.40	1.164		

#### 4.3 Reliability and validity test

According to statistical analysis, Cronbach's  $\alpha$  of the dimensions are higher than reliability level .8. It shows that reliability of scale is good and there is high degree of internal consistency. CR of dimensions is .614~.953 which are more than .6 and it matches standard suggested by Fornell & Larcker(1981) ( $\geq .6$ ) (Fornell et al., 1981). It shows that internal consistency of the model is good, as shown in Table 2.

Correlation coefficients of dimensions in this study are significant. It means that 6 dimensions are associated. In addition, correlation coefficients of dimensions are lower than figures of diagonal lines (square roots of AVE of dimensions). It means that square roots of AVE in this study show good discriminant validity, as shown in Table 3.

Table 3. Discriminant validity for the measurement model

Construct	PEU	PU	SN	SE	AKS	IKS
PEU	.896					
PU	.334**	.666				
SN	.157*	.502**	.907			
SE	.135*	.387**	.766**	.896		
AKS	.125*	.333**	.751**	.766**	.869	
IKS	.255**	.338**	.632**	.683**	.622**	.928

Note: Diagonal lines are square roots of AVE of dimensions

#### 4.4 Path analysis

According to path analysis result of dimensions in this study, they are all significant. The hypotheses are supported. As to paths of dimensions in the study, “perceived ease of use” positively and significantly influences “attitude toward knowledge sharing” and value is .03, “perceived usefulness” positively and significantly influences “attitude of knowledge sharing” and value is .03. “Self-efficacy” positively and significantly influences “attitude toward knowledge sharing” and effect value is .83. “Subjective norm” positively and significantly influences “behavioral intention of knowledge sharing” and value is .38. “Attitude toward knowledge sharing” positively and significantly influences “behavioral intention of knowledge sharing” and value is .42.

### 5. Conclusion

According to empirical findings and result, it demonstrates that the hypotheses are supported. The conclusions are shown as follows:

*5.1 According to descriptive statistics, the main reasons that students use LINE are the following: it is free, convenient and they are influenced by peers:*

Since it is free, people frequently use non-verbal communication functions (texts and images of facial expression). It is the main attraction of LINE. People use line to chat with friends. The following is social needs and file delivery. According to the result, the need of immediate learning is low.

*5.2 Means of perceived ease of use, perceived usefulness and attitude toward knowledge sharing show higher satisfaction:*

It shows that LINE is easy to use for students, they can easily share recreation and leisure knowledge with friends. Hence, they have stronger attitude toward knowledge sharing.

*5.3 Perceived ease of use and perceived usefulness significantly and positively influences attitude toward knowledge sharing:*

Since it is easy to use non-verbal images of facial expression by LINE, it can avoid the inconvenience to key in the words and immediately share recreation and leisure knowledge and feelings to others. Students feel easy to interact with others and it enhances their interpersonal relationship. By images of facial express, they can not only share recreation and leisure knowledge with peers, but also interact with others. They can reinforce interpersonal relationship and intention of use.

*5.4 Self-efficacy and subjective norm positively and significantly influences attitude toward knowledge sharing:*

When self-efficacy of leisure and recreation knowledge sharing by LINE is higher and the effect of peers is more significant, attitude toward knowledge sharing will be more active.

*5.5 Attitude toward knowledge sharing significantly and positively influences intention of knowledge sharing:*

Users can immediately share recreation and leisure knowledge with peers by non-verbal images of facial impression. They are satisfied with interaction with peers and have higher intention. They are willing to recommend it to others.

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# Preschool education of blind pupils in the People's Republic of China and the Czech Republic

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## Abstract

The paper deals with the research of language skills and capabilities in blind pupils in the nursery school for visually impaired pupils. The comparison between the Czech Republic and the People's Republic of China is made based on the gained results and reviewed literature.

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*Keywords:* blind pupil; education; language skills and capabilities; Czech Republic; People's Republic of China.

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## Introduction

Being one of the world powers, the People's Republic of China has addressed the education of individuals with disability in recent decades. Despite the fact that care for these individuals started over 2000 years ago, first official schools for persons with visual impairment were established in 1874, whereas compulsory school attendance was enacted as late as in 1986, in 1994 the Regulations on Education of Persons with Disabilities were issued (Miles, 1998; Pang & Richey, 2006). Although in the People's Republic of China some categories of individuals with disability are not legally acknowledged (Kritzer, 2012), the most common categories are identical and include individuals with visual impairment.

As mentioned by Finková (2012), education of individuals with visual impairment is subject to certain rules and principles since early age. In the research we attempted to find out whether these rules and principles are identical in so different countries such as the Czech Republic and the People's Republic of China. We focused particularly on language skills and capabilities as these are required for successful education in all other subjects.

The research of language skills and capabilities in visually impaired individuals was carried out in a special basic school in the city of Chengdu 成都特殊教育学校 Chéngdū tèshū jiàoyù xuéxiào in the People's Republic of China, whose integral part is a nursery school. The aim of the research was not only the level of language knowledge and capabilities in the mother tongue in this group of individuals but also the methods of education used in nursery school.

## Methods

For the purposes of the research we used several methods, the results of which are described below. These methods included especially personal observation, during which we took part in lessons as well as extracurricular activities, and an experiment in the form of assignments given to pupils. The results of the observation were recorded in detail as well as the assignments; both written and audio recordings were made. Any recoding was made upon consent by all parties involved.

### Assignment topics

Defining the assignments for nursery school pupils was based on a presumption that there is only one class in the school and the pupils' skills and capabilities differ. Therefore, we designed simpler assignments to be accomplished by a majority of pupils.

The assignments primarily included language competences. We also focused on spatial orientation (school grounds) and surface orientation (desk).

Assignments:

*a) Recognizing shapes*

For recognizing shapes we selected an aid specially designed for this purpose – wooden board with carved shapes such as triangle, square, etc. The shapes can be removed from the board; the pupils had known the aid before.

*b) Recognizing typhlographic shapes*

For recognizing typhlographic shapes we selected several common shapes from all available aids. The whole set of aids had been in the classroom and had been freely accessible for the pupils.

*c) Assembling a figure from geometric shapes*

For assembling a figure from geometric shapes we selected 2D wooden shapes from small aids and games that were in the classroom and also accessible for the pupils.

*d) Comparing sizes (small car, big car...)*

*e) Matching according to logical connections: car – route, ship – waves*

For comparing sizes and matching according to logical connections we selected toys and aids from the classroom and relaxing room. Again, the pupils had known all toys and aids and had had an opportunity to play with them and use them.

*f) Surface orientation*

Surface orientation on the desk was tested in the pupils' home classroom, ideally using the pupils' desks, some pupils had to use their classmates' desk.

*g) Spatial orientation*

Spatial orientation was tested in the school grounds under teacher supervision. Towards the end of the school year the pupils were supposed to learn a certain route, which was then the subject of our analysis. We also observed the pupils in PE classes; this observation influenced overall assessment of this area.

### Results

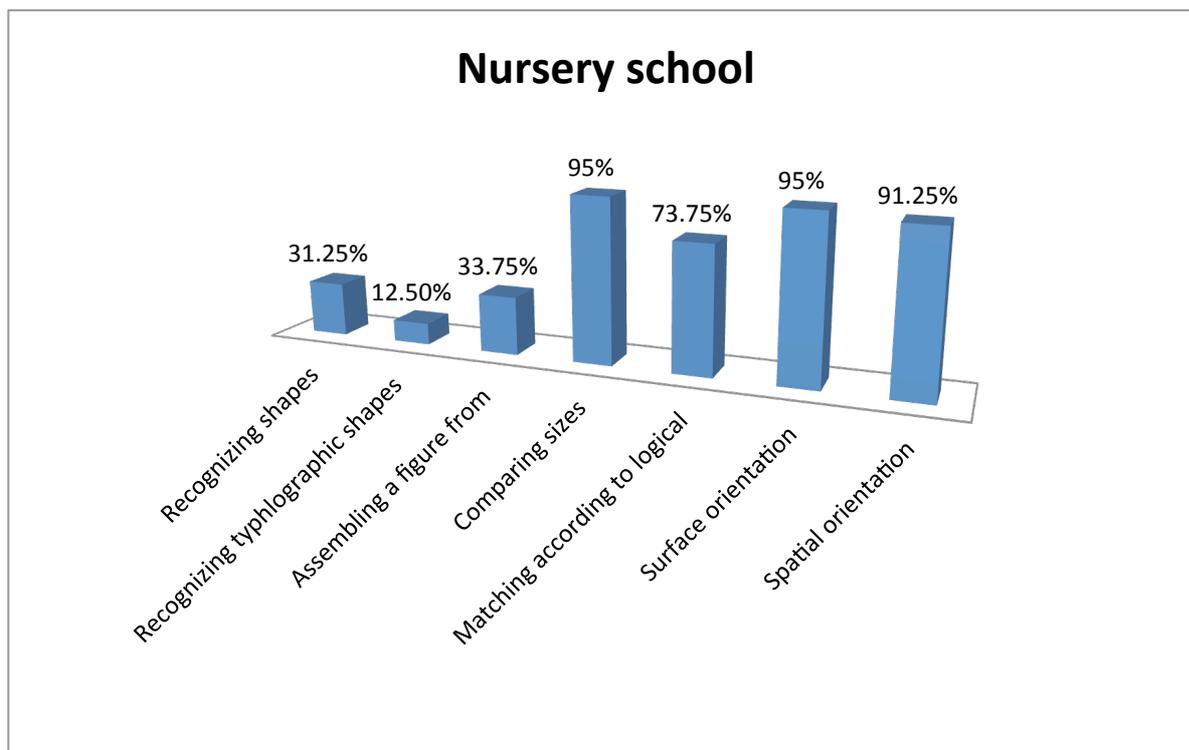
The results were processed as percentages and recorded for each assignment.

Table 1. Results of monitored areas in nursery school

	<b>Pupil No. 1</b>	<b>Pupil No. 2</b>	<b>Pupil No. 3</b>	<b>Pupil No. 4</b>	<b>Average</b>
<b>Recognizing shapes</b>	25%	25%	50%	25%	31.25%
<b>Recognizing typhlographic shapes</b>	25%	0%	0%	25%	12.5%
<b>Assembling a figure from geometric shapes</b>	85%	25%	25%	0%	33.75%
<b>Comparing sizes</b>	100%	100%	100%	80%	95%
<b>Matching according to logical connections</b>	95%	100%	85%	15%	73.75%
<b>Surface orientation</b>	100%	100%	100%	80%	95%
<b>Spatial orientation</b>	100%	100%	90%	75%	91.25%

The obtained results are shown in the graph below providing a comparison of the monitored areas.

Graph 1: Graphical comparison of various performance areas in nursery school



The graph implies some significant information. The best results were achieved by the pupils in comparing sizes and surface orientation. In the context of these results, the high percentage in spatial orientation (school grounds) is not surprising.

Above-average results were achieved by the pupils in matching according to logical connections. To a large degree the pupils relied on touch and smell, some even on taste.

On the contrary, the worst results were achieved in recognizing shapes and assembling a figure from geometric shapes. In these areas about 1/3 of all information was retrieved, for example out of 4 shapes 1-2 shapes were recognized, in assembling a figure the head was connected with the body but that was all.

The worst results were achieved in recognizing typhlographic shapes. As confirmed by the class teacher, the pupils had never worked with typhlographic shapes and although these aids are available in the classroom, they are never used in classes. The result of 12.5% was achieved through natural intelligence of some pupils, some of which might have held typhlographic pictures for the first time in their lives and were able to recognize some of them.

In overall terms, the results point to a dominance of orientation and a good level of tactile discrimination. On the contrary, the results signify a low language level, i.e. naming the outer world and orientation in the human body. Poor results on the area of typhlographic shapes highlight an insufficient level of preparation and use of these aids, which could be explained by a lack of any typhlographic aids in school.

## Comparison

As seen in the graph above, in a majority of assignments the pupils scored average to above-average results. From this it can be concluded that the curriculum and language competences taught in nursery school in the Czech

Republic are similar to those taught in the People's Republic of China. This means that the knowledge of blind pupils of the same age in nursery school in the Czech Republic and in the People's Republic of China correspond and are comparable.

Attention should also be paid to a significant role of an assistant teacher who could, particularly in mixed-age classes, help the pupils with acquiring new knowledge. The position of an assistant teacher in the Czech Republic is defined by the law and applied for by the headteacher. It should also be mentioned that the daily routine of nursery school pupils in the People's Republic of China resembled education in elementary classes compared with the pupils from the Czech Republic. This was caused, *inter alia*, by the fact that two pupils were going to enroll in the first grade of elementary school and they had been used to the school regime.

As far as tactile stimulation is concerned, no typhlographic pictures were used in classes although their reading and quick recognition is essential for using maps, illustrated publications and other materials in older school age. On the other hand, objects of daily life and common environment – e.g. cutlery, brushes, various bottles (plastic and cans), plastic beads of various sizes, rubber bands, natural objects (seeds, hard-shelled fruit), etc. were used more than in nursery schools in the Czech Republic.

On the contrary, the level of spatial orientation was similar to the Czech Republic. The pupils were able to move independently in the school grounds, they were able to walk to the dining hall, boarding house or classroom. However, it must be mentioned that most nursery and basic school pupils stay in the boarding house throughout the week, whereas in Czech nursery schools, pupils travel home in the afternoon to stay with their parents or guardians. Even though Stoklasová (2006) claims that care in a family circle is a key part of early child education, nursery school pupils in the Peoples' Republic of China frequently come from distant villages or towns and do not have the opportunity to stay with their parents during the week.

The teaching methods used by the teachers are fully adequate to those used in the Czech Republic. They include particularly verbal methods – description, narrative, dialogue, discussion, using a book, and illustrative methods – presentation of objects in a visual or tactile way, and practical methods – experiment and game. Most frequently used methods included dialogue, narration and games.

## **Conclusion**

The methods of educating pupils with visual impairment are very similar. The differences described above can be viewed from several perspectives. In the first place we must not forget that even though some aspects of the educational environment could be perceived as low-quality in a European context, in the Chinese society they must be viewed in a wider social context. Some rural areas are still not suitably adapted to individuals with disability, while the school environment provides better opportunities than the pupils' home villages. This is also confirmed by Ellsworth and Chung (2007), who recommend the development of special education in rural areas.

On the other hand, Chinese special education has reached a level, where, apart from providing required elementary education for pupils with visual impairment, ways must be identified to provide top-level education. The bases of such education had been laid, however, they need further development. Similar conclusions were formulated by Deng and Zhu (2007), who also state that Chinese special education should focus on the inclusive education model, which is nowadays used in Western European countries.

The above implies that both countries have a similar system of special education, it is thus desirable to share experience and facilitate quality development of the modern society.

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# Pre-school education teacher's opinion about the implementation of 2013 pre-school education program

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## Abstract

This research is made to determine pre-school teacher's opinion about the implementation of 2013 pre-school education program. This research is a descriptive study in screening model. The study group consists of 72 pre-school teachers. Datas are collected by using Personal Information Form and the Evaluation Survey of 2013 Pre-school Education Program Application. According to the great majority of teachers, introducing information about program was given but the information was not sufficient. Majority of teachers found themselves proficient to apply the program. Teachers state that they have problems in administration of program mostly because of smallness of the classroom space.

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*Keywords:* Pre-school Education, Pre-school Education Program, Teacher Opinions

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## Introduction

**The Progress of Pre-School Education In Turkey:** Preschool education benefit to young children in Turkey dates back to 15th century, Fatih Sultan Mehmet era. “Sıbyan Okulları” (Ottoman elementary-primary school) can be considered in one sense first samples of pre-school education institutions in Ottoman period (Aral Kandır, Can Yaşar, 2003).In Turkish Education history attaching importance to children and education of children seen that starting to change with 19th century. With the Tanzimat period, Sultan II. Mahmut's edict that ensure primary education compulsory in 1824 and later the studies related to protacting compulsory education to 6 years spent significant progress.The developments of the education history brought along the developments also in pre-school education developments (Deretarla Gül, 2008).Education Provisional law dated 1913 had brought provisions about pre-school education and nursery schools and primary classes were included in primary school. The first known and comprehensive programme of official nursery school dated 1914 (Akyüz, 2006, p.268).The tasks, objectives and definition of pre-school education were identified in accordance with the Basic Law of National Education no 1739 introduced in 1973 (Çetinkaya, 2006). In the next period, importance and extensification of pre-school education were considered in the Government Programme, Development Plans and National Council of Education (Deretarla Gül, 2008).

Pre-school education activities organized by regulations untill 1952 were conducted within the context of programmes prepared after this date (Alisinanoğlu, Bay, 2007). Programmes implemented and applied by reviewing in 1989, 1994, 2002 and 2006 (Gürkan, 2007). 2006 programme was reorganized and 2013 Pre-School Education Programme was developed by Considering feedbacks coming from national and international researches and implementations(ttkb.meb.gov.tr).

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Various researches were made on preschool education programmes. When we examine these researches we saw that studies mostly concentrate upon teacher's knowledge about programme and implementation competencies of teachers (Avcı, 1987; Parlakyıldız, 1998; Can Yaşar, 1998; Çalışandemir, 2002) or examination of preschool education programme according to teacher's opinions (Demir, 2001; Cömert, 2003; Çaltık, 2004; Şıvgın, 2005; Uzun, 2007; Düşek, 2008; Akkaya, 2009; Can Gül, 2009). A number of researches are related to difficulties that teachers experienced while preparing preschool education programme (Kandır, 1991; Kandır, Özbey, İnal, 2009), preschool teacher's degrees of benefiting from programme (Genç, 1997), assessment of preschool education programmes based on objectives, content, process and assessment dimensions (Güler, 2001). In this research we studied promotional activities of the 2013 programme put into practice and the problems encountered in practice according to teacher's opinions.

## Method

The study group of this research is consisting of 72 preschool teachers that work in schools in 2013-2014 academic year. The study group's age distribution are 32% of 25-30, 26% of 31-36, 19% of 32-37, 13% of 43-48 and 10% of 49-54. 19% of teachers are between 3-5 years, 28% of 6-10, 22% of 11-15, 8% of 16-20, 11% of 21-25 and 11% of the teachers are between 26-30 years in this profession. Almost all of the teachers are bachelor's degree, 61% of them working in nursery school and 39% of them are working in nursery classes. Personal Information Form and Survey of 2013 Pre-School Education Programme Application Assessment are used in this research as data collection tool.

**Personal Information Form.** Age, professional experience and educational background of teacher, type of school that he/she work, age group that he/she works, appear in this form.

**Survey of 2013 Pre-School Education Programme Application Assessment.** This survey is consist of 28 items and 3 sections; 4 of the items are the introduction of the program 2013, 12 of items are implementation competencies and 12 of items are problems encountered in practice. First we created item pool for development of the survey by taking advantage of existing researches and literature. We presented the trial form to 5 expert opinion. According to expert opinions we revised the trial form and acquired the final form.

## Findings

### 1. What are the preschool teacher's opinion about 2013 Pre-School Education Programme's introduction?

Did you informed about 2013 Pre-School Education Programme?/ Did you attended any in-service training/seminar? 94% of the teacher's answer was yes, 6% of teachers' answer was no. Did you find 2013 Pre-School Education Programme or the given information adequate? 23,5% of teachers' answer was yes, 53% of teachers' answer was partially and 23,5% of teachers' answer was no. 59% of teachers who didn't find the information adequate, didn't find the seminar enough expositional and 41% of them found the seminar inadequate. 78% of teachers stated that they obtained information about new programme from in-service training seminars, 10% of them from other teachers, 10% of them from school director and 2% of them from application students.

**2. What are the opinions of preschool education teachers about their competencies in implementation of programme?** Do you feel yourself qualified in implementation of 2013 Pre-School Education Programme? 60% of teachers' answer was yes, 36% partial and 4% no for this question. Teachers who didn't feel themselves qualified in the implementation of the programme stated that she/he didn't understand the programme, could not prepare activities or couldn't apply the programme to younger age group of students. How do you prepare the plans while implementing 2013 Pre-School Education Programme? 65% of teachers stated that they prepare by themselves by benefiting from internet or magazines, 31% of them stated that they copied from internet or magazines and 4% of them stated that they entirely prepare by themselves.

Did you make physical arrangements in your classroom in accordance with 2013 Pre-School Education Programme? 47% of teachers' answer was yes, 36% of teachers' answer was partially and 17% of teachers' answer was no. The

teachers who didn't make physical arrangement in their classroom stated that, they didn't make physical arrangement because new arrangement poses security risk for children. Moreover, because of the sleeping time is spent in the classroom, activity center is changing to prepare beds cause a loss of time, that is why for the arrangements there is a requirement of staff member. Some of the teachers didn't make physical arrangement in their classroom since they use the classroom together with another teacher, some of them stated that they don't know how to make a physical arrangement that is why didn't make physical arrangement.

In accordance with 2013 Pre-School Education Programme;

Do you find yourself qualified to make "Adaptation Studies' for the students with special needs? 38% of teachers' answer was yes, 39% of teachers' answer was partially and 24% of teachers' answer was no. Do you find yourself qualified to arrange integrated big group activities? 68% of teachers' answer was yes, 28% of teachers' answer was partially and 4% of teachers' answer was no for this question. Do you find yourself qualified to arrange integrated small group activities? 69% of the teachers' answer was yes, 27,8% of teachers' answer was partially and 2,8 of teachers' answer was no. Do you find yourself qualified to organise parent involvement activities? 75% of teachers' answer was yes, 22% of teachers' answer was partially and 3% of teachers' answer was no. Do you find yourself qualified to organise outdoor activities? 74% of teachers' answer was yes, 19% of teachers' answer was partially and 7% of teachers' answer was no. In accordance with your daily training schedule how much of your activities take place outdoors ,if weather condition is suitable? 43% of the teachers' answer was several times in a week, 25% of teachers' answer was once a week, 17% of teachers' answer was once a day and 15% of teachers' answer was once a month that they arrange activities outdoors.

**3. What are the preschool teachers' opinions about the problems in implementation of the programme?** The problems encountered in implementing the program is given in Table 1 according to teachers' opinions

*Table 1. The problems in implementation of the programme*

<b>Problem Statement ( N=72)</b>	<b>f</b>	<b>%</b>
Smallness of the classroom area	45	63
Number surplus of students	43	60
Lack of tools and materials	30	42
Lack of guiding about the programme	24	33
The garden's unsuitable design for children	23	32
The negative attitude of parents	19	26
Lack of outdoor playground at school	18	25
School administrator's lack of knowledge about the program	17	24
Having too much stuff in class	14	19
Lack of information about the programme	13	18
Garden's smallness compared to number of children	7	10

More than half of the teachers are facing problems in administration of program mostly because of smallness of the classroom space. The cases stated from teachers those are least problems respectively are; garden's smallness compared to number of children, lack of information about the programme and having too much stuff in class (Table 1).

### **Discussion And Conclusions**

According to the findings of this research; information related to 2013 Pre School Education Programme was conveyed to a majority of teachers, this informing was obtained through in-service training seminars and big majority of teachers didn't find the seminars adequate. A big majority of teachers indicated that they find themselves qualified to implement 2013 Pre School Education Programme but because of smallness of the classroom area, number surplus of students, lack of tools and materials, lack of guiding about the programme, the garden's unsuitable design for children, the negative attitude of parents, lack of outdoor playground at school, school administrator's lack of knowledge about the program, having too much stuff in class, lack of information about the programme and

garden's smallness compared to number of children they have difficulty. In Çaltık (2004)'s study, 66,4% of teachers stated that they didn't attend the in-service education/course/seminar about 2002 Preschool Education Programme. In his study, Cömert (2003) found that very high rate of (25.4%) teacher started to implement the programme without any knowledge about the programme. Obtained from this study a big majority of teachers (%94) attended the in-service training/seminar related to the 2013 Preschool Education Program is a finding that is not supported to Çaltık (2004) and Cömert (2003). According to Çaltık (2004)'s research, 62.1% of teachers find themselves qualified, 31.9% partially qualified and 6% didn't find themselves qualified in the implementation of new preschool education programme. Findings of this research is parallel to Çaltık (2004). Can be said that in general, teachers are often educate themselves when they encounter a new programme and they find themselves qualified. In Köksal Eğmez (2008)'s study, All of the teachers (100%) who participated in the survey stated that they organised activities about family involvement in accordance with the latest enacted programme. The majority of teachers (%75) find themselves qualified to organise parent involvement activities obtained from this study promotes findings of Köksal Eğmez (2008). In Akkaya (2009)'s study nearly half of the teachers stated that they are considering the settings out of classrooms while preparing education setting. The findings of this study supports Akkaya (2009). Çetinkaya (2010)'s study shows that according to preschool teachers outdoor playing settings are not arranged suitable for children in general, and the instruments and arrangements are inadequate to support physiological development of children. 60% of teacher agreed with the view that the classes are sufficient sized for children to play comfortably and get education. 40% of teachers are not agreed with this point of view. In Düşek (2008)'s study teachers stated that they have difficulties since inadequacy of physical condition/equipments, number of student (23.3%), having inadequate information about the programme (10%) and home visits, family involvement and obtaining document. The findings that obtained from this study are consistent with number surplus of students, inadequacy of physical condition/equipments, inadequate information about the programme and the garden's unsuitable design for children findings.

Based on the findings from the research, after the modifications made in preschool educations, before put into practice the programme, all teachers and all the staff who were in contact with the child can be informed about the new programme via in-service training/seminars and collaboration with academicians can be done about this issue. People with sufficient information about the new programme may be tasked with informing via in-service training/seminars, the duration of in-service training/seminar shall be long enough and applications may be included extensively. The problems that teachers faced can be identified and teachers can be guided for the issues they need. All directors of kindergarten or schools with kindergarten can be let to have information about the programme. In order to increase the success of education programme's implementation number of the students can be considered, improvements can be made in efficiency of instruments and physical conditions of schools and classrooms. Parents can be guided about the new programme.

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INTE 2014

# Preservice elementary mathematics teachers' written views on the concept of instructional activity

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## Abstract

The purpose of this study is to reveal the views of preservice elementary mathematics teachers on the concept of instructional activity. Of qualitative research patterns, the case study method has been employed in this study. The research group of the study is made up of a total of 12 preservice elementary mathematics teachers studying the fourth grade at the department of elementary mathematics teaching in a state university located in the Eastern Anatolian Region of Turkey during the fall semester of the 2013-2014 academic year. In the study, to get the opinions of preservice teachers on the concept of instructional activity, a written feedback form containing three open-ended questions was applied to the preservice teachers. Then, content analysis was conducted on the data obtained from the written feedback form. The study has revealed that preservice teachers have different opinions on the concept of instructional activity.

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*Keywords:* Activity, preservice elementary mathematics teacher

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## Introduction

It is a known fact that societies, institutions and individuals should undergo a proper educational process to survive and compete with each other. Nations recognizing this fact are aware of the need to consistently keep their educational policies and systems up-to-date with a view to keeping up with the continuously developing and evolving world. In this sense, our country (Turkey) attaches importance to the education system to sustain its presence and progress and boost its competitive edge across other countries, and pursues initiatives for renewing its educational programs in an controlled manner to this end. In this respect, the Ministry of National Education amended its educational program in 2005 based on a constructivist approach to learning, followed by a recent partial update to the program in 2013. In this program that has been in the play since 2005, teaching along educational activities is highlighted and the role of educational activities in the success of the program is emphasized.

One of the educational programs based on the constructivist approach where educational activities are critical is undoubtedly the Mathematics Syllabus in Primary Education (Mathematics Syllabus in Secondary Education as currently defined). In the syllabus; learning mathematics is addressed as an effective process, active involvement of students in the learning process is emphasized, the need to build up class environments where students can research and inquire, communicate, think critically, justify, comfortably exchange their ideas and suggest different solution methods, and the necessity to involve activities that provide students with the autonomy to build such learning environments and allow them to practice mathematics is specified (Ministry of National Education [MNE], 2013).

It is reported in various studies that, teaching aided by activities enhances the quality of mathematics training (Henningsen and Stein, 1997; Horoks and Robert, 2007) and that activity-based teaching yields positive influence in the educational process and learning outputs (Choo, 2007; Kiyoyuki, 2006). Furthermore, Simon and Tzur (2004)

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suggests that mathematical activities are highly valued in enhancing the quality of mathematics education and facilitating to the learning of a particular mathematical concept in the States. Again, it is argued that mathematical activities should be regarded as a major key to the learning of mathematics (National Council for Teachers of Mathematics [NCTM], 2000).

Here, the question of how to define the instructional activity as the major part of an effective educational process appears. Reviewing the appropriate literature reveals different definitions for the instructional activity that is a key component of an effective educational process. Uğurel and Bukova-Güzel (2010) suggests that instructional activity may be defined as learning or working action produced through a voluntary interpersonal interaction. In his study, MacDonald (2008) describes instructional activity as the set of activities founding learning, supporting students' learning and promoting their learning levels.

Central role of instructional activities in the Mathematics Syllabus in Secondary Education for 2013 besides their significance in the educational process necessitates to explore the views of preservice elementary mathematics teachers on the concept of instructional activities. Therefore, the question of "what preservice elementary mathematics teachers' views about the concept of instructional activity?" constitutes the problem of the study. The purpose of this study conducted across the problem identified is to reveal the views of preservice elementary mathematics teachers on the concept of instructional activity.

## Method

### Research Method

Of qualitative research patterns, the case study method has been employed in this study. In the case study; factors related to a particular case are researched holistically with emphasis on how they impact and how they are impacted by the related situation in an attempt to describe variations and processes in that situation (Yıldırım and Şimşek, 2008).

### Research Group

The research group of the study is made up of a total of 12 preservice elementary mathematics teachers studying the fourth grade at the department of mathematics teaching for primary education in a state university located in the Eastern Anatolian Region of Turkey during the fall semester of the 2013-2014 academic year.

### Data Collection Tools and Data Analysis

In the study, to get the opinions of preservice teachers on the concept of instructional activity, a written feedback form containing three open-ended questions was applied to the preservice teachers. Then, content analysis was conducted on the data obtained from the written feedback form.

## Findings

Codes	Participants	Frequencies
To give examples	P <sub>1</sub> , P <sub>4</sub> , P <sub>6</sub> , P <sub>7</sub> , P <sub>8</sub> , P <sub>12</sub>	6
Preparing materials	P <sub>1</sub> , P <sub>5</sub> , P <sub>6</sub> , P <sub>8</sub> , P <sub>11</sub>	5
Driving the involvement of the student in the lesson	P <sub>1</sub> , P <sub>2</sub> , P <sub>3</sub> , P <sub>5</sub> , P <sub>8</sub>	5
To associate the lesson with the daily life	P <sub>6</sub> , P <sub>7</sub> , P <sub>9</sub>	3
To play games about the lesson	P <sub>7</sub> , P <sub>11</sub> , P <sub>12</sub>	3
Embody	P <sub>2</sub> , P <sub>10</sub>	2
A process of materialization allowing transition from concrete thinking to the abstract	P <sub>3</sub> , P <sub>5</sub>	2
The whole bundle of anything that allows better understanding of the topics	P <sub>4</sub> , P <sub>12</sub>	2
The contribution to mental development	P <sub>3</sub>	1
Selection of method based on the topic	P <sub>5</sub>	1
Anything that drives student interest in the lesson	P <sub>9</sub>	1
Visualization	P <sub>10</sub>	1
Anything that cements the learning	P <sub>11</sub>	1

Table 1. Opinions of participants on their immediate understanding of what an instructional activity is.

Table 1 shows data on what preservice teachers understand about what an instructional activity is. Table 1 reveals that preservice teachers have different opinions as to the concept of instructional activity. Of them, 6 define the instructional activity as to give examples, 5 as preparing materials and 5 as driving the involvement of the student in the lesson. Also 3 preservice teachers indicate that an instructional activity is meant to associate the lesson with the daily life while another 3 argue that it is meant to play games about the lesson. Furthermore, 2 preservice teachers define it as embody, a process of materialization allowing transition from concrete thinking to the abstract, and the other 2 argue that it is the whole bundle of anything that allows better understanding of the topics. In addition, other preservice teachers in Table 1 describe instructional activity as the contribution to mental development, selection of method based on the topic, anything that drives student interest in the lesson, visualization, and anything that cements the learning.

Table 2. Opinions of participants on whether they were taught on the concept of instructional activity during their license study.

Codes	Frequencies	Lesson Type	Participants	Frequencies
Yes, I took a lesson.	12	Theoretical	P <sub>2</sub>	1
		Applied	P <sub>1</sub> , P <sub>3</sub> , P <sub>6</sub> , P <sub>8</sub> , P <sub>10</sub>	5
		Both theoretical and applied	P <sub>4</sub> , P <sub>5</sub> , P <sub>7</sub> , P <sub>9</sub> , P <sub>11</sub> , P <sub>12</sub>	6
No, I didn't take a lesson	0			

Table 2 shows the opinions of participants on whether they were taught on the concept of instructional activity during their license study. Table 2 reveals that all preservice teachers involved in the study group indicate that they were taught on the concept of instructional activity during their license study. Furthermore, of preservice teachers, 1 states theoretical study, 5 state applied study and 6 state both theoretical and applied study received on the concept of instructional activity.

Table 3. Lessons received by participants on the concept of instructional activity.

Lessons	Participants	Frequencies
Special Teaching Methods (I-II)	P <sub>2</sub> , P <sub>3</sub> , P <sub>4</sub> , P <sub>5</sub> , P <sub>6</sub> , P <sub>8</sub> , P <sub>10</sub> , P <sub>11</sub> , P <sub>12</sub>	9
Instructional Technologies and Material Design	P <sub>3</sub> , P <sub>4</sub> , P <sub>5</sub> , P <sub>6</sub> , P <sub>7</sub> , P <sub>9</sub> , P <sub>11</sub> , P <sub>12</sub>	8
Seminar on Mathematics Teaching	P <sub>1</sub>	1
Teaching Principles and Methods	P <sub>4</sub>	1

Table 3 shows the statements of preservice teachers on classes they received on the concept of instructional activity during their license study. Of them, 9 state the reception of the lesson "Special Teaching Methods (I-II)", 8 state "Instructional Technologies and Material Design", 1 states "Seminar on Mathematics Teaching", and 1 states "Teaching Principles and Methods" as regards the concept of instructional activity.

Table 4. Opinions of participants on what to consider during the preparation of an instructional activity.

Codes	Participants	Frequencies
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The students' level	P <sub>2</sub> , P <sub>3</sub> , P <sub>4</sub> , P <sub>5</sub> , P <sub>8</sub> , P <sub>9</sub> , P <sub>10</sub> , P <sub>12</sub>	8
Include the topic	P <sub>4</sub> , P <sub>6</sub> , P <sub>10</sub> , P <sub>11</sub>	4
The duration of the activity	P <sub>2</sub> , P <sub>7</sub> , P <sub>10</sub>	3
To be linked to the daily life	P <sub>3</sub> , P <sub>9</sub> , P <sub>12</sub>	3
To be interesting and attractive	P <sub>7</sub> , P <sub>8</sub> , P <sub>11</sub>	3
To be cost-effective	P <sub>7</sub> , P <sub>10</sub> , P <sub>12</sub>	3
The selection of teaching methods and techniques	P <sub>1</sub>	1
The structure of the activity	P <sub>2</sub>	1
The suitability of the physical setting	P <sub>2</sub>	1
The fitting tools-equipment	P <sub>2</sub>	1
The usefulness of the activity	P <sub>7</sub>	1
The ensuring active involvement	P <sub>8</sub>	1
The fitting instructional gains and expedience	P <sub>10</sub>	1
The appropriateness for the class size	P <sub>10</sub>	1
The plain and clear nature of the activity	P <sub>12</sub>	1

Table 4 shows the opinions of participants on what to consider during the preparation of an instructional activity. According to Table 4, of preservice teachers, 8 state that the activity should be aligned to the students' level, 4 state that the activity should include the topic while each argument that the duration of the activity is of essence, the activity should be linked to the daily life, the activity should be interesting and attractive, and the activity should be cost-effective is put forward respectively by 3 preservice teachers for each. Moreover, there is one preservice teacher favouring each of the following considerations that should be given while preparing an instructional activity: "selection of teaching methods and techniques", "structure of the activity", "suitability of the physical setting", "proper tools-equipment fitting the activity", "usefulness of the activity", "ensuring active involvement", "educational gains and expedience", "appropriateness for the class size", "and plain and clear nature of the activity".

### Conclusion and Suggestions

The study further reveals that the knowledge of preservice teachers on the concept of instructional activity is poor. This finding is consistent with the outcomes of the study conducted by Uğurel, Bukova-Güzel and Kula (2010) for identifying opinions and experiences of mathematics teachers on the concept of "learning activity".

Again, the study findings reveal that perceptions of preservice teachers on the concept of instructional activity vary with majority of the preservice teachers perceiving it as a material and a set of researches and example solutions for better understanding of the topic. And this result is in line with the findings of the study conducted by Bozkurt (2012) on identifying the perceptions of mathematics teachers in the concept of mathematical activity.

