

# ICLEL 2015

## *1<sup>ST</sup> INTERNATIONAL CONFERENCE ON LIFELONG LEARNING AND LEADERSHIP FOR ALL*

October 29<sup>th</sup>-31<sup>st</sup>, 2015  
Palacky University &  
Moravian University College Olomouc  
Olomouc, Czech Republic



### PROCEEDINGS BOOK

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ICLEL 2015  
(1st International Conference on Lifelong Education  
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## ***Editor's Preface***

*Dear ICLEL 2015 participants!*

*After the 1990's, the World has started to change fast because of technological improvements especially internet based. These improvements have changed not only most social systems including educational institutions but also social development and educational perspectives. One of the most striking perspectives related to education: Lifelong Learning.*



*We developed a partnership with Palacky University and Moravian University College Olomouc to create International Conference on Lifelong Education and Leadership for ALL (ICLEL). ICLEL 2015 conference had taken much interest from academicians and researchers. We would like to THANKS all the participants and all the supporter universities from Europe, supporters academic institutions and journals. Moreover, I would like to THANKS all the Keynote Speakers and the organization team as well.*

*Iclel Conferences is not only academic but also social and cultural activity. This richly detailed and considered examination of current thinking in lifelong learning brings together new writing from worldwide experts in the topic, from Czech Republic to the USA, England, China, Croatia, Latvia, Serbia, Slovenia, Taiwan and Turkey etc. to offer a broadranging picture of the position to date.*

*ICLEL 2016 Conference Proceeding Book provides a critical summary of current developments in understanding both lifelong learning and new leadership perspectives in education and in the societal context and leadership in education for all. Across the different contributions and sections of the Conference Proceeding Book covers a wide range of topics related to;*

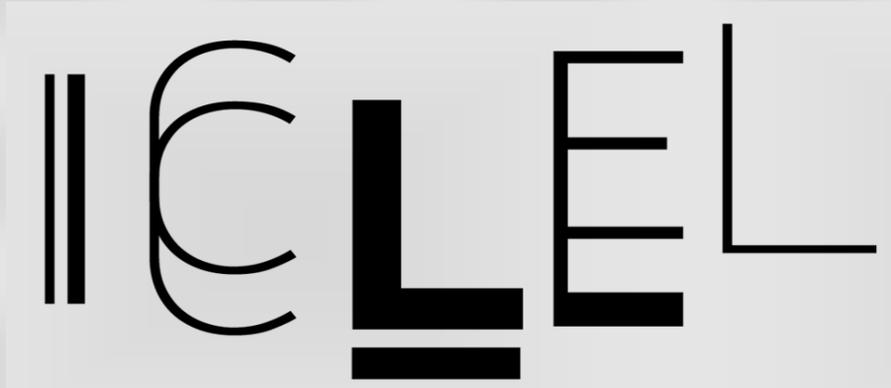
- *Learning is more than a cognitive activity in that it includes an affective dimension as well as contextual influences.*
- *Lifelong learning has implications for the purpose and processes of learning managing systems in educational institutions.*
- *There are subordinate discourses of lifelong learning that need to be aired and can enrich our understanding of what it means.*
- *From a modern perspective, leaders should improve their skills and styles in a lifelong learning perspective to develop society and meet its necessities.*
- *Lifelong learning has a vital affect on society so Lifelong learning can be seen as an antecedent of leadership*

*Lifelong Education is a rising value in the society, education and management systems in all sectors. It affects the way in which societies, educational institutions and leaders improve themselves. Therefore, lifelong education has started to be supported by both European Union and other nationalities in this competitive World.*

*We would like to thank everyone who contributed to the various processes involved in the making of this book.*

***Best Regards***

***Assoc. Prof. Dr. Osman TITREK***  
***Sakarya University- Turkey***  
***otitrek@hotmail.com***  
***Chair of ICLEL Conferences***



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## **Prof. Dr. Philip Stephenson**

### **Faculty of Education - University of Cambridge**



Philip Stephenson is currently a Fellow and Tutor at Homerton College Cambridge and until recently, a Senior Lecturer in the University of Cambridge Faculty of Education. He has enjoyed a diverse career including fifteen years working in UK primary schools as a Teacher, Local Authority Adviser and Headteacher prior to joining the University of Cambridge as a Lecturer and researcher in Education in 1996. Since then he has been involved in Initial Teacher Education and Training with a particular interest in Museum and Gallery Education. He has enjoyed a close association with the Education Departments of the University of Cambridge Museums and in particular, the Fitzwilliam Museum. He has taught science in secondary and middle schools and acted as science co-ordinator in addition to his general teaching duties in primary schools. After a two year LEA secondment as an advisory teacher, he returned to schools first as a deputy and latterly as a head teacher of a Cambridge city primary school. During this time he had some involvement with Homerton College as a teaching

associate working on primary postgraduate courses. In 1996 he joined the full time staff of Homerton College. In addition to the role of lecturer, he also took on associate directorship of SCICentre (National Centre for Primary Science in ITT), a collaborative project with the University of Leicester. This was aimed at improving standards in primary science teacher training through the identification and dissemination of innovative practice across the UK. Over the last five years he has been involved in a series of DfES funded collaborative curriculum development/professional development projects with the Fitzwilliam Museum and associated East of England museums and archives.

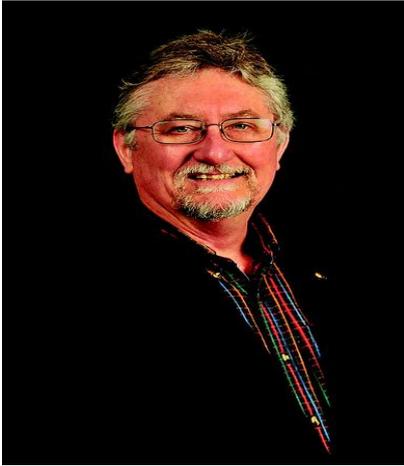
## **Prof. Dr. Michael Searson**

### **Executive Director, School for Global Education and Innovation, Kean University, NJ, USA**



He is past-president of the Society for Information Technology and Teacher Education (SITE). At Kean University, he administers a unique school that focuses on global education, innovative pedagogies, world languages, and cutting-edge learning technologies. Activities include professional development and collaborative partnerships with local, national and international colleagues and organizations, including UNESCO. Between 2006-2009, he was Executive Director, Center for External Education & Development at Kean University. He was Acting Dean, College of Education, Kean University 2005-2006 and Executive Assistant to the President, Kean University 2003-2005. He was Chairperson, Department of Early Childhood Education 2002-2004. In his career, he has authored or co-authored over \$10 million (USD) of grants that mostly focus on innovative integration of technologies into educational settings. He is Professor, Early Childhood Education. Also he was Adjunct Professor, Psychology, Rutgers University 1985 and Adjunct Professor, Computer Science, Kean University 1985-1989.

**Prof. Dr. William W. Cobern**



**Director of The George G. Mallinson Institute for Science Education Biological Sciences and Science Education, Western Michigan University, MI, U.S.A.**

He is director of The Mallinson Institute for Science Education, Distinguished University Professor of Biology & Science Education, Department of Biological Sciences from 2003. He was also Associate Dean for Academic Programs, College of Education at Western Michigan University. Moreover, he was studied Professor of Science Education, Department of Teaching, Learning and Leadership. For the last few years, he focused on cultural and cross-cultural dimensions of education. He also supervised lots of academicians all over the world.

**Prof. Dr. Festus E. Obiakor**



**Head of Department of Early Childhood and Special Education, Dewar College of Education and Human Services, Valdosta State University, GA, U.S.A.**

He is studying about: Using Cases and Personal Narratives in Research and Practice. Culturally and Linguistically Diverse Learners With and Without Exceptionalities (e.g., African American Learners/Urban Learners). Self-Concept Development/Behavior Management of At-Risk Learners. Educational Reform/Program Evaluation. Comparative/International Education. He is also has studied some Spring 1996 to Fall 1996, Emporia State University, Emporia, Kansas, Course # MG 505-PA, "Managing Change in the Workplace" and Course # CI 743-PC, "Turning Diversity into Community."

**Dr. Jiri Kantor**



**Palacky University, Olomouc, CZECH REPUBLIC**

**WORKSHOP Topic: Person, relationships and community in the creative process** Main professional area is the special education of persons with physical and multiple disabilities. Another professional area is the field of expressive therapies and psychotherapy. Main area of research is qualitative. Dissertation was made by using the grounded theory with the combination of quantitative techniques and case studies (the title Educational outputs of students with cerebral palsy in the area of social abilities). Next research activities were focused on the analysis of the relationship development between persons with severe multiple disability and professionals, creating models of personal development processes based on the interactions in students with severe physical and multiple disabilities, description of communication processes between students and teachers and construction of theories for creative functional training in persons with physical and multiple disabilities. Recent publication and teaching activities are connected mainly to somatopedic area (education of students with physical disability and illness).

Professional interest is in the development of this discipline and development of teaching courses for students of special education in the Palacký University in Olomouc during last 5 years.

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# Educational process and its components in the technical education\*

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## Abstract

The article deals with the issues of a process of realisation of the instruction in technical subjects including also the definition of the didactic concept of the technics in relation to the subject of teaching. The issue of the acquisition of terms from the area of technics is a complicated complex of knowledge and skills that is demanding on the thought process. The explanation of the issue of the technics requires a complex approach by the pedagogue, who knows the rules of general didactics, psychology, and educational science; however, he/she should still be also a technician – an expert in the field of technics. Therefore, the gnoseological approach is a substantial feature of the educational process of the technical education.

Keywords: Educational science, didactics, subject didactics, technical education, teacher, process of education

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## 1. INTRODUCTION

At the beginning, it is possible to mention that the area didactics can be understood either in a *narrower* or a *broader* sense. In a *broader sense*, we understand the area didactics as specifics and rules of the group of the related subjects to the given area of study (electrotechnical subjects, mechatronical subjects, etc.). In this sense, we search for an intersection – common elements, laws and rules, strategy of the instruction of the given group of subjects. When talking about the area didactics in a *narrower sense*, we refer it of a particular subject (theory of the electrical network, the electrical machines, etc.). In the following text, we focus on the selected issues of the instruction of the group of specialized technical subjects of the electrotechnical nature. From this perspective, we can speak about the didactics of the specialized technical subjects of the electrotechnical nature as a group area didactics, or as a didactics in a broader sense.

The area didactics are the applied scientific disciplines, which form a fundament in the professional training of the teachers of the area-oriented subjects (Asztalos, O. 2008). They are based not only on the general theory of education and general didactics, but also on a scientific base of the given area. On the contrary, the pedagogical practice relates to the area didactics and the knowledge resulting from them. The bond of the transition and application from the general to the special, and from the special to the concrete is the defining bond for the area didactics, since they research the objective principles of the instruction of the given area. However, it is necessary to add also their subjective character, since they result from the teachers' experience.

## 2. DEFINITION OF THE ELECTROTECHNICAL INSTRUCTION CONCEPT

In the scientific educational literature, we encounter different approaches to define the concept of the didactics at its general level. Skalková, J. (2007) defines the general didactics as a theory of education and instruction, which deals with the issues of the content as well as the process, during which the pupils acquire this content – therefore teaching and learning. Průcha, J. (2006) understands the general didactics as a theory “of the intentional learning and teaching processes, and of the contents and forms of those processes”. It does not matter, where they take place: “whether they are realized in the classroom, during the company course, during the artistes' training, etc.”

The more detailed analysis by Janík, T. (2012) indicates that it is possible to understand the general didactics as a basic pedagogic discipline which strives for a scientific reflection, analysis and the clarification of the processes of teaching and learning at all levels and forms of the education – based on that, it contributes to their improvement.

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The aim of the general didactics is the clarification of the crucial didactic terms. i.a.: education, teaching, learning, etc., and elaborating of the theories connected to the teaching and learning. The didactics (as a professional science for a teacher) pursues also the practical aims. According to Janík, T. (2012), the teacher needs the general didactics in order to connect his/her activity within the instruction with the intersubjectively accepted criteria.

The area and subject didactics together with the general didactics belong are one of the pedagogic disciplines, which describe and clarify the processes of teaching and learning. If we focus the general didactics on the teaching of the subjects, we get from the general level to the specific level, therefore to an area didactics (Uljen, M. 1997).

The area and general didactics (Ouroda, S., Švec, V. 2000), (Janík, T. 2012) deal with the processes of teaching and learning according to their membership to the particular area and their specificity. These disciplines are situated between a specific technical, artistic or other area and the educational sciences. The general term *area/subject didactics* is often substituted by a term expressing the didactics of the particular subject or area of study (didactics of mathematics, didactics of electrotechnics, etc.).

By a term area we designate the particular professional field; in its framework, the specific problems are solved. The relation between the area didactics and the area is a dynamic one – it takes on different expressions, however, it is necessary every time to have the conditions of the pupil's learning and the area quality of the teaching in balance. The area didactics is therefore a science, which mediate the area towards the pupils/students<sup>1</sup> with a help of knowledge from the field of educational science and general didactics, pedagogical and developmental psychology, and other disciplines. Therefore, the area didactics has a nature of an interdisciplinary science (Průcha, J., Walterová, E., Mareš, J. 2003).

The subject didactics deal with the problems of instruction in particular educational subjects and they are generally seen as their methodologies (Průcha, J., Walterová, E., Mareš, J. 2003). The subject didactics directly relate to the corresponding educational subjects – the area didactics are shaped as a relatively autonomous scientific disciplines and their aim is to catch the whole communicative process in a particular area and its corresponding area of education (Brockmeyerová-Fenclová, J., Čapek, V., Kotásek, J. 2000).

Didactics of elektrotechnics is a theory and practice of the teaching and learning of the electrotechnical subjects relating to the education and forming of the knowledge, skills, competences, attitudes and other dispositions. It is a summary of the individual electrotechnics-related subjects' didactics, however, it is not a sum of the didactics and however, it is not a sum of the didactics.

We can divide the didactics of electrotechnics into 2 parts:

- a) The general part dealing with the object of didactics of electrotechnics, the history of the teaching of the electrotechnics and the educational importance of the electrotechnics.
- b) The special part dealing with the content of the electrotechnical subjects and their means, which can facilitate the achievement of the main educational aims of the electrotechnical subjects.

If we describe the didactics of the electrotechnical subjects as a science, we understand the didactics of electrotechnics as an interdisciplinary, independent boundary scientific discipline, which processes didactically the knowledge of the electrotechnics and it integrates them with the knowledge from the social sciences and forms the didactic system of the electrotechnical subjects.

#### Relation of the didactics of electrotechnics to the electrotechnics itself as an object of teaching

The relations between the didactics (methodology) of electrotechnics and the electrotechnical science are very close. Mainly because that the didactic transformation of the subject matter as well as the scientific content are based on the mentioned science. While describing of the relation between the didactics and electrotechnics (from which is the school subject – electrotechnics – derived), it is necessary to realize that the didactics does not research the principles of the specialized science (e.g. physics), but the principles of the electrotechnical education.

#### Relation of the didactics of electrotechnics to the other sciences

For the successful realisation of the instruction, a teacher of the specialized subjects has to have a basic knowledge from a number of scientific disciplines and not only from the electrotechnical subjects. As it was already mentioned, special importances have the following sciences (to name at least some of them): philosophy, psychology, theory of education, general didactics and specialized technical sciences as well as the specialized natural sciences.

As well as the electrotechnics, the didactics of electrotechnics has a close relation to the mathematical and natural scientific disciplines, mainly to the physics. Furthermore, it emphasizes their engineering and technical. Apart from the mentioned scientific disciplines, a few others also play a significant role in the educational process, e.g.:

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<sup>1</sup> Note: however, not the whole content of the area is mediated – only the parts which seems useful from the perspective of teaching and learning are – i.e. the ones contributing to the development of knowledge, skills, competences, attitudes and other pupils' dispositions (either the didactic transformation, or the didactic reconstruction)

- Sociology researching the structure of the class collective, the action in different social situations, the communication and the relationships within the group, etc.
- Logic which provides the base for the analysis of the principles and norms of the right thinking and enabling (according to the laws of logic) the right ordering of the subject matter and the educational process
- Cybernetics – a science about the information and managing processes in the organized systems; it provides a base for the program management of the teaching, for the concept of the teaching machines, etc.
- Statistical mathematics enables the quantitative analysis of the teacher’s methodological work
- etc.

The mentioned and also other scientific disciplines may facilitate the didactics of electrotechnics, and a teacher of the specialized electrotechnical subject has to realize all of these relations and to strive for their reflection in his/her methodological work and educational activity.

### 3. EDUCATIONAL PROCESS IN THE ELECTROTECHNICAL EDUCATION

The electrotechnical education in the high schools’ conditions may include the acquiring process – **learning** – during which the pupils acquire the knowledge, skills and habits, and the **teaching** process, in which the teacher of the electrotechnical subjects educates the pupils.

These processes take place in the electrotechnical education in various forms; the following ones may be understood as the most important:

- 1) individual pupils’ work, individual teacher’s work with the individual pupils (e.g. individual study, consultations) not present in the set of the lessons;
- 2) set of the lessons in the school education in the divided as well as the undivided classes (educated groups), mainly in the specialized classrooms (e.g. devoted for the electrical measurements);
- 3) operating electrotechnical training of the pupils at the workplaces of companies;
- 4) connections with the practice outside of the company practical activity (e.g. in form of educational excursions, exhibitions and trade fairs).

#### The essence and the constituents of the didactic transformation in the electrotechnical education

The individual work of a teacher with the pupils and the teaching of a teacher of the electrotechnical subjects in a set of lessons strives to achieve the aim to transform the knowledge of the electrotechnical theory and practice into the pupils’ knowledge (a process called “didactic transformation”). The concept of the didactic transformation is specific for the Czech didactic environment (Drahovzal, J., Kilián, O., Kohoutek, R. 1997), (Kropáč, J., et al. 2004), in the foreign literature (non-Czech), we encounter more the term ‘didactic reduction’ (Kath, Fritz M. 1981), (Lehner, M. 2012) or a term “didactical reconstructions”, which was introduced by U. Katmann (1997). This principle is based (apart from the orientation to the choice and mediation of the subject matter to the pupils) mainly on the systematic research of the pupils’ ideas of the scientific knowledge, which will, retroactively, reflect in the process of choosing of the educational contents. The research process is based on:

- 1) the research of the pupils’ opinions, ideas, precepts and other existing knowledge, which they have about the concrete subject matter or a school subject;
- 2) the confrontation of these facts with the past and current knowledge of the particular scientific disciplines, which are represented in the curriculum;
- 3) the reconstruction of the current educational contents, which are in accordance with the abovementioned findings as well as the educational aims.

It is obvious from the abovementioned facts that the model of the didactic reconstruction is based mainly on the results of the educational research and based on them, the reconstruction of the school curriculum is taking place. The crucial role here is played by the area didactics. Shulman, Lee. S. (Shulman, Lee. S. 1987) states that the didactic knowledge of the content includes *the most efficient analogies, illustrations, examples, clarifications, verbal demonstrations, ways of representation and formulation of the topic, which makes it understandable for others.*

The teacher’s preparation for the mediation of the subject matter to the pupils is (within a framework of electrotechnical subjects) focused on:

- study, analysis and interpretation of the pedagogical documentation (mainly the syllabi of the electrotechnical subjects);
- textbooks and the teaching aids;
- specification of the educational aims of the subjects as well as the lessons;
- clarification and concretisation of the content of an electrotechnical subject;
- psychological justification of the transformation of the subject matter;

- pedagogical analysis and realisation of the content intended to transformation.

The transformation (or reconstruction<sup>2</sup>) of the subject matter is, from the perspective of the preparation and the presentation by a teacher, a continuous and mainly a constant process. There are some connection between the individual constituents and phases, penetrating each other. The transformation process is for a teacher a very demanding process since it requires not only electrotechnical, but also the pedagogical expertise from him/her.

#### **4. THE APPLICATION OF THE DIDACTIC PRINCIPLES IN THE ELECTROTECHNICAL EDUCATION**

The educational process in the electrotechnical education represents a process, which is not taking place according to the subjective wish and discretion of a teacher. Even a pupil will not be able to acquire the electrotechnical knowledge systematically, if he/she is progressing elementally and passively. The educational process has to be based on the objective principles, which are usually formulated as the didactic principles (Skalková, J. 2007):

- Principle of the active participation of a pupil

The aim of the electrotechnical education is not the memorizing of the electrotechnical facts and the mechanical reeling off the memorized definitions and formulations of the electrotechnical phenomena and processes. It would not be useful for a life, nor for the professional practice. In order to create a high-quality electrotechnical education, a pupil has to make effort to understand the issue. A pupil has to think through the subject matter with an aim to understand the acquired information. The pupil's thinking is managed by the teachers and their logical explanation. The application of the knowledge in the practice motivates the pupils to cognizing of new knowledge and to discovering deeper connections.

- Principle of constancy

The fragmentary, incomplete and superficial knowledge do not allow the workers to fulfil the tasks and functions in practice. The systematic approach is a significant sign of a good technician's work. Mainly the pieces of knowledge, which were acquired as results of a long-term acquirement, are essential for the practical destination of the graduate. For the quality of knowledge, the constancy is typical for the education in some electrotechnical subjects. The constancy in the educational process is reflected mainly in:

- the creating of the pedagogical documentation. The electrotechnical subjects create a system in the curriculum which systemizes the subject matter in the syllabi of every electrotechnical subject;
- the creating of the textbooks and other texts used in the teaching. The subject matter is divided into smaller portions in every textbook, and it is presented in a logical and factual connection to the individual parts of a textbook (chapters, topics);
- the didactic transformation by the inner ordering of the subject matter submitted in every lesson and a set of all the lessons, which constitute the educational process of the electrotechnical subject;
- the systematic work of a pupil as well as the teacher, which leads to well-acquired knowledge and to a feeling of responsibility for the constant working activity at school and in practice.

- Principle of permanency

The active participation of the pupils during the acquiring of the electrotechnical knowledge based on a system approach in the electrotechnical education leads to the permanency of knowledge. The quality electrotechnical knowledge is required by the professional practice, the graduate's practical application, and the rational and effective behaviour of a technician. The acquirement of the electrotechnical knowledge and their application has to be well thought-out and well understood. We have to obey the principle of permanency in these didactic situations:

- we should incorporate the knowledge with a longer-term legitimacy (a larger orientation to more general approaches and principles than to variable facts) – these pieces of knowledge should be acquired more permanently by the pupils;
- we should manage the educational in a way that the pupils should contribute to the cognition and solution of the electrotechnical problems and examples, too;

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<sup>2</sup> TN: As mentioned above, in the Czech Republic, the process is usually named didactic transformation. However, in the German-speaking countries is more common the term didactic reconstruction.