Also the results of this study are parallel to the findings of the study conducted by Özmantar, Bozkurt, Demir, Bingölbali and Açıllı (2010) on identifying the perceptions of form tutors in the concept of instructional activity.

We are of the opinion that presenting theoretical and applied lessons on the concept of instructional activity to preservice teachers during their license study would be helpful in enhancing their knowledge and skills on the concept.

Further, we believe that setting up the curriculum of the Teaching Practice lesson delivered to preservice teachers to enhance their knowledge and skills on the concept of instructional activity in an activity-oriented manner would yield more benefits to the preservice teachers.

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# Preservice physics teacher's beliefs regarding classroom management

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## Abstract

The aim of this study is to determine classroom management beliefs of preservice physics teachers. Besides, it is also aimed to examine the effects of gender and classroom management lessons on those beliefs. For this purpose adapted version of Attitudes and Beliefs on Classroom Control-Revised Inventory and Demographic Variables Questionnaire were administered to 109 preservice physics teachers. The results of this study indicated that preservice physics teachers' attitudes and beliefs regarding classroom management are interventionist on the instructional management- and non-interventionist on the people management subscale. Moreover the effects of gender and classroom management lessons on classroom management beliefs were discussed in this research.

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*Keywords:* preservice teacher education, physics education, classroom management styles

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## Introduction

Classroom management can be defined as the efforts of a teacher for managing students' behaviors, providing student interaction and carrying out class activities regarding teaching (Erden, 2001). Creating efficient learning environments and managing the classroom effectively is very important for students' learning process. However, effective classroom management has been shown to be the most common concern of both preservice and experienced teachers (Sokal, Smith, & Mowat, 2003). Veenman (1987) has examined the studies regarding the problems of beginning teachers in primary and secondary education and stated that the first problem encountered by those teachers was classroom discipline and the second one was the student motivation. Similarly, the basic concern of preservice teachers is to classroom control, discipline and motivation of students (Hart, 1987; Merrett, & Wheldall, 1993). Doyle (1986) points out the importance of attitudes and behaviors of students and teachers in terms of students' behaviors and the importance of classroom management for teaching and learning.

In general, teacher behaviors towards classroom management are related with their attitudes and beliefs towards classroom management (Martin, Yin & Baldwin, 1998). Glickman and Tamashiro (1980) have defined three approaches on a continuum of control in teacher-class interaction: non-interventionist, interventionist, and interactionalist. On the one end of the continuum, there are non-interventionists "assumes the child has an inner drive that needs to find its expression in the real world" (Martin, Yin, & Mayall 2008, p. 11). On the other end of the continuum there are interventionists who emphasize "what the outer environment does to shape the human organism in a particular way" (Martin et al., 2008, p. 11). Moreover, the non-interventionist is the least directive and controlling, while the interventionist is most controlling. They also stated that midway between these two extremes, the interactionalists focus on "what the individual does to alter the external milieu, as well as what the environment does to shape the individual" (Martin et al., 2008, p. 11). Moreover, "interactionalists work to find solutions acceptable to both teacher and students and use of the same techniques as non-interventionists and interventionist" (Martin et al., 2008, p. 11).

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Martin, Yin, and Baldwin (1998a) developed the Attitudes and Beliefs on Classroom Control (ABCC) Inventory to measure teachers' beliefs and attitudes toward classroom management. This inventory was formerly titled as the inventory of classroom management style (ICMS) and used to measure teachers' perceptions of their classroom management style (Martin & Baldwin, 1994). The ABCC has three dimensions: instructional management, people management, and behavior management. Instructional management (IM) includes activities such as monitoring seatwork, organizing daily class routines, and allocating materials in the classroom. People management (PM) refers teachers' beliefs about students as people and their efforts to create teacher-student relationship. The behavior management (BM) dimension focuses on pre-planned efforts (like giving instructions, providing feedback to students) aimed at preventing misbehavior (Martin et al., 2008). Martin and colleagues investigated the impact of teacher characteristics like gender, age, training educational background on teachers' attitudes and beliefs toward classroom management styles in various researches (Martin, Yin, & Baldwin, 1998b; Martin, Yin, & Mayall, 2006). Recently some of the researchers used this inventory and found that the ABCC has two factor structures which are instructional management and people management (Gencer & Cakiroglu, 2007; Henson, 2003).

In the light of literature review, it is obvious that teachers have a considerable effect in creating effective and efficient learning environments and the learning environments created by teachers with different attitudes and beliefs might indirectly have positive or negative effects on curriculum. For example, teachers with negative attitudes about teaching and classroom discipline may negatively affect the efficiency of the curriculum. Physics curriculum was re-organized in 2007 and based on constructivism. According to the current curriculum, teachers should aim to create democratic learning environments providing an opportunity to the students to develop their self-regulation and lessons would be based on activities. However, it is difficult create such environments with an over-controlled attitude. Moreover, it would be necessary to understand classroom management beliefs of preservice physics teachers to improve the quality of physics teaching-learning environments. The aim of this study is to determine the classroom management beliefs of preservice physics teachers. Besides, it is also aimed to examine the effects of gender and classroom management lessons on those beliefs.

## **Methodology**

### *Participants*

Data were collected from 109 preservice physics teachers. 25 of the subjects were freshman, 20 were second year, 16 were third year, 20 were fourth year, 28 were fifth year preservice physics teachers. Majority of the participants were female (67 %).

### *Instruments*

In this research, Demographic Variables Questionnaire and Revised Version of the ABCC Inventory (ABCC-R) (Martin et al., 2008) were used. Preservice physics teachers' class, age, gender was asked in demographic variables questionnaire. ABCC-R designed to measure teachers' beliefs of their classroom management styles on a continuum of control suggested by Glickman and Tamashiro (1980). At first, Martin, Yin, and Baldwin (1998a) developed the Attitudes and Beliefs on Classroom Control (ABCC). The ABCC inventory consisted of 48 items under three subscales which were instructional management (IM), people management (PM), and behavior management (BM) (Martin, et al.1998a). However, the research results indicated two factor structure of the ABCC (Henson, 2003; Gencer & Cakiroglu, 2003) which was not the same as the three factor structure suggested by Martin et al. (1998a). Therefore, Martin et al., 2008) created The ABCC-R by revising the wording of several of the original 48 ABCC items and creating additional items. The ABCC-R inventory consists of 20 items and has two subscales, which were instructional management (10 items) and people management (10 items). Each item was scored on a four-point scale ranging as "describes me well" (4), "describes me usually" (3), "describes me somewhat" (2), and "describes me not at all" (1). Both of the subscales measures teachers' classroom management beliefs on a continuum of control ranging from non-interventionist, to interventionist to interactionalist. After reverse scoring items of the PM subscale, high scores on The ABCC-R subscales represents the teacher's interventionist management belief about

classroom management and a low score obtained from the subscales represents the non-interventionist management belief of the teacher.

#### *Factor analysis of the ABCC-R inventory*

At first, the ABCC-R inventory translated into Turkish. Three initial translations were made independently by two university lecturers from the department of translation and interpretation translators and by the researcher. All options were reviewed by the researcher. Then, translation choices were discussed by the translators. After that, consensus about the translation was made. Then, Turkish versions of the scale were checked by a professor from the Department of Turkish Language and Literature. After this process the scales were reorganized. Finally, it was controlled by the English experts again. For the construct validity, an exploratory factor analysis with principal component extraction was performed to confirm two factor structure of the ABCC-R inventory. Martin et al. (2008) also used principle component analysis with orthogonal rotation to identify the subscales of the ABCC-R. Initial principle component analysis with varimax rotation yielded a seven factor solution with eigen values greater than one. However, scree plot results indicated that two factors solution should be examined. Based on this result, principle component analysis with two factors conducted. Moreover, unweighted least square extraction was performed to reduce correlation between both factors. In this two factor structure, items with loadings greater than .40 were retained. Therefore, only one item was eliminated in the subsequent analysis. Thus, the instrument used for the final analysis consisted of 10 items for IM Scale, 9 for the PM Scale. According to the subsequent analysis, retained items loaded highly with their own scales as in the original ABCC-R. Factor loadings for the IM scale with 10 items (19 % of the variance) were between .44 and .70 and for PM scale with 9 items (16 % of the variance).42 and .67 (Table1). Both of the scales of the ABCC-R inventory were accounting for 35 % of the variance in the respondents' scores.

The Kaiser Meyer Olkin (KMO) and Bartlett's tests of sphericity tests indicated the adequacy of data for factor analysis. KMO for 19 items was found as .72. and Bartlett's tests of sphericity tests was  $\chi^2 = 466.81$  ( $p \leq .05$ ). The minimum KMO value for being eligible for the factor analysis is 0.60 (Pullant 2001). In this case, the observed KMO value of 0.72 is higher than the recommended KMO value and thus the data is suitable for factor analysis. Martin et al. (2008) used item inter correlations minimum as .20 in their research. In this research, as seen in Table 1, the minimum corrected item to total correlation was .29. For the internal consistency, Cronbach Alpha reliability coefficients were computed for both scales of the ABCC-R. In this study, Cronbach  $\alpha$  reliabilities for the IM scale and the PM scale found as .75 and .73 respectively. Martin et al. (2008) found Cronbach  $\alpha$  reliability coefficient between .70 and .80 for both subscales in different samples. As a result, adapted version of the ABCC-R has an acceptable level of reliability and validity for the IM and PM subscales. Moreover, the validity and reliability results are consistent with that of Martin et al. (2008).

Table 1. Factor Loadings and the Item Total Correlations of the Adapted ABCC-R

Factor	Items	Factor 1 Loadings	Factor 2 Loadings	Item Total Correlations
	Item 17	.70		.57
	Item 19	.68		.53
	Item 4	.68		.54
	Item 18	.59		.47
	Item 2	.57		.42
Instructional	Item 5	.50		.36
Management	Item 15	.48		.40
	Item 6	.47		.35
	Item 8	.46		.30

	Item 11	.44	.32
	Item 13	.67	.51
	Item 9	.66	.49
People	Item 16	.63	.47
Management	Item 12	.63	.48
	Item 7	.57	.45
	Item 14	.56	.38
	Item 3	.54	.36
	Item 10	.45	.33
	Item 20	.42	.29

## Results

Descriptive statistics was used in determining attitudes and beliefs of preservice physics teachers towards classroom management. Means and standard deviations of the subscales of the ABCC-R were given in Table 2. Table 2 indicates that preservice physics teachers' beliefs regarding classroom control are high.

Table 2: Means and Standard Deviations of the Subscales of the ABCC-R

	N	ABCC-R			
		IM		PM	
		M	SD	M	SD
Female	73	26.58	4.90	18.92	4.17
Male	36	28.86	4.79	18.72	3.72
Total	109	27.33	4.96	18.85	4.02

Results of the ABCC-R scale revealed that preservice physics teachers believe that they are more interventionist at IM subscale ( $\bar{X} = 27.33$ ) and noninterventionist at PM subscale ( $\bar{X} = 18.85$ ). The mean scores of the preservice physics teachers' beliefs regarding IM subscale showed that they preferred interventionist attitude, which points more controlling attitude on the aspects e.g. monitoring seatwork, organization of the daily class routines, and allocating materials in the classroom. On the other hand, the mean scores of the preservice physics teachers' beliefs regarding PM subscale were low. This means, they preferred non-interventionist attitude on developing teacher-student relationship. Male preservice physics teachers believe that their attitudes are less interventionist at IM subscale when compared to female preservice physics teachers.

T-test was performed to explore whether preservice physics teachers' classroom management styles differed according to gender. Research results revealed that there was a significant mean difference between male and female preservice physics teachers' in terms of the classroom management beliefs on the IM subscale scores. Moreover, any significant correlation was found between male and female preservice physics teachers' classroom management beliefs on the PM subscale scores.

Table 6: Independent T-Test Results with respect to Gender on the ABCC-R Scores

	Gender	N	Mean	SD	df	p
IM	Female	73	26.58	4.90	107	.02**
	Male	36	28.86	4.80		
PM	Female	73	18.92	4.18	107	.81
	Male	36	18.72	3.72		

T test was also used to determine whether there was a difference between the students who took classroom management course and the students who did not take this course regarding classroom management styles. As seen in Table 7, any significant difference between those two groups regarding classroom management styles was found.

Table 7: T Test Results with respect to Student Groups on the ABCC-R Scores

	Classroom Management Course Taken	N	Mean	SD	df	p
IM	No	84	27.33	5.14	107	.99
	Yes	25	27.32	4.43		
PM	No	84	19.01	3.94	107	.45
	Yes	25	18.32	4.28		

## Discussion, Conclusion and Recommendations

Results of this study revealed that the preservice physics teachers are more interventionist on the instructional management and non-interventionist on the people management regarding their attitudes and beliefs on classroom management. It was also observed that while they are more interventionist in activities such as monitoring seatwork, organizing daily class routines, and allocating materials in the classroom, they are non-interventionist in teacher-student relations. Similarly, in a study carried out by Gencer and Cakiroglu, (2007) it was found that preservice primary science teachers are more interventionist on the instructional management while they are non-interventionist on the people management. This means, that they would have control on seatwork monitoring, selection of tasks, and directing daily routines. Since the physics teacher education programs are more lesson-planning-oriented, it might have caused a more interventionist attitude on the instructional management. The preservice teachers mainly provided by lesson-planning information naturally have non-interventionist attitudes and beliefs on classroom teaching environment. The preservice physics teachers are still students and they are studying together with their classmates during applied courses, therefore, they could believe to have a non-interventionist belief on teacher-student relation.

From gender point of view, regarding the classroom management styles of preservice physics teachers a significant difference was observed only on the instructional management and there was no difference between male vs. female scores on people management. Martin et al. (2008) investigated that male teachers are more interventionist on the instructional management and there is no difference between male and female teachers' scores on the people management.

When the effect of classroom management course on preservice physics teachers' classroom management styles was examined, no difference was observed. The reason for this might be unreal classroom environment when compared with real physics classes in secondary schools. Merret and Wheldall (1993) point out that the classroom behavior management skills cannot be acquired when instructors taught preservice teachers how to manage the classroom. The results of this study may indicate that classroom management courses in the training of preservice teachers may be sufficient for giving information but insufficient for forming an attitude as the courses are not given in a real classroom environment. During preservice education, creating more real classroom environments is very important to build up classroom management skills. Besides, concentrating on teaching methods like microteaching (which makes preservice teachers active and shows their imperfection) would help preservice teachers to adopt themselves to teach and to create efficient classroom environments.

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# Primary and secondary school teachers' knowledge and misconceptions about the brain in Turkey

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## Abstract

Neuroscience adds a new perspective to the field of education. However, it is challenging to bridge the gap between those deeply-rooted fields. Historically, the gap has generated certain neuromyths and these can be quite damaging. In order to prevent this situation, teachers should be sufficiently informed. Thus, there are some efforts in some countries to prevent the spread of neuromyths, such as UK, Netherlands, Brazil, US, Greece, Portuguese etc. However there have been no studies in Turkey. The present study took a two-stage mixed-methods approach to explore primary and secondary school teachers' concepts about the brain in Turkey and to identify potential sources of misconceptions. 278 primary and secondary school teachers were surveyed and 6 of them were interviewed for in depth responses. Analyses revealed that teachers held many misconceptions about concepts related to brain that have been observed elsewhere in Europe. On the other hand the comparison between Turkey, UK and Netherlands revealed some interesting differences. For instance the conceptions about the neuromyths on second language learning and plasticity were differentiated between countries. This could show the differences between cultures. There is a need to do distinctive scientific research in Turkey as well.

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*Keywords: Neuroscience in education, Neuromyths, Turkey, Teachers' knowledge on brain*

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## 1. Introduction

In 2002, the OECD's Brain and Learning Project (1999-2006) drew an international attention to the destructive effects of neuromyths (OECD, 2002: 69), defining these as "misconception generated by a misunderstanding, a misreading or a misquoting of facts scientifically established (by brain research) to make a case for use of brain research, in education and other contexts" (OECD, 2002: 111). There are various possible reasons why neuromyths have spread in education. Firstly, neuroscience is alluring. For instance, a study shows that the representation of brain images in an article is more persuasive than other data representations for readers (McCabe & Castel, 2008). The persuasiveness of "brain-based" explanations appears to add to the marketability of educational products, whose attractiveness can be enhanced simply by including "brain" in the titles, and further enhanced when an irrelevant brain image added (Lindell & Kidd, 2013). Secondly, the gap between neuroscience and education which adds difficulty to the process of transferring knowledge between neuroscience and education promotes condition which promotes neuromyths and allows them to endure. According to Goswami (2006), part of this gap arises from miscommunication between neuroscientists and teachers.

As the field of neuroscience in education evolves and brain-based educational products are developed, the hunger for 'brain-based' knowledge among teachers is likely to increase and it will become increasingly important for teachers to be critical consumers. Understanding teacher's ideas and common misconceptions about the brain will be crucial to professional development initiatives aimed at developing their critical awareness. That is one reason why several research studies have already focused on teachers perceptions regarding neuroscience, including in the UK (P.A. Howard-Jones, Franey, Mashmouhi, & Liao, 2009; Pickering & Howard-Jones, 2007), the Netherlands (a comparative study with teachers in the UK) (Dekker, Lee, Howard-Jones, & Jolles, 2012), Brazil (Bartoszeck&

Bartoszeck, 2012), the USA (Serpati & Loughan, 2012) and the Portugal (Rato, Abreu, & Castro-Caldas, 2013). Thus, there is an urgent need to ground the field in Turkey, regarding the importance of teacher training for a successful teaching-learning environment; because teacher education is one of the most effective mechanisms for improving neuroscience literacy in education (Ansari & Coch, 2006) with many voices calling for a modest inclusion of neuroscience in teacher training (e.g. Royal\_Society, 2011).

On the other hand, the last comprehensive revision to teacher education in Turkey was made in 1997 (Yuksel, 2012). Although some further updating was made in 2007 and 2009, it is still hard to consider Turkey has a coherently formulated and implemented set of standards for teacher education. According to Yildirim (2011) attempts to improve the quality of teacher education often have been undermined by new initiatives that appear contradictory with each other. Moreover, it can be questioned to what extent evidence has been used to change the curriculum for teacher training and how evidence-based decisions have been made. As Yildirim (2013) has indicated, teacher education research has a narrow scope in Turkey that creates deficiencies in the theoretical and conceptual dimensions of teacher education. Consequently, a lack of high-quality teacher education research hinders the development of an effective, consistent and research-based teacher training curriculum. In addition problems with the teacher training curriculum, poor working conditions of many qualified teachers and the gap between schools and university-based teacher training may also contribute to difficulties in experienced teachers helping to mentor and train new teachers.

This study was undertaken to examine the ideas about the brain that are held by teachers in Turkey, and particularly those related to learning that are likely to influence their practice in the classroom. In this way, we hope to draw attention to the need for teacher-training and professional development in Turkey to consider inclusion of authentic neuroscience. This may help inoculate teachers against the most common misconceptions, as well as to provide a basis for considering, in scientifically meaningful ways, how neuroscience may inform educational theory, policy and practice.

## **2.Method**

### *Participants*

The research participants were primary and secondary school teachers. In this mixed-methods study, a total of, 278 teachers (124 primary and 154 secondary school teachers), whose ages ranged between 23 and 64 (M=36), participated to the first part of the study. 51.8% of participants were female and 48.2% was male. For the second part of the study, 3 female and 3 male (3 primary and 3 secondary school teachers) participants were randomly selected for in depth interviews.

### *Procedure*

The translation and suitability of the survey was first validated through an electronic pilot study which included 38 participants. The questionnaire was revised according to the feedbacks from pilot study. A total of 14 schools were personally visited for the first part of the study and 2 schools were visited for the interviews. The research was held in two cities of Turkey, Istanbul and Mersin. Informed consent forms, which had detailed information, were gained from participants at the outset of both parts of the study (survey and interviews). The voluntary nature of participation and the right to withdraw were highlighted, along with how the data would be anonymised. The research was presented as a study of what teachers know about the brain and its influence on learning, and what are their misconceptions about the brain.

### *Instruments*

In the first part of the study, a questionnaire was used which was applied in Dekker et al.'s (2012) paper before. This included 32 statements about the brain and its influence on learning. Of these 32 statements, 15 statements were defined and accepted as educational neuromyths by the OECD (2002) such as “we only use 10% of our brains” or “differences in hemispheric dominance can help to explain individual differences amongst learners”. The other 17 statements were general scientific information about the brain such as “learning occurs through modification of the brains’ neural connections” or “production of new connections in the brain can continue into old age”. The participants could answer these statements by choosing “correct”, “incorrect” or “do not know”.

Respondents to the questionnaire were also asked some questions about their background, including age, sex, level of education (either undergraduate, Masters or PhD) and whether they were primary or secondary school teachers. A further 11 questions (using a likert scale) were asked the extent to which they read either scientific or popular scientific articles, attended conferences, in-service training courses or private certificate courses, in order to identify the sources of their information about the brain.

After analysing the data from the questionnaire, a subset of the respondents were chosen for in-depth interview. The first part of the interview was based on the analysis of the questionnaire results and focused on the most popular neuromyths identified in first part of the study, with questions aimed at identifying possible sources for the myths. In the second part of interviews, respondents were asked about their views, perceptions and knowledge of the potential relationship between education and neuroscience.

### 3. Results

Participants answered correctly a mean average of 14.56 (M= 43.92%) statements out of the total 32 (SD= 9.7) statements. Our Turkish teachers held 53.02% (SD=27.80) of the 15 neuromyths (see Table 1). This statistic is lower than the UK (49%) and Netherlands (49%) (Dekker et al., 2012). Teachers’ mean average score on the 17 statements regarding general knowledge about the brain was 56.9% (SD=25.7), somewhat lower than teachers’ average score from UK (M = 67% correct, SD = 13.5) and Netherlands (M = 73% correct, SD = 12.7) (Dekker et al., 2012). Independent t-tests between groups (age, sex, branch, education level) showed no relation between teacher characteristics (such as level of education and sources of information) and general knowledge.

Table-1: 15 Neuromyths about Brain and Brain Functions about Learning with Correct Answers in Brackets and Teachers’ Responses from Turkey, UK and Netherlands by Percentages (C = Correct, I = Incorrect, D.K = Do not Know)

15 Neuromyths in the Questionnaire	Turkey			UK			Netherlands		
	C%	I%	D.K%	C%	I%	D.K%	C%	I%	D.K%
1-Individuals learn better when they receive information in their preferred learning style (e.g.,auditory,visual,kinaesthetic). (Incorrect)	97.1	1.1	1.8	93	4	3	96	3	1
2-Environments that are rich in stimulus improve the brains of pre-school children. (Incorrect)	86.7	6.8	6.5	95	1	4	56	29	15
3-It has been scientifically proven that fatty acid supplements (omega-3 and omega-6) have a positive effect on academic achievement. (Incorrect)	79.1	3.6	17.3	69	12	20	54	16	30

4-Differences in hemispheric dominance (left brain, right brain) can help explain individual differences amongst learners. <i>(Incorrect)</i>	78.8	5.4	15.8	91	3	6	86	4	11
5-Short bouts of co-ordination exercises can improve integration of left and right hemispheric brain function. <i>(Incorrect)</i>	72.3	2.9	24.8	88	0	12	82	5	13
6-There are critical periods in childhood after which certain things can no longer be learned. <i>(Incorrect)</i>	67.3	26.6	6.1	33	53	14	52	38	10
7-Children must acquire their native language before a second language is learned. If they do not do so neither language will be fully acquired. <i>(Incorrect)</i>	58.3	32.4	9.4	7	82	11	36	61	3
8-Exercises that rehearse co-ordination of motor-perception skills can improve literacy skills. <i>(Incorrect)</i>	56.8	15.8	27.3	78	3	19	63	11	27
9-We only use 10% of our brain. <i>(Incorrect)</i>	50.4	31.3	18.3	48	26	26	46	42	12
10-Regular drinking of caffeinated drinks reduces alertness. <i>(Correct)</i>	45.7	34.9	19.4	39	26	35	41	36	23
11-Children are less attentive after consuming sugary drinks and/or snacks. <i>(Incorrect)</i>	43.9	22.3	33.8	57	24	20	55	24	21
12-Extended rehearsal of some mental processes can change the shape and structure of some parts of the brain. <i>(Correct)</i>	39.9	20.9	39.2	69	6	26	58	14	28
13-If pupils do not drink sufficient amounts of water (=6-8 glasses a day) their brains shrink. <i>(Incorrect)</i>	24.8	35.6	39.6	29	46	26	16	49	35
14-Learning problems associated with developmental differences in brain function cannot be remediated by education. <i>(Incorrect)</i>	21.6	64.7	13.7	16	69	15	19	62	19
15-Individual learners show preferences for the mode in which they receive information (e.g., visual, auditory, kinaesthetic). <i>(Correct)</i>	94.6	2.5	2.9	95	4	2	82	13	5

#### 4. Discussion

The analysis of the teacher responses for each neuromyth indicates several neuromyths whose high level of popularity in Turkey echoes those levels seen elsewhere in Europe. These include the myths regarding learning styles, hemispheric dominance and the possibility of using exercises to integrate left-right hemispheric brain function. An extensive review of educational evidence has been unable to support the educational value of identifying learning styles (Coffield, Moseley, Hall, & Ecclestone, 2004). Moreover, although individuals may show preferences for the mode in which they receive information, a psychological investigation of VAK (visual, auditory, kinaesthetic) learning styles tested recall of information presented in all three different styles and concluded that focusing on VAK learning styles was “wasted effort” (Kratzig & Arbuthnott, 2006). Hemispheric dominance (left brain, right brain) is also commonly used as a learning style approach to categorizing learners and as a means to differentiate teaching strategies accordingly. It is true that some tasks can be associated with extra activity that is predominantly in one hemisphere or the other (e.g. language can be considered in most individuals to be left

lateralised). However, no part of the brain is ever normally inactive in the sense that no blood flow is occurring. Furthermore, performance in most everyday tasks, including learning tasks, requires both hemispheres to work together in a sophisticated parallel fashion. The division of people into left-brained and right-brained takes the misunderstanding one stage further and there is no reliable evidence that categorisation based on hemispheric dominance is helpful for teaching and learning. The idea that that co-ordination exercises can help integrate the functions of left and right hemisphere is also popular in some commercial educational programmes, but cannot be supported by reviews of the scientific literature (Arter & Jenkins, 1979; Bochner, 1978; Cohen, 1969; Hammill, Goodman, & Wiederholt, 1974; Kavale & Forness, 1987). 97% of our Turkish teacher considered that individuals learn better when receiving information in their preferred learning style, comparable with the figures of 93% and 96% recorded by Dekker et al. for UK and Dutch teachers. 79% of our Turkish teachers considered differences in hemispheric dominance could help explain individual differences amongst learners, again comparable with figures of 91% and 86% recorded by Dekker et al. for UK and Dutch teachers. In a recent survey in Portugal, less than 20% of teachers succeeded in identifying similar statements about learning styles and hemispheric dominance as myths (Rato, et al., 2013). These myths feature in many commercial programmes and literature claiming a brain-basis and this may help explain the global nature of their popularity. Such ideas appear to have gained the type of international currency warned about by the OECD (OECD, 2007: 124).

Interestingly, however, our data also indicated some potential variation between the prevalence of neuromyth amongst Turkish teachers and those in other countries. The most outstanding differences related to notions around neuroplasticity. For instance, the neuromyth about second language learning ‘*Children must acquire their native language before a second language is learned. If they do not do so neither language will be fully acquired*’ was agreed by 58.3% teachers in Turkey, while it was believed by only 36% teachers in Netherlands and by just 7% of teachers in the UK. This neuromyth could have arisen from people’s attitudes to multilingualism in Turkey. There is no official figure about how many languages spoken, but a research conducted (by KONDA, a research company) in 2006 showed that there are 10 languages spoken in the country. Although the majority speaks Turkish, many different races and languages are represented in the population. There has been controversy regarding whether education should be in Turkish or whether multilingualism should be embraced more widely. In reference to similar arguments in contemporary Germany, Gogolin suggests the idea of the nation-state tends to support monolingualism (majority language) over multilingualism (Lengyel, 2011) such that language becomes closely tied up with ideology (Ayan Ceyhan, 2012). In contrast with the situation in Turkey, over 300 languages are spoken in London and over 40 languages are spoken in London schools by more than 1000 pupils (Von Ahn, Lupton, Greenwood & Wiggins, 2010). This may demonstrate differences in ideology and perceptions around multilingualism underlying responses between Turkish and UK teachers regarding the neuromyth of second language learning.

67% of Turkish teachers (compared with 33% in the UK) also agreed with an over interpretation of the idea of sensitive periods for learning, i.e. that “*There are critical periods in childhood after which certain things can no longer be learned.*” The current notion amongst neuroscientists is that sensitive, rather than critical, periods exist for learning, such that there is no clearly defined window of opportunity for learning outside which progress is impossible, just periods when learning can be more efficiently achieved. However, it is also worth noting that the contexts of learning for which even sensitive periods have been observed are chiefly those involving primary sensory or motor function, rather than the higher types of learning process that are usually the subject of formal education (for further discussion, see Blakemore & Frith (2005, p26-36) and Howard-Jones et al. (2012)). Our Turkish teachers were also less willing to believe in structural neuroplasticity, with only 40% believing “*Extended rehearsal of some mental processes can change the shape and structure of some parts of the brain.*” compared with 58% and 69% for the Netherlands and UK respectively. Yet examples of such plasticity abound, with changes occurring over as little as 3 months (Draganski et al., 2004), and even in relation to informal learning related to social network sites (Kanai, Bahrami, Royle, & Rees, 2012). This is an important issue, since notions of plasticity amongst students have been linked to their theories of knowledge formation, self-concept and academic achievement (Blackwell, Trzesniewski, & Dweck, 2007). Although the brain is not a muscle, it can be enhanced with physical exercise (Dweck, 2007). However, the results demonstrated that there are false beliefs amongst teachers in Turkey about neuroplasticity and these could affect student achievement – since they relate to a more entity-based theory of achievement. This situation might be ameliorating through improved teacher training programmes that address neuroscience. For instance according to Akdag and Haser (2010), in Turkey 49 faculties of

education have early childhood education teacher training programmes; however “most of them lack sufficient instructors, physical condition and materials”.

On the other hand, it can be claimed that the gap between theory and practice, in other words working conditions of teachers also could cause those false beliefs. For instance classrooms are overpopulated compared to all OECD countries (Ozturk, 2011). Teachers struggle with both structural quality problems including space, lighting, safety and materials; and process quality problems including poor parent involvement, poor interaction and poor educational activities (Akdag&Haser, 2010).

In interviews, the seven most popular neuromyths, which attempted to establish the potential sources of misunderstanding, were used for in depth responses. Having established that the participants believed in a particular myth, they were asked where they remembered acquiring the information. For our analysis of the transcripts, we found that they often believed it had arisen through experiences and observations of their own, other people’s or their students’. This echoes the proposal of Johnson and Wellman (1982), who suggest one of the ways we develop the concepts about our brain depends on the observations about our own and others’ cognitive processes. However, many participants also indicated that they could not remember the source of their knowledge. To obtain further insight, we also asked our interviewees “How do you improve yourself with regards to your profession?” Responses to this question usually involved tales of searching the internet and sharing information and experiences with their colleagues. One of them mentioned attending in-service training courses, two of them indicated that they read books, and only one of them mentioned anything about reading scientific articles. In brief, responses suggest only very vague awareness of where their neuromyth had originated from, and quite informal sources for general information about the role of the brain in education and learning. This may also be reflected in the results of our regression analysis involving teacher characteristics and neuromyth, since those who had been able to acquire more general information about the brain were also those more likely to possess neuromyth, suggesting that the sources accessed by the teachers may have encouraged some important misunderstandings.

Enthusiasm for the relevance of neuroscience in education was high, as reported in studies elsewhere. 93.2% of the sample (n=259) were supportive of the idea that neuroscience is relevant to education, 90.3% expressing a desire to have more knowledge on the brain. This result echoes previous results for the UK and US, with Pickering and Howard-Jones (2007) reporting a similar majority of UK teachers rating the role of the brain in the design of educational programmes as very important or important. In a US study, Serpati and Loughan (2012) stated that 94% (n=221) teachers agreed that it is significant to know the knowledge on neurological underpinnings of learning, cognition and behaviour.

### **Conclusions**

- Myths regarding the brain are prevalent amongst teachers in Turkey
- Some of those myths associated with commercial brain-based programmes have high levels of popularity similar to those recorded in other European countries.
- Some myths around neuroplasticity were very popular for our Turkish teachers, with higher levels of popularity than recorded in countries such as the UK and Netherlands.
- There is a clear enthusiasm for brain-related ideas amongst Turkish teachers and a belief in the relevance of neuroscience to education.

### **Recommendation:**

- Given the high levels of neuromyth amongst Turkish teachers, their enthusiasms for including neuroscience in educational thinking, and increasing international developments in the field of neuroscience and education, we recommend greater attention is paid to the brain in initial teacher training and continuing professional development of teachers in Turkey.

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# Primary education in ancient athens and today

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## Abstract

The main purpose of the study is to draw a picture of the education system in terms of the curriculum, the physical condition of schools, the attitudes of the teachers and the perspective of the society towards education in ancient Athens and today. Education was an important issue for free Athenian citizens. Athenian children were taught at home, sometimes under the guidance of a master or a paidagogos, until they began elementary education at approximately seven years of age. At school, the children were taught how to read and write, to count and draw. In this study also the importance of the paidagogos and the family structure in the education of the primary school students is investigated. In doing so, the body of the study is based on a literature review, where available the modern sources has been supported by the ancient sources. In this study is compared the ancient times and today's education system. Many similarities and differences were observed.

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*Keywords:* Education, History of education, Ancient Age, Athens, Ancient Greece, Primary School.

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## Introduction

In ancient Athens, childhood was not seen as a phase with its own value, but as a stage in the process of becoming an adult and therefore able to take on the roles prescribed for them by society. And the emotional bonds between parents and children were as strong in ancient Greece as they are in the modern world.

Greek children had learned primarily by watching the world around them and imitating respected elders. Few people in antiquity knew how to read, and most formal education involved listening and reciting from memory.

But the circumstances of life were different for boys and girls. Boys were seen as being the means of continuing the family, while girls could build connections between families through arranged marriage and they were expected to be good wives and mothers. Actually it is unclear if they attended the same schools or received education in the seclusion of their homes. Most girls were denied any sort of education other than the running of a household. Therefore, often childhood was very short for girls; they could be married as young as 13. In this context mostly, a girl's education would end at the point her brother starts school. Girls tended to be taught domestic skills such as the arts of spinning and weaving cloth at home by their mothers and they would learn finer points of manners and the skills required to run a household from the slave girls. And in addition to that, it is known that parents sometimes had daughters instructed in basic reading and writing skills in case they needed this knowledge to supervise household accounts or to manage temple properties if they became priestesses. (Pomeroy, 2004: 189)

For the sons of wealthier citizens, the options are far more appealing. The little children both girls and boys were getting education at home before start to school. When he is about seven, the boy is removed from his nurse and given to the care of a paedagogos, a selected household slave who accompanies him everywhere as well as the school (he stays with him at school to ensure he pays attention to his lessons and works hard) and is permitted to punish the boy if he behaves badly (Adkins, 197: 275). Each family had one paedagogos no matter how many children there were. For example in Euripides' Medea there is one for Medea's two children and Themistocles' two children. (Herodotos, Historiai, VIII, 75) So the "Paedagogos" had a big importance in pupil's life. Although the

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slave position (Friedell, 2004:187) paedagogos and nanny had an important and respectable place in the house and except to watch over the children they instruct them at a basic level. Also there are plenty of hints in the theatre plays that Paedogogos and nannies would have given advices or scold the children. But at the same time they are full of love and when the children grown up, they would show respect and love them. (Bonnard, 2004: 155)

Greek parents, like those of our own day, often sent their children to school at an early age to keep them out of mischief at home so six or seven appears to have been a common age for attending and fifteen or sixteen for leaving school. (Hobhouse, 1910: 9)

School hours began early in the morning (Thuc. vi. 29; Hobhouse, 1910: 9) but it is uncertain how long they continued; the child was not forced to go out from the home too early. Also schools were not allowed to be open before dawn and after sunset. So classes takes place from about half an hour after sunrise until half an hour before sunset. This makes for a particularly long day in the summer, but a mercifully short one in winter. The reason of that was to prevent sexual abuse of adolesences. In this context it was forbidden for a teacher to stand alone with a student and also it was forbidden for a foreigner to get inside the school building unless being the teacher of the school or a private teacher. (Deighton, 2005: 44)

In this respect, Aiskhines states these; "In the first place, consider the case of the teachers. Although the very livelihood of these men, to whom we necessarily entrust our own children, depends on their good character, while the opposite conduct on their part would mean poverty, yet it is plain that the lawgiver distrusts them; for he expressly prescribes, first, at what time of day the free-born boy is to go to the school-room; next, how many other boys may go there with him, and when he is to go home. He forbids the teacher to open the school-room, or the gymnastic trainer the wrestling school, before sunrise, and he commands them to close the doors before sunset; for he is exceeding suspicious of their being alone with a boy, or in the dark with him. He prescribes what children are to be admitted as, pupils, and their age at admission. He provides for a public official who shall superintend them, and for the oversight of slave-attendants of school-boys. He regulates the festivals of the Muses in the school-rooms, and of Hermes in the wrestling-schools. Finally, he regulates the companionships that the boys may form at school, and their cyclic dances. Dances by specially trained groups of boys, often completive between tribes, were popular features of many of the Greek festivals. Those dances which were arranged for a circular dancing-ground were called "cyclic"." (Aiskhines, Timarkhos'a karşı, 1. 10).