- we should choose the teaching methods in a way that lead to a fixation of the acquired knowledge (the methods of practise have a significant importance in the electrotechnical subjects);
  - practical exercises with the technical devices (measuring in the electrical networks) lead to their systematic application at work.
- Principle of suitability
- We approach each pupil of the electrotechnical education differently according to their age, and type and level of education. The criterion in this case is the graduate destination in different professions with a required qualification by the practise. The adequateness of the educational process in the terms of electrotechnical education is pushed forward in these forms:
- we choose the pieces of knowledge that the pupils are able to understand;
  - we set the quantity of the findings (the depth of the cognition) according to the requirements of the practise on the graduates;
  - we choose adequate teaching methods regarding the pupils and also the nature of the electrotechnical subject (example's solving);
  - we choose the incorporation of the electrotechnical subject into the set (into the grade of study) not only according to the factual connections of the electrotechnical disciplines, but also according to the pupils' maturity (e.g. the electroenergetics<sup>3</sup> is not taught in the lower grades);
  - we order the subject matter rather stepwise (concentrically) than linearly in order to incorporate the basic findings into the first stage which are the pupils able to acquire with understanding. In later stages of teaching, we can demand managing of the more demanding subject matter of the pupils;
  - in the instrzction, we approach the pupils individually according to their abilities, interests and hobbies;
  - in the instruction of the same electrotechnical subject in different classes, we respect the distinctiveness of the classes from the perspective of the relation to the subject and to the abilities of the whole class.
- Principle of illustrativeness
- From the perspective of the pupils' ideas about the essence and progress of the electrotechnical phenomena, the electrotechnical knowledge in the electrotechnical education is not all the same. To illustrate with, the pupils may have a correct idea about some phenomena, some of them are less understandable, and the essence of the others may be very difficult grasp by the pupils. The difficulty is based also on the abstractness of the reflection of some difficult electrotechnical phenomena. It is essential to use the illustrativeness (models, animations) when presenting the subject matter and enabling the pupils to understand the subject matter in the electrotechnical education. These following modifications of illustrativeness may be included in the electrotechnical education:
- demonstration (with a use of the electrotechnical kits);
  - educational excursions and other forms of connection with the practise (exhibitions, internships in companies, teacher training, etc.);
  - visual aids to facilitate the idea's creation (models), expressing of the essence (electrical networks' schematics), representing of the relation between the theoretical findings and the practise (demonstration of the electric motor).

## 5. THE GNOSEOLOGICAL APPROACHES IN THE ELECTROTECHNICAL EDUCATION

The acquiring of the electrotechnical terms and connections between them is one of the aims of the electrotechnical education. Their derivation is difficult not only for the science, but for the pupils as well. The work with the electrotechnical terms is also a difficult issue demanding on the thinking. The teacher's explaining of the issue while using a particular teaching method is based on the thought processes. The gnoseological processes are, therefore, a fundamental feature of the educational process in the electrotechnical education. We count in the basic gnoseological approaches/processes the following ones:

- **analysis** – the disassembling of the electrotechnical phenomenon/item on the individual parts (e.g. when dismantling the electric motor – a rotor, a stator, a cage and a winding) in order to learn their significant

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<sup>3</sup> TN: also known as power engineering

features and elements to determine the relations between them. We analyse not only the real electrotechnical phenomena, but also their depiction in the imagination;

- **synthesis** – assembling of the elements of the real electrotechnical phenomenon/item into a whole, e.g. we create an electrical network from the individual elements. The synthesis, too, is a thought process aiming to reveal the essence and relations, which determine the basis of the electrotechnical phenomenon or the electrotechnical term;
- **abstraction** – the setting aside of the significant attributes and aspects of the electrotechnical phenomenon, process and/or item (alternatively also electrotechnical term) from the matter which is unimportant, insignificant, or unique. Therefore we emphasize the important and typical perspectives for the particular phenomenon and term. The relations and connections between the aspects of the phenomenon and term are put to the front – during the abstraction, we emphasize the aspects which characterize the given phenomenon, process or item;
- **comparison** – comparing of the particular electrotechnical phenomena, processes and items according to certain regards in order to find out, whether there are some difference or identity of them, or not. E.g. we compare different types of rotating electric machines according to the revolution speed characteristics, we found out also the possibility of the application from the perspective of the propulsions;
- **differentiation** – is connected to the comparison. We differentiate the particular electrotechnical phenomena, processes and items when we say that they differ in some significant aspect. E.g. the DC motor differs from the compound engine);
- **generalisation** – a difficult gnoseological process in which we proceed from the finding of the important attributes, aspects, relations and connections of the electrotechnical phenomena, processes and items, which are common for the particular group of phenomena of the same nature and class;
- **genetic approach** – it is taking place in the electrotechnical education while we introduce the origins of the particular phenomenon, process or item the pupils, or how the opinions on the given reality were developing. Through the genetic approach, we explain the knowledge, which is suitable for this type of approach from the perspective of logic;
- **dogmatic approach** – it presumes that the pupils are presented the knowledge about the electrotechnical phenomena, processes and items, which completed their developmental process to the stage of final validity and reality, or when we explain the theoretical rule in way, how it is interpreted nowadays.

## 6. THE RELATION OF THE THEORY AND PRACTICE IN THE ELECTROTECHNICAL EDUCATION

One of the features of the electrotechnical education is its organic connection to the practise, mainly the industry.

The concept of the pragmatic education further emphasizes this feature. The connection of the electrotechnical education with the industry takes place depending on the structure of the educational aims:

- a) acquiring and strengthening of the pupils' ideas in the technical reality;
- b) acquiring and strengthening of the motion skills;
- c) acquiring and strengthening of the intellectual skills;
- d) synthesis of the knowledge and skills.

The electrotechnical education cannot take part without the connection to the electrotechnical practise. By the observation and exploration of the electrotechnical activity in concrete conditions, in companies, the pupils acquire the sensory contact with the electrotechnical phenomena, processes and items.

The sensory experience of the electrotechnical reality is a prerequisite to understand the essence of the electrotechnical.

The performing of the electrotechnical tasks and electrotechnical activities in the industrial practise requires a logical and rational approach to solving of the practical issues from the qualified workers. The contemplation and rethinking of the situation serves to the correct decision-making. The task of the professional education is to facilitate the preparation of the future technical professionals to the requirements of the practice. The forms of the connections of the theoretical education and the industrial practice may be, during the development of the intellectual skills, different, e.g.:

- solving of the problem-based situations, examples and cases from the industrial practise, involving the active teaching methods into the instruction. Development of the intellectual skills is taken to a level, which is demanded by the practice;
- working-out of the partial continuous examples, which are incorporated into the instruction of the individual topics of the electrotechnical subject;

- application of the didactic principle of illustrativeness by giving examples from the practice.

## 7. CONCLUSION

The teacher training is currently receiving a great deal of attention. The systems and models of the teacher training are, however, different and not only in their relation to the specialized subjects. The differences are also based on the type of the institution – school (dual educational school, vocational school, secondary technical school, etc.), on the grade of the autonomy of the institution (a state school, a private school, a school run by a company), on the conditions of the entrance exams for the pupils, and also on the organisation – structure of the preparation of the pupils (the proportion of the general and professional subjects; the proportion of the theory and practise given by the School educational programme). The diversity of the systems and models of the teacher's preparation is also determined by a number of factors while the most important ones are either the economic conditions or the traditions. Both of these factors are connected to the expectations of the society in terms of the results of the educational activity.

Apart from the national and regional specific, the school is also influenced by the factors having also some kind of a global nature. Those are mainly the needs of the labour market, and also, to some extent, the socio-political situation in a country. Although there is no generally accepted and respected optimal model of the professional training, it is possible to observe some specific general trends – courses of development, which were discussed in the present paper.

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# Turkish language proficiency: TÖMER graduates

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## Abstract

Language proficiency as the ability of an individual to perform in acquired language is considered extremely important for a student's educational life as well. The aim of this study is to evaluate the international students' Turkish language proficiency whether their language proficiency has been adequate or not. This research measures out the proficiency on four common skills, listening, speaking, reading and writing, of Turkish language. To evaluate this process, a mixed model research was carried out with participation of thirty international students of Sakarya University from different countries who joined an interview and filled a self-evaluation questionnaire. There are twelve quantifier items divided on four language skills in the questionnaire. The outcome of the study shows that over %90 of the participants deliver high proficiency in listening or understanding skill and their lowest proficiency appears in writing skill that covers approximately %65 of the participants. Unlike the above skills results, the results of reading and speaking skills respectively place over %35 and %50. This study presents efficient data regarding second language proficiency evaluation and assists language learning centres to improve the learning outcome in the university level.

Keywords: Language Proficiency, International Students, Evaluation

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## 1. INTRODUCTION

When considering the language proficiency, literature provides readers with different range of definitions. For example, Schleppegrell and Christian believe that success in academic language needs the skill to interact in the educational setting in the ways which are specific to educational institution culture in the society (1986). Another short definition by Bachman (1990) introduces language proficiency as the ability in language use. One more approach towards proficiency by Oller (1983) expresses that language proficiency is not a single unitary skill, but consists of various separate related structures in addition to a general construct. Furthermore proficiency can be observed as an aim and so is defined in terms of standards or objectives. Then these can act as criteria by which to evaluate proficiency as an empirical reality, that is, the actual performance of given groups of learners or individual learners (Stern 1983). Stern also states that proficiency ranges from zero to native-like proficiency. The zero is not absolute because the second language learner as speaker of at least one other language knows the language and how it functions. Complete competence is hardly ever reached by second language learners (p. 341). By looking at proficiency in its educational context, a different definition come across and the term 'proficiency' depends to the examinee's skills in a specific area of competency in order to determine the extent to which they can work in a real language use situation (Farhady et al. 1983). Krashen and Lee Brown (2007) add that academic language proficiency is considered to be a "central goal of language teaching programs: We want our students to be able to use their second language for demanding tasks, for business, science, politics, etc beyond carrying out daily conversation". They divide it by two proposing that academic language proficiency consists of two central components:

- a. knowledge of academic language: knowledge of the special language used in school and the professions and
- b. knowledge of specialized subject matter: consists of knowledge of math, science, history, etc.

The substantial evidence that Oller and his colleagues (1980) have gathered to show is that academic and cognitive variables are powerfully related to some measures of all four general language skills, so listening, speaking, reading and writing, raises an important issue for the evaluation of entry and exit criteria in bilingual programs. According to Snow, the procedure of education consists largely of teaching in decontextualized language usage. Cummins presents a similar conclusion as well when he declares that situations requiring academic language proficiency vary in two dimensions: contextualized vs. decontextualized and cognitively demanding vs. cognitively undemanding (Schleppegrell & Christian 1986).