The schools were as small as the houses and approximately ten-twelve students were given training. The archaeological evidence is scanty, especially since a teacher did not necessarily occupy a special building. Classes are held in teachers' private homes. Letters, arithmetic, and geometry could be taught in any room large enough to contain benches for the students (Griffith, 2001: 66). At this point we have to emphasize that; in elementary education the children would sit on a stool or a bank, but if they are reading a text by heart, or attending a flute lessons, they would spend large part of the time by standing.

In Athens the three main branches of education were writing, music and gymnastics (Freeman, 1996: 221), although it is uncertain if they were taught in one or more buildings. Reading, writing, arithmetic and literature were taught by a *grammatistes* (teacher of letters); literature involved reciting and memorizing passages from poets, especially Homer (Marrou, 1956: 42)- any child who wished to take place one day at the banquets as an educated person had to certain amount of Homer's poetry-, for moral training . Music and lyric poetry were taught by a *kitharistes* (lyre player), and physical education by a *paidotribes* (trainer.) Aristoteles also counts the drawing as a traditional education subject. Since music is such an important part of life in Greece, boys are also taught to sing and play the lyre and flute. Parents of the upper classes, however, paid for their sons to be instructed in what was called *mousike*, a subject that included the memorization of poetry. Since ancient poems were sung, *mousike* also involved learning to play the lyre.

Writing was done on tablets covered with wax with a pointed stylus (a pencil which has two edges-one to write and one to erase), and was taught by means of copies; great quickness in writing does not seem to have been generally aimed at, as copying work was performed by slaves. A skilled student would use papyrus as a writing material but it was really expensive material. In Greek world as a scratch paper students often used broken vessels, which could be picked up anywhere outside where people threw them away. (Cribiore, 2001: 27)

At the beginning, children were taught letters and then syllables, followed by words and sentences (Athenaeus, X. 453; Plat. Protag. 326). When the pupil had attained a very moderate proficiency in reading and writing he was introduced to the works of the great poets of his country, and was taught the "praises of famous men", and especially of the Homeric heroes. Homer was read aloud both by the teacher and the pupil, and great stress was laid upon good reading; large portions of the poems committed to memory, and we hear of instance of men knowing them by heart all through. (Ksen. Sympos. iii.5)

The books were in the form of long scrolls so, while reading, it must be done to wrap and open at the same time. This feature makes it difficult to control to backwards but however, Greek people's memory was trained. The children were memorizing the works of Homer regularly (27.000 string).

Turning from the literary to the scientific side we do not find much to record. Counting was taught either by the fingers or on the abacus, by means of pebbles. (Hobhouse, 1910: 11) Ruler, compass and miter also were used to calculate in geometry.

As we mentioned boys had a luckier position than girls in education, but it does not mean all the boys were sent to school in Greek world. The problem was not simply that poverty usually compelled children to stay home and work on the farm or ateliers (Deighton, 2005: 48). The main fact was that, with the exception of Sparta, Greek states did not provide public schooling. Accordingly, the age for beginning school life and its duration, depended largely on the incomes of the parents. (Pseudo Plato, Axiochus 366).

Mostly the person who has the responsibility to equip young minds with valuable information were worthless in the eyes of society and were poorly paid. Fees were paid every month by the parents of their students (Griffith, 2001: 67). Their amount is unknown, but evidently small in the case of the ordinary school; nevertheless, payment not unfrequently fell into arrears or was vaded (Hobhouse, 1910: 9; Demosth. in aphob. i. 828; theophr. char. 22). Most teachers were slaves, but were sometimes freedmen, with the head teacher usually. (Adkins, 1997: 275)

Furthermore, there were some special holidays in Athens daily life. For instance Holiday of Muses was a special event that pupils were carrying some gifts to school. (Theoph., Charac., XXII-XXVI) And during the other religious festivals schools were closed. In this context an economizing parent did not send his children to school at all during the month of Anthesterion, as it contained so many holidays that he did not think it worth while pay the fees of teachers. (Theoph., Charac., XXX.14) But in the same paragraph, we learn these payments should be made on time, even though the child couldnt go to school due to illness.

In the 5th century BC no organized system of higher education existed. Sons of wealthier parents usually continued their children's education to the age of 18 with specialist teachers in medicine, law, rhetoric or the increasingly popular courses given by the sophists. But the sophistes were far luckier in salary than the teachers who has to teach to younger pupils. And there were some traditions as to give some money to Sophistes in some holiays such as holiday of wine (Athenaios, VII. 437).

In the literature we witness that some teachers are quite cruel in their fines. For instance in a poem of Phanios, we see the tools of beating; such as sticks, slippers, whips. But we don't find any objections raised to it by Greek writers. What we know of Athenian schools in the fifth century B.C.E. suggests that a stress on discipline and punishment tended to outweigh the teaching of skills. This bias was certainly due in part to the need for soldiers, but it may also reflect Athenian understanding that, for their democracy to survive, young men had to learn to temper their competitive drives. (Nortwick, 2008: 47).

### **Aim of the Research**

The main purpose of the study is to draw a picture of the education system in terms of the curriculum, the physical condition of schools, the attitudes of the teachers and the perspective of the society towards education in ancient Athens and today. In this study is compared the ancient times and today's education system.

### **Methods of the Research**

In this study, literature review method has been used.

## Results

Education in general was considered a leisure pursuit only available to the privileged few but on the other hand played a significant role in ancient Greek. In their early years, Athenian children were taught at home, sometimes under the guidance of a master or pedagogue. They were taught basic morals, until they began elementary education at approximately seven years of age. In literacy instructions commenced with the alphabet and learning to read, children being first taught to recognize separate letters, and then proceeding to their combinations in syllables. When children were ready to begin reading whole works, they would often be given poetry to memorize. An elementary education was the only education available to most people, especially the poor and the rest of education in general was considered a leisure pursuit only available to the privileged few. Children belonging to the upper social classes would receive formal elementary education since their parents would be able to afford to hire a tutor or to send them to a public school. For most free, non-elite Greeks, the main occupation for which they had to be trained was that of their parent. In addition to not having the money to pay for a formal education, members of the lower class most likely would have required their children's services at home just to be able to afford food and other basic necessities.

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# Primary school 5th grade science and technology lesson book's investigation of multiple intelligence theory

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## Abstract

This study examines the suitability of the Science and Technology course textbooks of grade 5th for multiple intelligence theory, which was prepared by Ministry of National Education and that were read in 5th grade of Turkey's primary schools. The research is an objective study which was planned and conducted to analyze the content of the source of Multiple Intelligence Theory. Consequently; the book was prepared by taking account of Multiple Intelligence Theory. It's suitable for verbal, logical and visual intelligence and isn't sufficient according to interpersonal, intrapersonal, bodily kinesthetic and naturalistic intelligence. But no importance was given to musical intelligence. The subject is partially suitable for Multiple Intelligence when paid attention. But it should be developed definitely.

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*Keywords:* Science and Technology, Lesson book, Multiple Intelligence Theory.

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## 1.Introduction

Learning to be effective, according to the individual's own characteristics in terms of learning depends on the availability. Every individual has unique characteristics. Teachers should take into account the individual characteristics of students in learning and teaching environment should be organized according to these features (Ülgen, 1995) So, how is this possible? What separates people from one another? To be able to categorize the learning style of people possible? In line with these questions is the most influential work of Howard Gardner Multiple Intelligence Theory in 1983, as was revealed. Dr.. Howard Gardner, accepted all over the world today in the theory of multiple intelligences people have at least one of these eight types of intelligence that is to say. This shows us that the most important component in the educational process of training students will have eight different intelligences shows. Education of students with the most important elements if we want to get higher education level students with the basic information source textbooks will need to be prepared according to the Multiple Intelligences Theory.

## 2.Method

In this study, Science and Technology Book prepared by National Education Ministry that is chosen among four book, there of which belong to special publishing house and one is published by National Education Ministry and decided to be studied for 5 years starting from 2005- 2006 is analyzed in terms of Multiple Intelligence Theory. It is a qualitative research and it aims to analyze the content of the book based on the theoretical framework of Multiple Intelligence Theory.

The main objective of the study is "Is the Science and Technology book for 5th grades prepared suitable for Multiple Intelligence Theory?" It is researched in terms of three different views.

1. Is the Science and Technology book for 5th grades suitable for the students with different types of intelligence? Which intelligence types are concentrated more?
2. Which products of multiple intelligence take place in Science and Technology book, and how?

### 3. In parts of units in the book, which products of multiple intelligence take place?

Within the framework of these purposes, the content of the book is analyzed in terms of the basics of intelligence types stated below.

#### 2.1. Multiple Intelligence Theory

##### *Verbal- Linguistic Intelligence (L.I.)*

It is the ability to produce and use the language including the complicated capabilities, such as expressing the ideas with words, reviewing the complicated explanations, apprehending the meanings and the orders of the words, reading a poem, telling a story, sense of humor, grammar knowledge, figurative expression, simulation, symbolic thinking and writing (Vural 2005).

##### 2.1.2. *Logical- Mathematical Intelligence (L.M.I.)*

It expresses the ability to establish cause and effect relationship, to prove the working principles of things, and to play with numbers. People who are strong in this intelligence are good at studying on abstract symbols and establishing new connections. They learn best by classifying, sequencing and abstracting (Özden, 2005).

##### 2.1.3. *Visual – Spatial Intelligence (V.I.)*

People with visual spatial intelligence think using images and shapes. They can read maps, diagrams, and tables. They like art and project activities and visual presentations. They understand better if a text consists of pictures. They enjoy designing, drawing and visuality. They learn best through art, videos, movies, puzzles and maps (Gündeşli, 2006).

##### 2.1.4. *Musical-Rhythmic Intelligence (M.I.)*

People with this intelligence play musical instruments, sing in a choir. While studying, they thump out. They learn songs easily. They like singing songs and listening to music. They learn best through music, cassette players and rhythm (Gündeşli, 2006).

##### 2.1.5. *Interpersonal-Social Intelligence (S.I.)*

People who are strong in interpersonal intelligence like speaking and listening. They like directing and organizing. They need to be with friends and they learn best through interaction, group work and presentations. They enjoy being with peers or friends of different ages (Gündeşli, 2006).

##### 2.1.6. *Intrapersonal Intelligence (I.I.)*

They like studying individually. While learning, they need self assessment and personal awareness. They reflect up every events and experience of them (Gündeşli, 2006).

##### 2.1.7. *Bodily- Kinesthetic Intelligence (B.I)*

People with this intelligence learn through movement. They like listening, speaking, running, touching and moving. They need drama, role play and acting for learning. They learn through interaction and they remember what they do rather than what they are told (Gündeşli, 2006).

##### 2.1.8. *Naturalistic Intelligence (N.I.)*

They like doing researches. They are interested in different species of living beings and animals. They enjoy

reading magazines about nature and travelling (Gündeşli, 2006).

### 3. Findings

When we analyze the book both in terms of units and as a whole, we see that most of the activities are suitable for verbal linguistic, logical mathematical and visual spatial intelligence. Bodily and naturalist intelligences are less included. Intrapersonal and interpersonal intelligences are included the least. Musical intelligence is included only in one unit and there is no other activity suitable for this intelligence to activate the students having musical sense. The introductions to all units are designed according to visual intelligence; the unit named “Electricity in Our Life” is introduced using the bases of both visual and intrapersonal intelligence. The unit about the world of all living beings is designed using naturalist intelligence. In the parts of presentation of the subjects, generally all the intelligence types take place but in some parts, some intelligence types are included less and some others are ignored. The information of which intelligence types are included and to what extent they are included is given in the Findings part. The evaluation parts of all the seven units are suitable for verbal linguistic and logical mathematical intelligence. In the three units the evaluation includes visual spatial activities.

Table 1. Findings Separated by Units

	L.I.	L.M.I.	V.I.	B.I.	S.I.	I.I.	N.I.	M.I.	Total
1. Unit	37	12	17	2	2	8	3		81
2. Unit	38	40	8	19	12		5		122
3. Unit	14	16	7	7	4	4			52
4. Unit	11	11	8	5	2				37
5. Unit	10	10	16	5	4	7	4		56
6. Unit	27	18	23	10	3	1	29		111
7. Unit	23	11	21	9	2	2	1	7	76
<b>Total</b>	160	118	100	57	29	22	42	7	535

Table 2. Findings Categorized by Intelligences

Multiple Intelligences	Findings
Verbal- Linguistic Intelligence	160
Logical- Mathematical Intelligence	118
Visual – Spatial Intelligence	100
Bodily- Kinesthetic Intelligence	57
Interpersonal-Social Intelligence	29
Intrapersonal Intelligence	22

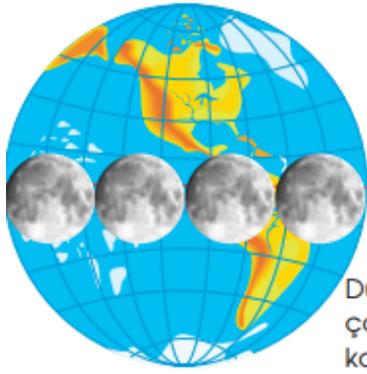
Naturalistic Intelligence	42
Musical-Rhythmic Intelligence	7

#### 4. Conclusion And Discussion

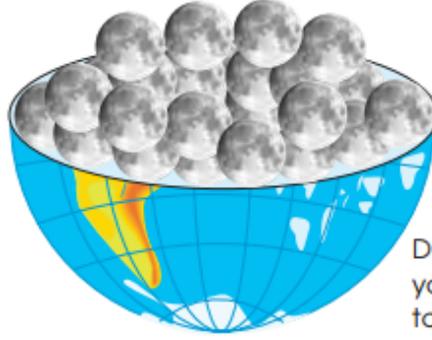
As a result, verbal linguistic intelligence is the most intensively included intelligence type with 160 different findings in the book. This may lead to ignore the other intelligences and can be an obstacle to learning better. We see that in almost no part of the book, musical rhythmic intelligence is included. It means that there is negligence. This result is in accordance with Ozbay's study (2008, p93) in which the science course books and workbooks for 6<sup>th</sup> and 7<sup>th</sup> grades are analyzed. Ozbay confirmed with this study that there were only three products of musical intelligences in these four books analyzed in terms of multiple intelligence theory. There are 118 findings of logical mathematical intelligence and it means that it is the second intelligence type included intensively. When we take the ages of the students into the account, we see that these students are at the concrete operational stage and they newly pass formal operational stage of Piaget's cognitive development theory. For this reason logical mathematical intelligence shouldn't have been paid so much attention because these students can't develop their metacognition abilities. Ozbay suggests that the number of the activities using logical mathematical intelligence should be reduced and there should be alternative activities. There are 100 findings of visual spatial intelligence. When we consider the 5<sup>th</sup> grade students' development stage, it is a suitable approach to use visual intelligence. And these findings show that it is aimed to be suitable for multiple intelligence theory. There are 57 finding for bodily kinesthetic intelligence and 42 findings for naturalist intelligence. It should be at least at the level of other intelligences. Ozbay (2008, p93) suggests that the number of naturalist intelligence activities should be more because of the nature of science lesson. The number of findings for interpersonal and intrapersonal intelligence is fewer than the other types. To develop the cooperation between the students there should be interpersonal activities. Consequently the book is prepared according to multiple intelligence theory. It is suitable for visual, bodily and naturalist intelligence but insufficient for social and verbal intelligence. Intrapersonal and logical intelligence is included in the book more than adequate. But there is no activity for musical intelligence. We can say that the book is suitable partially for multiple intelligence theory. But it should be definitely developed.

#### 5. Suggestions

Subjects should be prepared suitably for the intelligence level of the students. There should definitely be activities for musical intelligence. Like visual intelligence, other types of intelligences should be given importance. It will be easier for students to learn if logical mathematical intelligence activities take fewer places. If introduction parts of the units include other intelligence products than visual intelligence, it will be more gripping for students with different intelligence types. It will be more gripping and educating when all intelligence types take place in evaluation parts of the book.



Dünya ve Ay'ın  
çaplarının  
karşılaştırması



Dünya'nın içine  
yaklaşık olarak 64  
tane Ay sığabilir.

Fig. 1. An Example of Visual – Spatial Intelligence Product

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# Problems and solution offers related to the vocational and technical orientation in Turkey

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## Abstract

When we look at the process during which the need for manpower in the sectors related to production, decreased and a system based on automation, was implemented along with the use of technology in the production; the importance of the need of qualified manpower, stands in front of us as a problem that must be solved primarily. The most important step for overcoming these problems, is to make an educational planning and to put it into practice, in which issues such as the interests and requests of the individual in Vocational orientation, environmental conditions, and the state's economic condition.

In today's economic conditions and labor markets that have gradually become more competitive, individuals have to change their jobs or even occupations at will or if required throughout their life, and to renew and improve their skills continuously. Therefore, the programs implemented in the institutions that provide Vocational and technical training, should bring extensive and transferable skills to the students as well as occupation-specific skills.

A sense of education in the level and equipment that is able to meet the expectations of manufacturing sector, will be a very important step for the solution of the problems faced in Vocational and technical education orientation in our country.

In this study, solution offers concerning the Vocational and Technical Education Orientation, have been suggested according to the present condition and the problems faced.

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*Keywords:* Vocational orientation, qualified manpower, technological development;

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## 1. Introduction

Training is a systematic process that provides recoveries and developments in the thoughts, behaviors and attitudes of people on the basis of the objectives that have been already determined (Barutçugil, 2002). Training has been examined in the form of preparation effectively within the framework of social needs or human resources of the workforce in the industrialized countries. Teaching can be considered as arrangement of information and environment in order to realize the learning. Environment means not only place of education but also the transfer of knowledge and methods, tools; and materials that are used in guiding the studying of students (Gelişli, 2007).

In general, the most important natural resource that affects the country's development is manpower. Providing high-level production is the basis for the developments by using manpower and natural resources. This is only possible with training. It depends on the manpower to use the natural resources ideally. The concept of vocational training emerges at this point. In general, vocational and technical training that direct to meet the intermediate member's needs exhibit a dynamic structure in order to response to the needs of the industry and production methods and technological knowledge (Ercin, 2004).

The purpose of vocational and technical training is to provide the individual to enter a job in the business and to gain basic behaviors in order to improve (Sezgin, 2000). The concept of having a profession through training and performing the profession in the best way affects the lives of people and society. It is clear that the vocational and technical training has an important role in the lives of people and society (Kazu and Demirli, 2004). The vocational training should bring people in the skills such as problem solving, creativity in order to catch the modern technology

and give the directions. The success of vocational training that prepares people for life and business depends on the effectiveness of both industry and school cooperation. Modern technological changes and developments are reflected to the vocational training programs and so, training can be provided according to the needs of the age and business life (Güzel, Özus and Harmankaya 2010). It is required to regulate the context with academic standards and technical knowledge related to the subject should be prepared in the expertise area for the next training and vocational life (Donnelly, 2008). If training system cannot be appropriate for the developments that happen in the industry the disconnection between two systems can occur and the skills can be invalid in the industry (Ulusoy, 1993).

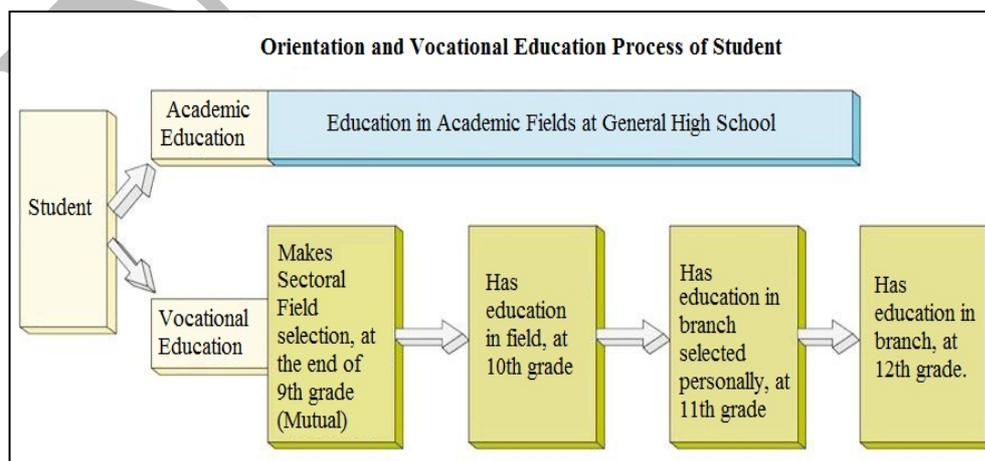
The need for manpower in the production sector decreases because of the technology but the need for people who have enough skills to use them in the technology increases. The individual who is directed to the profession is an important prerequisite for raising the level of social and economic welfare by taking into consideration the high profit with less people. To have an economic level that compete with the market conditions and the first investment costs depends on having qualified manpower.

There are serious problems in order to keep pace with evolving technology and it shows that today's conditions are far from being met the expectations. The most important condition is to have qualified people in order to provide adequate yield in both production and services sectors. The time, labor and big investments are important for educating the people in order to have the appropriate skills and knowledge.

## 2. The Current Case in Vocational and Technical Training System

Vocational and technical training indeed is an expensive investment. The cost changes between 2 or 10 times per student when it is compared with academic training. However, the students in vocational and technical training system cannot benefit from this system sufficiently.

According to the data of Ministry of Education, 1,689,093 students have been educated with 124.260 teachers in the schools that have 62 disciplines and 226 branches based on General Directorate of Vocational and Technical Training. 100 students are educated in vocational and technical training high school in Turkey but 60 of them graduate. 5 % of the graduating students are able to attend a 4-year higher education institution. Although transition to two-year vocational schools is without examination, 40 % of graduates are able to attend vocational high schools to get training.



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Figure 1 shows the stages of training system in Turkey. There are two pillars of the system within the formal education the first pillar, students are in formal education after 4 years of 4+4 application and after they take TEOG exam and they prefer vocational or academic training according to their scores.

After this stage, the student is educated in both programs in 9th grade and he or she has and right to transmit according to his or her general high school score. (Strategy Development Authority of Ministry of Education 2013)

### **3. Problems in Vocational and Technical Orientation**

#### *3.1. Problems that Result from the Structure of Formal Vocational and Technical Training*

1. The expectation of enterprises are not met by vocational and technical training,
2. The governance support is low for the trainers in the enterprises,
3. The lack of decision making between employer and authorities,
4. The lack of transmission of basic academic knowledge,
5. The training process in vocational and technical training is inadequate,
6. Not receiving the employer's opinions for the preparation of the training program,
7. Ignoring the interest, common and skills of the individuals for vocational and technical orientation,
8. Not meeting the expectations of students according to the lesson context,
9. Not applying the technological based training in vocational and technical training,
10. Not meeting the expectations of society in the information age of vocational and technical training,
11. The ease of transmission between high schools and vocational and technical training schools,
12. The evaluation of pass grading system although the training is conducted by modular system,
13. Not applying the quality system for the practice in vocational and technical training institutions,
14. The lack of directing to the formal education in the first stage of the basic education,

##### *3.1.1 Solution proposals*

1. Providing vocational and technical training for the expectations of enterprises,
2. The increasing of the education quality in primary level,
3. Taking the students with an exam for vocational and technical training schools,
4. The increasing the applied course time,
5. The updating the training programs parallel with technological development,
6. Providing vocational training from 9th grade,
7. The directing the students who doesn't have skills for formal education to the informal education institutions after 4 years,
8. The preparation of physical structures appropriate for modular system,
9. The directing to the vocational and technical orientation with helping of experts, who have adequate skills,
10. The modernization of the skill education according to the enterprise in 12th grade,
11. The determination of the disciplines by considering the local needs,

#### *3.2 Problems that Result From the Point of View of the Society on the Vocational and Technical Training*

1. Lack of introduction
2. Interruption in the social communication because of the problems in the training program,
3. The tendency of student's profile for the social conflict,
4. The problems that individual meets in order to express themselves,
5. The negative effects of social view on the students,
6. The determination of the students according to the environment conditions,
7. The thought related to the graduating students who don't have adequate knowledge and skills,

### *3.2.1 Solution Proposals*

1. The written and visual information supported by Ministry of Education and Ministry of Labor and Social Security,
2. The regulation for the trips supported by municipalities
4. The information related to the autobiography of the students that are graduated,
5. The preparation of employment conditions according to the vocational training system,
6. The increasing of wage policy of students,

### *3.3 Problems That Result From the Student Structure*

1. The weakness of student profile,
2. The lack of counseling that results from the basic education,
3. Domestic pressure in the education choose of the individual,
4. Lack of the self-confidence,
5. The negative view of social structure on blue-collar workers,
6. The low socio-economic family structure,
7. The low level of students' success coming from basic education,

#### *3.3.1 Solution Proposals*

1. The new exam system to prevent the students with low profile for vocational schools,
2. Providing for having self- confidence with technological development,
3. Cultural studies in order to remove the negatives that result from the low level of family's economic and cultural structure,

### *3.4 Problems Result From Technical Teacher Profile*

1. The lack of institution that educates the teachers,
2. The lack of skills that the teacher must have,
3. Not following the evolving technology by the teachers,
4. The lack of vocational and technical teacher training in Turkey,
5. Inappropriate training program with teachers' expectations,
6. The difference between the expectations of teachers and students,
7. The low expectations of teachers for the attending to the in-service training,
8. Lack of the number of teachers in the disciplines,
9. The negative opinions of teachers for the students,
10. The failure of the teacher to educate the student,
11. Lack of confidence of the teacher for the management,

#### *3.4.1 Solution Proposals*

1. Reopening the programs for the teacher,
2. The skills and knowledge of the teacher appropriate for technological developments,
3. Providing the teacher for comfortable and reliable environment,
4. The application of wages policy depending on the performance,
5. The forming of training system that consists of expert teachers,

6. The application of written and applied exams for evaluating the job interviews of the teachers,
7. The application of an exam for the teacher in every 5 years to evaluate the renewing criteria,

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In this study, who helped us faculty of education all our masters thank you.

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# Problems of mining education at Turkish universities: past, present and future

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## Abstract

In this paper, the history of modern mining engineering education at Turkish universities from 1924 until today is briefly explained. So far, the number of departments of mining engineering adds up to 28 and second program is provided by 12, and the number of programs of mining engineering in total have been 40. Consequently, the problems these departments are facing in mining engineering education are mentioned, as well as some researches carried out and work opportunities for mining engineers.

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*Keywords:* Education; Mining Engineering; Mining Education; Turkey

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## 1. Introduction

As the application of technology expands throughout the world, the demand for qualified engineers in all fields is increasing rapidly. With the growth of the global economy, the demand for mobility of engineers has also increased. Information on engineering programs at training institutions throughout the world is important to students and universities as well as to employers and the various engineering societies and licensing and accreditation bodies.

Mining Engineering includes elements of geology, chemistry and physics as well as civil, mechanical and electrical engineering and the social and environmental implications of mineral development. Students apply scientific theory and modern technology to the development, evaluation and recovery of mineral resources from the earth as well as to areas such as the construction of roads, tunnels, underground waste disposal chambers, etc. Subjects in the mining curriculum include *inter alia* principles and techniques of mineral exploration, mining methods, mine planning, mine design, surface and underground operations, rock mechanics, rock fragmentation, materials handling, safety, environmental impact analysis, mineral or coal processing, mine surveying, mine valuation and mine rehabilitation (McDivitt, 2002).

On the other hand, mining engineering education has been in trouble for almost thirty years. Many historical mining schools have terminated their minerals programs. As seen in Figure 1, the number of U.S. programs in the field dropped from 25 to 15 between the years 1982 and 2007 (McCarter, 2007). Today, the numbers of the active departments are continuing 7 of them. Over the past decade the number of mining engineering programs in the UK has fallen from 10 to 2, Leeds and Camborne School of Mines, so far survive. The number of programs that offer a degree still continues to drop. A decline in the numbers of students studying mining engineering over the last few years has lead to the closure of many university courses and departments in all first world countries around the world.

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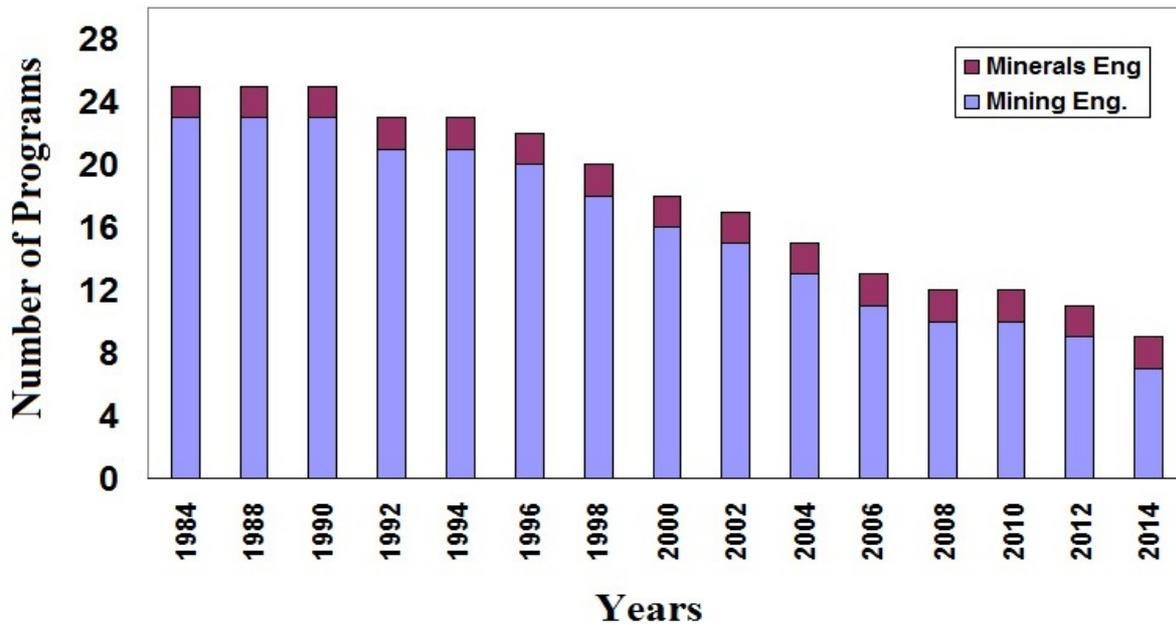


Figure 1. Mining and minerals engineering department in past 30 years in USA

The situation varies from country to country, but the trend is clear. In most industrial countries where mining is no longer a dominant industry (England and Japan would be examples), mining engineering as a discrete field of study is in decline. In many cases it has been absorbed back into general engineering or become an option in civil engineering or part of a resources or environmental engineering program. In Japan, where 20 years ago there were mining engineering departments at many of the major universities, mining is now taught in a series of courses in resource engineering or environmental engineering departments. This trend is also apparent in Europe and America, where mining schools, once relatively common, are now a rarity, or exist in name only as with some of the French Ecoles des Mines (McDivitt, 2002).

Consider how this trend is evidenced at some of the famous American mining schools. At the Henry Krumb School of Mines at Columbia University, the first to be established in America, mining engineering is now taught under the title of Earth and Environmental Engineering with a very limited enrolment. At the Pennsylvania State University, mining engineering is still taught, but in the Department of Energy and Geo-Environmental Engineering. At Michigan Tech the Department of Mining and Materials Processing Engineering is in the process of being dismantled, with mining going to geology and materials processing to chemical engineering (McDivitt, 2002).

Mining engineering education in Europe is in a critical situation. Students enrolments keep decreasing and established study programs are closed. Financial funds to faculties and institutes, particularly to mining, have been cut down in the latest years.

The study of mining engineering in Turkey, like most other engineering studies, such as metallurgy, geology and geophysics engineering is in crisis. The interest of young generations is directed towards tourism, history, economy and banking, which can easily be understood when we know that scientific and technological achievements at our parts are almost daily present in the media. Mining, geology and or geophysics engineering are very seldom the subject of discourse and if so, in the con-text of various economic, social, ecological or other problems. Such situation is not a specific one for our country. Degree granting educational institutions in many European countries, in the USA and Canada are confronted with similar problems, but due to the relatively complex situation in Turkey that has been actual for more than 10 years; the problem is even more difficult. The study of mining engineering is in some way specific for its problems, not only because of the bad economic situation but also because of the public standpoint that mining does not exist in Turkey anymore and that a great part of ecological problems is to be imputed to mining. The worldwide attitude towards mining is not better either. It is regarded as being useless, damaging nature and causing ecological problems.

The mining education in Turkey is generally based on a traditional, passive, lecture-based learning. According to the arrangement of core courses in mining engineering programs the 1<sup>st</sup> and 2<sup>nd</sup> years are largely identical. As for 3<sup>rd</sup> and 4<sup>th</sup> year contents, although they are quite similar in general, there are still some diversities between them. The differences between the programs resulted in serious deviations from the basic philosophy of the mining engineering. Such differences may also create problems in the national or international accreditation evaluations. The integration of new additional courses to programs, without monitoring their overall effect thoroughly, resulted in excessive loads on students (Özbayoğlu, 2011). For example, the curriculum of Hacettepe University has been focused on mineral processing since its beginning; METU mining engineering curriculum has been mainly interested in rock mechanics in certain periods of time. In İTÜ, mineral processing was separated from mining engineering department in 2007 and the new department was established with the name of mineral processing. In 2003, Dokuz Eylül University revised their undergraduate mining engineering curriculum with a radical change which was based on problem based student learning, to form modules to increase the learning and teaching effectiveness. This interactive system had continued up to 2009, and then a return to the passive system was experienced (Onargan et al., 2004).

## 2. An Overview on Mining Engineering Education in Turkey

According to developments which have taken place since 1924 in the education of mining engineering, four periods can be distinguished. The first period covers the years between 1924 and 1953. This is accepted as the ‘foundation’ period of the education of modern mining engineering in Turkey. The second period covers up to the years between 1953 and 1982, the Department of Mining Engineering at Istanbul Technical University (İTÜ) was the only establishment active in this field. After, the Department of Mining Engineering at METU (Ankara) in 1960, Dokuz Eylül University (İzmir) in 1971 and Osmangazi University (Eskişehir) in 1975 were opened and started offering education in the same year. Within this second period, theoretical lectures were given in these five departments, as well as collections of mining data related to Turkey. Both national and foreign (European) experts lectured during these years and carried out substantial research in mining education, in parallel with fields of expertise. Addition, within this second period starts with the Scientific and Technical Mining Congress of Turkey in 1969 and with the Turkish Coal Congress of Turkey in 1978 with contributions of the Turkish Mining Engineering Society, the foundation in 1958.

The third period covers 20 years (from 1982 to 2002), and can be called as the period of ‘development’ of the science of mining engineering. This period starts with the Mineral Processing Symposium in 1982 and the foundation of the Turkish Mineral Processing Society in coordination with the Universities. Addition, third period starts also the National Rock Mechanic Symposium in 1986 with contribution of the Turkish National Rock Mechanic Society (1969). Towards the end of the same period, the number of departments of mining engineering increased to seventeen. A department of mining engineering was opened at Karaelmas Bülent Ecevit Univ. (Zonguldak), Cumhuriyet Univ. (Sivas), Süleyman Demirel Univ. (Isparta), Karadeniz Technical Univ. (Trabzon), Çukurova Univ. (Adana), İstanbul Univ. (İstanbul), İnönü Univ. (Malatya), Dicle Univ. (Diyarbakır), Selçuk Univ. (Konya) and Dumlupınar Univ. (Kütahya) belonging to Engineering Faculties. Besides, second program is provided by eleven departments. Program of Mining engineering in Turkey was reached 28 in total. Turkish mining engineers of the period followed the developments in Western nations, participated in international meetings and wrote articles and textbooks in Turkish. Research in the mining of Turkey increased rapidly.

The last and fourth period is from 2002 until today. With the establishment of new departments, the number of mining engineering departments in the country increased. By the year 2002, there were 11 departments of mining engineering and second program was by one program in mining. The distribution of these departments is shown in Table 1. Consequently, this has meant fewer employment opportunities for graduates of departments of mining engineering. The estimated demand for mining engineers is around 800 graduates per year in Turkey surveyed.

In this period, Departments of Mining Engineering provide academic education at undergraduate and graduate levels, including doctorates. Studies are based on theoretical and on field research.