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Hernandez-Chavez, Burt and Dulay (1978), present that language proficiency deals with multiple factors along three separate parameters: 1) the linguistic components, 2) modality, and 3) sociolinguistic performance. The linguistic component involves lexicon, semantics, syntax and phonology; modality includes production and comprehension through the reading and writing through the written channel oral channel and; sociolinguistic performance includes the dimensions of domain style, variety and function. Oller (1978, 1979; Oller & Perkins 1978) argues that "there exists a global language proficiency factor which accounts for the bulk of the reliable variance in a wide variety of language proficiency measures" (1978: 413). This item is strongly connected to IQ and to other elements of academic achievement and it is about equally well appraised by listening, speaking, reading and writing factors. Then four major aspects run throughout the debates of academic language. First, academic language takes place in the school culture and asks for knowledge of the ways of that culture for being successful. The student must have the knowledge of using language in school, including conventions of speaking and writing in communication and academic performances, and knowing what is important, valuable, and unique for the school (Schleppegrell and Christian 1986). Hakuta and others (2000) believe that educators have come to distinguish between verbal language proficiency, concentrating on speaking, and academic English proficiency that focuses hugely on reading skill.

According to Alptekin's report, to strengthen the language proficiency The Strategy Inventory for Language Learning (SILL) introduce strategies dividing them into two major categories: direct and indirect. Each one consists of three subcategories. Direct strategies include memory, cognitive, and compensation strategies and indirect strategies support and manage language learning without essential engaging the target language directly. They are formed of metacognitive, affective, and social strategies (Alptekin 2007). Apart from above definitions and approaches towards language proficiency, the connection between academic achievement and language proficiency is lost as students approach native like proficiency levels (De Avila 1990). The main goal of language proficiency is leading the individuals to success and in Savignon's opinion (1983) communication happens in an infinite types of conditions and success in a specific role belongs to one's understanding of the context and on the former experience of a similar kind (pp. 8-9)

This study reviews the language proficiency of international students graduated in 2014 from Turkish Language Teaching, Practicing and Research Centre (TÖMER) in Sakarya University. The study presents the findings of its evaluation based on Turkish language proficiency of international students who are currently studying in Sakarya University. The study evaluates Turkish language proficiency focussing on four common language skills, listening, reading, speaking and writing. It also suggests new approaches to enhance the areas with low proficiency. A total number of 30 participants from African, Asian and European countries were selected randomly for the study.

## 2.METHODOLOGY

In the current study, a mixed model research was conducted. As the qualitative part of the study, a total number of twelve variables were shared with the participants through a questionnaire and as the qualitative part of it, the participants were interviewed face to face asking and answering questions regarding to four common skills of the language. A sample of thirty TÖMER international graduates (2014) was randomly selected in this study. The participants come from African, Asian and European countries and are current students in Sakarya University (2015). Each variable on the questionnaire was rated from 1 to 5 in four categories - listening, reading, speaking and writing. Each number explains a value as they are explained: (1) - "*never or almost never true of me*", (2) - "*usually not true of me*", (3) - "*Somewhat true of me*", (4) - "*usually true of me*", and (5) - "*always or almost always true of me*".

### *Listening*

- I can understand the professor's lecture.
- I can listen and take note during the lecture.
- While listening to the lecture, I can understand the simple and complex sentences.
- I can understand the intonation, voice emphasis or stresses.

### *Reading*

- New words are not a problem for me while reading books or articles.
- Meaning of sentences is not a problem for me while reading books or articles.

### *Speaking*

- I can ask questions about the lecture comfortably.
- I can present my seminars comfortably.

- I can explain an academic topic related to the lesson comfortably.
- I can attend the discussions and speak fluently.

*Writing*

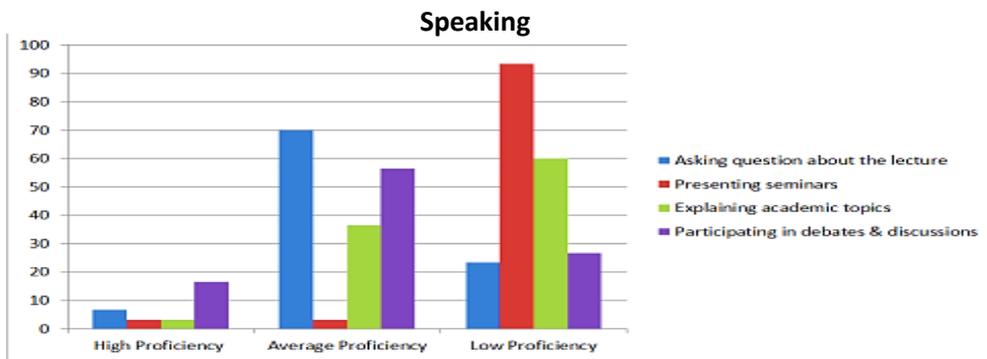
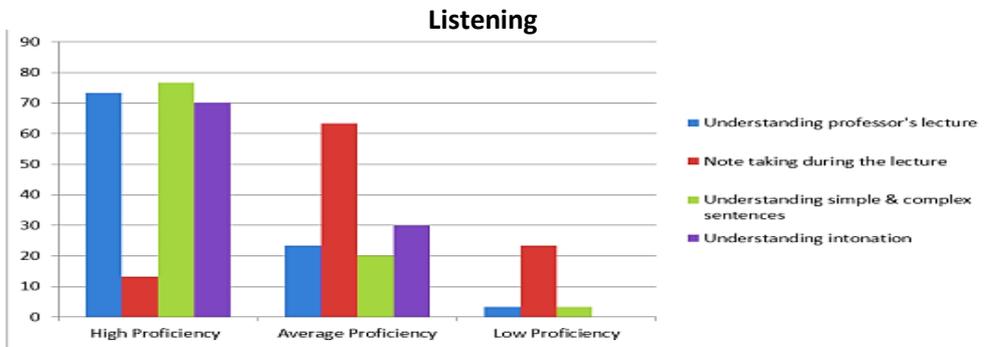
- I can write my assignments comfortably.
- I can finish my exams according to the time provided.

The participants' language proficiency, in the first stage, is evaluated through each category with its sub items. In the second stage, the values are divided into two parts, high proficiency and low proficiency, showing the percentage of each part. Numbers are divided into three values: "1 and 2" are introduced as "low proficiency", "3" as "average proficiency" and "4 and 5" are presented as "high proficiency" values.

**3.FINDINGS**

The result of the qualitative analysis of the data indicates that participants have owned different degrees of proficiency in listening, reading, speaking and writing skills. Figure1 shows the details about the participants' proficiency.

**Figure1:** Turkish Language Proficiency of Sakarya University TÖMER Graduates- 2014



**Figure1: Continued**

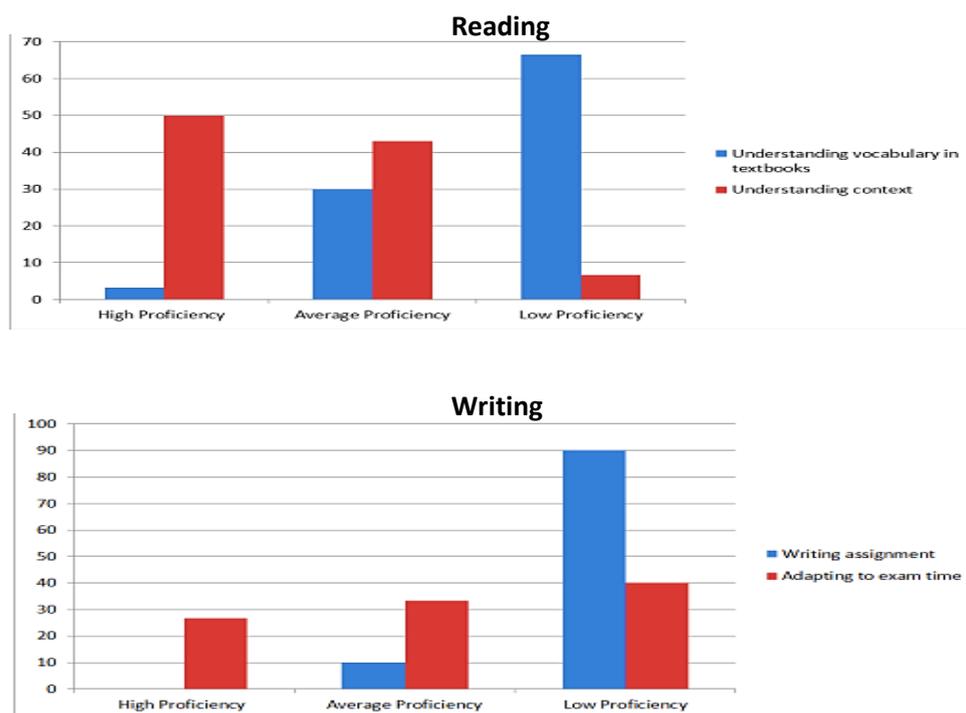


Figure1 shows that the proficiency degrees in four major language skills differ from one another. Each category is divided into subcategories. In general, the listening competence of the participants was the highest among all other categories. In understanding the professor’s lecture, over 73% of the participants gained high proficiency, 23.3% stayed on average and only less than 4% went to low proficiency level. While taking notes during the lecture, again most of the students had average proficiency (63.3%) and high proficiency (13.3%) levels, but 23.3% of the participants located with low proficiency level. In addition, for understanding simple and complex sentences, over 76% of the participants were placed on high proficiency level, 20% in average level and only 3.3% stayed on low proficiency level. To understand intonation, voice, emphasis and stresses, 70% rises to high proficiency level, 30% belonged to average and none of the participants fell to low proficiency.

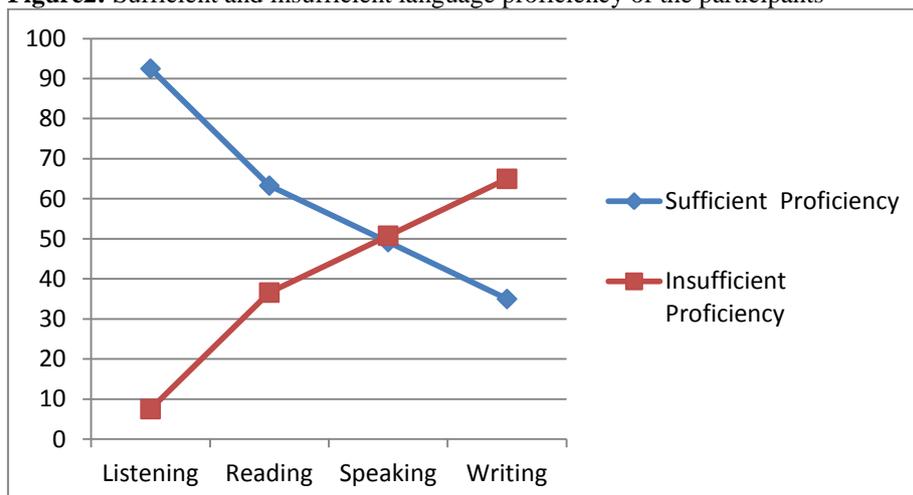
Participants showed their next proficiency in reading after the listening skill. As the analysis reveals, 3.3% of the participants appeared with high proficiency for comfortably asking questions about the lecture, 30% agreed to have average level and over 66% joins low proficiency level, but while understanding the context 50% of the participants placed on high proficiency level, 43% average and 6.6% went to low proficiency level.

The analysis of the speaking proficiency of the participants is presented as below. 6.6% of the participants have opted for high proficiency level, 70% for average level and 23.3% goes among low proficiency level for comfortably asking questions about the lecture. For presenting their seminars or presentations fluently, 3.3% of the participants replied to have high proficiency level, 3.3% average level and 93.3% of them reveals low proficiency level. In explaining an academic topic related to the lesson comfortably, 3.3% were with high proficiency, over 36% with average proficiency and 60% were with low proficiency levels. For debate and discussion participation, 16.6% of the participants rose to high proficiency, 56.6% stayed on average proficiency and 26.6% declined to low proficiency levels.

Writing proficiency of the participants was evaluated through writing assignment which none of the participants reached high proficiency level, but 10% stayed on average proficiency and 90% plunged in low proficiency levels. The second variable for writing proficiency evaluation was adaptation to exam time that over 26% peaked to high proficiency level, 33.3% reached average proficiency level and 40% demonstrated low proficiency level.

To simplify the findings and analysis, both “high proficiency” and “average proficiency” levels are selected as the adequate and acceptance level of proficiency for academic lives of the students. This level of proficiency is introduced as “sufficient proficiency”. The “low proficiency” level is introduced as “insufficient proficiency” and is not accepted as adequate level of competence for academic lives of the students. Figure2 summarizes the findings of the study.

**Figure2:** Sufficient and insufficient language proficiency of the participants



The figure above highlights Turkish language proficiency of international students (participants) graduated from Sakarya University, Turkish TÖMER in 2014. It is inferred that over 90% of the participants owned sufficient proficiency in listening skill while only less than 8% of them have had inadequate proficiency in listening. Again, most of the participants (over 60%) showed to have sufficient proficiency in reading but 36.6% still remain in low proficiency level. Almost half of the participants displayed to achieve sufficient proficiency in speaking skill, but still another half remain with insufficient proficiency. Finally, the writing skills of the participants reached a bottom of insufficient proficiency covering over 60% of the participants. Only 35% of the participants reached sufficient proficiency in writing skill.

After having the interview asking the participants about their satisfaction of the four common skills, they all declared one common problem. That common problem was the writing skill. A few of their responses are presented as below.

Participant A: *“I do not feel much problem in listening. I think that is because I often hear Turkish language repeatedly. For example, when I am in the classroom I hear the teacher or other friends or when I come back to the dorm again I hear the language from TV, from Turkish students or the dormitory staff. When I go to shopping, here again I hear people talking in Turkish or I myself have to listen and answer in Turkish with the shop assistant. . . . Yes, my serious problem is writing in Turkish, specially writing in academic format. I believe I have to work more on my writing...”*

Participant B: *“My reading is not very bad. I can read easily. Of course I need to look up new words in the dictionary, but I still can read it because the alphabet is almost the same with English and in most cases they sound the same. The skill I have improved most is himm it is listening... I don't know but listening comes the easiest for me... The most difficult one...it is writing of course. I come with a lot of mistakes when writing my assignment...”*

Participant C: *“Writing and reading is my main problems in Turkish. I can understand what the professor says and I can communicate with my friends. I mean they know what I mean and I know what they mean, but I face with a lot of vocabulary that I don't know the meaning. So it takes a lot of my time to bring out the meaning from the dictionary. Beside that I make a lot of grammatical mistakes while writing my assignment and I think writing in academic style is very hard for me...”*

#### 4. RESULTS AND DISCUSSION

Both the quantitative and qualitative analysis of the study show that students in Turkish Language Teaching, Practicing and Research Centre (TÖMER) of Sakarya University own sufficient skill in listening to respond their academic lives. Reading is comes second after the listening with the majority of the participants having sufficient proficiency in Turkish language to interact positively with their lecture notes and textbooks. It is seen in the study that speaking is sufficient but still half of the participant remain in low proficiency level and need to improve to reach the sufficient proficiency level. The evaluation of the analysis indicates that writing is the only skill which hosts over 60% of the participants with insufficient proficiency. To improve the overall situation in (TÖMER), it is required to reconsider the curriculum. Since all the students are adults, the curriculum needs to be intensified in all areas especially in four common skills. In order to achieve better and positive outcome in reading and speaking co-curricular activities enhance the process. Co-curricular and curricular activities mixed together are more likely to affect positively on [aligning] students' learning goals with the institution's educational values and purposes (Kuh, 2000, p. 52). In addition, co-curricular activities can support classroom-

based learning as well as providing students an opportunity for campus involvement and personal development outside classroom (Storey, 2010). Since writing is seen as the only skill with the highest number of participants with the lowest proficiency, to bridge the gap, a special writing program is suggested that offers intensive and academic Turkish writing classes especially after the first term is finished. This can be possible by conducting a few model classes comparing the result with the former curriculum.

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# The problems during the postgraduate education: Of the teachers who continue their Phd education\*

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## Abstract

The purpose of this study is to detect the problems of teachers who pursue Phd education. For this end, the views of postgraduate teachers with regard to associated school, their own lives and registered programs have been studied. Phenomenological pattern has been preferred. All the data have been collected through face to face question-response questionnaire technique. The scope of the research covers eleven teachers who pursue postgraduate education in the 2014-2015 education term. Content analysis has been applied in the evaluation of the data. Results and suggestions have been listed in the suggestion section in line with the postgraduate teachers.

Key words : The views of postgraduate teachers , master's degree , master's degree problem , teacher's view, Phd.

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## 1.INTRODUCTION

One of the most indispensable elements of the education and training is teachers as well. A teacher directs the society's future and he is one of the most effective role model in front of the students. The kind of this crucial task assigned by the education system requires the teacher's self development and being more qualified compared to the past. The teacher appears as a model that is open to lifelong learning and willing to share his knowledge. In fact, the mentioned qualifications define the aspect of his scientist side. That the teacher not only presents his personal and professional development for the development of the society but he also manages his leadership task successfully are one of his areas of responsibility. In order to fulfil the kind of responsibilities truly and accurately, the teacher must have a personal equipment and a personality that reads, analyzes, follows the scientific developments concerning his profession, investigates, transfers the information into the life. For this reason, a role model that will enhance the teacher's qualities and supply his deficiencies will be useful for country. In order to accomplish this, graduate education arises as an indispensable need. Today, the technology and science hard to keep up with make it almost impossible for the people to use their master's knowledge during their lifetime. Yet, hardly a day passes without a new invention ,a change. for this reason, preschool and graduate education become widespread and more necessary compared to the past.

Graduate education is accepted as one of the most important factors in raising scientists and conducting national science policy. The main goal is to raise a manpower that will be able to produce and use information with a critical and productive way of thinking. So, the planning of the graduate education and running it actively is closely connected with that country's development level. (Karaman ve Bakırcı, 2010). Higher education institution is expected to fulfil such duties as raising the qualified manpower for every segment of society, producing science and technology, enlightening the society, pioneering for social change and developments. So, higher education has been a symbol of respect for countries (Kaya, 1989). As the determining factor of the intensifying competition conditions is the qualified manpower, so high qualified higher education demand is increasing rapidly. In the 21st century, higher education will mainly focus on raising a manpower with international competitive power besides doing mass education. The elites especially in higher education and science whom the society needs are able to be raised with Phd programs. Graduate education is a link that makes and maintains teaching and research unity stronger in higher education. People are acquired the ability to do independent researchs ,interpreting scientific events thoroughly with a deep and broad point of view and to reach new synthesis via graduate especially Phd programs. (Tuzcu, 2003).

The aim of Phd programs which are one of the graduate programs is to provide the students with the ability of carrying out independent research, commenting on the scientific events with a broad and deep point of view by investigating and the ability of determining the necessary steps to reach new synthesis. (YÖK, 1996).

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The education system undertakes an important task on producing, teaching and disseminating the information a knowledge-based society (Karakütük, 2002). Graduate studies are guides in providing the teachers' personal and professional developments so turning the school and in-class practises into a research problem and sharing the results of it (Alabaş, Kamer ve Polat, 2012). The teacher is one of the strategical parts of the education system (Karlı 2004). The number of the teachers with phd degree working at the Ministry of Education is 847 as of the date of January 2015. As for master's degree teachers, the number is 65.976 (MEB, 2015). The total number of the teachers working at the Ministry of Education is 850.960 kişidir (MEB, 2015). The ratio of the teachers with phd degree is about % 1. As for the graduate degree ones, it is about % 8. At the point of training qualified people, graduate education especially phd programs and the teachers in the middle of their careers are of great importance in terms of education system. The teachers continuing to their phd education have many problems. However, while there are very few specific close studies, it is observed that the subject is researched little. The institution worked at, the studied phd program and the social problems should be investigated specifically for defining the problems. In this study, identifying the views of the teachers, continuing to Phd programs, about their problems in graduate education are seen as important.

This study aims to identify the problems of the people continuing to Phd education and doing the profession of teaching at the same time and to contribute their solutions towards these problems. In this context, the question "What are the problems of the teachers contiuning to Phd education in graduate education?" constituted the problem sentence of the research. Besides, answers were searched for the subproblems "What are the problems related to the instutions worked at ?", "What are their problems about the registered Phd programs ? " "What are the problems in their own lives?"

## 2.METHODOLOGY

In this section the model of the research, study group, the method of data collection and analysis were given places.

### Research Model:

In this research, phenomenologic method,one of the qualitative research designs,was preferred.

### Study Group:

Study group was comprised of the 9 male and 2 female teachers in total 11 teachers who were doing Phd during the years of 2014 and 2015. It was shown in table 1.

**Table 1.** Personal Characteristics of the people participating in the research and doing Phd

Variables		Frequency	%
Age	30-35	3	27
	36-45	8	73
Gender	Female	2	18
	Male	9	82
Marital Status	Single	1	9
	<b>Married</b>	<b>10</b>	<b>91</b>
Professional Experience	5-10 years	6	55
	10 years and more	5	45

As seen on the table above, a total of 11 teachers including 2 females (% 18) and 9 males(% 82) participated in the research. 3 of them (% 27) were between the ages of 30-35, 8 percentage of them(%73) were between the ages of 36-45. One them was single (%9) and 10 of them were married (%91), 6 of the them(%55) had 5-10 year of experience, 5 of them(%45) had the 10 and more year of experience.

### Data Collection Tool

In this research, firstly the literature review was made and a questionnaire about the problems of the teachers doing Phd was prepared. In the first section, there are 4 questions related to the demographical features of the participants. As for the second section, there are 24 questions in total related to the problems of the teachers doing their Phd. For the results to be more clear, pre-application was carried out with 3 teachers and the final shape was given for the questionnaire.

### Data Collection and Analysis:

The questionnaires were applied to the teachers face to face. The data collected from the questionnaires was analyzed through content analysis method. Firstly the codes and then the themes were created. In data analysis, percentage and frequency were used. The data was evaluated by 2 researchers, the consistency between the evaluations was determined as 0,85. For the calculation of the reliability, the reliability formula proposed by Miles and Huberman (1994) was made use of.

$$\text{Reliability} = \frac{\text{Agreement}}{\text{Agreement} + \text{Disagreement}}$$

Following the calculation, the reliability of the study was calculated as % 85. That the reliability results are over % 70 is regarded as reliable for the research (Miles and Huberman, 1994). The result obtained from the research was regarded as reliable. For the privacy of the teachers' information, teachers were coded as T1,T2,T3.....

### 3.FINDINGS

In this section, the findings of the research results were presented in tables. The findings obtained from the answers to the questions directed to the teachers were reflected in themes by being adapted. The views the frequency of which were higher were shown. The lower ones weren't reflected in tables.