Table 1. The numbers of quota and preference years for 2013 year and Turkish universities’ established and start years

No	City	University Name	Establish	Start	Closed	Quota	Preference	Exp. Academic
----	------	-----------------	-----------	-------	--------	-------	------------	---------------

			Year	Year	Year	2013	2013	Staff 2013
First Period								
1	Zonguldak	Zonguldak Mining School	1925	1925	1931	--	--	---
Second Period								
2	İstanbul	İstanbul Technical University*	1953	1953		41	41	31
3	Ankara	Middle East Technical University (METU)*	1960	1960		62	62	11
4	Ankara	Hacettepe University*	1969	1969		72	72	17
5	İzmir	Dokuz Eylül University	1971	1975		82	82	
6	İzmir	Dokuz Eylül University (2 <sup>nd</sup> Educ.)		1993		82	82	28
7	Eskisehir	Osmangazi University	1975			72	72	
8	Eskisehir	Osmangazi University (2 <sup>nd</sup> Educ.)		1997		72	35	25
Third Period								
9	Zonguldak	Karaelmas Bülent Ecevit University	1982	1982		41	10	20
10	Sivas	Cumhuriyet University	1986	1987		52	8	
11	Sivas	Cumhuriyet University (2 <sup>nd</sup> Educ.)		1997	2011	----	---	14
12	Isparta	Süleyman Demirel University	1987	1987		41	8	
13	Isparta	Süleyman Demirel University (2 <sup>nd</sup> Educ.)		1997	2012	----	----	12
14	Trabzon	Karadeniz Technical University	1990	1991		52	52	
15	Trabzon	Karadeniz Technical University (2 <sup>nd</sup> Educ.)		1997	2012	----	----	14
16	Adana	Çukurova University	1991	1991		52	22	
17	Adana	Çukurova University (2 <sup>nd</sup> Educ.)		1997	2012	----	----	9
18	İstanbul	İstanbul University	1991	1991		62	62	
19	İstanbul	İstanbul University (2 <sup>nd</sup> Educ.)		1993	1998	----	----	15
20	Malatya	İnönü University	1992	1992		41	15	
21	Malatya	İnönü University (2 <sup>nd</sup> Educ.)		1997	2011	----	----	9
22	Diyarbakır	Dicle University	1992	1992		52	21	
23	Diyarbakır	Dicle University (2 <sup>nd</sup> Educ.)		1997	2009	----	----	12
24	Konya	Selçuk University	1992	1992		62	28	
25	Konya	Selçuk University (2 <sup>nd</sup> Educ.)		1997		62	1	15
26	Aksaray	Aksaray University	1992	2011	2013	41	0	5
27	Kütahya	Dumlupınar University	1993	1993		52	15	
28	Kütahya	Dumlupınar University (2 <sup>nd</sup> Educ.)		1997		41	2	17
Forth Period								
29	Afyon	Afyon Kocatepe University	2002	2003		41	8	11
30	Van	Van 100. Yıl University	2003	2012		21	1	4
31	Niğde	Niğde University	2005	2008		21	2	5
32	Niğde	Niğde University (2 <sup>nd</sup> Educ.)		2010	2012	---	----	
33	Erzurum	Erzurum Technical University	2008	----	2013	40	0	3
34	Gümüşhane	Gümüşhane University	2009	----		----	----	3
35	Muğla	Muğla Sıtkı Koçman University*	2009	2010		41	20	5
36	Uşak	Uşak University	2011	2012		21	5	4
37	Çanakkale	Çanakkale 18 Mart University	2012	2012		41	13	3
38	Şırnak	Şırnak University	2012	2013		41	4	3
39	Konya	Necmettin Erbakan University	2012	----		----	---	1
40	Adana	Adana Science & Technology University*	2013	2014		----	----	4

\* Departments of providing education in English

The Turkish Scientific and Technical Mining Congress and the Turkish Coal Congress were organised each two year. The Turkish Mineral Engineering Society published one journal namely the *Journal of Ore Dressing*, in foreign languages (English). Another journal was also published by the *Bulletin of Rock Mechanic*, in Turkish, with contribution of the Turkish National Rock Mechanic Society with an emphasis on current research.

Mining engineering education has been in trouble for almost five year. In the same to the world trend, especially second programs of mining engineering programs in Turkey continue to decreases in number considerably fast and there is a decreased supply of graduates whose number is same down the demand. The reason of this situation, young people are not willing to choose the field as it lost its dignity. The number of active mining engineering programs in the field dropped from 35 to 26 between the years 2009 and 2013. The number of programs that offer a degree still continues to drop (Table 2).

Table 2. The numbers of preference at between 2009-2013 years in Turkish universities

No	City	University Name	2009	2010	2011	2012	2013
----	------	-----------------	------	------	------	------	------

First Period							
1	Zonguldak	Zonguldak Mining School	----	---	---	---	---
Second Period							
2	İstanbul	Istanbul Technical University*	72	72	72	82	82
3	Ankara	Middle East Technical University (METU)*	57	57	57	62	62
4	Ankara	Hacettepe University*	62	67	67	72	72
5	İzmir	Dokuz Eylül University	72	77	77	82	82
6	İzmir	Dokuz Eylül University (2 <sup>nd</sup> Educ.)	---	---	77	82	82
7	Eskisehir	Osmangazi University	72	77	77	82	72
8	Eskisehir	Osmangazi University (2 <sup>nd</sup> Educ.)	72	77	77	54	35
Third Period							
9	Zonguldak	Karaelmas Bülent Ecevit University	72	77	77	21	10
10	Sivas	Cumhuriyet University	72	77	54	14	8
11	Sivas	Cumhuriyet University (2 <sup>nd</sup> Educ.)	72	52	7	----	---
12	Isparta	Süleyman Demirel University	72	77	77	22	8
13	Isparta	Süleyman Demirel University (2 <sup>nd</sup> Educ.)	67	77	30	4	----
14	Trabzon	Karadeniz Technical University	52	57	57	62	52
15	Trabzon	Karadeniz Technical University (2 <sup>nd</sup> Educ.)	52	57	57	17	----
16	Adana	Çukurova University	72	77	77	41	22
17	Adana	Çukurova University (2 <sup>nd</sup> Educ.)	72	77	57	4	----
18	İstanbul	İstanbul University	52	52	52	67	62
19	İstanbul	İstanbul University (2 <sup>nd</sup> Educ.)	----	----	----	----	----
20	Malatya	İnönü University	52	57	57	14	15
21	Malatya	İnönü University (2 <sup>nd</sup> Educ.)	---	57	23	4	-----
22	Diyarbakır	Dicle University	52	57	57	36	21
23	Diyarbakır	Dicle University (2 <sup>nd</sup> Educ.)	---	----	----	----	-----
24	Konya	Selçuk University	62	67	67	70	28
25	Konya	Selçuk University (2 <sup>nd</sup> Educ.)	62	67	67	2	1
26	Aksaray	Aksaray University	----	----	---	0	---
27	Kütahya	Dumlupınar University	72	77	77	29	15
28	Kütahya	Dumlupınar University (2 <sup>nd</sup> Educ.)	72	72	43	8	2
Forth Period							
29	Afyon	Afyon Kocatepe University	62	67	67	18	8
30	Van	Van 100. Yıl University	----	----	----	---	1
31	Niğde	Niğde University	41	57	48	6	2
32	Niğde	Niğde University (2 <sup>nd</sup> Educ.)	----	---	7	----	----
33	Erzurum	Erzurum Technical University	----	----	---	0	---
34	Gümüşhane	Gümüşhane University	----	----	---	----	----
35	Muğla	Muğla Sıtkı Koçman University*	---	47	47	44	20
36	Uşak	Uşak University	----	----	---	---	5
37	Çanakkale	Çanakkale 18 Mart University	----	----	----	---	13
38	Şırnak	Şırnak University	----	---	---	---	4
39	Konya	Necmettin Erbakan University	----	---	----	----	---
40	Adana	Adana Science & Technology University*	----	---	----	---	----

\* Departments of providing education in English

In future, this is accomplished mining engineering education into only five programs such as: ITU, METU, İstanbul, Dokuz Eylül and Osmangazi universities. In so much that most of the programs will be merged into other departments. As a result, closing mining programs not only decreases the rate of unemployment in the country, but also increases the respect of the mining engineering field.

### 3. Discuss on Mining Engineering Education in World and Turkey

Presently, about 800 mining engineers graduate annually in Turkey. In many of those universities active in mining education, have started offering second mining programs in recent years, hence had quite output up to year 2009. The graduates of these departments will soon impose another jump on the already ascending curve of mining graduates (Figure 2a).

Comparisons of the state of mining education in Turkey with selected countries, from different continents, reveal some interesting points.

About 90 universities on the European continent and 30 universities in EU countries are offering mining engineering education. The annual mining graduates of EU universities, is estimated to be about 450-600 (SMP 12, 1998). With the introduction of new mining technologies and reduction of mining activities in recent years, the number of mining departments is gradually decreasing in EU countries. For example in the UK, after a period of merging some departments, only 4 universities are active in mining education in 1998 (Shaw, 1998). In the academic year 1999-2000, these departments had 176 undergraduate students, a number of whom were from other countries. In recent years, two major pitfalls of mining education in UK have been the declining number of new students as well as the absence of government founding and the minute amount of funds from industry (SMP 15, 1999).

In South Africa two universities and two other higher education institutes are offering mining education. In the past decade, about 38 students graduated annually from these two universities (Phillips, 1999).

And finally, the example of Turkey is presented in this article. Comparing the statistics of mining education in Turkey with the above examples shows that the total number of active mining engineering departments of Turkey (26), 22 programs in the normally education and 4 programs in the second education, is more than combined number (23) of mining engineering departments in Canada, Australia, UK and South Africa (Figure 2a). Similarly, the number of annual BSc graduates from Turkey mining departments (800) is more than the total of graduates (613) of US, Canada, Australia, and UK combined (Figure 2b).

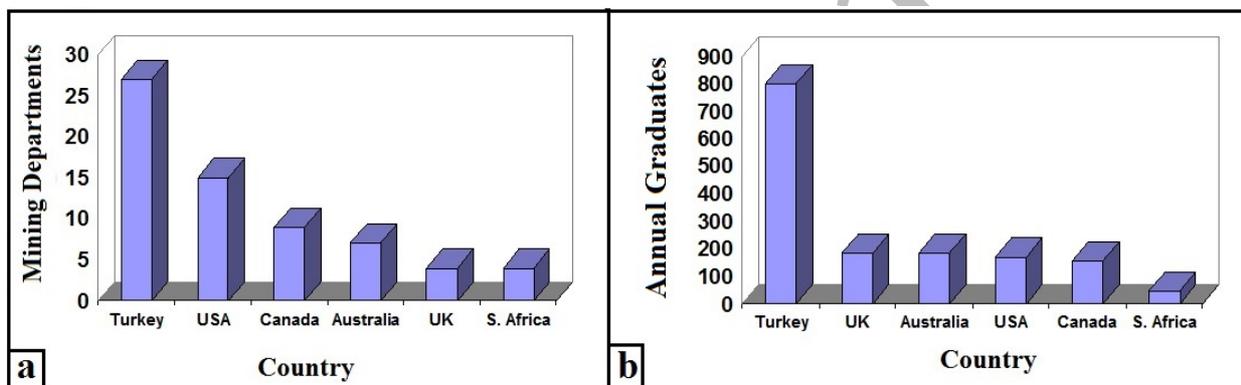


Fig. 2. a) Comparison of institutions in mining education in some countries; b) Comparison of the number annual in mining engineering graduations in some countries

#### 4. Problems of Mining Engineering in Turkey

The problems faced by mining engineering education in Turkey can be grouped in two categories (1) academic problems and (2) problems related to employment opportunities.

Those of the first category encompass problems related to teaching and training, as well as to the educating experts. Apart from the departments located in the main Turkish cities, the academic staff is insufficient in numbers. Often academics are obliged to lecture in subjects outside their main fields of expertise and work long hours. Those who have well a command of a foreign language or those who have completed their doctorates abroad are few. Often laboratories are either non-existent or insufficient in equipment. The numbers of students of mining engineering are rather high, with the inevitable consequence that training is not accomplished up to the desired standards.

The second group of problems is that relating to employment opportunities. Whilst the numbers of graduates are high, areas of work are limited; graduates find it hard to settle in a job either in the public or in the private sector. However, with ever-increasing numbers of students, graduates find it less and less easy to obtain a job.

Mining engineering education has the worst position among other engineering fields with its lowest rank in the Higher Education Selection Exam Results (YÖK, 2013). Young people are not willing to choose the field as it lost its dignity. Numerous factors have contributed to this decline, such as terrible images of mine disasters, negative impact of mining activities on environment and human health, difficult working conditions, low salaries, pressure of the communities in mining areas, and consequently the limited recognition of the mining engineering field by the

broad research and academic communities. Therefore, one should consider how to inspire young people to study mining engineering, how to engage and retain students in their studies and continue to train the mining engineers of the future professionally (Özbayoğlu, 2011).

## 5. Conclusions

Within the programmes of mining in Turkey, various aspects of the natural environment (geology, chemistry, environment and soils) are studied together with the various environments of the earth. The period of education covers a period of eight terms (or four years), and graduates are awarded the diploma of 'mining engineer'.

The motivation of the country for development and the excessive number of high school graduates, which are the results of a bulb of high population growth in early 80's, are the two prime factors, influencing the significant expansion of mining engineering education in Turkey.

The number of active mining engineering programs in Turkey (26) is more than the sum of similar programs in Canada, Australia, UK and South Africa (23). Also, the annual mining graduates of Turkey (about 800) are more than the cumulative graduates of USA, Canada, UK and Australia (613).

Mining training at Turkish universities is still under constant development. Substantial differences can be noted between the characteristics of their academic staff as well as their programmes. To a great extent, developments in education are shaped by national economic conditions. While the education programmes diversify and increase in numbers, the population of students studying in mining is greater than the country needs. Consequently, work opportunities for mining engineer diminish.

- A declining image of the mining industry as a "career of choice".
- The number of mining departments decreased from some 34 in the millennium to 22 in 2014
- At this moment a few are still under threat to be closed.
- While departments of mining engineering in Europe are closing due to decrease in prefers of students with reduction of mining potential, they are closed due to government's false policy in Turkey.

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# **PRODUZ@IDEIA- An approach project to develop entrepreneurship in primary schools**

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## **Abstract**

The greatest barriers to entrepreneurship are the fear of risk and poor entrepreneurial culture of the population. These factors are clearly identified in Portugal, in particular, due to cultural characteristics, because the fear of failure that typically an entrepreneur has to pass is a strong barrier difficult to be overcome. Also being an entrepreneur is socially very penalized, which is not the case, for example in United States culture. In spite of a poor entrepreneurial culture and subsequent difficulties in this area, the Portuguese people are extremely creative and with some guidance they reach their dreams easily. In this sense our project proposes the development of activities to be implemented very early on and empower the entrepreneurial attitude. Therefore, we consider that the elementary school has unique characteristics to the possible introduction of this project, in particular when we hook up with higher education institution connected to the professional practice teaching methodology, the HEI, namely Polytechnic Institutes. It's our intention, consequently, to create a project that consists in stimulating children's creativity to the design of a product, service and/or machine, that children consider important that exists and where, later, teams of teachers and students of a Polytechnic HEI will build/ implement the selected ideas. We pretend to develop our project based on the notion that entrepreneurship is all about the ability of being able to have an idea or dream and put into action is a competence that relies on a problem-based learning process. This methodology, here, will begin with the young children dream explored through creativity and ends with the implementation of the solution/ idea. This empowerment of our children and young people will make them more able to risk and daring themselves to develop their ideas in the future. Thus we are contributing to a better and sustainable future of our society.

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*Keywords:* Entrepreneurship Education; Primary and High Education Institutions, Problem-based-solution.

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## **Creativity and Entrepreneurship**

The role of entrepreneurship in terms of the economic development has been recognized by several theorists over time, among them Schumpeter (1934), Leibenstein (1968), Kirzner (1997), Baumol (2002) and Acs *et al.* (2004).

The entrepreneurship concept has always a reference to the attitudes towards the environment and its response capacity in the sense of constructing solutions that add value to the society. To the European Union (2012), entrepreneurship is related to the individual ability to turn ideas into actions, where this ability is linked to creativity, innovation and risks acceptance, as well as the ability of planning and project management, in order to achieve goals.

Also Heinonen and Poikkijoki (2006) say that entrepreneurial behavior is widespread, which is related to the call for bigger and better business skills in order to face growing challenges and uncertainty of the future. According to these authors, the attributes related to the entrepreneurial activity are high availability for change, self-confidence and creativity, as well as an innovative approach to solving problems.

The innovation idea has been constantly linked on the different aspects of entrepreneurship - in most developed economies, long-term economic growth relies increasingly on business creation and the fact that these generate innovation in terms of products, services and processes. The process of innovation is closely linked with the concept of enterprise, because its creation is in itself an innovation (Drucker, 1985). But the innovation intensity differs depending on the company that creates, since the motivation of organizations to produce innovations is to generate value, thereby increasing its competitiveness and promoting their survival (Mulet, 2011). In this sense initiatives that do not rely exclusively on innovation, but rather in replication, assume also relevance (Kirzner,

1997).

In general, entrepreneurship research shows that the level of entrepreneurship is favored by cultures that value and promote the need for self-realization, autonomy and conquest (Hayton, George and Zahra, 2002). Thus, the antipathy by uncertainty, found by Hofstede (2001) on Portuguese culture is also an inhibitor of entrepreneurship and this trait may explain why the level of companies' creation is low, even when the effort in education for entrepreneurship has evolved positively, particularly in higher education. The challenge with which Portugal has been facing is to replace the culture of penalization of the error for an entrepreneurial culture, opening paths to creativity and innovation (Robinson, 2006, 2001, and Amaral, 2009) and using the error as a form of evolution (Ferreira 2011 and Monteiro 2011 cited in Teixeira, C. 2012). Already Dolabela (2003, p. 30) states that the "*culture has the power to induce or inhibit entrepreneurial capacity*", noting that entrepreneurial education must begin with children, as it may influence their behaviors as future professionals.

The difference between entrepreneurs and non-entrepreneurs is in society (Sadler-Smith et al. 2003). The entrepreneur values creativity, takes risks, is based on an informal organizational structure concerned in formulating strategies and in identifying opportunities. The non-entrepreneurial, for its part, emphasizes the planning, control, monitoring, and evaluation is based on a formal organizational structure. It is important, therefore, to create an educational system capable of collaborating with the society in which it is inserted, which can affect change-technological, social, economic – for its development, causing a greater interaction between school and society (Friedlaender, G., 2004).

Creativity is believe to has an important role in the economy since is crucial to assist nations to achieve higher levers of employment and innovation (Davies, 2002 and Burned, 2006 cited in Shaheen, 2010). That's why creativity has to be present in schools in their education curriculum and pedagogy (Wilson, 2005 cited in Shaheen, 2010).

The currently accepted and implemented model, in the European Union, to frame the notion of entrepreneurship education is based on Heinonen and Poikkijoki (2006) propose and its main objective is to provide students with the attitudes, knowledge and skills for entrepreneurial action, having the different dimensions of education for entrepreneurship to be deployed in multiple categories, which constitute the framework of the various learning outcomes implemented and achieved by the countries of the European Union.

To enable a student to acquire entrepreneurial skills is to provide a more creative education, developing his talent and potential. Currently there is an education based on the errors, in denial of the subject (Friedlaender, G, 2004). Through the entrepreneurship teaching will allow students the possibility start from what he knows which means that errors and ignorance become possibilities of creation and new solutions, losing the connotation of failure (*ibidem*, 2004). In this way, learning to undertake should be a stimulating, creative activity and with quality. Creativity in the current era of innovation is getting increasingly important in which all professionals need to get creative (Corrêa, T., 2008) which is considered as nothing more than an electric impulse in the human brain and a potential boost. In summary, it is inherent to the individual, it can be exercised and developed and must be unlocked and rescued in essence (*ibidem*, 2008). We know that all individuals are born creative and that over time are being blocked and inserted in a social model not to be nonstandard governing the collective spirit. Thus, education for creativity should be based on self-knowledge exploitation (Gardner, 2007). In our society the creativity is sought-after, cultivated, cherished. (*ibidem*, 2007) and for that many entrepreneurs are conducting courses to understand and learn to perceive the intuition which is nothing more than an exercise in self-knowledge.

Despite this reality, it is essential to make it clear that creativity requires hard work, discipline, commitment and above all courage to do different from the majority, pursue unknown paths and often scroll through them alone. This reflection requires a demystification that ideas appear out of nowhere they don't fall from the sky. They need to be cultivated and exercised continuously (Corrêa, T., 2008).

In a proposal of teaching and learning, according to Predebom (2005), our creativity can be induced when adopting pre creative behaviour patterns, enabling the development of a creative personality. Consequently, allows the student to understand his individual process of creation.

### **Problem-Based-Learning (PBL) methodology**

We assist to a change in the educational policy in schools around the world to combine creativity and knowledge (Dickhut, 2003 cited in Shaheen, 2010). So, creativity in fundamental for entrepreneurs since they have

to have new ideas with novelty, usefulness' and appropriateness to it and also because to have the capacity of creating a sustainable commercial value from those ideas (Duxbury, 2012). In view of the above, we observe how important is to make the link between creativity and innovation which are apparently a paradox. The cognitive psychological perspective show us that this contradiction tendency may be alternatives ways of a more general propensity to people to store information in organized structures and then access this knowledge to implement their activities (Ward, 2004).

In 1994 and 1995, Runco and Chand (Ward, 2004) have described models that includes process of ideation and evaluation that interact between them and with the knowledge and motivation to determine creative results. In addition to these authors, others creativity models include steps as problem definition or discovery (e.g. Basadur, 1996, 1997; Mumford et al., 1991; Stenberg, 1988; Treffinger, 1994; cited in Ward, 2004) in the belief that the way people contextualize a problem strongly influences their probability of reaching an original or creative solution (Ward, 2004).

Other issue is the effective knowledge acquisition, in particularly in a way that creativity can be used to develop innovative solutions. One of the theory for knowledge acquirement that seems to be able to integrate both perspectives is the Problem Based Learning (PBL) because it stimulus people to restructure information that they already know within a realistic context to gain new knowledge and to elaborate on the new information they have learned (Kilroy, 2014). It differs from the "traditional" approaches of teaching because students are stimulated to self-direct learning skills and to be critical in analyzing scenarios and at the same time being objective in collecting additional information to develop the innovative solution for the initial problem (*ibidem*, 2014).



Fig. 2. PBL pillars

PBL relies in a three pillars as shown in Figure 1. Accordingly with several authors (e.g. Shin and McGee, 2003; Barrows, 2002; Dods, 1997; Jones, Beau Fly; Rasmussen, Claudette M.; Moffitt, Mary C., 1997) the "Ill structured problem", that consists of a problem which is described in an ambiguous way, that needs more information research to be more clear and that can be solved in more than one way, that have different possible solutions; the "students as stakeholders" in the sense that they have a significant knowledge that they have to make a useful and meaningful of it and that have to select and evaluate their options, monitoring the process towards the solution and at the same time have to defend and give evidence-driven arguments; and the "teachers as coaches", as they have to guide the students, in an ethic perspective of the solutions definition process and help them to develop their self-awareness process of thinking and seeking information.

This model helps developing learning and interpersonal skills and potential the learner confidence, while doesn't kill creativity but allowing it to have a crucial part in the resolution/innovation process. It seems that the model may be the one the potential more the entrepreneurs attitudes as they been described before.

### Produz@ideia project

Analyzing the studies of Gardner (2007) and taking into account the above, we tried to develop a teaching methodology and a method of exploring the creativity that would provide children from the first years of schooling

(accordingly to the author just mentioned the children under 5 years are at their maximum exponent of creativity), in primary education, a free development of their creative potential. We want to provide the ability to implement their imaginary, as referred by Dolabela in his Entrepreneurial Theory of Dreams (2003), and therefore contribute to a more effective education of entrepreneurship, enabling future professionals and opposing the current social environment so they may contribute to the behavioral change that, today, it's so urgent.

The proposed methodology is based on modelling creativity, with the goal of breaking paradigms and rescue the children's imagination, unlocking creativity, through playful activities, artistic and interpretative (Cury, 2003).

In order to transform information into knowledge and knowledge into experience, generating experiences (*ibidem*, 2003) and breaking down barriers, we propose to link children's imagination to the technical expertise developed in higher education Polytechnic system in order to implement the ideas and empower children and thus reduce the risk and the inhibition of innovate. In this way we are also able to apply the Problem Based Learning principles, exploring what they already know, developing their abilities of creating new knowledge by seeking and discussion new information within an objective problem situation that needs an innovative solution.

Due to the exposed the imagination application seeks to be an entrepreneurship project to the extent that the ideas are structured and the activities planned. The Polytechnic student may also be motivated by the children's creativity and develops entrepreneurial skills in the sense that it has to reflect and implement an idea.

So, it all begins with the recognition of a necessity/ problem or getting an exist one that it's difficult to solve, goes through an objective definition and means to achieve a solution, a plan of action has to be developed, the resources have to be analyzed and accessed and it's possible to implement a process and a creation.

This didactical methodology of teaching of entrepreneurship is based on a multidisciplinary interaction of different scientific areas to the extent that the products/services imagined by the children may have to be achieved by combining technological and scientific skills.

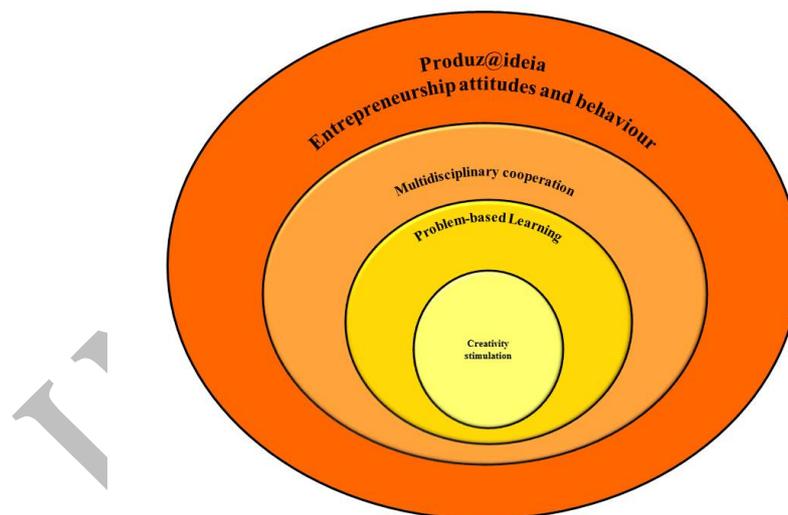


Fig. 2. Produz@ideia interactions

The didactic innovation project we propose, "Produz@ideia", fits on theoretical reflection exposed, intending to promote creativity and enhance the power of realization of dreams or ideas, while entrepreneurial skills. This project was born of the need to find a methodology of entrepreneurship education for teachers of basic education could use in their students.

To be developed by professors of the Polytechnic, naturally drew a design of didactic innovation that makes the bridge between these two levels of teaching, encouraging and using the creative potential of the students of basic education and the power of knowledge and technical realization of Polytechnic School students. In this way Produces @ Idea allows working student's entrepreneurial skills and abilities of the two levels of education.

Objectives of this project are therefore to:

- Encourage creativity in children (elementary school) and young (higher education);
- Empower the entrepreneurial attitude;
- Reduce the fear of risk, through collaboration among peers;
- Making dreams come true, making you believe in their potential for creation, always present;
- Involve the institutions of higher education and primary education.

Is important for the success of this project that everyone involved in the different steps of this process knows what is happening and how it is going to come true. So the ICT are an important tool also to take into account as are through them that easily and creatively we may involve and motivate all the intervenient of this process.

## Conclusion

In this paper we explain the tendencies of entrepreneurship education and explored the main discussions on how it may be developed based in a more urgent need of creativity integration on educational curriculum and pedagogies, particularly as a way of reaching innovation and applied ideas to the economic context. So the link between creativity and entrepreneurship is made through knowledge. The Problem based learning methodology give also a boost to this knowledge and creativity integration by integrating them in a real life context and directing them to a innovative solution. We believe that our project Produz@ideia combine all these perspectives and we are going to prove it by implementing with some students of the primary school.

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# Professional and technological education and management experiences of the Federal Institute of Rondônia, Brazil

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## Abstract

The theme of this paper is the management of professional and technological education. The purpose is to demonstrate trends in Federal Network of Education in Brazil and specifically discuss issues of management of Federal Institutes, in particular the Federal Institute of Rondônia. The research is documentary. National indicators of dropout and retention reveal that less than half of the students of the Federal Institutes of Education, Science and Technology can complete courses of middle and higher levels. The academic indexes of the Federal Institute of Rondônia are similar to the national indexes and require management strategies beyond common procedures for positive intervention in the processes of formation.

*Keywords:* Professional Education; Federal Institutes; Management; Indexes.

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## Introduction

The Brazilian Professional, Scientific and Technological Education (EPCT), founded in 1909, has followed a path in which high schools became technical schools (such as the Agrotechnicals), these in Federal Centers for Technological Education (CEFETs) and, finally, almost all became Federal Institutes (IFs). Along this trajectory, there were many changes of direction in training policies, especially in the last 20 years, because while during the 1990s professional education and basic education were separated, in the next decade were reintegrated. One of the largest public policy investments for professional education was the establishment in Law 11,892 (Brasil, 2008) of the Federal Network of Professional, Scientific and Technological Education. In this, the Institutes spread across the country and expanded their reach far beyond, with Campus, poles of distance education and other units. This has autonomy equivalent to Federal Universities and a greater range of services, such as: basic mid-level training; short courses; higher education; graduation at all levels; certification of competences; revalidation of diplomas; technological development and innovation; patenting, and others.

Lives is, therefore, the old enthusiasm for education, beating the dust of the flag of the “Escolanovismo” (“New School Movement”), with the belief that such expansion at least tends to overcome social inequalities. However, institutions have experienced such problems as student absence and network professionals, low utilization of teaching and even idleness of vacancies in their professional training schemes, as recently discussed in the XXXVII Meeting of Directors of Federal Institutions of Professional and Technological Education (Reditec, 2013) in Maceió/AL/Brazil.

The paths of Professional and Technological Education, while theme present, are quite troubled. This article, the result of desk research, has the objective to demonstrate some of the trends of the Federal Network of Education and specifically discuss issues of management of Federal Institutes, in particular the Federal Institute of Rondônia, and highlight what national programs and local proposals present for this decade.

## Benchmarks of Efficiency and Effectiveness

Since the creation of the Federal Institutes, the concept of “excellence” is the key to much of the discussion

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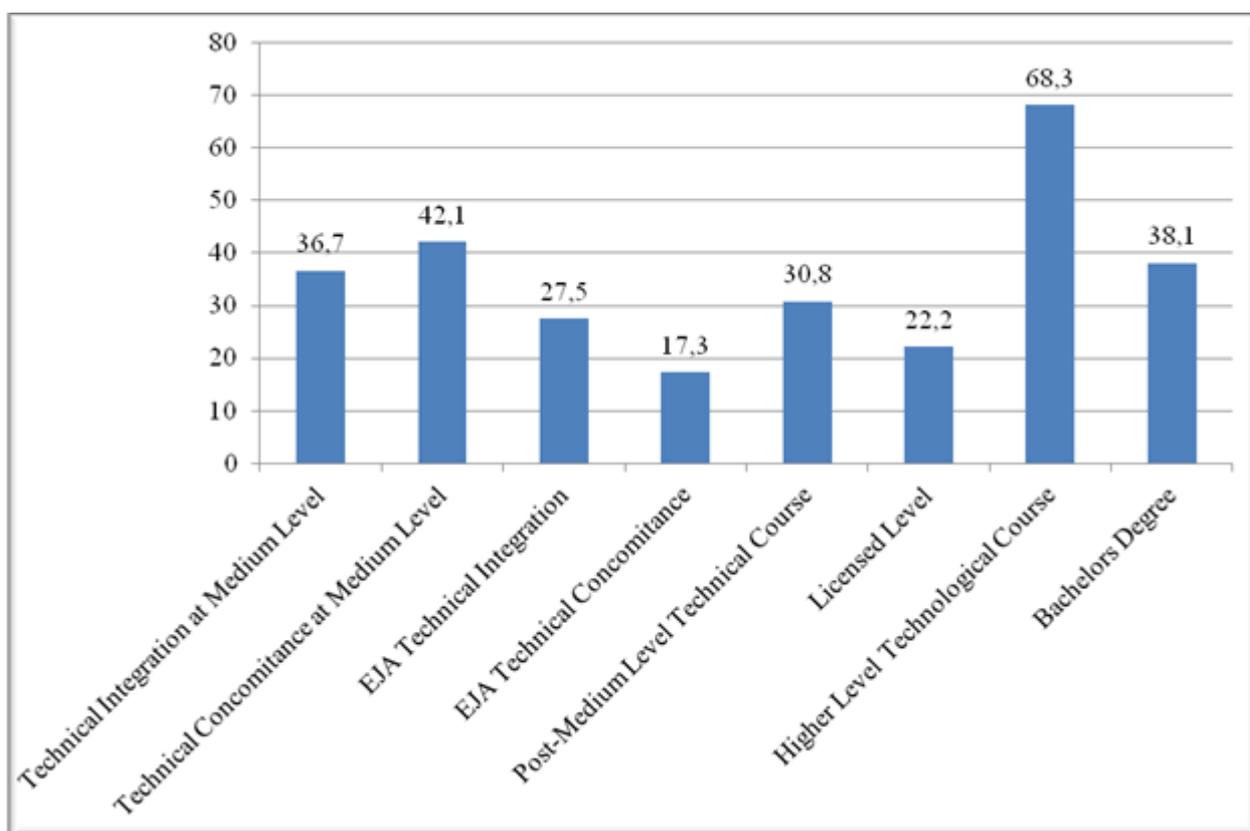
regarding the enhancement of teaching in the Federal Network of Education. Professional education is often considered in the discussion of the overvaluation of financial gains in view of technical training. Among intellectuals, representatives of the professional class (unions), and amongst groups of managers, this data has been put to the test in order to find solutions, but many problems still seem chronic, such as the long-standing dropout and repetition rates.

In the XXXVII Reditec, the data presented were those taken from the National System of Professional and Technological Education (Sistec), of the Secretary of Professional and Technological Education of the Ministry of Education (Setec/MEC). Although there are statistical imperfections, considering that the Sistec statistics only reflect the numbers they are supplied with, the references given remain plausible, considering the findings of indicators that are made for practically the same purpose as in experiments Federal Institute of Rondônia (IFRO), which will be addressed later. Data from 2011 and 2012 revealed that the national level of withdrawal, or dropouts, reaches 18% in the courses of concomitant mode to Middle Teaching of the Youth and Adult Education (EJA), 12% in the subsequent mode and 7.7% in the integrated mode to Middle Teaching.

The indices are aggravated when superimposed on non-completion rates between the years 2011 and 2012, from an ascertainment of September 2013, over all Federal Institutes of the country (Dantas, 2013). The figures for the EJA, with a completion rate of 17.3% in the concomitant mode and 27.5% in the integrated mode, are extremely precarious. In the subsequent technical courses to Medium Teaching, the rate is 30.8%, worse than that of Bachelor degrees, 38.1%, probably because many of the students in this modality has trend to migrate to the Bachelors degree when possible in view of the opportunities that arise, which are more advantageous at the top level. However, an analysis of the causes of dropout shows that it goes beyond speculation, as evidenced by the studies of the Getúlio Vargas Foundation (2012). Finally, also worth mentioning the low completion rate in licensed degrees (22.2%), particularly considering the need for training of teachers for basic education in Brazil (Dantas, 2013).

These are statistics showing that commitment becomes even more alarming when collated with non-completion indicators. After all, there are two major challenges for institutions: promoting the permanence of freshmen and getting them to positive results at the end of the training processes.

The national completion rates denote that for the upper courses of technology the results are better than in the post-medium level technical courses, jeopardizing the rationale of the second mode, without necessarily voiding it. At the same time, it also damages the concept of education for youth and adults (EJA) in professional education, as state policy to guarantee vacancies to those students who had no opportunity the proper age, considering the use of 27.5% on completion rates of courses integrated mode and 17.3% in the subsequent mode of the Program, as shown in graph 1.



**Graph 1. Conclusion Rates in the Federal Network of Education (in %)**

Font: XXXVII Reditec (Dantas, 2013)

The problem also highlights on data of the Court of Accounts of the Union (TCU) (Brasil, 2013 a), described in the audit report on the supervision at the Federal Education Network, which brings forward the following themes arranged in the summary document:

[...] NEED FOR IMPROVEMENT IN PROCEEDINGS RELATING TO SCHOOL DROPOUTS, THE INTERACTION WITH THE PRODUCTIVE LOCAL ARRANGEMENTS AND PROFESSIONAL SUPPORT FOR INCLUSION OF STUDENTS. LACK OF TEACHERS AND PROFESSIONAL LABORATORIES. LACK OF ADEQUATE PHYSICAL FACILITIES IN SOME FEDERAL INSTITUTES [...]