**Table 2.** The views of the teachers, participating in the research and doing phd, about the institutions worked

Theme	Codes	F
Administrative Breakdowns	The timetables' inability to be prepared according to the Phd courses	4
	Inability to get permission from the institution worked	3

For the code 'Inability to get permission from the institution worked' of the Administrative Breakdown theme, under the title 'The views of the teachers about the institutions worked', the expression of T3 '*the mid-term and final exams are held on out of the days of Phd courses. So I have difficulty in getting permission from my work place.*' and the expression of T7 '*As I am class teacher, getting permission for Phd in another city is troubling, so different kinds of modifications should be brought.*' can be given as an example.

On the article 41's relevant section of the Ministry of Education Staff Permission Guidelines dated 2001, the expression: 'The ones continuing to the graduate education, are allowed to have two half-day's leave as long as they don't delay their duties..The teachers' teaching periods are arranged properly enabling them to attend their graduate education. took place. However, this guidelines changed in 2013 and according to the article 18/b, '..... Teachers' teaching periods are arranged in a way that will enable them to attend their graduate education.' which has replaced the previous expression

Among the administrative breakdowns, there comes the inability to make the timetables of the institutions, where the teachers work, suitable for Phd programs. One of the reasons of this is closely related the teachers' branches .It may not be possible to arrange the timetables of the class teachers doing Phd because of their branches or to provide them free days.

**Table 3.** The views of the teachers, participating in the research and doing Phd, on their social lives

Themes	Codes	f
Financial Problems	The expenses' as travel, accomodation ,education materials etc. being high.	10
Family Problems	Inability to keep time for yourself and the family	11
	Inability to have time for social activities	11

The views of the teachers, participating in the research and doing PHD, on social lives were examined under the themes of, financial problems and family affairs on table 3. The code 'The expenses' as travel, accomodation, education materials etc . being high. ' was created under the theme of financial problems. As for under the theme of family problems, the codes 'Inability to keep time for yourself and the family' and 'Inability to have time for social activities' were created.

For the code 'Inability to keep time for yourself and family' the expression of T11 '*The Money I earn covers the expenses of travel,hotel price,books,photocopy and other educational ones,and I run out of Money.*' And the expression of T4 '*Now,I have difficulty in answering to my daughter's questions: 'Dady, are you again*

studying? ‘ Dady,Are you again going to another city for studying? That all the responsibilities of the kids are on the shoulders of my partner creates tensions in the family. The presentations,homeworks take a lot of time to prepare. I spend almost all of my private time for this task. At times I even think of suspending Phd.’ can be given as examples. For the code ‘Inability to have time for social activities’ the expression of T5 which is ‘ I havent met my close friends since I started Phd.Somhow,lest I cant join to my friends ,they wont invite me for the activities anymore ’ can be given as an example.

As understood from the frequency rates, it is seen that the teachers doing Phd have family affairs and financial problems.

**Table 4.** The views of the Teachers participating in the research and doing phd, about Phd program

Theme	Codes	f
Problems related to the program	Publication requirement	8
	Language proficiency	9

On table 4, the views of the teachers participating in the research and doing Phd were examined under the theme of ‘the problems related to the registered Phd program’.Publication requirements and Language proficiency codes were created under the theme of Problems related to the program. For the code ‘ Publication requirement’ the expression of T8 ‘ That necessary publications to pass the courses and the publication resuirements necessary to be done for the submission of the thesis are more difficult compared to the past really discourages me.’ For the code of Language proficiency the expression by T2 which is ‘ I had to attend a course for the language proficiency for 3 years. This condition may be made flexible or it may be among the conditions that is necessary while submitting the thesis. Moreover, if there were a kind of Professional foreign language related to the relevant program, it would be more useful. ‘ The expression of T7 ‘ Fulfilling the publication requirement is difficult, if the obligation that the Advisers must write articles together with their students were imposed, then things would be easier.’ can be given as examples.

When looked at the above frequency rates, it appeared that the publication requirements are harsh. Besides, language proficiency is the problem the frequency of which is the hishest of the problems about language proficiency.

#### 4. DISCUSSION and CONCLUSION:

The importance of the education’s quality to form a society comprised of qualified individuals is an undeniable fact. For quality, graduate education especially Phd education has an important role. It can be said that graduate education is also effective in personal and professional developments of the teachers who will be assigned to shape the individuals in future in terms of education. As phd education is more specific and special field compared to graduate education , the problems are fewer . The teachers continuing to the graduate programs have more problems compared to the ones doing their Phd. (Nayır, F. (2007).

At the end of the study, it was realized that the teachers doing phd have various difficulties. At the end of this study the aim of which is to define the problems of the teachers, doing their phd, during phd education, it was seen that % 36 of the teachers had problems with the instutions worked. The reason why the school timetables cant be prepared suitably for the Phd course timetables stems from the obligation that teacher branches must be at school every day. In addition to the administrative breakdowns, the school administration show ultimate attention in arranging the timetables with the new guideline. This rate was % 40 and similar conclusions were reached on Alabaş, Kamer and Polat’s research (2012) on graduate education problems. This rate was % 46 on Aydın and Hayal’s research on views about graduates (2014) As seen, the problems of the teachers doing Phd follow a decreasing sequece.

The study showed that almost all teachers face many kinds of social problems. And these problems were observed to be the parental and financial ones. The rate was % 46 on Aydın and Hayal’s studies themed views about the graduate. It is seen that the teachers doing Phd face more social problems than the ones doing graduate. It was stated that Phd education brings along such other problems as time and private life also on the research of Özmen and Güç. According to the research result, the teachers doing phd have more problems than the ones doing graduate.

$\frac{3}{4}$  of the teachers participating in the research had problems related to Phd program. Among these problems, here come harsh publication requirements and language proficiency. This rate was about  $\frac{1}{4}$  on Aydın and Hayal studies themed views about graduate (2014) When looked at the rates. harsh publication requirements also

appears as a crucial problem. Solving the problems of the teachers, contributing a lot in teaching qualified individuals, in Phd education will encourage higher education, increase the teaching and training quality and contribute positively for the country's development level.

## 5. SUGGESTIONS

Based on the research results, the suggestions below can be brought forward:

- The administration and officers of the institutions where the teachers work can be informed more on the difficulties and importance of Phd programs. Maximum flexibility can be shown on such issues as timetables, reducing the course variety and administrative task for the teachers doing their Phd education.
- The opportunity for the teachers, doing Phd in another city other than the school they work, to be appointed to the cities they have Phd education or to work with a temporary assignment.
- Paid leaves can be given for the teachers doing Phd especially on 'the Phd proficiency phase'
- Even to some extent in order to reduce travel, financial and social problems, small percentage of the phd courses can be implemented as distance learning.
- In order to make the publication requirements easier, the obligation that the advisers must write the articles together with their Phd students can be imposed
- Professional English course related to their fields of study can be included in the curriculum for the solution of the language problem.
- In phd educations which exceed the standart time, tuition fee may not be asked from the teachers.
- The additional course fee can be raised at the rate of % 50 in order to uprise the education level and encourage Phd teacher.
- A salary increase befitting to the diploma obtained after finishing Phd and the title of Phd deserved can be provided. The teachers with Phd degree in their fields can be given the tenure of a headteacher without waiting the kind of tenure.
- The ministry can come to an agreement with the universites on allocating Phd contingent for the teachers to uprise the Professional development.
- In order to prevent the qualified brain drain and not to have these people carried away by different institutions, the relevant ministry can allocate different kinds of ministeriel tenures for these proficient people.
- In order to ave more reliable results, questionnaires should be applied to more teachers doing Phd and in this way more effective solution proposals can be produced by generalizing the findings obtained.

*NOTE: This paper was presented in ICLEL 2015.*

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# Teacher burnout – an evaluation according to demographic, organizational and personal variables

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## Abstract

Professional burnout, which is encountered especially in human service professions where human interaction is at its most, is a psychological syndrome which will lead professionals into some physical, emotional, behavioral, interpersonal, and attitudinal problems such as; migraine, gastrointestinal diseases, being cynical or critical at work, a general negative attitude towards colleagues or clients, loss of motivation, exhaustion and unfortunately quitting the job. Former researches reveal that teachers being an important part of human service professionals, also experience burnout in various levels. In this study teacher burnout is investigated by scanning model. Researches attained for the last twenty years were analysed under three main headings. Demographic variables (gender, age, seniority and length of service, marital status, having kids, level of education, branch), organizational factors (kind/type of school, educational level of school, appreciation from principals, workload, school's location and work environment) and personal factors (choosing and doing teaching profession willingly, job satisfaction, stress) were taken into account in order to define which sub factors were effective in teacher burnout. After analysing former studies, eventually, it was concluded that among the demographic variables there was no significant difference in gender, age, marital status and having kids but there was significant difference in seniority, length of service and branch. For organizational and personal factors there was significant correlation in nearly all the sub factors. As a conclusion studies indicate a strong relationship between school principal's attitudes towards teachers, workload, workplace or job satisfaction, stress, seniority and teacher burnout. Generally all the previous studies suggest there is low or average level of burnout in teachers.

Keywords: teacher, burnout, demographic, organizational, personal

## 1. INTRODUCTION

" History shows us not only how some countries' fates become miserable but also how some countries fight against turning into a docile ant and build their lives onto solid basis" says Grigoriy Petrov in his book, The Land of White Lillies. When we look at the reasons for the progress of the developed countries, the importance they give on education stands out. If the road for success goes through qualified education, the key of the gate of this road is the teacher itself. Unfortunately in our country, constantly altered syllabuses and curriculums, problems stemmed from student, parents and administrative staff, financial or personal problems lead to some degree of burnout in teachers and this situation affect the education system directly or indirectly.

First suggested by Freudenberger in 1974, the concept of burnout is generally described as a type of psycholological syndrome which was seen in especially service business employees because of the intensive interaction individuals face with in their daily working lives. Different burnout models were put forward for this concept. The most accepted model is Maslach Burnout Model produced by Christina Maslach and friends. This model has three dimensions as emotional exhaustion, depersonalization and reduced personal accomplishment. Among these three dimensions, emotional exhaustion is the base dimension which shows itself in the form of emotional burnout, stress, physical and emotional fatigue, alienation towards the job and loss of concentration. Depersonalization reveals itself as employees' negative manners towards whom they serve in the workplace like they are inanimate objects. Employee become estranged to his workplace, use cynical, rude and reckless attitudes as a defence mechanism and try to compensate the degree of burnout he felt in a way of self defence. And in reduced personal accomplishment employee briefly feels himself deficient and unsuccessful in his job. Other burnout models in literature are; Cherniss Burnout Model, Edelwich and Brodsky Burnout Model, Pines Burnout Model, Perlman and Hartman (1982) Model, Scott Meier Burnout Model, Susan and Sheridan Burnout Model, Leiter Burnout Model and Golembiewski Model. Even though Golembiewski Model is seen closely

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related with Maslach Model, according to Maslach Model emotional burnout is the reason for depersonalization and depersonalization is the reason for reduced personal accomplishment but in Golembiewski model burnout process starts with depersonalization, it causes reduced personal accomplishment, and reduced personal accomplishment causes emotional exhaustion. According to Maslach Burnout Model, burnout is defined as “emotional exhaustion, depersonalization and reduced personal accomplishment feeling of individuals who are in an intense relationship with people due to their jobs”.

Classic Burnout Model for teachers was suggested by Kyriacou and Suttcliffe in 1978. According to this model, stress is a result of difference in teacher's perceptions. That is to say, if the teacher has a perception about the excessive amount of demands on his/her shoulders and have difficulty in meeting these demands, s/he experiences burnout. Here, the important point is the perception of threat the teacher experiences (Antoniou et al., 2000; Dincerol, 2013).

According to Argun and Ozben (2005) teacher burnout has two types: recession and precipitancy burnout. In recession burnout, teacher describes his/her professional activities as monotonous and boring. S/he tries to cope with loss of energy, being introvert, robotic style of education and boredom. On the other hand teacher who feels precipitancy burnout complain about heavy workload. They feel high level of anxiety because of busy worklife and mostly they are in a rush to get the work on time and surrounded with complicated situations in the workplace.

Burnout is not a result faced with suddenly but a process. It emerges with some symptoms and develops itself by time. An individual with burnout syndrome has physical (hypertension, gastrointestinal problems, headaches and etc.), behavioural (alcohol and cigarette addiction, eat more or less than normal and etc.) and psycho-emotional (anxiety, sleeplessness, depression and etc.) symptoms. These symptoms reveal itself by feeling less pleasure from work, monotony, meaninglessness. Then the feelings of anger against work, anxiety and depression follows. Finally person directs the reasons of these feeling towards oneself and blame oneself. This situation makes the person angry, nervous, critical, cynical and opinionated which alienates him from the social bonds around. These symptoms may be subtle or they can lead to serious illnesses as well. A depressive mood, hopelessness, frequently being late for work or absenteeism, loss of desire for teaching, being unmotivated and eventually resigning the job are some of potential symptoms a teacher suffering from burnout experience. (Sweeney & Summers, 2002; Koyuncu, 2005; Kacmaz, 2005; Lambie, 2007; Ari & Bal, 2008; Torun, 1995; Gumus, 2006; Iacovides, 2003; Izgar, 2001; Oruc, 2007; Ozler, 2010; Dincerol, 2013)

Though burnout is a work sourced problem, personal traits also effect it. Despite the same working conditions, some employees experience more or less burnout compared to other employees. When the former researches were analysed, there are strong results showing personal traits have an important impact on peoples' possibility of experiencing burnout. While there are no specific explanation of personal traits, specialists explain it is possible to examine personality under two main headings as A type personality and B type personality. A type individuals are idealistic, perfectionist, angry and aggressive people who don't like to lose. They can generate opposite ideas in contrast to others' and go over it. B type individuals are not perfectionists, they avoid competition and are calm people but not good at taking responsibility. They don't take life seriously and they have high levels of tolerance for others. Researches indicate that A type personalities suffer from burnout more than B types ( Eren, 2006; Ardic & Polatci, 2009; Yurur, 2011; Langelaa et al., 2006; Baker et al., 2006; Ari & Bal, 2008).

In literature five dimensions of personality (Big Five Factor) are defined as extroversion, agreeableness, openness, conscientiousness and emotional stability. Individuals with low level of agreeableness exhibit an insecure attitude so they experience depersonalisation more. Introvert individuals experience more burnout. In a study, extroversion and conscientiousness dimensions were seen as the most related dimensions with burnout. In another study searching for relationship between self-image and burnout, individuals with negative self-image were stated to have higher burnout levels (Jeanneau & Armelius, 2000; Cano-Garcia et al., 2005; Zel, 2001; Ari & Bal, 2008; Kim et al., 2007).

When we look at organizational reasons for burnout, workload stands out. Employees' lack of control over the applications held in the workplace and not getting involved in the decisions about the job negatively affect their organizational commitments to their institutions and lead burnout. If the individual doesn't know what is expected from him/her in the workplace explicitly or role conflicts also affect the burnout process. Because of inefficient reward system and not having promotion possibilities, behaviours against work ethics, mobbing, deficiency of orientation facilities, lack of job and social security, physical insufficiencies and a weak management deprived of professionalism are also leading organizational factors in job burnout. Intensive face to face interaction in the workplace is seen as an element which worsens the burnout problem.

Besides personal and organizational reasons, social support that employee get from his surrounding is an important factor effecting burnout. People who have family support and good relationships with colleagues can cope with burnout more easily than others. (Ardic & Polatci, 2009; Ari & Bal, 2008; Oruc, 2007; Budak & Surgevil, 2005; Ercen, 2007).

Problems in educational institutions which causes teacher burnout most can be counted as; teacher-student or school-parents conflicts, discipline problems, crowded classes and insufficient physical circumstances, lack of public support, social and political pressure over educational institutions, principals' and inspectors' non-essential pressures over teachers and lack of praise, not getting involved in decision making process, restless work environment, corrupted education system, deficiencies and mistakes in curriculum. These factors cause burnout by increasing stress and pressure on teachers. These problems result in low success, negative attitudes towards the job, irregular attendance at work or chronic absence, intention of resign, deterioration in physical and spiritual health. An anxious, gloomy and unhappy teacher affect his students emotionally in a bad way while an indulgent, calm and supportive teacher has a positive influence on them. Burnout in teachers has profound effects on students, parents and school administrators and these effects reflect on society directly or indirectly (Cokluk, 2000; Caglar, 2011; Girgin, 2010).

## **2. AIMS**

The aim of this study is both to give emphasis on teacher burnout and to guide those concerned about which precautions to take on the problem. There are lots of studies done on burnout which is mostly encountered in service sector but despite all the researches done it's seen that those researches aren't utilized at its most. So as to attract attention on the topic, studies reached of the last twenty years were scanned, the results were analysed and put forward in a coherent way in order to make a contribution to the solution of burnout problem in teachers.

## **3. METHODS**

In this study, studies reached of the last twenty years were scanned and the results were classified under three main headings as demographical, organizational and personal factors of burnout. For demographic variables sub-factors were defined as gender, age, seniority and length of service, marital status, having kids, level of education, branch, for organizational variables the sub-factors were; type/ educational stage of school, appreciation from principals, workload, workplace satisfaction, school's location and work environment and for personal factors, choosing and doing teaching profession willingly, job satisfaction, stress were taken into account. Because there is no meaningful difference and the results show a coherence, there was no need to evaluate the studies under two more separate headings as national and foreign studies.

## **4. RESULTS**

After revising studies of the last twenty years, most outstanding factors affecting burnout among teachers are seem to be; appreciation from principals, workload, job satisfaction, stress, seniority and length of service and branch of teaching.

Previous studies show us that mostly there is no meaningful difference between gender and teacher burnout. (Cemaloglu & Sahin, 2007; Turkcarpar, 2011; Basoren, 2005; Arikan, 2007; Gunduz, 2006; Sahin & Sahin, 2013; Mede, 2009; Rosenblatt's, 2001; Hastings' & Bham's, 2003; Girgin, 2010; Kirilmaz, Celen & Sarp, 2003; Dolunay, 2001; Ikiz, 2010; Zhao & Bi, 2003; Argun & Ozben, 2005; Filiz, 2014). There are limited number of studies which show gender has an influence on teacher burnout (Cimen, 2007; Oren & Turkoglu, 2006; Karakus, 2008; Otacioglu, 2008; Mede, 2009; Bumen, 2010; Sezer, 2012; Koruklu et al., 2012). In those limited studies, women were found to have higher degrees of emotional burnout. The pressure of responsibilities concerning both modern working life and traditional family life are suggested as the reason for this result. (Antoniou et al., 2006; Surgevil, 2005; Sahin, 2009; Oginska & Estry-Behar, 2001; Ozsaker, 2011; Sahin, 2008; Gecit, 2012; Lacritz, 2004; Antoniou et al., 2013; Yildiz, 2012; Isikhan, Korukcu & Ciftci, 2007; Sezer, 2012; Caglar, 2011; Babaoglan, 2007; Kayabasi, 2008; Balat ve Karahan, 2011; Sunbul, 2003). In men, depersonalization was higher compared to women (Demirbas, 2006; Garnosa et al., 2006; Girgin, 1995; Sezgin & Kilinc, 2012; Peker, 2002; Martin, 2000; Lacritz, 2004; Ercen, 2007; Lau, Yuen & Chan, 2005; Yavuz, 2009; Ozturk, 2013; Avsaroglu, Deniz & Kahraman, 2005).

There was no meaningful difference in age variable in most of the studies scanned (Dilsiz, 2006; Cimen, 2007; Cemaloglu & Erdemoglu, 2007; Ikiz, 2010; Sezer, 2012; Girgin, 2010; Gecit, 2012; Sezgin & Kilinc, 2012; Tugrul & Celik, 2002; Kirilmaz, Celen & Sarp, 2003; Dolunay, 2001; Yildiz, 2012). For those in which meaningful difference was found, the difference was between young and old teachers. As Dworkin (2001) stated, young teachers who started teaching profession recently are apt to burnout more than old and experienced teachers. Being inexperienced, deficiency of adequate orientation and mentoring, insufficient on the job training alongside idealism may make young teachers suffer from burnout more (Mede, 2009; Sunbul, 2003; Lacritz, 2004; Isikhan, Korukcu & Ciftci, 2007; Sezer, 2012; Argun & Ozben, 2005; Monfries, 2002). Older teachers have more self-esteem because of their experience but this situation may result in uniformity and they can be in a

more indifferent mood and this may lead higher degrees of depersonalization and emotional exhaustion (Turkcarpar, 2011; Basoren, 2005; Topaloglu et al., 2007; Karakus, 2008; Ozsaker, 2012; Avsaroglu et al., 2005; Karademir, 2009; Dincerol, 2013; Cemaloglu & Sahin, 2007).

In most of the studies, there has been meaningful difference according to seniority and length of service (Sahin & Sahin, 2013; Ozturk, 2013; Secer, 2011; Avsaroglu et al., 2005; Karademir, 2009; Gecit, 2012; Mede, 2009; Bivona, 2002; Girgin, 2010; Yurur, 2011; Ikiz, 2010; Segmenli, 2001; Guillot & Lynne, 2003; Yildiz, 2012; Isikhan, Korukcu & Ciftci, 2007; Caglar, 2011; Balat & Karahan, 2011; Filiz, 2014; Dericiogullari et al., 2007; Cemaloglu & Sahin, 2007; Dincerol, 2013). Generally, in teachers who have low seniority, burnout levels are higher (Segmenli, 2001; Gecit, 2012; Mede, 2009; Bivona, 2002; Girgin, 2010; Ikiz, 2010; Yildiz, 2012; Isikhan, Korukcu & Ciftci, 2007; Tumkaya, 2000; Piyal & Dolunay, 2003; Kirilmaz, Celen & Sarp, 2003; Altay, 2007; Sezer, 2012; Caglar, 2011; Balat & Karahan, 2011; Baysal & Girgin, 2005; Filiz, 2014; Dericioglu et al., 2007). As Dagli and Gunduz (2008) stated before, burnout appears most in early years of teaching profession in idealistic and enthusiastic teachers. Especially in foreign sources, studies made for preventing beginning teacher burnout attract attention (Antoniou et al., 2006; Goddard et al., 2004; O'Brien et al., 2007). Having parallelism with age variable, there has been higher levels of depersonalization and reduced personal accomplishment in teachers who have 10 years or more experience (Sahin ve Sahin, 2013; Ozturk, 2013; Avsaroglu et al., 2005; Karademir, 2009; Yurur, 2011; Ikiz, 2010; Guillot & Lynne, 2003; Cemaloglu & Sahin, 2007; Dincerol, 2013). Monotony in business life, limited opportunities for career development can be indicated for this result.