The problem raised in the Federal Network of Education is not limited to academic achievement, but also involves the various purposes of the Federal Institutes as expressed in the laws that established these Institutes, among which is stipulated the need for productive relationships with local, cultural and social arrangements (APLs). The table 1, with the data of the report of TCU (Brasil, 2013 a), which established the National System of Professional and Technological Education (Sistec), brings forward the precariousness of efficacy rates of the Network.

**Table 1. Outcome indicators in the Federal Network of Professional Education in relation to tuition cycles ended in 2011**

Indicator/Type of Course	Middle Level			Higher Level		
	Medium	Post-	Medium	Licencin	Bachelor	Technologica

	Proeja <sup>142</sup>	Medium Proeja	Integrated	g Level	Degree	I Qualification
Quantity of Matriculation Cycles	287	1.544	483	163	107	739
Quantity of Students in Courses	5.836	59.871	16.066	3.084	2.538	21.762
Percentage of Dropouts	24,0%	18,9%	6,4%	8,7%	4,0%	5,8%
Percentage of Students still in Education	37,9%	49,3%	44,4%	64,5%	68,1%	50,8%
Percentage of Graduates	37,5%	31,4%	46,8%	25,4%	27,5%	42,7%

Font: TCU (Brasil, 2013 a, p. 12)

The dropout rate appears higher in Reditec data (Dantas, 2013) than the TCU data (2013 a) concerning the measurements in 2011 and 2012, for the integrated mode (7.7 *versus* 6.4%); but is lower for the subsequent (12% *versus* 18.9%). At the other levels and modalities expressed, the variances also occur. In the two reports, of the TCU (2013) and of Dantas (2013), there is no distinction between On-Campus and Off-Campus offerings. It is believed that the causes of dropout and non-completion problems can be separated into four categories: a) social, cultural and economic vulnerability; b) reconciliation of work and study; c) learning ability; d) problems with food and/or transport (Dantas, 2013).

The FGV survey (2012) concludes that the reasons for students not completing the courses are mostly an incompatibility with the content requirements of the labor market (29.45%), dissatisfaction with the course or not monitoring classes (11.29%) and family or health problems (25.91%). Therefore, there is a greater complexity than disclosed by Dantas (2013), especially with regards to the mismatch between curriculum and expectation of formation. For operations under government management, it is suggested: “ Guidelines for permanence and success (combat to retention and evasion)”; “Fostering actions student assistance”; “Encouraging the training of professionals” (Dantas, 2013). For institutional management, the list of focal points is greater.

All proposals should have been implemented, because are common and traditional references for education in the democratic political field. Intervention actions, for example, are always required, while the composition of teams is a regular forecast, but this has been a cause of major clashes in discussions about the structure of the Federal Institutes, almost since its inception and more severely today. The strengthening of the relationship between teaching, research and extension is one of the urgent measures not yet implemented.

According to the TCU report (Brasil, 2013 a), there are no sufficient monitoring indicators for verification of employability of graduates or entrepreneurial projects, nor other means of analysis of demand conditions. The institutional management units do not have the need indicators, along with indicators of opinion. This perception emerges from referrals from TCU as recommendations to Setec/MEC/Brasil, which can be summarized thusly: a) optimization of efficacy rates, the fight against student dropout and towards student retention; b) instruction to formalize partnerships between the Federal Institutes, other educational institutions and the productive sector; c) greater integration between teaching, research and extension; d) establishment or strengthening of shares of integration of students in the productive sector, with an emphasis on traineeship; e) investment in training programs of servers; f) overcoming the deficit of teachers and technicians; g) establishment of a system of evaluation of technical courses. These recommendations were part of the guidelines discussed in the strike movement of the employees of the Federal Education Network between 2012 and 2013. These proposals are aimed at correcting problems evidenced daily in each Federal Institute (IF), including the example of the Federal Institute of Rondônia (IFRO), which is specific reference as study in this article.

### The EPCT in Brazil

The National Education Plan for the decade 2011 to 2020 (Brasil, 2013 b) also lies in a controversial stage because it's been more than three years and is still in progress through government. According to the News Portal of the Senate on September 25, 2013 (Brasil, 2013 c), the plan had been approved by the Committee on Constitution, Justice and Citizenship (CCJ) and passed to the Committee on Education, Culture and Sports (CE). The Draft Law which is attached provides as guidelines in its Article 2º, “training for work”, “humanistic, scientific and

<sup>142</sup> Proeja: National Programme for Integration of Professional Education with Basic Education in the Mode Education for Youth and Adults

technological promotion of the Country” and “enhancement of professional education”, in sections V , VII and IX as well as an inclusive education system and democratic management of education in Articles 8º and 9º. In the Goals Plan, highlight the Target 11, which provides “[...] double enrollment of professional technical high school education, ensuring the quality of supply.” We need to pay attention to this, because the problems that culminated with the TCU audit of the Federal Institutes were precisely those arising from a rampant expansionism considered, which did not meet the needs of infrastructure and personnel. The table below summarizes the main goals of the Plan in relation to the Federal Network of Professional, Scientific and Technological Education (EPCT).

Meta	Description / Summary of Strategies
3	“To universalize by 2016 the educational attainment for the population aged 15 to 17 years and raise by 2020, the net enrollment rate in secondary education to 85% in this age group.”
4	“Universalize, among the population of 4-17 years, school assistance to students with disabilities, pervasive developmental disorders and high ability or giftedness in regular network teaching.”
10	“Provide at least 25% of enrollments of youth and adult education in the integrated form with professional education during the final years of primary school and in medium teaching.”
11	Duplicate registrations of professional medium level education, ensuring the quality of supply .
12	“Raising the gross enrollment ratio in higher education to 50% and the net rate to 33% of the population of 18-24 years old, assuring the quality of provision.”
13	“Raising the quality of higher teaching by expanding of operation of masters and doctors in institutions of higher education to, at least, 75% of the teaching staff in effective exercise, including a total of 35% of doctors.”
14	“Gradually increase enrollment in graduate courses <i>sensu stricto</i> in order to reach annual titration of 60,000 teachers and 25,000 doctors.”
16	“Enable 50% of teachers of basic education in <i>sensu lato</i> and <i>sensu stricto</i> , while allowing and ensuring that they can continue education in their field.”
17	“Enhancing the public teaching of basic education in order to approximate the average yield of the teaching professional with over eleven years of schooling of the average income of other professionals with equivalent education.”

**Tableau 1. Summary of Goals of the National Education Plan related with the EPCT**

Font: Adapted from National Education Plan of Brazil (Brasil, 2013 b)

Several other targets, mostly, are also related to EPCT, especially with regard to the universalization of education, teaching careers and investments to improve the quality of education. However, as this article refers to a specific theme, the above scenario was focused on the goals objectively directed more to professional education. It is observed that they are founded on eminent challenges such as the enhancement of educational agents, the servicing of a diversity of subjects, the overcoming of performance indicators, the restructuring of the Federal Network and interaction with other networks (financial investment), as well as the increment of policies to promote joint institutions with the world and the labor market.

### Results of Teaching Dimension on IFRO

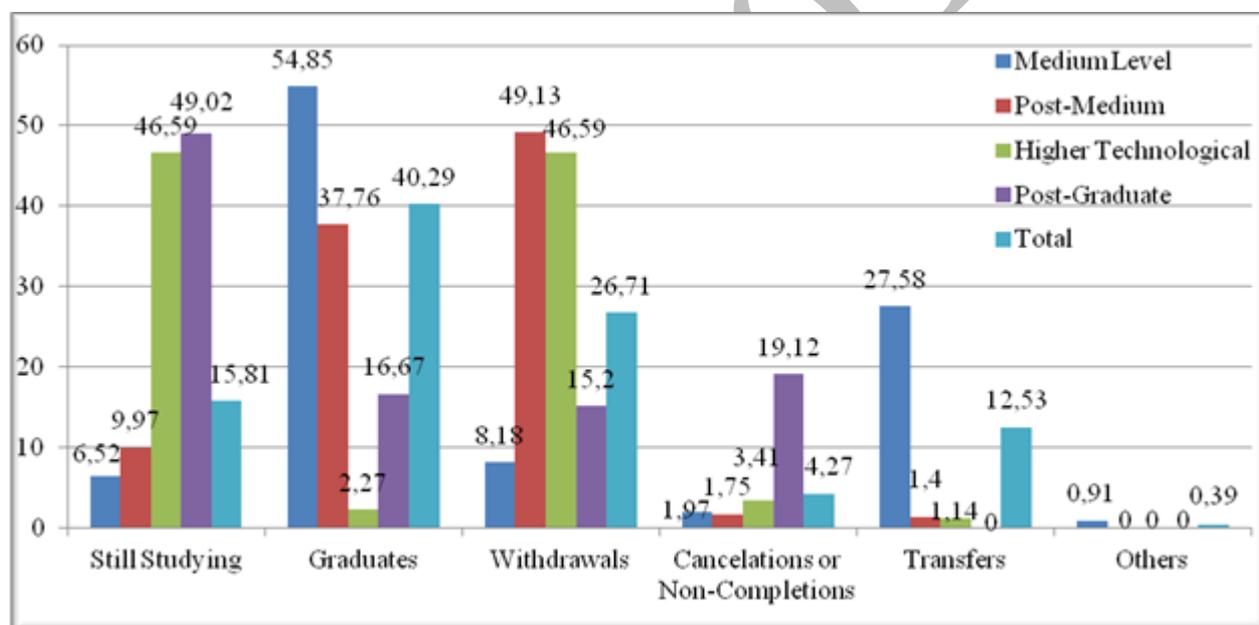
The results of teaching and learning endorse the national problem raised by the Court of Accounts of the Union and that has motivated many political clashes and union struggles within the Federal Education Network. The following table shows the results recorded in Sistec, extracted by the institutional researcher of the IFRO on March 24, 2014 (Brasil, 2014). These contemplate the cycles of registration included between the beginning of the activities of the institution in the first half of 2009 and the first half of 2013. Other data were discarded due to the fact that some campuses have not fed the Sistec with the latest results.

**Table 2. Academic achievement of students in IFRO between the first half of 2009 and the first half of 2013**

Student Situation at the end of Minimum Cycles	Technical Integration at Medium Level	Post-Medium Level Technical Course	Higher Level Technological Course	Post-Graduate Level	Total
Still Studying	43	57	41	100	241
Graduates	362	216	2	34	614
Withdrawals	54	281	41	31	407
Disconnected from de System (Cancelations or Non-Completions)	13	10	3	39	65
Transfers (external)	182	8	1	0	191
Others	6	0	0	0	6
<b>Total</b>	<b>660</b>	<b>572</b>	<b>88</b>	<b>204</b>	<b>1524</b>

Font: Adapted from Sistec/Institutional Research of the IFRO (Brasil, 2014)

In the IFRO, the courses have a minimum term of completion and a maximum — the second is twice the first, in general. For this research we consider “current” students who have not paid up studies in full; the dropouts are the withdrawals; and disconnect from de system are those that exceeded the maximum period of completion or cancelled registration. The final number of not approved or retained does not appear because the maximum cycle has not yet closed in technical courses and higher level courses. The data in Table 2 are shown in the graph 2 below.



**Graph 2. Academic achievement of students of the IFRO with cycles registration between the first half of 2009 and the first half of 2013 (in %)**

Font: Adapted from Sistec/Institutional Research of IFRO (Brasil, 2014)

The graphic shows that, in the Technical Integrated at Medium Level Courses, the graduating rate is 54.85%, higher than the national average of 46.8%; in the form of Technical Courses Subsequent to high school, the rate drops to 37.76% — greater than the national again, 31.4% , but equally critical, since over 50% are dropouts, cancelations or transfers. Among College Courses in Technology, the graduates are only 2.27%, with 46.59% on students still ongoing. The result is very poor compared to national averages, with 42.7% of graduates. A similar situation occurs in Postgraduate *Sensu Lato*, which has a graduation rate of 16.67%.

The informations about the number of licensed not are presented because the first groups had initial completion only in December 2013, and so the data have not yet been fully launched in Sistec. The Bachelor level

classes not had completed cycles and the those of the Technical Concomitant Medium Level Courses involve unrepresentative data yet, because have low number of vacancies. According to the Report of the Dean of Teaching of the IFRO (Brasil, 2012), there is a stabilization in the rates of overall progression of students from one period to another, in the range of approximately 70%, for the initial enrollment periods from 2009 to 2011. The document indicates negative trends in the process, since the cumulative loss of 30% per period, partial and final, leads to greater losses at the end of registration cycles.

In addition to the enhancements of routine measures, the top management of IFRO instructed a study of possibilities for resizing the medium level technical courses, converting the time of minimum completion from four to three years at the completion module and four to three semesters in subsequent mode on some campuses. Experiences already exist of such arrangements, including the campuses offering full shift and shorter courses. The study was conducted by the Dean of Instruction and resulted in a paper discussed by the management teams of the Campus, teachers and other professionals of the units. He was justified not only because of the high rate of losses in the process (dropouts and non-completion), but also in light of national trends to optimize the time of formation of the students, the prospect of accreditation by the National High School Exam usually in the third year of training of participants, the trend optimization in institutions of National Learning Systems and proper configuration of high school in three years. According to the studies of the Dean of Teaching (Brasil, 2013 d), the resizing process would improve by reviewing the organization of curricula, which has a high-level of concentration of components of general education curriculum at the early stage and many specific disciplines at the final stage; there are also excess workloads in some cases approaching the design of the integrated technical courses of a bachelors degree. This proposed change generated some instabilities in management due to expected impacts, involving the reorganization of personnel, infrastructure investments and technology and integration among the work of agents. At the same time, this has led to complex changes. A comprehensive review of the curriculum proposal for the High School was taken in integrated technical professional education, through a forum parameter in Moodle environment, taking as a reference the verbal informations and exhibitions of the III Meeting of Leaders of Teaching<sup>143</sup>. Intervention measures have materialized in the document formalizing the menus of common and diverse core parameterized by teachers of the IFRO for the national basis, prepared by the Directorship of the Development of Teaching (Brasil, 2013 e).

Other issues raised by the Directors of Teaching during the III Meeting of Leaders of Teaching of the IFRO (verbal information) should be complementarily considered: lack of teachers; limited infrastructure; the large amount of unlicensed teachers; an educational academic management system (Siga-Edu) without sufficient effectiveness yet; delays in hiring professionals; an absence of research into the demand for particular courses; contests with inadequate edicts and without the participation of teachers of the IFRO in examination boards; ill-equipped libraries; disinterest of students and servers; lack of monitoring of graduates; absence of institutional marketing and difficulties in implementing selective processes. As positive highlighted by management, the Directors of Teaching noted: promotion of many interdisciplinary events; harmonization of work teams; expansion of partnerships and linkages with external sectors; expansion of public consultations of interest for the courses; deployment of distance education; continuous training of servers. The goals were limited to forecasting routine activities, such as enhanced pedagogical support, but without the expected quantification; added up to this proposals for opening new courses, expansion of infrastructure, implementation of libraries, internalization of training units and revision and enhancement of the student assistance program.

## Conclusion

The goings-on courses in Federal Education Network is in the process of turbulence that requires urgent action to seek balance. The intervention of TCU is a measure of control on the accountability of managers of institutions responsible for the use of public resources, because the completion rate of less than 40% of students reveals two major facets: the waste of more than half the cost of resources invested, and a failure to meet the market reserve, especially for technical of mid-level and graduates.

The National Education Plan also brings a lot of expansionist goals, but these should be implemented with sufficient planning and investment to guarantee proportional returns. The recommendations made by the TCU to

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<sup>143</sup> The III Meeting of Leaders of Teaching of IFRO occurred in Ariquemes/RO/Brazil in October 2013. This event discusses the actions taken, problems and planning the year of education at the Institution.

Setec/MEC/Brazil are nothing more than what is expected of the Federal Institutes. Actions to strengthen the relationships between teaching, research and of the world of work is some of the directions expected for Professional Education, Scientific and Technological (EPCT), as well as intervention and positive leadership in clusters, with proposals for innovation and technological advances. Furthermore, the implementation measures of laboratories, grants for student assistance policies and the expansion of the staff are some of the corrective measures to stagnant problems, almost chronics. Such measures are not innovative, but commons, though unfortunately not regularly implemented in this system. The Agreement on Goals and Commitments (Brasil, 2010) signed by the Ministry of Education with the Federal Institutes corresponds precisely to a measure of intervention required for lack of efficiency and effectiveness.

The IFRO has not been immune to these management problems, it has presented similar statistical numbers to the national average. Your expansionism occurred with the generation of problem commons to the other institutes of the country. The management experiences have suffered low levels of achievement in course completion rates per cycle, plus lots of evasion and distancing the institution in relation to regional development systems. The IFRO must therefore broaden and diversify its actions to fulfill its vocation and strengthen the local productive arrangements, in order to meet the public policy of improving professional education effectively, expanding research and extension proposals within this tangle of indicators, pointing to various places and one at the same time: excellence in education.

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# Professional development of project management for contractor in the construction project: a review

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## Abstract

Professional development programmed can improve the effectiveness and capability of the contractor. A well organized development programme is a critical strategy for construction companies. In coming years, professional development was increasingly playing a significant role in organizational success. Based on the literature and previous research, the study explores the correlation professional development in employee training and motivation practices with task improvement in construction project. It is anticipated that the discussion of these factors will provide a basis for future strategies to promote the development of construction industry and also provide a useful reference for other industry which face similar problems in promoting the applications of professional construction project management in the construction industry. Professional development programmed had gone through the necessary project management training and sufficient knowledge, skills and experience to manage a project successfully.

*Keywords:* professional development, contractor, construction project

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## 1. Introduction

Construction project often suffer from poor performance in terms of time delays, cost overruns and quality defects. The reasons behind these problems have attracted the attention of construction practitioners and researchers. (Hamzah et al., 2011). These problems can overcome and reduced with having a well organized and effective professional development programme. It is one of the most important assets of a company, directly impacting its fruitfulness and long term viability as a company (Ling et al., 2006). The importance of involving project management in development, planning and implementation of competency based strategies has been emphasized by researcher. Contractors Management Training Program is to increase the capacity and to ensure that contractors are truly competent in undertaking the jobs and construction activities of a project. This training program encompassed

technical management aspect that is closely related with construction activities, using modules developed together with the industry experts (Dai et al., 2006).

Improving productivity performance is a primary driver of the economic performance and long-term sustainable competitiveness (Palaneeswaran et al., 2006). Accordingly, a previous researcher has developed a strategy for improving productivity, which focuses on 5 key drivers: improving competition, promoting enterprise, supporting science and innovation, raising skills, and encouraging investment (Jung et al., 2006). For example, the Sector Skills Development Agency (SSDA) Strategic Plan 2005/08 (SSDA, 2005, p. 9) stated clearly that increasing participation levels in training which is one of the common skills indicators adopted by the government) by 5 per cent points could increase productivity by 4 per cent – boosting GDP by £40 billion (Lee et al., 2006).

The review was commissioned in order to assess the skills in order to remain competitive in a rapidly changing global economy. It has to be noted that this was a clear indication of the importance given to skills development and training in policy discourse as a means of improving productivity across all sectors of the economy (Chan et al., 1999). There were no similar reviews carried out with respect to the other four drivers, mentioned above, in relation to their potential impact on improving productivity performance across different sectors of the economy. There is a direct correlation between skills, productivity and employment (Nepal et al., 2006). The UK government set-up a network of Sector Skills Councils (SSCs) in 2003 in order to promote its skills agenda within the context of all sectors of the economy. It given the government's emphasis on sector perspective in implementing its skills and productivity agenda, this research examines the trend of construction industry productivity performance in relation to its skills profile, over the period 1995-2006 – through analysing the most up-to-date published construction statistics. This study commences with a literature review, which discusses the relationship between skills development and productivity performance (Kim et al., 2000).

## **2. Training and Development**

Training is generally stated as being a systematic and planned effort to develop knowledge, attitudes, abilities and skills through learning experience, to attain effective performance in an activity or a range of activities (Clarke., 1999). Findings from the interviews with the quantity surveyor and contractor revealed that they both considered a large portion of rework costs as attributable to the poor skill levels of the client's project manager, and of the design team and subcontractors. The main causes of rework identified as a result of poor skills were defective workmanship, disturbances in personnel planning, delays and alterations (Han et al., 2007). Managers, executives, and supervisors can have a significant constructive impact on the transfer of knowledge and skills [26]. The training of extension personnel contributes directly to the development of human resources within extension organizations (Chua et al., 2003). One of the most important factors in implementing HRM in construction industry is the need for effective training. Managers also need to develop ways to measure the performance of their workers (Chen et al., 2010). A system of performance measures is needed in order to monitor improvements among construction teams. They advice managers to display quality indicators, which creates encourages the participants to achieve improvement (Clarke., 2010).

On the other hand, the external sources of labour (subcontractors, agency temporaries, and self employed) are very common in construction industry. In fact, it is accepted that construction firms face a lot of difficulties in the training and development of labour and staff (Davidson & Rowe., 2009). Two significant methods of training construction workers are on-the-job and off-the-job training. In the traditional model of on-the-job training (OJT), to promote new practices, workers would typically receive a pre-prepared course on the new regulations, procedures, or processes, often at a different location than their place of work, and be expected to apply this abstracted knowledge later in their workplace. OJT and experience are probably the most common methods of employee development used at all levels of the organization (Fuller et al., 2011). Where organizations utilize a large number of skilled bricklayers, carpenters, plumbers, armature workers, welders, etc. they may utilize a special type of OJT called apprenticeship training. This training is mostly done under standards which are established (i.e. curriculum, number of hours, and affirmative action goals) by governmental parts (Henderson., 2008). Popular OJT methods include job rotation and understudy assignments. Job rotation involves lateral transfers that enable employees to work at different jobs. Both job rotation and understudy assignments apply to the learning of technical skills (Huff., 2008). Interpersonal and problem-solving skills are acquired more effectively by training that takes place off the job.

### 3. Performance improvement

The definition of performance is likely to encompass multiple traits and behaviours, such as effective communication with colleagues, technical competence and knowledge level. It is not possible to distinguish between these two dimensions of performance in the quantitative research discussed in this review (Jha & Iyer., 2007). However, issues of performance in the construction project seem to arise particularly frequently in interviews with contractors about the impact of low basic skill (Koskinen., 2011). Further research is required to distinguish different dimensions of performance within the contractor, and their varying relationships with basic skills. This might include evaluating the relevance of different aspects of performance relating to basic skills identified in the construction research (Kwak & Anbari., 2009). For example, a survey of construction employers providing workplace education programmes identified a number of distinct dimensions to the impact on performance, many of which seem applicable to the contractor context: Improved quality of work; Better team performance; Improved capacity to cope with change in the workplace; Improved capacity to use new technology; Reduced time per task; Reduced error rate (Ling & Tiong., 2008).

Project Academia is scheduled to supporting project managers in their daily work, and highlighting the importance of commitment. Superiors are involved in the applying process by proposing and nominating participants, and following up their achievements in the training program (Morris., 2010). Participants of each Project Academia training program come from different departments that give a fruitful opportunity to share good practices, lessons to learn, and collegial discussions. Every participant makes a project work from actual and/or strategic theme (Müller & Turner., 2010). The project work results are shared with colleagues and management. Some of the destruction is said to be due to inefficient design and lack of standard materials while many of the buildings with standard materials and proper design were destroyed because of low quality of construction (Tan et al., 2008). This places blame on the lack of skilled labour in construction projects. However, most of the researches conducted on the lack of proper design and materials, and little attention was given to unskilled workers in construction sectors. Therefore, it seems human resources, particularly in the area of skilled labour, play a crucial role in the quality of construction projects (Wong et al., 2010).

Human resource management (HRM) has been broadly defined as a field of organizational activity and professional practice. It has remained a complex and obscure entity, variously interpreted by practitioners and researchers. HRM as covering functions related primarily to training, career development, organizational development, and research development. HRM as an academic discipline includes the development of knowledge and expertise, and the enhancement of performance nowadays. A forceful HRM system is also the most valuable asset of construction companies, as an enterprise's productivity is closely correlated with its strategies (Zwikael and Unger., 2010).

The development of people, their competencies and the process development of the total organization are the main concerns of HRM. With rapid changes in technology, worker's needs, current market, and competitive environment, planning for human resources have become an important and challenging task for development. HR planning involves plans for future needs of employees, their required skills, acquisition of employees, and personnel development (Gale & Brown., 2003). A quality HR program, personnel examination, and HR appraisal are the three basic areas of concern for modern enterprise HRM. The purpose of HRM is to enhance learning, human potential and high performance in work-related systems. This research evaluates the execution of training and motivation methods in HRM practices as well as the performance of the respondent companies (Maloney., 2003). On the other hand, HRM can be conceptualized as all those activities that seek to facilitate all forms of learning and development at all levels within organizations. Training and development of HR becomes the strategic component of the program. How to treat, determine, and develop the value of HR, has become an important area of research in the strategic management of an enterprise (Torbica., 2001).

In a training context, motivation can influence the willingness of an employee to attend the training program, to exert energy toward the program, and to apply what they learn in the program onto the job. To encourage worker participation, managers are advised to use a system that identifies and rewards workers who do a good job (Leung et al., 2004). For example, construction workers can receive a financial bonus for identifying ways to improve the quality of their company's operations; the success of a construction organization largely depends upon the quality and morale of its people. Thus, human assets are becoming the most important wealth of an organization if they are adequately nurtured and their potential is efficiently developed. Companies should ensure that all learning achievements by their staff are recognized by publicity, appropriate promotion, and reward [48].

Many cases can be found that show successful construction organizations making use of the principles of training and motivation in HRM practices (Brown & Adams., 2000).

#### **4. Human resource for construction project**

Construction projects have a various types of worker, such as engineers, project managers, and labour. Previous research indicates that there were many damages to the buildings due to bad quality of construction. It could be due to the lack of sufficient supervision, low quality materials and unskilled labour (Odusami et al., 2003). According to Yang et al., 2006), it shows that unskilled labour was the main reason for the low quality of construction of many buildings which were destroyed. It seems necessary to research the lack of skilled workers in construction projects in different parts. In turn, this research concentrates on unskilled labour, and the methods, barriers, and practical solutions of training them. Most of the respondents (69.9%) were in private companies. In contrast, 17.3% were in governmental companies, 1.9% in semi-governmental companies, and the rest (3.8%) in other areas. In addition, most of them (43.6%) were contractor companies, 23.6% were developers, 20% were consultants, and 12.7% were the project management companies. Consequently, most of the companies in this survey are private and contractor companies. In addition, the occupations of the respondents were 36.2% supervisors, 5.2% counsellors, 22.4% project managers, and 13.8% company managers. Other responsibilities (22.4%) make up a large group of the respondents, as they did not mention their responsibilities. The results show that most of the respondents in this survey are supervisors who are directly related with construction workers. Therefore, their responses and ideas have a momentous effect on this survey and confirming the credibility of the results of the study. During the survey, the respondents were asked about their programs for training the labour (Hodgson., 2005). The findings show that the percentage frequencies of the companies training programs were: 26.5% of the companies had specific training courses and programs for their labour, and 73.5% declared that there were no specific training courses or programs in this regard. According to the declaration of respondents, the most important company training programs were professional short-time courses on the site, sending some of the labour to construction industries training centres, and providing supervisors to train some of the labour during the construction. According to Bryde., 2005, some of the fundamental problems and barriers in order to have integrated training programs for the staff and workers are as follows: high expenses of construction training courses, financial problems, short-term contracts of the workers, large number and various types of construction learning points, low level of labour education, lack of incentive among the workers for training, inadequate relations between the contractor or client and the labour, little attention from the client on the importance of skilled labour in projects, and time-consuming. Some of the crucial problems of the workers are low level of education, low income, lack of motivation, and family struggles. These barriers play an important role in inhibiting their training and learning. Most of the respondents believed that more than one of these items affected the training of labour. It shows 26.8% of the respondents believed that the low level of education of the labour force is the most important barrier to train them. Also, low income by 25%, no motivation (21.4%), and family struggles (17%) were the other important barriers according to the respondents' views (Belout & Gauvreau., 2004). In addition, some of the respondents mentioned other problems and barriers in training labour such as low culture, inadequate obligation to train labour on the government's part, and low control by the government ones the use of skilled or unskilled labour in projects. Unfortunately, the incomes of the workers are low and most of them have populous families with high Regarding Table 3, nearly 53% of the respondents stated that they faced a lack of skilled labour in their projects while less than 12% did not face the problem. This statistic shows that the construction projects in Mashhad do not have enough skilled labour.

#### **5. Limitations and future research**

The current study has some limitations that offer an agenda for future research. As the research has been confined to quantitative techniques, a large-scale follow-up survey would be useful to find out which of the identified training and motivation methods have the proposed connection with construction workers. A range of training and motivation methods in HRM practices have been revealed that play a role, but which methods are most relevant is not yet clear. It seems unlikely that all practices can be treated as atomistic ingredients that have an additive enhancing effect on idea generation and/or application on the quality of construction. It is necessary to say that, the questionnaire was limited to supervisors, counsellors, project managers, and company managers, as a source of

relevant respondents. Although, some respondents elaborated their experiences as an employee or construction worker, additional questionnaires and/or interviews with subordinates may provide a more comprehensive picture of relevant training and motivation methods in HRM practices. Thus, future research should also try to address how companies and governments adapt to and even shape the environmental and organisational settings in such a way that the context optimally stimulates workers motivation and participation in training courses and the corresponding effects on increasing the quality of construction.

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# Professional education in contemporary Brazilian society: public policies and pronatec cup program analysis

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## Abstract

This research is result of contemporary public policies's analisis implemented under the Brazilian society, related to vocational education, conducted of the current educational context in Brazil by surveying projects that provide vocational education, highlighting the initiative at the Program “Pronatec Cup”, which aims to train workers to meet the needs of skilled manpower for the FIFA World Cup Brazil 2014. The methodology used is the critical analysis of theoretical frameworks that address the topic of this research, discussing possibilities of contribution or not of this program to improve the living conditions and stay in the labor market for their participants.

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### **Introduction and methodology**

In the context of Education and Work thematic discussions in contemporary society we can see the intention to provide that education fulfills its role in preparing learners for access to the labor market and social life.

In Brazilian society this statement can be confirmed by analyzing the legislation designating the guidelines for national education as postulated the Law of Guidelines and Bases of National Education ( LDB ), Law No. 9.394/96, which points in your article first, second paragraph, that education should be linked to the world of work and social practice.

The same law also shows that education should be provided on the basis, among other principles, the linkage between education, work and social practices, as put in his third article.

The law points, still, in your second article, that education aims at the full development of the learner, your preparation for the citizenship's exercise and his qualifications for the job .Thus, one sees clearly the intention to provide, through education, training covering the world of work in contemporary society and to develop in accordance with the changing demands of today's society, marked by broad processes of change intensified by globalization.

In Brazil, education systems, as LDB, article twenty one, are composed of basic education whose purpose, according to article twenty-second, is to develop the learner, ensuring you the common training for citizenship and provide you ways to progress at work and in later studies and is formed by preschool, elementary and secondary education and for higher education.

The same law also provides for the delivery of vocational and technological education in initial and continuous forms or professional qualification, vocational technical high school education and technical vocational education undergraduate and graduate, as his thirty-ninth article, second paragraph.

Therefore, it is concluded that the Brazilian goal is to provide education linked to the scope of work at different levels and types of education providing the formation related with the context of the current society without, however, fail to provide a general education, oriented to the integral development of the students and their education for citizenship as well as providing, at different levels and types of education, his preparation for the continuation of studies.

Thus, it is understood that the formation focused on the human development of the individuals should be the objective of educational practices taking these a critical and emancipatory nature with a view to preparing learners to participate in social life and for the effective exercise of their citizenship, as the law postulates.

Many vocational education initiatives of governments Federal, State and Municipal Brazilian are being developed with a view to offering professional training courses articulated or not with the regular basic education.

Among these initiatives, the PRONATEC - National Program for Access to Technical Education and Employment, was created on 26 October 2011 by Law No. 12.513/2011 and has as main objective to expand and democratize the provision of professional education courses and Technology (EPT) for the Brazilian population.

As a result, among other things, of events that will occur in the country such as the Olympic Games and Paralympics Games Rio 2016 and the 2014 FIFA World Cup, the labor market of the tourism sector in the country is in growth and expansion and, that's why, a branch of PRONATEC project was proposed, that is the PRONATEC COPA program, whose main objective is to provide professional training to Brazilian workers to prepare Brazil for large events that will happen in the country by offering professional education courses, related or not with the Brazil's basic education, consolidating as educational provision provided by the public power for youth and adults , from 18 years.

Faced with such a proposal, which specifically addresses a technical and focused training for the labor market of the tourism sector in Brazil, arises to concern over the breadth of the training offered in view of to have its focus specifically on training for the world of work.

Therefore, the present research was developed to understand how the program " PRONATEC Cup " has been consolidated in accordance with the guidelines of the Brazilian educational policy , which, as postulated in the above legislation , indicates that education , in its diverse forms , must involve , Apart from training to work , the development of the individuals and their education for citizenship , including the various dimensions that make up human wholeness as psychic , intellectual , physical, etc., or if it is a compromised proposal only with the economic interests of preparation of manpower in accordance with the interests of Brazilian capitalist society and the needs imposed by the context of the labor market in Brazil today.

From these questions was developed a qualitative research, bibliographic and documental to analyzing the proposal PRONATEC Cup program based on educational legislation presented here and based too on theoretical frameworks that served as a basis for understanding the issues studied here and that will be presented in sequence.

### **The PRONATEC Cup program**

The COPA PRONATEC Program - National Program for Access to Technical Education and Employment - FIFA, as indicated in its proposal is developed through partnership held between the Ministries of Tourism and Education in Brazil and It aims to provide the workers formation to attend with quality and competence the Brazil visitors and strengthening the country's image as an international tourist destination as is presented in their home page.

For this, the program provides job training for people already working in tourism or intends to become professional work in this area and it is a branch of PRONATEC Program - National Program for Access to Technical Education and Employment.

The PRONATEC Cup offers 44 courses such as tourism, hospitality and leisure, tourist information agent, attendant diner, kitchen assistant, "barista", bartender, maid in lodging facilities, butler, cook, industrial, waiter, baker's helper, auxiliary confectionery, messenger amid hosting, wedding planner and master of ceremonies, event organizer, receptionist at lodging facilities, receptionist events, sommelier, sushi man, conductor of adventure tourism, English, Spanish and others.

The course duration is approximately four months and are offered by the following educational institutions like federal and state public schools for vocational education or others created to meet the demands of the courses.

Participation in the course is free and participants receive student aid, food and transport, however, the participant must be over eighteen years of age and reside in one of the 120 cities included in the program, like the twelve cities hosting World Cup, other cities around for the world cup, destinations displayed in the FIFA's catalog for foreign operators and destinations consolidated as international touristic destinations, among others.

The program was also developed in the form of "Pronatec Cup in Company" for the qualification of professionals in the tourism sector in the companies directly, where lessons can happen in the workplace, also counting as 44 vocational courses related to tourism sector.

### **Results: analysis of the proposal**

It was comprised, through analysis of the proposed program, that the PRONATEC Cup is geared to the training of Brazilian workers for various professions that do not require a high degree of complexity and provide entry into the labor market in jobs that require little qualification and therefore offer lower wages and lower conditions of employment and stability. The PNAD (National Household Sample Survey) data indicate that there has been an average annual increase of 173 thousand employed in tourism per year from 1995 to 2001, equivalent to a growth of 3.5% per year. Also, according to the Annual Survey of Economic Situation of Tourism, published by the Ministry of Tourism, it was found that the largest eighty businesses in the tourism sector in Brazil had revenues of U.S. \$ 57.6 billion and employed 115,000 workers in 2012 and the sector, compared to 2011, increased 13.1%.

However, as pointed out in a study about the labor market in the tourism sector, also based on PNAD, it was found that more than 75% of the jobs generated in the broad tourism in the period occurred in the non-formal market. So, we can conclude that the prospect of the government to generate more and better jobs in tourism can be considered disappointing, because, despite the improvement of the educational profile of formal employees in tourism, the occupations were created, mainly, in the non-formal sector and were accompanied by a stronger deterioration revenues as pointed by Arias, Barbosa and Zamboni (2003).

Moreover, as pointed out by IPEA, in 2006, 59 % of existing jobs in tourism were informal.

Thus, it was found that there is a predominance of informal employment in the sector that does not ensure effective conditions of employment for participants of courses of this nature.

Regarding the formation offered to participants, it is observed that this is a governmental program aimed at training and that, according to the characteristics of the courses offered, is specifically focused on technical training. Therefore, other aspects considered essential to the formation of the individuals in its entirety, are not considered in this type of proposal that allows participants to develop just one aspect related to their education (education for work) consolidating itself into a political focused on qualification of manpower related to the interests of the Brazilian economic environment that imposes such demand today.

So, it is conceived here, as postulated by educational legislation of Brazilian society, that the object of education mustn't reside only in the formation of labor as a mechanism for adapting these individuals to the economic setting. However, Silva (2011) sown that the work organization at school has been strongly marked by an instrumental logic that establishes, in schooling, the privilege of his technique and conservative dimension that overlaps the emancipatory dimension of educational phenomenon. For her, the school would be able to perform in individual potential for differentiation and has emphasized the aspect of adaptation of individuals to society, ignoring processes that could go beyond this adaptation.

Adorno (1995) points to the existence of a crisis in the cultural formation where the education distance themselves from their nodal objectives, that should enable the domain of the knowledge and the capacity for reflection, oriented to social transformations wished by the working classes, providing only a "semi-formation" of the individuals who can't realize themselves completely, contemplating just an inherent aspect of the training process.

As Dale (1988) the education's role was historically consisted to ensure the inclusion of individuals in the social relations of production like "consumers" and promote a social environment conducive to the accumulation of capital through the inculcation of habits and values related to Capitalism's dictates and conform of the moment Historical lived, just as it was found that the program in question develops, as a government initiative that brings the duality inside itself, fulfilling your goal momentarily while form for a labor market in expansion, as occurs with the tourism sector at a time when major international events will occur in the country and contributing to the insertion of the participants in this sector, however, the program restrict the universe of formation for the working classes and It reinforce their exclusion ensuring them only access to elementary and temporary functions and with little prestige and development conditions .

This is a program that has a direct link to meet the demands of the labor market, with an implied terminally without providing effective possibilities of continuing studies and, therefore, the education provided in this program is questionable, because it can consolidate itself as an educational approach with an immediate end and not like a formation that includes the full development of its participants.

This initiative don't have curriculum contents focused in a education for critical and constant reflection about the society in which they operate and citizenship formation, so, the program direct itself more to the work than provide individual's humanizing and then to be committed with the society transformation and the transformation of the conditions of its participants, as we believe that could be helpful towards increasing the possibilities and conditions of this program participants.

Proposals are related more to life and the conditions of existence possible only through work and that the result of their work with practical action in the world.

Moreover, at the end of these great events that will employ the great mass of workers formed, there is no guarantee that the labor market in the sector will be able to continue employing the professionals and effectively to continue in increasing expansion, as indicated in the indicators of the area, because is precisely because of these great events, among other things, that the tourism is increasing in Brazil.

In this perspective, the program provides an alienating education as a commodity of capitalist society , reinforcing exclusion processes when It "sell" the false illusion of ensuring through this type of education an uncertain employment .Thus, it is seeking to implement mechanisms to promote training in the various levels and types of education that more than just prepare for the job market towards an adjustment of the working classes to the productive sector, also fosters a general training, critical and humanistic nature and constitutes , thus effectively in an educational proposal committed not only to the productive sector which is back, but with the subjects who participate in such programs.

### **Final consideration**

When considering these educational public policies developed in Brazil as the PRONATEC Cup program here in analysis, it appears that the education of many students is developed like mere instrumental in obtaining work in a utilitarian logic related to emptying of collective projects with a importance for the individuals, such as pointed Silva and Trajber (2011), consolidating the basis of an uncritical and pragmatic adaptation for the production system.

Thus, as say Segnini (2000), the qualification for the work has your contribution reduced when it focus only on the technical and market-oriented training of work. So, It has a pragmatic-mercantile nature and is not sufficient to provide effective improvement of the condition social of the individuals and can even, ultimately, contributing to the intensification and legitimation economic inequality.

Provide the integral formation, according to the National Curriculum Guidelines, presented in Resolution CEB / CNE No. 02 / 98, Section III, Art.3, is to provide the formation of the human being in its entirety and shall to recognize that learning is constituted in the interaction of the knowledge processes as a result of the relationships between the different aspects of the identities of the individuals from the schooled context, the different life experiences of students, teachers and other participants in the school environment and must be expressed through various forms of dialogue that should contribute to the education for a positive, persistent, autonomous and cooperative actions related to knowledge and values essential to citizen life.

It is, therefore, necessary to contemplate the multiplicity of aspects inherent to human development, providing your personal and professional development so that their inclusion in social life occurs broadly and access to the labor market may consolidate itself as a dynamic process and possible, consequence of a broad and well-

articulated educational process and not as its sole purpose, as we consider necessary that the educational proposals are developed in a way compromised with possible changes in the society in which we live.

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## Promoting healthy living in childhood: an action research

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### Abstract

The process of adapting to new technologies and urbanization causes changes in children's lives, increasing morbidities. The study objective was to promote healthy living for children from a Unit of Primary Health in Fortaleza, Brazil. This is an action research. Thirteen medical students participated in the implementation of health education workshops. The meetings were held fortnightly, with theme: Healthy Eating, Childhood Obesity, Habits of Health, Oral Health, Physical exercises, prevention of drug abuse, Violence and Accident Prevention in traffic. It was observed changes in children's behavior and lifestyle.

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*Keywords:* Health Promotion; Health education; Child health; Public health.

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### Introduction

The Brazilian society is undergoing a time of change in lifestyle, mainly due to adaptation to new technologies and urbanization. Children suffer the worst consequences of these changes, which often lead to irreversible consequences in adulthood. This situation, however, causes changes in the profile of diseases affecting the population, from the stage where there is high prevalence of contagious diseases to a greater presence of non contagious diseases and injuries, such as hypertension and obesity, although both problems still coexist (Schramm, 2004).

In this context, it is noteworthy that health education and practice of health promotion in order to monitor these changes with the encouragement of healthy habits. This practice should be adopted in all countries because it stimulates the sharing of knowledge in the search for solutions to the problems that affect people. In this sense, it is clear how preventive actions are more advantageous than the "healing" actions, both from an economic standpoint as from an assistance one (Costa and Silva, Diniz, 2008). Thus, to promote healthy habits in childhood, some topics have been addressed in this study, such as healthy eating, childhood obesity, oral health, childhood accidents, hygiene, drug abuse, road rage and physical activity. The topics listed should be addressed in primary health care and childcare starting in adolescence.

### Literature review

The new epidemiological profile interferes with the daily lives of children, as it is common today easily having access to processed foods and spending too much time watching television or at the computer than playing in the street, because of the lack of security (Mello, 2004). This can be prevented mainly through a

healthy diet since the earliest years of life, a factor that contributes to maintaining these habits into adulthood (MALTA, 2010), showing the importance of awareness of the problems that can occur early, it is increasingly apparent replacement of the main meals of the day for snacks and treats (VARGAS, 2011).

Childhood obesity therefore constitutes a major public health problem (WHO, 2000). It affects about 15% of Portuguese children and is a difficult issue for parents and teachers. By joining genetic predisposition, a high calorie diet and lack of exercise are creating the conditions for obesity being installed (AMA, 2003).

The World Health Organization (WHO) describes other aspects of healthy habits and recognizes the importance of hygiene, to consider it as one of the factors that influences the health of the community. However, it states that a community can be considered healthy when the occurrence of diseases are low, when members of the community have access to basic services, when health services respond to their needs and where the community lives in a reasonable state of harmony. That way, you can maintain proper hygiene, capable of maintaining a stable state of health during physical and mental development of the child (BRAZIL, 2006).

Accidents in childhood and adolescence currently constitute a major public health problem in Brazil, especially in those over five years old. These accidents usually bring a high public cost to a nation and pain to families, being considered the first cause of mortality in children (AMARAL, 2007; ALMEIDA, 2013).

Drug use is an ancient and universal practice. In the 60s, however, this practice was a global concern, as it became common and put many people in danger (TAVARES, 2001). In Brazil, this problem is part of adolescence, and sometimes of some children who die mainly in the suburbs of large cities due to a greater contact with drugs since childhood. It is noteworthy that in addition to the many health problems, the use of illicit drugs greatly increases school dropout rates, often due to social interaction. Thus, it is essential an alert from both school and family with these behavioral changes.

From the standpoint of public health and preventive medicine, promote physical activity in childhood and adolescence means establishing a solid basis for reducing the prevalence of physical inactivity and these diseases in adulthood, thus contributing to a better quality of life. Furthermore, sport has great importance, promoting companionship, team activity and placing the child in situations of challenges where you can win or lose. (LAZOLLI, 1998).

In this context, we carried out a health education intervention in a community with underprivileged children, whose goal was to promote healthy living for children of a Unit of Primary Health Fortaleza-CE, Brazil.

## **Methodology**

This is an account of an action research conducted in the Baptist Church Candeias, social facilities of a unit of primary health care. Participated in the implementation of health education workshops thirteen academics, the horizontal module II and III activity, entitled: Integration, Service, Education and Community, contemplated in the grid of the medical course of Christus University Center. The meetings were held fortnightly, with theme: Healthy Eating, Childhood Obesity, Habits of Health, Oral Health, Physical exercises, prevention of drug use, Accident Prevention and Traffic Safety.

In each workshop a pre-test and post-test was applied, with the aim of identifying the knowledge and learning of children.

The activity was carried out with 25 children participating in the social project "Fly Space" sponsored by the Baptist Church Candeias, Fortaleza / Ceará / Brazil, in the period of January through June of 2014.

## **Development Workshops for Health Education**

The activity on diet was based on assessing the feeding preference of the children and then presenting healthy foods to discuss the correct intake. We used a questionnaire to verify the eating habits of children, a video informing the balanced amount of food intake, emphasizing the healthiest and then was made an educational playful game. The children were divided into groups. The game consisted of a "giant chessboard", designed with pictures of foods of different nutritional values, children were considered parts of the game, as they walked on the board, each group played the "giant given" and, according to the number obtained, the child jumped squares on the board. If the child stopped in a place filled with high calorie foods, they received warnings and information about food, if they stopped in nutritious foods earned bonus. Moreover, at a certain point of the game, each child chose a path to follow: the right, with figures of healthy foods, or left with bad eating habits, but the only path that led the child to win the game was the right, indicating a balanced diet.

The Oral Health workshop was addressed through a puppet show in which the characters grew bad oral hygiene habits, which triggered a series of negative consequences such as gingivitis, cavities and bacterial plaque. At the end of the story, it was made a debate about the problem, where children showed a very similar reality to that depicted in the play. Trying to reverse this situation, a workshop on oral health, where the children were instructed on the proper way to brush your teeth through an educational music and a lecture given by the students was developed. Furthermore, the workshop found by means of a dental arch, so as brushing must occur. Then were given a hygiene kit with which they practiced proper brushing, as the guidelines they had received.

The choice of the theme Childhood Obesity and the receipts was based on a previous diagnosis of high consumption of soft drinks and processed sweets, obtained through dietary surveys. To perform the activity, the mothers participating in the project were invited to attend the church, date and time marked. Initially, a lecture was given, which expounded on healthy eating and the importance of family in building good habits in childhood. Initially, a lecture was given, which expounded on healthy eating and the importance of family in building good habits in childhood. Then, two healthy, easy and inexpensive recipes were performed: one natural orange soda flavor and other natural banana ice cream with subsequent tasting and sensory evaluation. The recipes were printed and delivered during the workshop.

The workshop on Prevention of accidents was performed to preventing childhood neurotrauma. It was shown an educational video of the Brazilian Society of Neurosurgery, focused on children, which exposed situations that should be avoided to prevent accidents. Moreover, the organizers of the activity used balloons to demonstrate, through a game, what could happen to children's heads if they did not play safely.

In the workshop on the prevention of drug abuse, images were shown with different situations, in which each child had to paste a smiley face on the images depicting happiness and a sad face on the images they considered sad. In that first moment we discussed the perception of children for each image. Then we performed a play in which was presented the difficulties that the use of drugs requires. The children were divided into pairs, we used a die, in which on each side contained images (figures of alcoholic beverages, cigarettes and families smiling children playing), then according to the image presented, the team would be attached to the foot of each other or not. Then each team had to run a certain distance to complete the test. It was carried out so the children could realize that drug use often make us unable to perform activities efficiently, compared with not using drugs.

## Results

It was found that 12.5% of children were out of school, the socio-demographic and economic context; half of the parents had less than eight years of study, 19% of households were poor and had no formal occupation.

Regarding the post-workshop learning children, it was found: 94% of children recognize the consumption of fruits and vegetables as healthy foods, 88% recognize that soft drinks, sweets, fried foods, sauces and chocolates are harmful to health, 94% understood the need to six daily meals. 91.7% seized the importance of hand washing before and after meals, 100% know the meaning of the colors of traffic signals, 83.4% identify signs of transits, 93.7% know how to prevent accidents and 100% knows the importance of physical activity as a healthy habit.

## Conclusions

People are capable of change and early identification of changing lifestyles and inadequate, its correction may interfere positively in the life of the individual. Through this study it possible to train health promoters, as well as academics with a vision of a humane practice of medicine.

After the workshops, most of the children, seized relevant information to healthy habits, thereby reducing possible damage to health and improving the quality of life for families, because they are multipliers of information within the social context in which they live. It was possible through interventions, teaching healthy practices with a focus on health promotion, and is considered extremely relevant when performed in infancy, because they have a greater impact on the prevention and treatment of health problems and health hazards.

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# Promoting reading literacy

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## Abstract

This research promotes reading comprehension of poetic texts for High School students through the use of Information Technology and Communication (ICT). The gradual and consistent development of the reading comprehension of literary texts can open a door for the love of reading. Such approach to literary texts also fosters the development of meaningful learning through the reading comprehension of poetry. Furthermore, it promotes self-awareness with the use of ICT tools familiar to high school students, as well as given them access to the writing of others.

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*Keywords:* poetry; teaching; ICT; reading comprehension.

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## Promoting Reading Literacy

Literature teachers face serious problems from the time the students start High School: their students usually lack solid skills to approach literary texts. This is often due to poor reading comprehension skills. Such weakness hinders their ability to gain further general knowledge, as well as to acquiring a wider vocabulary, or expressing what they think and feel.

I propose that High School students can acquire meaningful learning through the reading of literary texts. This can help them to improve their general reading skills. Furthermore, through the reading of literature young high school students learn about other ways of life, as well as about different ways of thinking. Such experience can further their personal and intellectual development. For these reasons, it is of major importance that high school students develop solid reading comprehension skills. Such skills promote other mental abilities, such as: logical, analytical, and critical skills that will be helpful in their everyday life and in their future.

Taking into account the above mentioned ideas, the aim of this research was to create a didactic sequential process that would allow students to comprehend gradually and coherently poetic texts. The meaning of love was chosen as the central theme of the texts given, its continuous presence throughout the history of human kind in a variety of literary and art genres. Love can be found in texts from classical myths and folk tales to modern songs, films and videos. It has provided minstrels, poets, writers, and playwrights with material that has been handled in a numberless variety of nuances.

It should be noted that the chosen texts for this sequence are organized in gradual complexity. In the last sessions, the complexity of the lexical level and the use of rhetorical figures increase significantly.

On the other hand, it should be mentioned that the fast development of electronic resources that has taken place in the last decades has produced a dramatic change in the handling of teaching resources at different levels. Younger generations handle a new variety of information and communication resources: internet, emails, twitter, Facebook, and so on. PCs, tablets and mobile phones are part of their everyday life. This explains why in the proposed didactic sequence, some of these appliances are handled as support tools. This includes: videos, music, links, blogs, Power Point presentations, podcasts, and emails. The handling of such appliances in an education environment can strengthen the construction of knowledge in an integrative way and can produce meaningful learning.

The didactic sequence includes six sessions in which the reading of literary texts of gradually ascendant

complexity is evaluated. The proposed reading texts belong to a variety of geographical areas and historical periods, so that the students can experience a wide panorama of literary texts and notice how the same topic is handled in different periods, places and social spheres. The texts included were by the next authors: Anacreont, Luis de Góngora y Argote, Antonio Machado, Nizar Kabbani, Nicanor Parra, Mercedes Villaseñor, Mario Bendedetti, Jaime Sabines, Nicolás Guillén, Efraín Huerta, Pablo Neruda, Luis Cernuda y Pedro Salinas.

Specialized terms such as poetic genre, literary devices and a number of rhetorical figures are included in the sequence, as well as some features of the different aspects of literary texts, including its phonetic, lexical-semantic, and morfosyntactic dimensions.

The sequence was applied to a group of forty five students in a World Literature class at the UNAM's Escuela Nacional Preparatoria, Plantel Núm. 6 "Antonio Caso" [Antonio Caso High School, High School Number 6 of the National Autonomous University of Mexico in Mexico City]. During the first and last sessions two questionnaires (A and B) were applied to evaluate the outcome of the didactic sequence. The questionnaires were focused on finding out whether students enjoyed reading poetry and what kind of literary texts they have already read. The following was found:

- a) During the first session, 47.37% of a total of forty five students indicated that they enjoy reading poetry. At the end of the didactic sequence, this percentage increased 9.77%
- b) At the beginning, 47.37% of the total of students indicated that they have already read three or more poetic texts. At the end of the sequence this amount increased 4.14%.

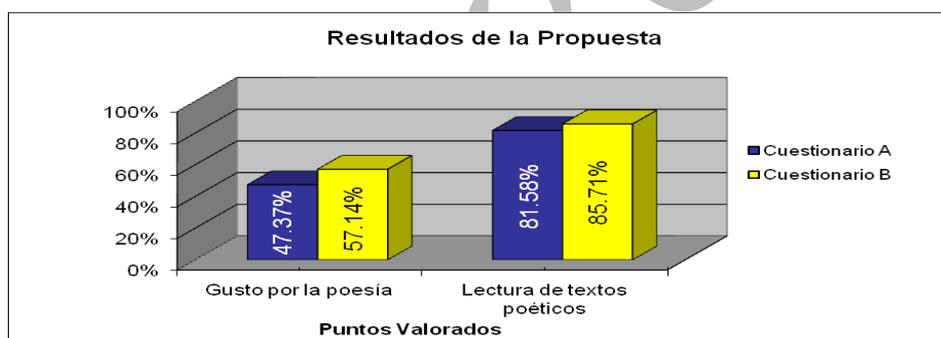


Fig. 1. Outcome of the proposed sequence. Questionnaire A. Questionnaire B.  
Enjoy poetry and experience reading poetry.  
Evaluated points.

The outcome proved that the reading comprehension of poetic texts can be undertaken in class with a didactic sequence which provides guidance at different stages of the reading task. In this way, the reading is divided in different sections or stages to understand the overall meaning and structure of text. It was also confirmed that the ICT are helpful teaching tools that help teachers to show clearly, and in an attractive way, the contents and structure of literary texts to young students. Their handling also proved useful to establish a more direct and easier teacher-student interaction (at distance), which the characteristic shyness of teen-agers usually makes difficult. It was also confirmed that the teaching of one poetic resource requires one whole session in which texts of different authors and periods can be handled.

In terms of the learning of poetic devices, a significant progress from the first to the last sessions of the didactic sequence was shown by the questionnaires:

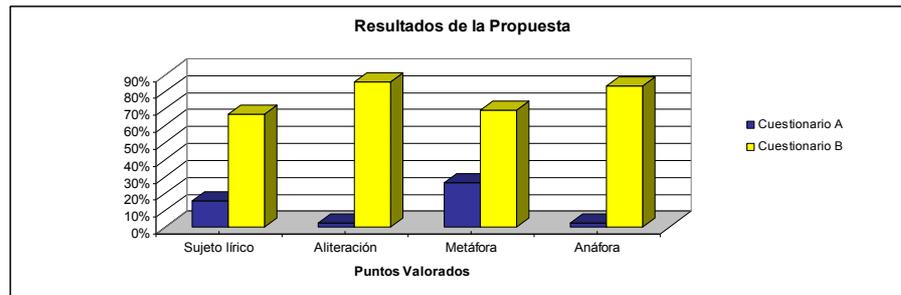


Fig. 2. Outcomes of the proposed sequence. Questionary A. Questionary B.  
Lyric Subject. Alliteration, Metaphore. Anaphore. Evaluated points.

Before the didactic sequence showed that the proposed analysis of each text fostered the student's interest to undertake their own analyses. After the sequence, the students wrote their own texts and included images and videos which they themselves set to music and which were even played live by some of them.

This outcome shows that the ICT are helpful teaching tools in a literature class for young readers. They can improve the students' reading comprehension and stimulate particularly their interest in reading poetic texts.

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## Promoting scientific ideas through the future studies in Tamil language teaching

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### Abstract

Tamil language is one of the main languages in Malaysia. Tamil language is taught as a medium in primary education and a subject in secondary school education. The Tamil language curriculum has developed by the Curriculum Development Center. The Tamil language curriculum is based on listening, speaking, reading and writing skills. In addition to this, constructivism, multiple intelligence, mastery learning, thinking skills and future studies are incorporated in teaching of Tamil language. In order to train the students to face the future challenges and to develop scientific ideas among them, future studies are incorporated in Tamil language teaching. This paper discusses on how future studies are incorporated in teaching to build up scientific thinking.

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*Keywords:* Futurology, Tamil teaching, Basic skill and Receptive skill, Interpreting Skill, Assuming and analyzing skill, Imagination, creative Thinking, Teaching Learning, predicating future

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### 1. Introduction

Tamil is one of the traditional languages, which is a root for other Dravidian languages such as Kannada, Telugu and Malayalam. It is considered as a regional language for southern states of India, especially for the people of Tamilnadu. The Tamil language has its own traditional, cultural, political and social effects. It has rich literature potentials, which are reflected over the lifestyles of Tamil native speaker (Kingston 2003). Tamils are the largest of the language groups that form the Indian minority in Malaysia and Singapore. There are schools with Tamil language as medium of instruction and Tamil language taught as a subject in Malaysia. Tamil language is the medium of instruction upto primary level education whereas it is taught as a subject in secondary schools. As per the educational policy in Malaysia, for Tamil, in the national schools Malay is the medium of elementary education. But if fifteen students request to learn in Tamil or Chinese then these students must be taught with the requested language. This applies even in secondary level of education. The Malaysian constitution provides recognition / guarantees for the use of these languages in the above contexts.

#### 1.1 Futurology Study

Futurology is the study of postulating possible, probable and preferable future and the world views and myths. In general, future studies seek to understand what is likely to continue, what is likely to change, and what education is. Part of discipline thus seeks a systematic and pattern – based understanding of past and present and to determine the likelihood of future events and trends. Futurology is interdisciplinary field, studying yesterdays' and today's changes and aggregating and analyzing both lay and professional strategies and opinion with respect to tomorrow. It includes analyzing the source, pattern, causes and stability in an attempt to develop foresight and to map possible futures. Around the world, the field is variously referred to as futures studies, strategic foresight, futuristic, futures thinking or future.

#### 1.2 Need of the Futurology Study in Teaching Learning Process

Education futurology is universally conceptualized as the system of predicating future outcomes and demand or requirements in education through an interplay of appropriate technology, relevant data on socio-economic and cultural variables, the practice itself demands a clear anticipation of future requirements which must be predicted now, for actualization in the future. The futurology activities will develop the students in teaching learning process for facing the future challenges.

**2. Features in Futurology**

There are two types of skills in futurology studies viz., Basic skill and Specific skill. Basic skill is further classified into three sub skills and Specific skill into nine sub skills. They are enlisted in the following table:

Basic Skills	Specific Skills
Interpreting Skill	Skill of knowledge about the future Skill of collecting data and analyzing the trends
Skill of interpreting the causes	Assuming and analyzing skill Imagination and creative skill Skill of facing the future worries
Skill to handle the changes	Innovation skills Skill of designing ability Skill of designing the future Skill of facing the future problems

**2.1 Interpreting Skill**

Interpreting is a complex task that combines several abilities beyond language competence in order to enable delivery of an effective professional interpretation in a given setting. Consequently, extreme care must be exercised in hiring interpreters and interpreting duties should be assigned to individuals within their performance level. The future is the portion of the timeline that is still to occur, i.e. the place in space-time where lie all events that still have not occurred in this sense the future is opposed to the past. Therefore, this skill is considered to be essential for the students in order to face challenges in future.

**2.1.1 Skill of Knowledge about the Future**

There is a relationship between Past, future and present. Whatever we are doing today had relationship with past. The future is definitely has relationship with past activities. The activities that are framed today are design for tomorrow. Predicting the future is by no means an easy task, and requires considerable erudition, creativity, wisdom, and insight. This is because the future will certainly not be the same as it is today, and if we use what we see around us today to predict the future we will not add into play components from the past and the future.

**2.1.2 Skill of Collecting the Data and Analyzing the Trends**

To make the students to accomplish this skill, firstly, they should be given knowledge about all theoretical aspects and principles of data collection and analysis. The consequential effects of mastering of theoretical aspects will make the students to acquire the skill practically. It is presumed that the analysis and interpretation is made on the basis of existing knowledge and data. By having this knowledge the student will acquire an ability of interpreting and analyze the future easily.

**2.1.3 Assuming and Analyzing Skill**

In our day to day life whether in school or personal or social, students have to deal with complications. Some situations are easy to handle but some are complex which snatch the peace of mind because our brains get stuck on

how best to handle such state of affair. This is where our analytical skills help us. The prime purpose for the Analysis of any given situation is to get to know the root causes of the issue, to forecast the impact and to plan corrective/preventive actions strategy. So, basically assuming and analyzing skill is to visualize a given situation,

task, project or issue from several angles in order to breakdown it into smaller steps.

## **2.2 Skill of Interpreting the Causes**

Interpretative skills are used to determine the precise meaning and significance of message. In this context, thinking, imagination, understanding, etc. are important. Hence students should have the ability to understand the present situation and to think/imagine what type of changes will occur in the future and what may be the causes. This skill can be elaborated in three subskills such as imagination and creative skills, skill of facing the future worries and innovation skills.

### **2.2.1 Imagination and Creative Skills**

Creative imagination is a thought process which involves divergent and convergent thinking relating to a problem, need, motive, or desire, and a person's creative imagination can be enhanced by context, thinking tools, and culture. This type of thinking is reflective and attentive, and can be negatively influenced by constraints, such as time pressure, a non-supportive environment, improper group dynamics, poor health, and stress. For students to become creative "imagers," teachers should use inquiry-guided group learning to engage students to use higher-order thinking, which will lead them to become more mindful, empathetic, and efficacious. If students practice problem finding, possibility thinking, and theory of mind, as well as problem solving, they will become more open to thinking creatively.

### **2.2.2 Skill of Facing the Future Troubles/Problems**

Most of the students worry about their future. They find very difficult to solve the problem and they think what will happen in the future? This skill will help the students to handle the future problems and creates refreshment among them. Moreover confidence increases and stops the future worries.

### **2.2.3 Innovation skills**

Innovation skill is consciously exploiting new ideas, or new uses for old ideas, to add social or economic value. Innovation skills are practically the types of skills that allow individuals to become innovative in what they do. These are usually a combination of cognitive skills, behavioural skills, functional skills and technical skills.

## **2.3 Skill to Handle the Changes**

Change is constant in education. However the students have to face the same and they must handle the situation successfully. Basically handling the situation is the skill which is part of proficiency of performing effectively in an unwarranted real life situations. This kind of skill may be developed among the students by giving practical activities, creating environment to handle particular situations, etc. By acquiring this, students will have an ability to handle the entire situation using of human resource and other resources.

### **2.3.1 Skill of Designing Ability**

A learned power of doing something competently can be said as ability. The term design has become much more of a science than an art. According to this skill, the students get ability to design their future. Having the knowledge of the features of futurology is the first and foremost step of the skill.

### **2.3.2 Skill of Designing the Future**

Designing is not just about designing a tool. The students who have to be able to elevate beyond the level of currently working at and understand how that effort will integrate in the system in which they are working within is the important part of thinking/designing. So, students should, not only design the present but also the future. Through obtaining the methodology of futurology skill of designing the future can be developed.

### **2.3.3 Skill of Facing Future Changes**

Students will get the skill of facing the future changes when they really know the techniques of

futurology in handling the changes.

### 3. Teaching and Learning Futurology Aspects in Class Room

Future studies had significant gain during the 1990s by developing its basic knowledge as an academic field. Now, after passing a decade of the third millennium, futures studies must define its role through offering a new theoretical base appropriate for an era of “post – normality”. This will involve theory derivation from different fields and theory generation suitable for futuristic activities (Gary 2008). New philosophies and theories should be developed, and related methods should be introduced and applied in futures research activities. Studying alternative futures related to different societal, industrial, organizational and developmental fields requires new theories in futures studies to accomplish foresight missions in an effective manner.

Education towards the future means creating a way of looking at our futures, as well as participating with those who will come after us and with those who are far from us in space. Looking at the future means enlarging our sense of time but also of space; it is participation in time and space. Education towards the future also means teaching how to live in a complex society. Children who are not usually part of the constructed social system better equipped to look at the future as being “out of the system” than children who are part of that system and tend to maintain it because it helps them feel more secure. It is for this reason that it is easier to educate children who do not yet feel part of a given social system.

The idea of the future is one of the central symbols through which human beings have ordered their present and have given meanings to the past. Whilst futures research in the academic sense is a recent pursuit, conjecture, speculation, and exploration of future events have always been prime features of the human condition (McHale, 1978:5). It is important to note, however, that our contemporary way of looking at the future is relatively new in human experience. It dates from the Scientific Revolution (17th century) and the Enlightenment (18<sup>th</sup> century), both of which placed great value on reason and rationality, as typified by the rise of science. Rather than the future being preordained by God or the gods (as had been believed for much of human history) and being something over which we had limited control, the Scientific and Industrial Revolutions reshaped our notion of history as something which could lead to progress, with the future being seen as essentially controllable. For the Victorians in the mid/late 19th century the idea of a materially better future for all seemed a real possibility. However, at the same time, industrialization and urbanization were beginning to break down traditional communities.

#### 3.1 Promoting Scientific Knowledge

Building up language skills even while propagating scientific ideas will be the principle for guiding the implementation of the concept. Children completing school education in Tamil had working knowledge of the language. Basically, it would be a method of providing Tamil language skills to every child, while at the same time scientific concepts would be delivered. We can teach children through Tamil concepts of health and hygiene, rainwater harvesting, environment, physiology, nutrition or food etc. The syllabus and the content of the subject would go up gradually with class. Children’s construction of knowledge can be enhanced through social interactions—that is, by sharing their observations and ideas with each other. Children should be encouraged to work together “in building theories, testing those theories, and then evaluating what worked, what didn’t, and why” (Conezio & French, 2002). To become engaged in scientific thinking, children need access to materials that they can take apart and the tools to assist them in doing so. They need places where they can dig in the dirt and dip water from a pond. They also need magnifying glasses, measuring tools, buckets, and frequent access to the natural world.

#### 4. Implementation of the Skills in the Class Room

All the above discussed skills play equal role in language teaching. Though this is true, imaginative, creative and innovative skills can be developed more through Tamil language teaching (listening-speaking-reading-writing). The scientific ideas can be promoted very easily by the classroom teachers.

The teacher has the right to select examples from the real life. For example: when the computer was invented, it was huge in size because of the vacuum tubes. Due to the advanced of technology the size of the computer decreased and is called in different names like desktop, laptop, notepad, tablet, ipod, etc. Now leave the student to imagine what will be future size and name of the computer. This paves the way of imagination among the students.

In the same way creative skills also can be developed. Creative is quickly generating the ideas while responding to a problem or event. The teacher can put pieces of iron, copper, wires, etc on the floor and instruct the students to create something creative. Students will surely come out different creative things like, robot car, robot servant, etc.

Innovative is the result of putting creativity in practice. For example, there can be a bathing shower with water coming first. Then the water stops for a while by dropping little soap for body wash, little shampoo for hair, again water to clean the foam in the body and finally dry air to remove the wet from the body is possible.

Even in Listening skills of language teaching the scientific ideas can be promoted. To substantiate this lets go through an illustration. Assume that, for the listening skills, a comprehension text related to computer is given and in the questions given later, there can be question related to scientific invention. i.e. How computer can replace the teacher in the future classroom?

## 5. Conclusion

Children are naturally curious about the world and want to find out as much as they can. They want to know what makes the wind blow, how trees grow, why fish have fins, and where turtles go in the winter. But they don't want adults to give them the answers. They want to be the discoverers, the experimenters, and the theory builders. They don't want science to be something that is imparted to them; they want it to be something that they do. They want to be scientists; not just consumers of science. They want to ask their own questions, collect their own data, and arrive at new and wonderful ideas. These "wants" should shape the foundation of an early childhood language curriculum.

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# Prospective teachers' likelihood of performing unethical behaviors in the real and virtual environments

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## Abstract

Individuals act different in virtual environment than real life. The primary purpose of this study is to investigate the prospective teachers' likelihood of performing unethical behaviors in the real and virtual environments. Prospective teachers are surveyed online and their perceptions have been collected for various scenarios. Findings revealed that prospective teachers are more likely to perform unethical behaviors in virtual environment than real life. Results also revealed that men and more internet users regardless of their gender are more likely to perform unethical behaviors in virtual environment than women and less internet users. Future research should investigate the driving forces to perform unethical behaviors in virtual environment.

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*Keywords:* cyberbullying; virtual environment; teacher education

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## 1. Introduction

The amount of information produced by society and dependence on information in daily work is increased every day. Therefore, the society we live in have become increasingly dependent on computers and other communication technologies (Wong, 1995). Stichler and Hauptman (1998) stated that the use of new communication technologies in the life affects individuals' beliefs and actions. Moreover, it is not known exactly how these communication technologies influence society's beliefs and actions. Kabakçı and Odabaşı (2003) claimed that these changes in the society have led to the emergence of new beliefs and values. These means for communication have led to changes of people relationship between each other and their activities doing in their leisure time. It caused the emergence of many new negative habits and behaviors (Ahmed, 2002). Quinn (2005) mentioned that though these new technologies have many benefits for people, they can be used for personal gain by abusing others. In this way, personal information of individual can be accessed or disclosed this information without permission of the owners. Willard (2001) claimed that virtual environment provides less emotional feedback than normal environment so the virtual environment causes persons to remain insensitive to various events or conditions. In addition, the possible effects of the actions done in the virtual environment often are not considered thoroughly. Probably the primary reason is the belief that there is a lack of control that may penalize responsible ones in the virtual environment.

In general, the decision-making process of physical action is affected negatively while someone does not approve it. However, if this action is being performed on the virtual environment using technology and low probability to be observed by someone else, the views of someone on the actions affect the decision making process much less (Woodbury, 2003). The result of the study reveal that 95% of people are against stealing the software in the CD, DVD or similar tools, while one-third of these people do not oppose to be downloaded the same software from the internet illegally (Business Software Alliance, 2004). Likewise, more than half of internet users do not think to download music from the internet on their computers as a theft. Callahan (2004) stated that people usually refer to this way since the penalty of unethical economic benefits is less. According to investigation results, after Recording Industry Association in USA started to sue for illegal downloading and copying, illegal download rates have decreased over the internet (Poole, 2007). People have begun to review

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their actions on virtual environment again and again since the legal regulations were legislated (Madden and Rainie, 2005).

Advanced communication technologies have changed people's perception of ethics and so the decision-making authority. Because of these changes, people have done many unethical things in the virtual environment. The primary purpose of this study is to investigate the prospective teachers' likelihood of performing unethical behaviors in the real and virtual environments. Following research questions have been developed for the study:

- 1- Is there a difference between likelihood of student's performing unethical behaviors in different environments?
- 2- Is there a difference between student's acceptability of performing unethical behaviors in different environments?
- 3- Do gender and internet usage affect likelihood of student's performing unethical behaviors in different environments?
- 4- Do gender and internet usage affect student's acceptability of performing unethical behaviors in different environments?

## **2.Method**

The cross-sectional survey design (Creswell, 2002) is used in the study to investigate the research questions. Cross-sectional survey design is the most preferred form of survey design since the data are collected at one-point in a time.

### *2.1.Subjects*

The subjects for the study consisted of 352 (131male-221female) prospective teachers enrolled in the four-year teaching programs of the education faculties in two universities. Subjects were selected voluntarily from prospective teachers.

### *2.2.Instrument*

The survey developed by Poole (2007) is used in the study to collect the data from participants. The instrument has 22 scenarios. 11 scenarios have technology related items while the other 11 scenarios have non-technology related items. Survey respondents are asked to provide two ratings for each survey items using a five-point scale. The first rating is the likelihood of engaging the activities in each scenario. The second rating is the acceptability of the scenarios. Respondents' answers to each question are converted a number from 1 to 5.

### *2.3.Conducting the survey*

The survey instrument was originally on paper. Online version of the survey was developed to eliminate the potential risk for entering the data for analysis. Voluntarily participation of the undergraduate students studying at the school of education faculties of both universities was asked. Participants accepting to involve the study were completed the survey items. Then the file containing participants' responses were imported to the statistical analysis package (SPSS) for later analysis. All statistical analyses were conducted with a significant level of .05.

## **3.Analysis**

After the data collection phase, Cronbach Alpha coefficients were calculated to observe internal consistency of all scales. A reliability estimate of the likelihood of student's performing unethical behaviors in each environment was found 0.75 (virtual environment) and 0.78 (real environment). Also, reliability estimate of acceptability of performing unethical behaviors in each environment was found 0.77 (virtual environment) and 0.79 (real environment). Afterwards, Shappiro-Wilk normality test conducted to determine variables departure from normality or not. As a result, all variables are found not-normally distributed. Therefore, non-parametric statistics were used to analyze the data. The Wilcoxon Signed Rank Test was used to compare paired comparison of likelihood of student's performing unethical behaviors and acceptability of performing these unethical behaviors in virtual and real environments. Furthermore, the Mann-Whitney U-test was used to compare gender effect, also, the Kruskal Wallis H-test was used to compare internet and computer usage effect on likelihood of student's performing unethical behaviors and acceptability of performing unethical behaviors in

virtual and real environments. In addition, the Jonckheere terpstra test was used to establish whether there is a significant trend in student responses.

#### 4. Findings

Descriptive statistics and normality evaluations for likelihood of student's performing unethical behaviors and acceptability of performing unethical behaviors in different environments are shown in Table 1.

Table-1. Descriptive statistics and normality evaluations of variables

Scale	Environment	M	Sd	Skewness	Kurtosis	P*
Likelihood of student's performing unethical behaviors	Virtual	17.99	4.87	0.78	0.70	0.00**
	Real	15.99	3.86	1.34	3.00	0.00**
Acceptability of performing unethical behaviors	Virtual	17.52	4.95	0.91	1.17	0.00**
	Real	15.68	3.98	1.41	3.32	0.00**

\* Shapiro-Wilk test

\*\*  $p < 0,05$

##### *Likelihood of student's performing unethical behaviors*

The first research question investigated the whether there is a difference between likelihood of student's performing unethical behaviors in different environments. Median values of likelihood of student performing unethical behaviors in virtual environments and in real environments were 18.0 and 15.0, respectively. It is apparent from Table-2 that likelihood of student's performing unethical behaviors in virtual environments is more than in real environment,  $Z = -11.643$ ,  $p < 0.00$ . Further analysis indicated that likelihood of student's performing unethical behaviors in virtual environment has 241 median rank score greater than in real environment.

##### *Acceptability of performing unethical behaviors*

The second research question investigated the whether there is a difference between student's acceptability of performing unethical behaviors in different environments. Median values of acceptability of performing unethical behaviors in virtual and real environments were 17.0 and 15.0, separately. The acceptability of performing unethical behaviors in virtual environments is more than in real environment,  $Z = -10.680$ ,  $p < 0.00$ . Results indicated that acceptability of performing these unethical behaviors in virtual environments has 229 median ranks score greater than in real environments.

Table-2. The comparison of likelihood and acceptability of performing unethical behaviors

	N	Virtual		Real		Z	P
		Mean of Negative Ranks	N	Mean of Positive Ranks	N		
Likelihood of student's performing unethical behaviors	241	170.92	64	85.52	64	-11.643	0.00*
Acceptability of performing unethical behaviors	229	160.36	63	96.11	63	-10.680	0.00*

Consequently, both students' likelihood and acceptability of performing unethical behaviors in virtual and real environment differ from each other. Students' actions were greater than their beliefs on performing unethical behaviors in both virtual and real environments.

##### *Gender and internet usage rate effects on likelihood of student's performing unethical behaviors*

The third research question investigated whether the gender and internet usage affect likelihood of student's performing unethical behaviors in different environments. Results are shown in Table-3.

Table-3. Comparison of the likelihood of student's performing unethical behaviors for gender and internet usage rate

Independent Variables	Categories	N	Likelihood of student's performing unethical behaviors			
			Virtual		Real	
			Mean Rank	p	Mean Rank	p
Gender	Male	131	197.99	0.00*	190.01	0.054
	Female	221	163.78		168.49	
Internet Usage	<2 hour	99	149.48	0.01*	153.54	0.02*
	2-4	104	180.17		184.86	
	4-6	52	199.44		200.85	
	6-8	47	168.85		155.63	
	8-10	23	210.65		192.76	
	> 10	27	201.46		204.11	

\* P&lt;0.05

*Gender effect in virtual environment*

Results indicated that difference between male and female responses was significantly different from each other in virtual environments. Meanwhile, the likelihood of student's performing unethical behaviors in virtual environments is greater for male than female, with a mean rank of man's score 197.99, for woman 163.78,  $U=-3.057$ ,  $p=.002$ ,  $r=.50$ . Consequently, males were more likely to perform unethical behaviors in virtual environments than female partners.

*Internet usage effect in virtual environment*

The result indicated that internet using rate is decisive factor in determining students' likelihood of performing unethical behaviors in virtual environments  $\chi^2(5, N=352) = 14.320$ ,  $p=0.01$ . Students using 8 hours or more internet in a week were more likely to perform unethical behaviors in virtual environments. Further analysis showed that there was a significant trend in student responses concerning the likelihood of student's performing unethical behaviors in virtual environment ( $J=27427$ ,  $z=2.944$ ,  $p=0.002$ ,  $r=0.15$ ). Another possible explanation is that students who had high level of using internet perform more unethical behaviors in virtual environments.

*Gender effect in real environment*

Findings indicated that likelihood of student's performing unethical behaviors in real environments did not differ by gender preferences,  $U=-1.927$ ,  $p=0,054$ . Additionally, mean rank of man score is 190.91 and woman score is 168.49.

*Internet usage effect in real environment*

There was significant difference in the likelihood of students' performing unethical behaviors in real environments,  $\chi^2(5, N=352) = 13.411$ ,  $p=0.02$ . Finding indicated that likelihood of student's performing unethical behaviors in real environments was greater for 4-6 hours and 10 hours and more using internet in a week as per the other categories. More detailed results show that there was a significant trend in student responses concerning the likelihood of student's performing unethical behaviors in real environment ( $J=26565$ ,  $z=2.143$ ,  $p=0.032$ ,  $r=0.11$ ). Students who had high level of using internet perform more unethical behaviors in real environments.

*Gender and internet usage rate effects on acceptability of performing unethical behaviors*

The fourth research question investigated whether the gender and internet usage affect student's acceptability of performing unethical behaviors in different environments. Results are shown in Table-4.

Table-4. Comparison of the acceptability of performing unethical behaviors for gender and internet usage rate

Acceptability of performing unethical behaviors in different environments	
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Independent Variables	Categories	N	Virtual		Real	
			Mean Rank	P	Mean Rank	P
Gender	Male	131	189.16	0.071	183.76	0.301
	Female	221	168.99		172.2	
Internet Usage	<2 hour	99	152.12	0.074	163.79	0.484
	2-4	104	178.13		180.01	
	4-6	52	190.33		185.76	
	6-8	47	182.03		165.27	
	8-10	23	206.43		198.87	
	> 10	27	197.85		192.24	

#### *Gender effect in virtual environment*

There was no significant difference in students' acceptability of performing unethical behaviors between the male and female responses,  $U=-1.803$ ,  $p=0.07$ . Depending on this result, gender had no impact on students' acceptability of performing unethical behaviors in different environments.

#### *Internet usage effect in virtual environment*

The result indicated that there was no significant difference between the internet usage rate on students' acceptability of performing unethical behaviors in virtual environments,  $\chi^2(5, N=352) = 10.044$ ,  $p=0.07$ . According to this result, students' beliefs did not differ by internet usage time in a week.

#### *Gender effect in real environment*

Findings indicated that the difference between male and female responses was not significantly different from each other in real environments,  $U=-1.035$ ,  $p=0.30$ . Consequently, gender was not affected students' acceptability of performing unethical behaviors in real environments.

#### *Internet usage effect in real environment*

It is apparent from findings that there was no significant difference in the acceptability of performing unethical behaviors in real environments between the internet usage rate levels,  $\chi^2(5, N=352) = 4.472$ ,  $p=0.48$ . The amount of weekly internet use had no impact on the acceptability of performing unethical behaviors in real environments.

### **5. Discussion and Conclusion**

Virtual environments have become part of individuals' life in the last decade. Tools, which are available at virtual environments, provide numerous options for individuals primarily for communication and entertainment. Identical to the real world, individuals can do behaviors that are unethical in virtual environments. According to Joinson (2005), the main reason for such behaviors in a virtual environment is related to the use of the internet, which enables users to lie and cheat. Likewise, findings of this study revealed that individuals are more likely to perform unethical behaviors in virtual environments than in real environments even for prospective teachers. As prospective teachers' internet usage rate increases, the tendency toward performing unethical behaviors also increases. Therefore, excessive use of the internet may cause undesired behaviors (Cotten, 2008). Therefore, special cautions need to be taken to diminish this possibility for the teachers of young generations. Future studies are needed to investigate the possible reasons for the likelihood and acceptability of performing unethical behaviors in virtual environments.

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**Prospects for the future of education. Training  
teachers to think beyond**

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## **Abstract**

The teacher training process includes the technology, the teaching of school subjects and pedagogical-political commitment, as well as knowledge of different aspects of life. School education for future generations requires the “teacher in training” to rethink their own school education: reflecting on their memories of childhood and adolescence and deepening their awareness of their social role when they were students, as well as thinking about their future practice as teachers, with the goal to build their own professional identity. The research project to be presented is based on written reconstruction of the life history of teachers in training in Brazil, as well as group exercises to rethink their school life, writing and reading of individual and collective texts, resulting in reconstruction of their older memories in relation to their school education. The themes that suggest new fields for learning are: rebuilding their old memories and their relationship with early childhood education; with basic education and secondary education; recognition of their role as subjects participating in their own process of teaching/learning; rethinking negative and positive experiences in rebuilding their memory as well as the reconstruction of the figure of teachers with whom they lived.

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*Keywords:* Training teachers; school life memories

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We bring to this seminar results of a project to build an autobiography that was developed with 400 students from the degree in pedagogy from the Federal University of Alagoas (UFAL), located in Alagoas State in Brazil, between the years 2006 and 2011, at “Teaching Profession” discipline. The main objective was to rescue memories of school life in basic education of pedagogues and educators in their training and analyze their results collectively, in the sense of recovery process and reframe their own memories (Tardif, 2002; Freitas, 2000). We present in this text the importance to recover and rebuild their memory as an element to build a “teacher identity”, presenting some of the results.

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## **1. Autobiography of Teachers in training**

Education needs nowadays, to create profound bonds with our new civilizational codes. Following the emergence of new languages and technologies that are being created in our current century, the new generations needs to develop a sense of judgment that involves a new complex network of social construction of rationality, feelings, desires and expectations.

We cannot forget that we, teachers, professionals in general, teachers in training, we are all beings of the past century and the past millennium, and we - as it is common in human history - have difficulties of communication and interaction with the younger generations, with generations of intellectuals who are just starting their school lives and that are and will be our companions in this experience of education in the future.

Redeeming what has been learned with Paulo Freire and Antonio Gramsci (Freire, 1987, 1989, 1996; Gramsci, 1977, 1979), we emphasize the need to recognize that we are all intellectuals in our relationships with society and with the world around us, whose transformations are also responsibility of humanity. We all build knowledges about the world and about our societies, however, we don't think about the consequences of our actions enough. Only some of us socially exert the function of intellectuals, as in the case of basic education teachers and higher education.

The teacher, in particular, have to recognize in their students - children, youth or adults - human beings with a particular knowledge of the world, also recognizing themselves as creators of new knowledge. The act of teaching permanently requires special attention to the students' knowledge with the rescue of their experiences and the renewal of their ways of knowing the world.

If, until the 70s and mid-80s, Brazil had the experience of teaching science, math and language with traditional and technicist characteristics; the end of military dictatorship in Brazil and the process of democratic

transition had allowed the access to science and culture around the world, who long had been denied us. If the technology transfer process was intense in Brazil between the years 70 and 80, also occurred in a very restricted way, centering on multinational corporations headquartered in our country, helping to train workers by the companies themselves, not incorporating these new values in the curriculum of national education.

While an elite group of engineers, chemists, physicists, architects, had access to new technologies, the majority of the population, since that time, stays away from the technological achievements of our world. For example, today we still have difficulties in deploying in Brazil small digital inclusion programs in schools, not to mention the difficulties with the indices of learning in basic education (MELO, 2004).

Recover the teaching under new forms, and capitalizing on the advances in legislation on the content of teaching / learning school means recognizing both changes in our development and the needs of creating new scientific and technological knowledge, as recognize the new creative ways that the late twentieth century and early twenty-first century presents us.

If, in the peripheral countries, we live up the adverse effects of the restriction of technology transfer agreements 90s, today we have new requirements for the development, involving new types of explanation of the world, society, the nature of our language and ourselves. The recovering and reframe of our memories and our school life can be a valuable element in building our future (Freitas, 2000; Nóvoa, 1995; Stephanou, 2005).

We cannot forget that since the ancient Egyptians and the ancient Greece, the great systems of explanation of the universe are also efforts to understand the human being.

What are the epistemological and methodological requirements of our new century, which restricts access to knowledge to the majority of the global population? As the study of science and language should be experienced in basic education, what is the teacher's role in this social mediation, trampled on our world inequalities and social exclusion? As our school experience contributes to the construction of our existence? How is the training of the pedagogue, what's your profile and professional identity? These are questions that we did in this project, seeking to answer questions individually and together.

## 2. Training teachers to think about the future

In 2006, the Federal University of Alagoas held yet another step in the reform of undergraduate , forwarding results of a process that lasted more than two years and involved the participation of all undergraduate courses - administrators, faculty, staff and students , as well how different sectors of the senior management of the institution, especially the Dean of Undergraduate. All these actors made efforts to reform their courses, with a view to their suitability to the law of the National System of Higher Education Assessment ( SINAES ) ( BRAZIL, 2004) and national curricular guidelines for undergraduate each course. Considering the great demand for teachers in all areas of knowledge networks in the public education of Alagoas, the choice of degree besides being an attractive career option on the question of future work, it was always assumed to be a social responsibility both for their own courses as university.

At the core of the reforms and changes that have happened at the time, were collectively rethought for subsequent approval and recognition by the MEC of new projects and courses, to meet the legal information as to the workload on the integration of theoretical concepts and practical actions, the Forum of undergraduate/UFAL, which included the list of subjects that should form the curriculum framework for all undergraduate programs , respecting political , theoretical and methodological choices made by each of them. According to collective bargaining, one of the disciplines that has become part of all political- pedagogical projects of undergraduate discipline was titled "Profissão Docente", which had the menu: "The historical constitution of teaching. The nature of teachers' work. Teaching work and gender relations. The autonomy of teaching. The proletarianization of teaching. Role of the State and the teaching profession. The training of teachers and political action in Brazil. The school as locus of teaching. Teaching profession and law" (UFAL, 2006).

The subject was also cited as a lead in the approximation of undergraduates from various areas to the subjects of their future professions, as well as cause a differentiation of courses that also offer the baccalaureate mode since the beginning of the courses. That discipline seemed to put into relevance in the process of graduation, the needs of the professors and its relation to education knowledge, especially with the public school as well as provide an overview of the possibilities of their work as teachers at the school environment. Thus , as one of the teachers responsible for the course, I had the opportunity to follow their implementation at the UFAL, starting with the degree course in Pedagogy in 2005 and gradually to the others courses, relating to the construction of the identity of teachers in training.

Investigate the profile and identity of the teacher teaching in basic education in Brazil, yesterday, today and tomorrow, became part of the training of teachers themselves. The UFAL's Education Centre, like many other

institutions, was also part of the national's discussions that preceded the enactment of the National Curriculum Guidelines for Pedagogy, 2005 (BRAZIL, 2009b), who consider special and valuable way, in this professional training, the relationship with their experience and professional practice.

### 3. Our memory from school

The issues raised by this study area of education, "teacher training", has been expanding, deepening and diversifying at the last 20 years in Brazil - and in the world - in such a complex way that it is monitoring the multiplicity of complex issues and different types of research that present themselves at the global, national and local area scenario.

The growth of graduate programs in education in Brazil, also multiplied the educational researchers, revealing problems arising from our concrete experiences (Andrew, 2001; Gatti, 2002, 2005). The systematization and dissemination of these experiences form the basis of studies of the area. The teaching in pedagogy in Brazil, the classroom, texts, models, labs and experiences and, of course, issues involving teachers from different areas, they become objects of research and reflection (Nóvoa, 1995; Stephanou, 2005; Pepper, 1999).

"What is being a teacher, what is to become a teacher?" Are issues that permeate all areas of educational research in Brazil today, and are becoming increasingly essential in the training of undergraduates. How to start thinking about teaching in basic education today? What references one student in their first semester can begin to reflect? Our proposal for the project was to start by reflecting about ourselves, our schooling experience, the redemption of our memories and feelings about our school life, trying to overcome what many researches in the area tell us: that we repeat attitudes and behaviours related to the teaching / learning process that we experience in the not too distant past.

Think about yourself is a concept that underpins the concept of what is "human being", from the historical moments of the foundation of Western thought. The phrase "know you", appears in our lives as an epithet inherited from Ancient Greece, particularly of Plato's Academy, and survived in our school life, travelling over two thousand and five hundred years in history. The concept of self-knowledge brings forth in our experiences a deep need to reflect on various aspects of our lives, our past, our present and reflect on all that we want for our future and the future of our education, for our society, for all humanity. Which is the work that we can develop as teachers and how we can contribute to the social construction of the future?

### 4. Proposals for the future of education

The exercise proposed to cause an initial reflection on the discipline of "Profissão Docente" in classes the first semester of the Pedagogy, was initially reading and discussion of text on memory and training of teachers and proposed the theme "my school life" to written essay, with the collective orientation that any recollection of anytime of school life of each was chosen, all related to the action of "being a teacher". One exercise, although simple, requiring of all participants an initial rethink their entire school career, at least about eleven years of schooling. After the effort of choosing the topic, occurred in each class three to four sessions of readings and commentary on all written texts. It is interesting to note that the size of the texts ranged from one to six pages, which raised revelation of the most diverse emotions. The following is a summary of the contents gathering reports of recurring themes in those texts.

#### 4.1. Reconstruction of our earliest memories and our relationship with early childhood education and primary education.

Most of the texts reported facts of their lives about early childhood education, usually memories of experiences occurring between five and six years, sometimes the early years of elementary school, usually between seven and eleven. It's more or less the age group of people with whom / the pedagogues / teachers work (although today it is increasing the number of professionals involved in the education of youth and adults); those essays and memoirs were always loaded with intense feelings. It seems that those who had the opportunity to enter school earlier carry in their memories sweet memories of affection toward their teachers and the experience of school socialization, at a time when learning seemed to merge with a deep character of playfulness, playfully, of game to be played daily with a community that was the classroom. They were also reports that show personalities being built: "I enjoyed the playground, I missed my teacher", "I suffered through the exchange of school", "I was wronged and I ended up peeing in my pants", "I enjoyed doing my tasks and show my mom I was studying", "my teacher did not like me and never asked me for nothing", "I was very happy", "I was very sad and even today I remember", "I would never do with anyone else what she made to me".

We work with several reports of racial prejudice in early childhood education, and when we did a similar exercise with the theme "child labour" in a classroom composed of lay teachers in the mostly rural area, we also heard reports that told story enthralled by the students themselves: about housework, cutting cane, collect wood, sell services and sell goods. We also passed a few moments in our training recalling the figures of our teachers (almost all professionals that works at this level of basic education are woman) and trying to think how they were formed.

*4.2. Rebuilding our memories and our relationship with basic education and secondary education.*

What appears in reports of this phase are facts relating to the search for identities, sometimes related to the experiences of adolescent socialization, sometimes related to learning difficulties. The teacher no longer appears as affectionate friend, but as more impersonal and demanding. There are contradictions sometimes in the same story about the teacher's responsibility to what is "taught" - "he knew not teach", "he did not prepare lesson", "he did not charges the exercises and then charged the test" - and the student's responsibility in learning - "I dated a lot that year and so did not study", "I wanted nothing to do with the study", "I do not struggled to learn what he wanted". Also become common in the experiences reported with respect to specific disciplines and developments with learning specific topics.

*4.3. Recognition of our role ( or lack or impediment ) as subjects participating in our process of teaching / learning as well as subject knowledge producers.*

Starting from that principle on which we have already noted that all of us are intellectuals and are being training to pursue intellectual function in our society; we reaffirm that even very young children are thinking about themselves and about the world, expressing this in their school experiences. We are not "blank slates", we are not a screen where the others - the school, the teacher, the parents, the society - may write and paint our identity. There is resistance, there is imagination, there are feelings that precede and are held in tandem with the process of teaching / learning and school can not be ignored by educators. In the texts that we have analyzed, this role is assumed as the subject / actor / author in the teaching / learning process, this self -reflection begins to appear in the reports from pre - adolescence and extends to the end of high school.

*4.4. Rethinking positive and negative experiences, conducting reconstruction of our memory space and school time.*

Even in those limited exercises, with only one or other apparel they choose, from the moment we begin to think systematically about our school life, many memories are being reconstructed and many students reported at the end of the semester that began with such an exercise, that they continued to think about their lives and, in the process, managed to explain to themselves what occurred in certain situations, the decisions they had to make to survive in the school environment, the victorious path to be made in higher education and especially reviewing processes they used to hide themselves.

*4.5. Reconstruction of the figure of teachers with whom we live, recognizing them as people and identifying the historical motivation for their behaviours.*

In small towns in rural areas, children and young people tend to have a more personal image of his teachers. Everyone knows who they are, whether they are married, have children, where they live, with whom they live and many details of their daily life. In larger cities, where the daily relationships are more impersonal, it is not uncommon to hear a teacher of his students: "do you make groceries", "do you rides a motorcycle", "do you go to parties" It's as if the teacher only existed in his professional relationship with the school and its students realize their existence only in this relationship. Recognize our former teachers as being historically situated, with its personal and institutional experiences is also an excellent exercise to begin our reflections on our identity as teachers. In this sense, we were also able to reflect on the issue of training of each, each teacher remembered at school or in higher education, the experience of each one - usually during the military dictatorship, and also at the time of the democratic transition in Brazil - and their working conditions, and acting on their teaching practices.

Anyway, remember, criticize and overcome the negative and positive experiences we go through in our school life could help us build the project our teacher identity and make us think again about complex teaching/learning relationship as well as in personal relationships and with the learning environments in which

we work.

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# Psychometric properties of data gathering tools used in thesis

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## Abstract

Reliability and validity of data gathering tools used in postgraduate theses are crucial to obtain error-free evaluation results and to ensure that the data gathered through these means serve their purpose. This study investigated the presented evidence regarding the reliability and validity of data gathering tools (measurement tools) used in master's and PhD theses. The population of the study undertaken via document review method was composed of a total of 111 theses obtained between the years of 2011-2014 from the Institute of Educational Sciences of a university situated in the Western Black Sea region of Turkey. 93 of these theses were master's theses whereas 18 were PhD theses. Sample of the study was composed of a total of 46 theses open to publication (39 master's theses, 7 PhD theses). Data were analyzed descriptively (% , f). Findings point to the important problems faced during proving process of reliability and validity of data gathering tools used in theses. Suggestions were provided in the light of the findings.

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*Keywords:* Data gathering tools, validity, reliability

## 1. Introduction

Measurement is the process of observing specific properties of individuals or objects through the use of appropriate instruments and expressing the observation results with the help of numbers or symbols (Büyükoztürk et.al., 2013; Tan, 2012; Turgut and Baykul, 2012). Each measurement process includes a characteristic to measure along with a measurement tool to assess the specified feature (Özçelik, 2011). It is necessary for measurement tools to possess specific psychometric properties in order to have close to reality, objective and pertinent measurement results. Reliability and validity are the most important psychometric properties that ought to be included in measurement tools and they cannot be substituted for one another (Güler, 2012; Atılğan, 2013).

Validity is defined as the degree to which the instrument serves its purpose or measures what it is supposed to measure without confusing it with other properties or variables (Baykul, 2010). Various methods have been developed to prove the validity of measurement tools. Face validity, content validity, construct validity, predictive validity, concurrent validity and validity based on expert views are the major methods used. Different validity evidences generate different assumptions. Therefore, more than one validity evidence can be used to validate the assumptions obtained in studies (Crocker and Algina, 1986).

The concept of reliability is the extent of error-free measurement of a specified characteristic by measurement tools (Atılğan, 2013). Stability, consistency and sensitivity levels of measurement tools are considered to be indicators of reliability. In this framework, several methods have been developed to identify reliability levels of measurement tools. Test-retest, parallel forms, split-half, KR-20, KR-21, Cronbach Alpha and Inter-observer agreement are the major methods used. Different evidences for reliability generates different assumptions regarding the stability, consistency and sensitivity levels of the measurement tool. Therefore, more than one reliability evidence can be used to validate the assumptions obtained in studies (Crocker and Algina, 1986).

### 1.1. Purpose of the Study

The main purpose of this study was the investigation of reliability and validity of data gathering tools (measurement tools) used in postgraduate theses. In this framework, the main research areas included whether reliability and validity evidences were presented and which methods were used if evidence was presented. Distribution of data gathering tools based on type and development-adaptation was also investigated.

Answers to the questions provided below were sought in line with the specified purpose:

1. What is the distribution of tools used in theses for data gathering purposes according to type?
2. What is the distribution of tools used in theses for data gathering purposes according to their

development-adaptation?

3. What is the distribution of tools used in theses for data gathering purposes according to presentation of reliability and validity evidences?
4. What is the distribution of tools used in theses for data gathering purposes according to methods used to prove validity?
5. What is the distribution of tools used in theses for data gathering purposes according to methods used to prove reliability?

### 1.2. Significance of the Study

This study is regarded to be significant since it will guide those concerned (researchers, advisors and members of the jury) about the points to be taken into consideration in the context of reliability and validity of data gathering tools in line with the findings obtained in this study.

### 1.3. Limitations of the Study

This study is limited to the analysis of evidence presented in the context of basic psychometric properties (reliability and validity) of data gathering tools used in thesis writing process.

## 2. Method

### 2.1. Design of the Study

The data were obtained via document review in this study which utilized the survey model that identifies the qualitative and quantitative cases regarding the reliability and validity of data gathering tools used in master's and PhD theses. Document review includes the analysis of written materials that consist of information regarding the topics targeted for research. Documents are effective data collection instruments used in qualitative studies (Yıldırım and Şimşek, 2011).

### 2.2. Population and Sample

The population of the study was composed of a total of 111 theses obtained between the years of 2011-2014 from the Institute of Educational Sciences of a university situated in the Western Black Sea region of Turkey. 93 of these theses were master's theses whereas 18 were PhD theses. Sample of the study was composed of a total of 46 theses open to publication (39 master's theses, 7 doctorate theses). Random sampling method was used in sample selection. Department and disciplines related to the theses used in the sample are provided below:

- Department of Educational Sciences: Curriculum and Instruction, Educational Management and Supervision, Measurement and Evaluation, Psychological Counseling and Guidance
- Department of Elementary Education: Mathematics Education, Classroom Teaching, Social Studies Education, Pre-School Education
- Department of Fine and Arts: Music Education
- Department of Special Education: Teaching People with Mental Disabilities
- Department of Turkish Language: Turkish Education
- Department of Foreign Languages: English Education

### 2.3. Data Gathering Tool, Data Collection and Analysis

A survey form was developed by the researchers to collect data regarding the psychometric qualities of reliability and validity for data gathering tools used in the theses included in the sample. Criteria included in the survey form were identified by the researchers after reviewing the literature and taking expert views. Data were collected with this form. In order to ensure reliability of the collected data, 8 master's and 3 PhD theses were examined twice with a 20-day interval and consistency between results were examined. Frequencies and percentages were used in data analyses.

## 3. Findings and Interpretations

### What is the distribution of tools used in theses for data gathering purposes according to type?

Table1. Distribution of Data Gathering Tools According to Type

Type of Tool	f	%
Scale	44	48.35
Test	14	15.38
Questionnaire	12	13.19

Inventory	7	7.70
Interview Form	7	7.70
Form	3	3.30
Observation Form	2	2.19
Scenario	2	2.19
Total	91	100

Examination of data presented in Table 1 shows that the majority of tools used for data gathering purposes in postgraduate theses were scales (48.35%), tests (15.38%) and questionnaires (13.19%). They were followed by inventories (7.70%), interview forms (7.70%), forms (3.30%), observation forms (2.19%) and scenarios (2.19%) respectively.

Total number of data gathering tools used in the 46 theses that were examined was 91. This number shows that more than one data gathering tools were used in some theses. The theses that utilized more than one data gathering tool were the theses that used interview forms, observation forms, scenarios and forms. Findings show that half of the theses that utilized other data gathering tools used only one data gathering tool whereas the other half of the theses used more than one data gathering tools together. Examination of the data presents that questionnaire, scale and inventory terms were used interchangeably in these theses and researchers had difficulty in naming data gathering tools. It was also identified that the same data gathering tool was termed inventory, questionnaire or scale in the same thesis. These findings are important since they show that both the students who wrote the theses and their advisors and also the members of the thesis defense jury had lack of information about the types of data gathering tools or that they did not show the required sensitivity in the process of giving feedback.

#### **What is the distribution of tools used in theses for data gathering purposes according to their development-adaptation?**

Table 2. Distribution of Data Gathering Tools according to their Development-Adaptation

Development-Adaptation	f	%
Developed by the Thesis Author	42	46.16
Developed by Other Researchers	41	45.05
Adapted	8	8.79
Total	91	100

Examination of data presented in Table 2 shows that 46.16% of the tools used in theses to gather data were developed by the theses authors, 45.05% of the tools used in these theses were developed by others and 8.79% of the tools were used through adaptation by the theses authors or others. It may be significant for the originality of the research that approximately half of the tools used for data gathering were developed by the researchers in line with their aims. On the other hand, the fact that approximately half of data gathering tools used in these theses was developed by others may be significant since it shows these theses were implemented on different sample groups in line with the same research goals. Based on these information, it can be stated that developing and adapting data gathering tools is crucial in the process of preparing a thesis. However, it was identified that the process of data gathering tool development and presentation of evidence for validity and reliability were not undertaken in a satisfactory manner as can be seen from the findings of the next research question.

#### **What is the distribution of tools used in theses for data gathering purposes according to presentation of validity and reliability evidences?**

When the data presented in Table 3 are examined as a whole, it was seen that 57.14% and 34.07% of the theses that were investigated did not provide any evidence regarding the validity and reliability of data gathering tools used in these theses respectively. As stated in the introduction part, validity and reliability are among the basic psychometric properties of data gathering tools. Validity provides information about the degree of serving the specified purpose whereas reliability gives information regarding the extent of error-free results obtained via the tool used in data collection. Therefore, proving validity and reliability of data gathering tools with appropriate methods and presenting them are crucial steps in development and adaptation process of data gathering tools. This finding is important since it displays that researchers that develop and adapt tools are inadequate in terms of knowledge, skills and sensitivity in terms of the steps they need to take in the process of data gathering tool development. This finding is crucial since it signifies the fact that research results obtained via data that cannot be proven valid or reliable should be questioned.

One of the fundamental findings regarding the data gathering tools for which reliability and validity evidences are provided is related to the tools developed especially by other researchers. Thesis authors report the evidence provided by the researchers who developed or adapted the tools but they do not study the reliability of data obtained from the sample to whom they implement the tools. This finding is also important to show the need for

validation of research results obtained in these types of theses.

Table 3. Evidence for Validity and Reliability Presented for Data Gathering Tools

		Evidence for Validity	Evidence for Reliability (f)
		(f)	
Scale (44)	Specified	19	32
	Unspecified	25	12
Test (14)	Specified	8	14
	Unspecified	6	0
Questionnaire (12)	Specified	5	6
	Unspecified	7	6
Inventory (7)	Specified	2	4
	Unspecified	5	3
Interview Form (7)	Specified	3	2
	Unspecified	4	5
Observation Form (3)	Specified	2	2
	Unspecified	1	1
Scenario (2)	Specified	0	0
	Unspecified	2	2
Form (2)	Specified	0	0
	Unspecified	2	2
Total (91)	Specified	39 (%42.86)	60 (%65.93)
	Unspecified	52 (%57.14)	31(%34.07)

#### **What is the distribution of tools used in theses for data gathering purposes according to methods used to prove validity?**

As stated in Table 3, out of 46 theses, the number of tools for which evidence of validity was provided was 39 (42.86%) and the number of tools for which no evidence of validity was provided was 52 (57.14%). Examination of data presented in Table 4 shows that a total of 41 evidences for validity were presented for 39 tools. Distribution of methods used for evidencing validity is as follows: 14 (34.1%) content validity, 9 (21.95%) exploratory factor analysis, 9 (21.95%) validity based on expert views, 8 (19.5%) confirmatory factor analysis and 1 (2.45%) validity based on a criterion.

Table 4. Methods Used to Prove Validity of Data Gathering Tools

Validity Methods	f	%
Content Validity	14	34.15
Exploratory Factor Analysis	9	21.95
Validity based on Expert Views	9	21.95
Confirmatory Factor Analysis	8	19.5
Validity based on a Criterion	1	2.45
Total	41	100

Based on literature reviews, content validity is an often used method in proving the validity of tests. Exploratory factor analysis is mostly used in the identification of construct validity for psychological properties aimed to be generally measured through scales. It was seen that confirmatory factor analysis was the most often used validity evidence method during the adaptation process of data collection tools. Researchers mostly preferred observation and interview forms as methods for validity evidence based on expert views.

The finding that evidence for the validity of one data gathering tool was presented whereas no evidence was submitted for the others when more than one data gathering tools were used in the same thesis is one of the findings of the study that can be deemed important.

Presenting evidence for validity based on more than one method is especially desired during the process of data gathering tool development. Findings obtained in this study display that the methods used to prove validity of tools are mostly limited to only one method. In addition to the abundance of data gathering tools for which no evidence of validity was submitted (57.14%), the limitation of validity evidences with only one method may be important to show the inadequacies of the involved parties in terms of knowledge and sensitivity.

#### **What is the distribution of tools used in theses for data gathering purposes according to methods used to prove reliability?**

As stated in Table 3, out of 46 theses, the number of tools for which evidence of reliability was provided was 60 (65.93%) and the number of tools for which no evidence of reliability was provided was 31 (34,07%). Examination of data presented in Table 5 shows that a total of 64 evidences for reliability were presented for 60 tools. Distribution of methods used for evidencing reliability is as follows: 39 (60.94%) Cronbach Alpha, 10 (15.63%) KR-20, 8 (12.5%) inter-rater reliability, 6 (9.37%) test-retest and 1 (1.56%) split halves.

Investigation shows that Cronbach Alpha was used to prove the reliability of scales and KR-20 was used to prove the reliability of tests. Inter-rater reliability was the preferred method to identify the reliability of data obtained from observation and interview forms. Test-retest method was used to validate reliability of data obtained from questionnaires. The finding that evidence for reliability of one data gathering tool was presented whereas no evidence was submitted for the others when more than one data gathering tools were used in the same thesis is frequently seen.

Table 5. Methods Used to Prove Reliability of Data Gathering Tools

Reliability Methods	f	%
Cronbach Alpha	39	60.94
KR-20	10	15.63
Inter-Rater Reliability	8	12.5
Test-Retest	6	9.37
Split Halves	1	1.56
Total	64	100

When thesis authors used a tool developed by others, they reported the evidence of the researcher who developed the original tool. It is also a frequent case that thesis authors did not study the reliability of data obtained from the groups on whom the study implemented.

Proving the reliability of the questionnaires that resemble Likert type scales in format but prepared in a rating system with independent scoring for items with Cronbach Alpha method is one of the problems frequently faced.

All these three findings identified here are among the findings of the study that are deemed significant.

Presenting reliability evidence based on more than one method is a desired case during the development of data gathering tools. The obtained findings show that methods used to prove the reliability of tools are mostly limited to one method. In addition to the abundance of tools for which no evidence of reliability was submitted (34.07%), the limitation of reliability evidences with only one method may be important to show the inadequacies of the involved parties in terms of knowledge and sensitivity.

#### 4. Results and Discussion

Led by scales, main data gathering tools used in these are tests, questionnaires, inventories, interview forms, observation forms, general forms and scenarios. More than one data gathering tools were used together in some of the theses utilized in the study. Therefore, the number of theses that were investigated was 46 whereas the number of tools that were studied was 91. Approximately half of the tools used in these theses was developed by the thesis authors. The other half was composed of tools developed by other researchers. Although comparatively lower in number, the number of tools adapted for use cannot be underestimated.

Thesis authors use the concepts of questionnaires, scales and inventories interchangeably as if they all meant the same thing.

No evidence for validity was observed in more than half of the theses that were investigated and no evidence for reliability was seen in approximately one third of these theses.

Methods used to prove validity of tools were mostly limited to one method. Content validity in tests, exploratory factor analysis in scales, confirmatory factor analysis in adaptations and validity confirmation via expert views were methods that were often used as evidence for validity.

Methods used to prove reliability of tools were mostly limited to one method. Cronbach Alpha, a method to validate reliability, was used to confirm reliability of scales and KR-20 was used to confirm reliability of the tests. The method used to determine reliability of the data obtained from observation and interview forms was inter-rater agreement. Test-Retest was utilized to examine reliability of data obtained through questionnaires.

Findings and results are similar to findings obtained in studies that focused on data gathering tool development processes and various aspects of postgraduate theses (Erkuş, 1999; Kabaca and Erdoğan, 2007; Tavşancıl, 2008; Tavşancıl et. al., 2010; Erkuş, 2010).

Science should be established on valid and reliable data. Research and theses that based on data gathering tools with questionable reliability and validity are far from scientific foundations. Results obtained in this study are rather discouraging in this context. The facts that these theses were prepared under the guidance of advisors and approved by a jury are topics that merit separate discussions

#### 5. Suggestions

Some suggestions based on the findings of this study are provided below:

1. The use of data gathering tools whose validity and reliability are not proven through appropriate methods can be prevented with the help of investigations through institutes,
2. Related institutes can warn advisors regarding the results mentioned in this study and can provide in-service training opportunities about data gathering tools used in theses and the process of data gathering tool development.

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# Qualimetric researches of educational resources: standardizing of light conditions in the light booth

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## Abstract

The work presents a simple solution for the development of universal light booth, providing the conditions for viewing pictures, texts and other samples in accordance with ISO 3664:2009. The booth is designed for use in a qualimetric researches of educational resources which are involve both children and adults. It was tested in practical studies embracing reading and image assessment. The appliance is built of inexpensive and disposable materials.

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*Keywords:* Education; Light; Picture; Qualimetrics; Standard; Text; View

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## Introduction

While spectral, colour and density measurements play important roles in the control of colour reproduction, they cannot replace the human observer for final assessment of the quality of complex images. Colour reflection artwork, photographic prints, images on monitors, and reproductions are commonly evaluated for their image and colour quality, or compared critically with one another for fidelity of colour matching. Paper and other substrates contribute to the colour appearance and controlling the colour of these is equally critical. All this requires a certain viewing conditions, which are described in some international standards, such as ISO 3664 (2009). It's known that the most important feature of light is photometric brightness of a stimulus. As Daly S. (1993) showed, it concerns both the colour assessment and qualimetrics measures. All of that are the different kinds of psychophysical studies.

There is no doubt that the best viewing condition for the visual assessment is that in which the product (stimulus) will be finally seen. Since deficiencies in light sources and viewing conditions, and inconsistencies between colour viewing facilities, can distort the colour appearance of substrates, reproductions and artwork, they are likely to cause miscommunication about colour reproduction and processing. The International Standard (ISO 3664, 2009) provides specifications for illumination and viewing conditions that, when properly implemented, will reduce errors and misunderstandings caused by such deficiencies and inconsistencies. The illumination used to view colour photographic prints, reproductions, and images on monitors needs to provide adequate amounts of radiant power from all parts of the ultraviolet and visible spectrum to avoid distorting their appearance from that observed under commonly used sources of illumination such as daylight. To avoid further miscommunication, all the terms and definitions used in this study are applied in accordance with CIE 17.4 (1987). The reference spectral power distribution specified in ISO 3664 (2009) is CIE Illuminant D50 by CIE 051.2 (1999) which simulate natural daylight quite accurately and has correlated color temperature about 5000 K. Many of the reasons for the selection of illuminant D50 are done in ISO 3664 (2009), as opposed to any other CIE daylight illuminant, are equally applicable today (D55, D65). Spectral power distributions of that illuminants are showed in Fig. 1 Because it is very difficult to produce artificial sources of illumination which closely match the spectral power distribution of daylight, it is important that the tolerances specified within ISO 3664 (2009) provide a compromise between that required for lamp manufacturing purposes and that for consistent viewing.

The chromaticity, which directly defines the colour of the illumination at the viewing surface, is specified as that for illuminant D50 and the tolerance by a circle in the CIE 1976 Uniform Chromaticity Scale (UCS) diagram having a specified radius around that value by ISO 11664-5 (2009). To establish the compliance of the spectral power distribution of the illumination to that of illuminant D50 the methods defined in CIE Publications

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CIE 013.3 (1995) and CIE 051.2 (1999) are both specified. One defines the colour rendering quality of a lamp; the other its ability to correctly predict metamers. Every precise illuminant should have a color rendering index (CRI) assigned. CRI of illuminant for the color assessments shouldn't be less than 90 %.

Computer monitors are often being used to display and view digital images and texts in graphic technology, photography and research assessments. In order to ensure consistency of assessment in this situation it is important that the viewing conditions in which the monitors are placed are reasonably well specified ISO 12646 (2008). The perceived tonal scale and colours of a print or picture on monitor can be significantly influenced by the chromaticity and luminance of other objects and surfaces in the field of view. For this reason, ambient conditions, which may affect the state of visual adaptation, need to be designed to avoid any significant effects on the perception of colour and tone and immediate surround conditions need to be specified also ISO 5-4 (2009). Experience in the industries covered by ISO 3664 (2009) has revealed the need for two levels of illumination; a high level for critical evaluation and comparison, and a lower level for appraising the tone scale of an individual image under illumination levels similar to those under which it will be finally viewed. The appliance describing in this work provides both levels of illumination. The high illumination level on surface is equal to  $2000 \pm 500$  lux, the low level is equal to  $500 \pm 125$  lux.

The aim of this study was to create a cost-effective solution for the development of universal light booth, providing the conditions for viewing pictures, texts and other samples in accordance with ISO 3664:2009, as well as having mobility, durability and illumination variation for different viewing conditions, including prospective studies.

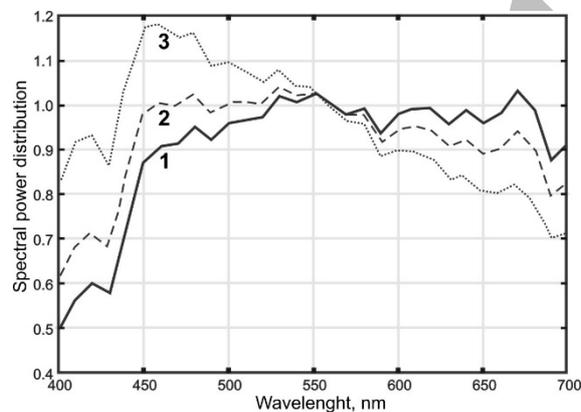


Fig. 1. Spectral power distribution of illuminants CIE D: 1 – D50, 2 – D55, 3 – D65.

### Short review of existing solutions

Nowadays much consideration was given to changing the reference illuminant to be CIE F8, a 5000 K illuminant more typical of fluorescent lamps. However, it was felt that this would provide only a minimal conformance advantage and the actual goal is for the illumination to simulate natural daylight. In spite of it, a lot of light booths and chambers based on fluorescent lamps are currently on the market. Most of them have some disadvantages: flare lights, short lifetime of lamps, high price etc.

In work of Farnand S. et al. (2012) a survey of 13 most common on the market D50 light booths used throughout the print production workflow was conducted. All of them are based on fluorescent lamps. Fluorescent lamps are produced in many different forms. Linear fluorescent lamps, such as those used in viewing booths, are commonly specified as either T12 or T8. Fluorescent lamps operate when low-pressure mercury vapor is energized from an electric current inside of a lamp. The excited mercury vapor emits UV and visible radiation. Phosphors coating the inner walls of the lamp absorb the UV radiation and re-emit it in the visible spectrum. The type of phosphors used, along with the visible mercury emission, determine the spectral power distribution of the light source. The most common color temperatures for T8 lamps are 3500 K and 4100 K. However, the color rendering properties of these lamps can vary greatly. T8 lamps are classified within the industry by their CRI. Those lamps with CRIs between 70 and 79 are classified as RE70 lamps; those with CRIs between 80 and 89 are classified as RE80 lamps, and those with CRIs greater than 90 are classified as RE90 lamps. However, it is also important to remember that fluorescent lamps are often tuned to produce a specific CRI value, which only guarantees proper rendering of the eight CRI samples. The spectral power distributions for all thirteen viewing booths are shown in Fig. 2. CIE illuminants F8 and D50 are shown for comparison.

In Fig. 2 the specific fluorescent peaks in short-wave and middle-wave areas can be seen well. These peaks are not corresponded to the smooth spectrum of CIE D sources. These are the main reason for the relatively low color rendering indexes of all fluorescent lamps. However, they're cheap. Therefore a fluorescent lamps are widely used in light booth's manufacturing.

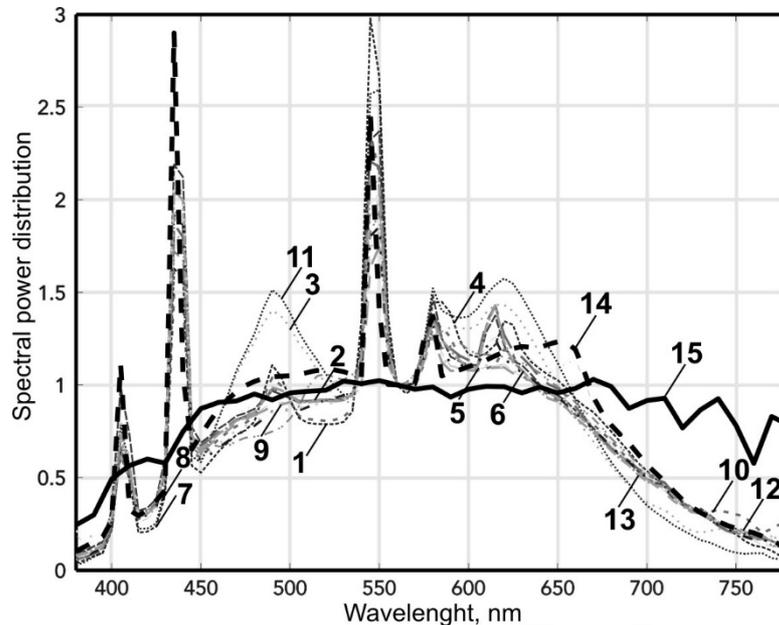


Fig. 2. Spectral power distribution of illuminants in light booths, F8 and D50: 1 – JUST Normlicht Color Control Professional (Customer); 2 – JUST Normlicht Color Control Professional (Pre-Press); 3 – Heidelberg Press Booth (press); 4 – Heidelberg Prinext Press Center; 5 – GTI CVX Color Viewing Station (on-press); 6 – GTI CVX Color Viewing Station (quality); 7 – GTI CVX Color Viewing Station (pre-press); 8 – GTI CVX Color Viewing Station (in-line); 9 – GTI CVX Color Viewing Station (digital); 10 – GTI GraphicLite LiteGuard; 11 – Heidelberg Press Booth (check); 12 – GTI ColorMatcher; 13 – GTI GraphicLite Executive Viewing Station; 14 – F8; 15 – D50 (Farnand et al., 2012).

### Development of the booth and results

Based on the conditions ISO 3664 (2009) and features of modern lamp, it was decided to look for a halogen lamp as light source. It is physically close to the natural sunlight and widely available on the market. Halogen lamps have a maximum brightness with minimum size. As a base illuminator lamp OSRAM Decostar 51 Cool Blue was selected (Osram, 2013). The main features of the lamp are following: long life (4000 hours), low price (about \$10), CCT 4500 K, CRI 95 %, light power 1200 cd, voltage 12 V, wattage 50 W, possible smooth adjustment of the operating voltage. The lamp has a smooth "thermal" spectrum without any extraneous peaks, and without a "hump" in the long wavelength region of the spectrum. Such not typical for the filament lamps colorimetric characteristics are achieved, in particular, by applying an interference filter which attenuates longer wavelengths of halogen spectrum and brings it close to the spectrum of standard CIE D illuminators. The spectral power distribution of Decostar 51 is shown in Fig. 3. CIE illuminants F7 and D50 are shown for comparison.

The preliminary studies have shown that CCT of the lamp does not comply with the standard ISO 3664 (2009) at an operating voltage. Moreover, the lamp provides insufficient lighting. It was decided to use the lamp in the overvoltage mode, whereby it is possible to raise both CCT, and light output. Subsequent experiments showed that even at 15 V the lamp provides CCT about 4800 K, which corresponds to the requirements of ISO 3664 (2009). Moreover, a single lamp is able to provide the illumination of 500 lux on the viewing table, which is sufficient for assessing the low level of illumination.

It was found that the lamp in overvoltage mode is well tolerated. In the experiments a supply voltage rose up to 21 V, the power consumption exceeded 100 W. Since the conditions of such intense lamp's heating, its electrical properties in the circuit are nonlinear. The main electrical characteristics were measured, they are shown in Fig. 4.

It should be noted that the IV-curve of the lamp is almost linear throughout the range of voltages 12-19 V, and electrical parameters remained virtually unchanged for different instances. Using the lamp in the overvoltage mode is interesting primarily because it allows to achieve higher CCT. Behavior of the photometric characteristics and CCT depending on the voltage is shown in Fig. 5. The measurements were performed in a

large dark area away from the surfaces at a distance of one meter from the lamp on its central axis. The spectrophotometer used was X-Rite ColorMunki with Argyll CMS software package. When creating the illuminators, it was considered the fact that the interference filters have a significant dependence of the spectral transmittance of the light flux incidence angle. To reduce the effect of angular CCT decreasing the conical diffuse reflector with an opening angle of 30 angle degrees and a surface with spectral reflectance of 30 % was applied. As experience has shown, this decision proved quite effective.

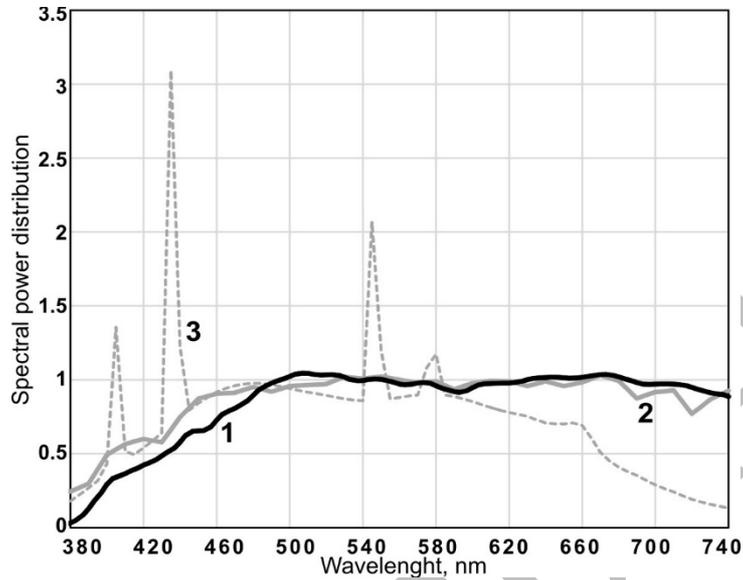


Fig. 3. Spectral power distribution: 1–Decostar 51 Cool Blue lamp, voltage 16.5V; 2– CIE D50; 3– CIE F7.

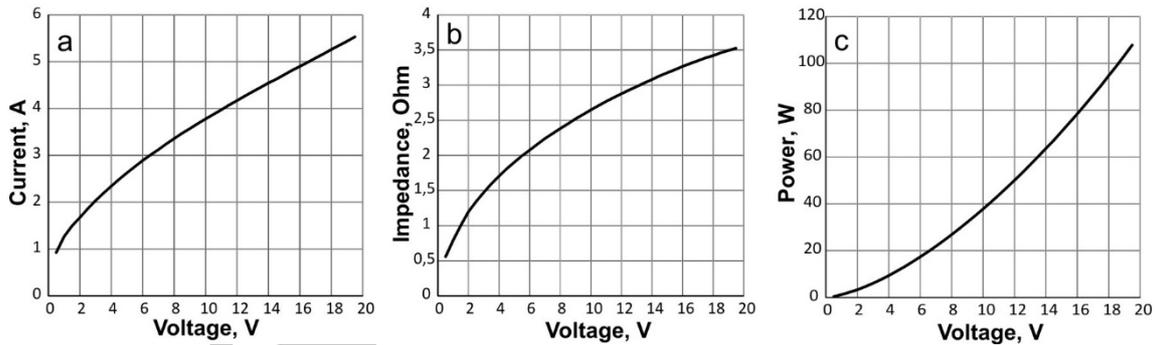


Fig. 4. Electrical characteristics of Decostar 51 Cool Blue lamp over a wide range of voltages: a – IV curve; b – resistance change; c – power consumption.

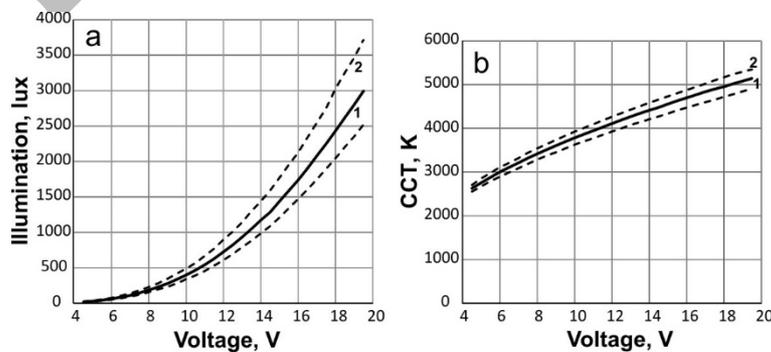


Fig. 5. Dependence on voltage: a – illumination; b – CCT: 1 – mean value, 2 – range of value.

The power supply of the lamps was carried out in two symmetrical electrical wiring where the laboratory

autotransformers with voltage regulation where used. The input alternating voltage 220 V, 50 Hz is fed to terminals of transformers and then after the two step reduction it's applied to the lighting components adjusting in the range of 0-17 V. To facilitate the registration of the power consumption the alternating voltage is rectified by a diode bridge. The lamp voltage was measured by digital multimeters. Schematic diagram of the power supply is shown in Fig. 6.

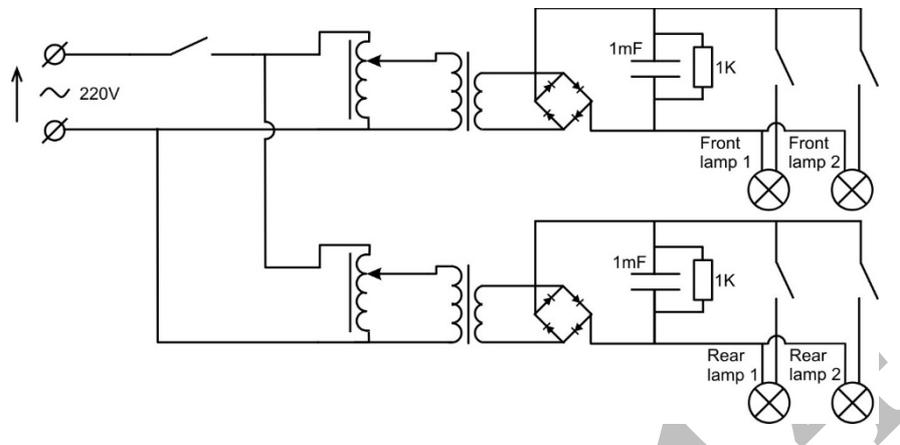


Fig. 6. Schematic diagram of the power supply.

The booth box is made completely isolated from the outside to remove ambient light. The observer located inside the booth within the experiments. It also promotes better luminance and chromatic adaptation of the observer. To unify and facilitate assembly and disassembly the camera frame is made of typical items for metal shelving: perforated racks and shelves. As a light-blocking material the black tarpaulin cloth has been applied. It also provided the possibility of natural ventilation of the inner room. The partition separates the inner room from the external control zone was made from aluminum sheet coated with matt achromatic dye that provides reflectance of about 30%. The illuminators were made of sheet aluminum. For better handling and more uniform illumination the dual lamps were used. To provide background lighting of the inner room the another dual lamp was added. They're located behind the observer and covering the upper part of the booth by dint of a polyethyleneterephthalate film reflector above the observer's table and under the lamps translucent diffusing screen was installed. Thus the light booth was built. Its overall dimensions - 2480×1040×2340 mm. Exterior and interior of the light booth is shown in Fig. 7.

To verify the compliance with parameters specified the series of twenty measurements of lighting on the surface inside were done. After the measurements the mean values were calculated. Measurements were made with a spectrophotometer X-Rite ColorMunki. Data from the spectrophotometer was treated in the Argyll CMS software package. The compliance with the standard spectrum of the source CIE D50 is demonstrated in Fig. 3. The average luminance value on the table was 510 lux. Average CRI was 98.7%. Thus, a universal light booth is fully compliant with ISO 3664 (2009) in terms of lighting conditions for consumer evaluation (low level). Four units of lamps provides about 1800 lux of illumination. It corresponds to the expert assessment (high level) according to ISO 3664 (2009). The shape of the spectrum is not changed. CRI is significantly above 90%.

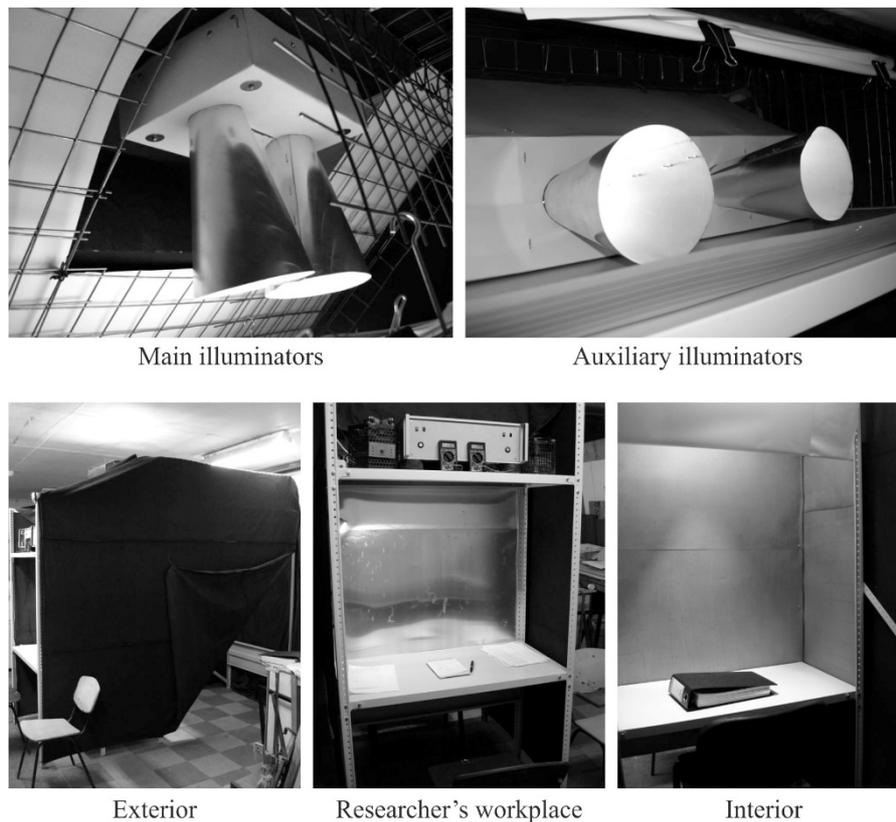


Fig. 7. Universal light booth.

## Conclusion

For the modeling of the standard viewing conditions the isolated universal light booth developed. The testing has shown that it meets the requirements of ISO 3664 (2009). The costs of building were about \$500. Thus, the cost-effective solution for viewing under standardized lighting conditions proposed. This universal light booth was used during the psychophysics and qualimetric studies (Tarasov et al., 2012) at the Department of Printing arts and web design of Ural Federal University, Ekaterinburg, Russia. A new research methodology based on use of this booth developed (Tarasov et al., 2013). The lamps have already worked for more than 100 hours. There is no significant change in light and spectral characteristics noted. The booth developed is recommended to use in all kinds of qualimetric researches.

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# Quality of graduates' preparation for labour market - a ServQual analysis

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## Abstract

Article presents results of ServQual analysis on quality of graduates' preparation for labour market in Poland. Research were carried out among pupils of three types of vocational secondary schools: Basic Vocational Schools, Technical and Vocational Schools and Vocational Secondary Schools for pupils with disabilities. Education – a specific service – can be analysed by ServQual methodology. This approach compliments knowledge about effects of education and gives information of process and its elements. Comparative analysis in different types of schools provided information of strengths and weaknesses of process of graduates' preparation for labour market, useful for schools to develop their activities.

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*Keywords:* ServQual, vocational education, quality of education

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## Introduction

Vocational education is one of important element of educational system. Despite increasing popularity of general education in Poland and aspirations of young people to continue education at university level qualified workers are expected and needed on labour market. Process of vocational education is strongly connected with labour market requirements and needs of employers. There are some studies on evaluation on quality of vocational education conducted among employers. Results of them provide much useful information of qualifications of graduates and efficiency of educational system. (Mulder, 2014; Firlar & Temizyurek, 2010; Pradela, 2013). However the vocational education is a complex process and is not only aimed at preparation to work in particular occupation. Employers provide information of effects of education (final competences, skills). Pupils provide information of process and it's elements in areas of: quality of education, vocational training, vocational advisory, their expectations and needs. In this paper process of quality of graduates' preparation for labour market was analyzed with ServQual method (Parasurman et al., 1985).

Vocational education on secondary school level in Poland covers:

- Basic Vocational Schools where students have to attend 3 years. On completion they have to pass a practical examination in acquired skills to obtain diploma. Vocational training covers 3 days whereas school education – 2 days.
- Four-year Technical and Vocational Secondary Schools offer broader scope of general education and besides of technical diploma, student can take matriculation examination. Vocational training covers 1 month during whole education at this kind of school.
- Basic Vocational Schools and Technical and Vocational Secondary Schools for pupils with disabilities. Vocational education programs and vocational training are individually adjusted to pupil's skills and abilities. Length and organisation of is the same as in vocational schools for pupils' without disabilities, however.
- There are two terms defining pupils with disability and dysfunctions in Poland:
- Disable person, a person having certificate of disability issued by the certified physician (The Act of Rehabilitation and Employment of Disabled People) and
- Pupil with special education need – a certificate of special education need is issued by psychologist of psychological-pedagogical advisory centre, establish in every region (Act of Education, Regulation of

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Ministry of Education).

Most pupils with dysfunctions have both certificates. However there is group of pupils only with certificate of disability, what will be important for being employed as a disable person in future. Those pupils will not receive individual educational programs as they do not belong to the group of pupils with special educational needs. There is the same situation with pupils with certificate of special educational needs – not all of them are disabled.

In Poland system education of pupils with special educational needs is an integrated part of educational system. It is regulated by The Act on Education and specific regulations of Ministry of Education. Students with special educational needs are educated in kindergarten and other forms of pre schooling education, primary schools, lower secondary schools, secondary schools and three year schools adopting for work. It is carried out in “special” and in regular schools with „special”, integrated or regular classes. Special education is organized for those, who are not adjusted for the society and for those who require to use special organization and specific methods of education. They can be educated in all types of schools accordingly to their individual needs of development, needs of education and skills. There are created individual programs, forms and processes of education and revalidation programmers for disabled. Disabled pupils educate in regular schools and classes offering facilities and infrastructure adapted for disabled needs (e.g. lifts, driveways for disabled).

#### **Nomenclature**

BVS	Basic Vocational School
TVS	Technical and Vocational Secondary School
DVS	Basic Vocational Schools and Technical and Vocational Secondary Schools for pupils with disabilities

#### **Literature review**

ServQual methodology, introduced and developed by Parasurman, Zaithaml & Berry (1985), was originally established for evaluation of service quality. The concept is based on five gaps, last gap no 5 concerns differences between expected quality of service and quality of provided service. The final model covers measurement in five dimensions: tangibles, reliability, responsiveness assurance and empathy. ServQual allows to analyze of clients' satisfaction of services in a complex manner, it allows identifying all problems appearing in the process of their provision (Wolniak, Skotnicka-Zasadzien, 2012).

Education is also a specific service, where pupils are the clients. Pupils have their own expectations, requirements and criteria when make decision on continuation the education in particular school. Previous research proofed that ServQual method provides useful information on various aspects of education. Most was carried out at universities (Arambewela & Hall, 2006, Foroughi Abari et al., 2011, Chatterjee et al., 2009, Rogotti, & Pitt 1992; Yeo & Li, 2013; Albu & Ivan, 2012; ect.). Akhlaghi et al. (2012) identified proposals for the development of technical and vocational education in Iran with implementing the ServQual. Lupo (2013) combined ServQual, Fuzzy Set Analysis and Analytic Hierarchy Process to measure quality of higher education in Italy.

#### **Research question and method**

In this article there is discussed research question: What is the level of quality of vocational schools graduates' preparation for labour market?

This study covered the ServQual methodology. Gap no 5 expresses a general client's perception of services and allow defining his/her satisfaction (Wolniak, Skotnicka-Zasadzien, 2012). To measure the quality of this process (identification of Gap 5) the survey was given to the respondents twice: at the beginning of education in the last class – to identify the level of expected quality and at the end of education in last class (after vocational exams) - to identify the level of perceived quality.

The target population consisted of pupils of vocational schools at the secondary level: Basic Vocational Schools (BVS), Technical and Vocational Secondary Schools (TVS) and Vocational Secondary Schools for pupils with disabilities (DVS) in Silesia Region in Poland. The unit of analysis was an individual pupil. I choose 3 school of each type and received 406 usable surveys. The research was carried out between September 2012 and June 2013.

A school education and connected process of preparation of graduated to enter the labour market is a specific service. All important factors necessary to measure were difficult to group into original ServQual dimensions. That is why they were replaced with key areas of graduates' preparation for labour market (Table 2).

Table. 2 The relationships between key areas of graduates' preparation for labour market and the original ServQual dimensions.

		5 key areas of graduates' preparation for labour market				
		infrastructure	activities	efficiency	competences	empathy & individual approach
ServQual dimensions	tangibles					
	reliability					
	responsiveness					
	assurance					
	empathy					

In many aspects they are complementary. Infrastructure covers tangibles. Efficiency of educational process must refer to reliability and responsiveness. Activities means all additional, non-obligatory tasks of school and teachers which have influence on development on education. Competences of teachers are included as well as in assurance and in empathy.

The questionnaire covered 34 statements in 5 areas and was based on 7 point Lickert scale from (1) "I extremely disagree" to the (2) "I extremely agree" (Table 3)

Table 3. Key areas of graduates' preparation for labour market and sub-categories (questions of ServQual questionnaire)

Key areas of graduates' preparation for labour market and sub-categories	Sub-categories
Infrastructure	High level of school equipment (computer labs, multimedia devices)
	Professional and useful website
	Good localisation of school
	Well equipped library
	Well equipped laboratories for vocational education
Activities	Meetings with employers
	Availability of vocational counsellor
	Support of school in vocational training
	School cooperates well with employers (partnership agreement or classes with patronage)
	Organisation of vocational training in cooperation with employers
	Study visits in firms
	The school participates in job fairs / on entrepreneurship days
Availability of workshops of career planning	
Effectiveness	Graduates are good prepared for work
	This is high level school
	Interesting extra-curricular activities
	High quality of vocational training
	Lessons of entrepreneurship are practical
	High quality of workshops with school pedagogue of career planning
High quality of workshops with school vocational counsellor	
High quality of workshops on career planning with experts from outside the school	
Competences	Teachers of vocational education subjects have a great theoretical and practical knowledge

	Teachers of vocational education subjects are very competent - relate to the requirements of the labour market
	Teachers of general education subjects are very competent
	School pedagogue provide comprehensive information on career planning
	Vocational counsellor provides comprehensive information on career planning
	Assistant of vocational training helps in organisation of vocational training
	School supports in development of pupils' interests
	Friendly atmosphere at school
Empathy	Useful individual consultations with school pedagogue
	Useful individual consultations with vocational counsellor
	Helpful teachers, active in solving individual pupils' problems

The level of quality of graduates' preparation for labour market is measured separately in each area by: Difference (Gap 5) and Weighted Gap 5. Gap 5 is the difference of the averages of perceived and expected quality of analysed process. Weighted Gap 5 = Gap 5 x weight of area.

## Results and discussion

The social-demographic profile of respondents who participated in the study is presented in Table 2.

Table 2. Socio-demographic information of respondents

	n	%
<b>BVS</b>		
<i>Gender</i>		
Female	71	53,78
Total of BVS respondents	132	32,51
<b>TVS</b>		
<i>Gender</i>		
Female	41	19,52
Total of TVS respondents	210	51,72
<b>DVS</b>		
<i>Gender</i>		
Female	33	51,56
<i>Disabilities</i>		
Mental disability	25	39,06
Dysfunctions of voice, speech and hearing diseases	11	17,18
Locomotors system disabilities	17	26,56
Eyes diseases	6	9,37
Other illnesses	3	4,68
Total of DVS respondents	64	15,76

Table 3. Assigned importance weights of dimensions

Dimension	Importance weights		
	BVS	TVS	DVS
Infrastructure	13,00	19,00	11,00
Activities	27,00	31,00	14,00

Effectiveness	20,00	31,00	17,00
Competences	29,00	11,00	21,00
Empathy	11,00	8,00	37,00
Total	100,00	100,00	100,00

Table 4. ServQual measures of quality of graduates' preparation for labour market

	BVS			TVS			DVS		
	Gap 5	Weighted Gap 5	SD	Gap 5	Weighted Gap 5	SD	Gap 5	Weighted Gap 5	SD
Infrastructure	-0,71	-0,09	0,67	-0,38	-0,07	0,75	0,75	0,08	0,87
Activities	-0,11	-0,03	0,60	-0,74	-0,23	0,88	2,58	0,80	0,50
Effectiveness	-0,53	-0,11	0,73	0,23	0,07	0,88	1,95	0,33	0,84
Competences	-1,47	-0,43	1,05	-1,87	-0,21	0,98	2,22	0,47	1,06
Empathy	-1,52	-0,17	1,79	-2,42	-0,19	1,82	2,30	0,85	1,83

ServQual analysis provided information of quality of graduates' preparation for labour market. In the area of "Infrastructure" differences between perceived and expected quality are the smallest. In this area BVS and TVS didn't meet pupils needs, but in a small degree. "Infrastructure" was evaluated by DVS pupils slightly in plus. More differences we can observe in area of "Activities", evaluated by BSV slightly in minus, by TVS in minus and by DVS highly in plus. This provides information that pupils with disabilities have much lower expectations for schools. They usually do not have opportunity to choose the school because secondary education for pupils with disability is concentrated in one big centre in the city. Their choices are limited by school offer and their predispositions, abilities and skills. Nevertheless this is very good news for DVS that wide offer of additional activities was so highly evaluated by respondents. "Effectiveness" area was evaluated in plus by TVS and DVS pupils (by disabled pupils much higher). BVS pupils negatively evaluated following sub-categories: "high quality of workshops with school vocational counselor" (Gap 5 of -3,40); "high quality of workshops with school pedagogue of career planning" (-3,00); "lessons of entrepreneurship are practical" (-2,50); "interesting extra-curricular activities" (-1,1). The highest score (2,10) received sub-category of "high level of school". Pupils of TVS the lowest rated "the lessons of entrepreneurship" (-3,00). The highest rates of 3,60 both received categories: "high level of school" and "valuable vocational trainings". DVS pupils positively evaluated all areas, Gap 5 of "interesting extra-curricular activities" was the biggest in plus (2,70). Competences were very positively evaluated only by DVS pupils. BVS pupils slightly positively evaluated competences of teachers. The problems were indicated in the area of vocational counseling. School pedagogue, employed in each school is, among others, responsible for vocational counseling. Her work did not meet expectation of BVS pupils (-4,50). Similar situation is connected with vocational counselors. Either she/he was not employed at school, what was expected, or her/his competences were really poor (-3,50). Competences of schools pedagogue and vocational counselor did not also meet expectations of TVS: -2,90 score for both of them. Another problem is connected with a support of school in organization of vocational training. In regular schools pupils do not receive any help in looking for an employer for vocational training. Before they start education in BVS and TVS they are not informed about it and have different expectations. That's why this sub-category received score -3,00 by BVS pupils and -3,60 by TVS pupils. All sub-categories in area of "Effectiveness" in DVS received positive scores. "Empathy" was very positively evaluated by DVS pupils. BVS and TVS evaluate this category negatively. Individual approach at work with pupils with disabilities is the crucial element of work in special school. Each pupil have different problems, that is why school programmes are adjusted to their needs, skills, abilities.

## Conclusions

The process of graduates' preparation for labour market was evaluated much better by pupils with disabilities than by pupils in regular schools. This comes from lower expectations of pupils with disabilities than others.

Special school organises many additional activities to help pupils to enter the labour market. Also, in every special school is employed vocational counsellor. Moreover in only in DVS assistant of vocational training are very active and help pupils in organisation of vocational training. Without such support they would have big troubles with finding an employer for vocational training, mainly for two reasons: pupils with disability are usually less independent and many employers do not want to cooperate with disabled person. For regular schools the biggest challenge is to develop vocational counselling. It mainly depends on financial support of local government. This is the weakest point of the system. To the opportunities belong cooperation with experts from outside the school, e.g. recruitment offices and non-government organisations.

A ServQual method is a useful method for evaluation of processes of education. When many methods are concentrated on measurement of results, a ServQual method allows to analyse the process and its elements, helps to identify strong and weak points. In further research this methodology can be used to compare quality of education among schools or among pupils of particular occupation.

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