There are limited number of studies which show meaningful difference according to marital status (Kirilmaz, Celen & Sarp, 2003; Aksoy & Urfali, 2007; Ozsaker, 2012; Sezgin & Kilinc, 2012; Girgin, 2010; Filiz, 2014; Cemaloglu & Sahin, 2007). When examined in more details, it is concluded that regular family life and family support decrease burnout in married teachers, widow or divorced teachers have higher levels of burnout compared to married and single teachers have higher levels of depersonalization (Caglar, 2011; Cemaloglu & Sahin, 2007; Izgar, 2001; Tugrul & Celik, 2002; Filiz, 2014). To sum up, in most of the studies it was put forward that there is no meaningful difference between burnout levels of teachers and marital status (Turkcarpar, 2011; Dolunay, 2002; Cavusoglu, 2005; Ozturk, 2013; Sahin, 2008; Gecit, 2012; Aksoy, 2007; Yurur, 2011; Yildiz, 2012; Isikhan, Korukcu & Ciftci, 2007; Argun & Ozben, 2005).

There are few studies showing having children has a reducing effect on burnout (Ozipek & Karabiyik, 2006; Izgar, 2001; Sezer, 2012). In most of the studies there wasn't meaningful difference between burnout and having children (Turkcarpar, 2011; Cavusoglu, 2005; Dolunay, 2002; Kirilmaz, Celen & Sarp, 2003; Filiz, 2014). Especially in teachers who had chosen teaching profession willingly and those who work willingly have low levels of burnout (Deniz Kan, 2008; Dolunay, 2002; Kirilmaz, Celen & Sarp, 2003; Gencer, 2002; Cemaloglu & Sahin, 2007).

When examined according to school type (Anatolian, boarding, distance education etc.), state school teachers have higher levels of burnout especially in reduced personal accomplishment level (Ozkaya, 2006; Arslan, Ozturk & Konak, 2007; Secer et al., 2013; Ozsaker, 2012; Vurgun, 2006; Yildiz, 2012; Balat & Karahan, 2011). In Ercen (2007)'s study, on the contrary, private school teachers have lower self accomplishment levels compared to state school teachers. There are also studies which show no difference according to school type (Turkcarpar, 2011; Ozipek, 2006; Dolunay, 2002; Izgar, 2001).

Along with studies which states education level has no important effect on burnout (Turkcarpar, 2011; Ozipek, 2006; Dolunay, 2002; Izgar, 2001; Ozturk, 2013; Ozkanal & Arikan, 2010; Kurtoglu, 2011; Gecit, 2012; Isikhan, Korukcu & Ciftci, 2007; Kirilmaz, Celen & Sarp, 2003; Altay, 2007; Dagli & Gunduz, 2008; Bilen et al., 2014), there are also studies stating higher the education level higher are depersonalization and emotional exhaustion (Peker, 2002; Sezer, 2012; Balat & Karahan, 2011; Tugrul & Celik, 2002). On the other hand Cemaloglu and Sahin (2007) claims that lower the education level higher are depersonalization and emotional exhaustion, Yildiz (2012) states teacher with bachelors degree have higher levels of reduced personal accomplishment compared to teachers who have masters degree.

Burnout levels of teachers according to their branches are highest in classroom teachers. Branch teachers, vocational teachers and kindergarten teachers follow them respectively (Dincerol, 2013). Filiz (2014) claims there is a meaningful difference between classroom and Maths teachers, Bilen et al. (2014) say Maths teachers have low levels of burnout. Sezgin and Kilinc (2012) says there is no meaningful difference according to teachers' branches.

One of the most important factors of burnout in teachers was stated as appreciation from principals in all the studies examined. Being appreciated by principals has a decreasing effect on burnout whereas not being appreciated has an increasing effect especially on depersonalization and reduced personal dimensions (Sahin & Sahin, 2013; Secer et al., 2013; Kirilmaz, Celen & Sarp, 2003; Mede, 2009; Brouwers & Tomic, 2001; Yildiz, 2012; Asad & Khan, 2003; Kovach, 2002; Secer, 2011; Ozabaci, Ismen & Yildiz, 2004; Otacioglu, 2008; Ikiz, 2010).

Another important factor in burnout appears to be workload (Murat, 2003; Croom, 2003; Sahin & Sahin, 2013; Karademir, 2009; Dick & Wagner, 2001; Cemaloglu & Kayabasi, 2007; Otacioglu, 2008; Girgin, 2010;

Tsiakkuros & Pasiardis, 2002). Excessive workload causes stress and burnout (Dick & Wagner, 2001; Cemaloglu & Kayabasi, 2007; Otacioglu, 2008). There are very few studies claiming workload has no increasing effect on burnout (Ozturk, 2013; Ozkanal & Arikan, 2010; Kurtoglu, 2011; Ozsaker, 2012).

For educational stage (primary, secondary etc.) highest level of burnout is encountered in primary school teachers (Cemaloglu ve Sahin, 2007; Antoniou et al., 2013; Izgar, 2003; Ikiz, 2010; Girgin, 2010; Sezgin & Kilinc, 2012). This result corresponds with burnout encountered in classroom teachers most (Dincerol, 2013; Filiz, 2014). Sezer (2012) says high school teachers have higher burnout levels than primary school teachers. There are also remarkably more studies showing no difference in burnout levels of teachers according to educational stage (Secer et al., 2013; Segmenli, 2001; Basoren, 2005; Tumkaya, 2005; Dilsiz, 2006; Karckay, 2008; Otacioglu, 2008).

When it comes to school's location and work environment, Erturk and Kececioğlu (2012) says teachers who work in city centres have higher levels of reduced personal accomplishment than teachers working in countryside. Yildiz (2012) states teachers working in low socio-economic areas have higher levels of burnout. Goddard, O'Brien and Goddard (2006) say work environment is influential especially in beginning teachers and in accord with this result Sahin and Sahin (2013) states workplace satisfaction effects burnout. Babcock (2003) determined what effected burnout most is often related with individual's workplace and relations with co-workers rather than demographic factors. According to Joseph (2000) conditions in the workplace (being small, noisy etc.), problems of adaptation to the new techniques and methods, career expectations not being met are some of the reasons affecting burnout process. Argun and Ozben (2005) found no meaningful difference between being satisfied with the work environment or not, Secer et al. (2013) states there is no difference among burnout levels according to school location. Maslach and Leiter (1997) argue that reasons for burnout are mostly related with the work itself. Workplace resourced problems such as workload, time consuming and hard job, not getting involved in decision process about work and organization and insufficient rewarding system effect burnout.

Job satisfaction and stress both effect each other and burnout reciprocally. Job satisfaction can be provided by enhancing work life quality, arranging working conditions and work environment, meeting employees' psychological, economic and social needs and decreasing work life problems (Isikhan, Korukcu & Ciftci, 2007). Generally, an inverse proportion between job satisfaction and burnout is highlighted (Peker, 2002; Argun & Ozben, 2005). There is a negative correlation between job satisfaction and burnout (Siegal & Mc Donald, 2004). According to Coban and Demir (2004), job satisfaction effects emotional burnout whereas İzgar (2001) states it effects depersonalization. Teachers who perform their job willingly don't experience burnout but teachers who have low emotional satisfaction in their jobs and who think they are not productive enough experience burnout more (Girgin, 2010; Kirilmaz, Celen & Sarp, 2003; Dolunay, 2001; Cemaloglu & Sahin, 2007; Yildiz, 2012). Demirel and Seckin (2009) found a positive correlation between work related stress and burnout. Deficiency in job satisfaction causes stress and this causes burnout or stress in work life causes low job satisfaction and low job satisfaction causes burnout eventually.

## 5. CONCLUSION AND DISCUSSION

In researches examined for this paper, teacher burnout appeared to be in average or low level. Among demographic factors the most important variables were seniority and length of service. Young teachers appears to have higher levels of burnout whereas depersonalization becomes higher in seniors by time. Important organizational factors of teacher burnout seem to be appreciation from principals, workload and type or educational stage of school. Teachers getting appreciated from principals have lower levels of burnout, heavy workload causes burnout in teachers and classroom teachers are the ones who suffer from teacher burnout most. For personal factors, teacher who loves their jobs have low levels of burnout and it is inevitable for teachers to suffer from burnout if they have low levels of job satisfaction.

It is inevitable for a teacher who has low job satisfaction to experience burnout. Studies examining stress and burnout show that teachers who apply active coping strategies has lower stress levels compared to teachers applying passive coping strategies. Also doing physical exercise was found to be effective in coping with stress. Individual's self awareness, his control on the profession, setting realistic goals, having new hobbies, taking care of both physical and spiritual health, trying to have good social relationships and family support are also important in coping with burnout personally. Coping strategies with burnout are classified into two categories; problem orientated and emotion orientated strategies (Admiraal, Korthagen & Wubbels, 2000). Problem orientated strategies help to reduce depersonalization and enhance self accomplishment (Grive & Joeques, 2003; Betoret & Artiga, 2010, Antoniou et al., 2013).

According to previous studies, one must take both personal and organizational precautions in coping with burnout. Personally one must be aware of burnout he/she feels and take action to get rid of it. Individuals can ask for help about stress and time management, rational emotional therapy, interpersonal and social competence education, management of vocational demands from their organizations. They can find recreational solutions and

learn how to meditate to relieve themselves or join new socio-cultural activities and exercise. When it comes to organizations, they should questionize themselves about how to improve the management. In educational organizations there should be enough orientation and mentoring process for beginning teachers. Also there should be enough promotion and educational opportunities for seniors and they should get motivated both morally and financially to continue postgraduate education or to attend courses about their personal and vocational development. By this way it is hoped that monotony in the workplace can be prevented. Individuals who have colleague and family support were found to have low levels of burnout so it is important to form a supportive work environment and help employees to maintain good relations with one another. Because we have centralized administration in education, Ministry of Education should take action not to smother teachers under trivial tasks and paper work called as drudgery work so that teachers can concentrate on their main duties that is to say: teaching and mentoring.

Because appreciation from principals plays an important role in teacher burnout, school administrative staff must be educated about motivation, interpersonal relations, conflict management and organization development. Work life quality of teachers should be improved and precautions should be taken. Rewarding system should be activated more, teachers should better be praised and encouraged for their endeavor. A supportive school climate should be established. Especially classroom teachers should be taken into account because both their responsibilities for working with younger students and their organizational commitments were found higher among other branches.

Vocational guidance has a significant effect on raising happy teachers. Due to high young population and unemployment risk in our country, students may choose teaching profession not because they become good teachers but they fear for being unemployed. So it is important to guide students into the professions best suit their personalities, capabilities and interests.

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# The adaptation study of justice in the classroom scale into Turkish

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## Abstract

The aim of this study is to make the Turkish adaptation, validity and reliability study of Justice in the Classroom Scale which was formed by unifying Distributive and Procedural Justice in the Classroom Scales developed by Chory-Assad and Paulsel in 2004 and Interactional Justice in the Classroom Scale developed by Chory in 2007. The research sample is made up of 720 students studying at several faculties associated to Abant İzzet Baysal University. The construct validity of Distributive, Procedural and Interactional Justice in the Classroom Scales was measured by using explanatory and confirmatory factor analyses. In consequence of the analyses, the following results were obtained:

1. Distributive Justice in the Classroom Scale which has originally one-factor structure was found to have two-factor structure named as "Expected Justice in the Classroom" and "Comparative Justice in the Classroom" after being adapted into Turkish.
2. Procedural Justice in the Classroom Scale which has originally one-factor structure was found to have three-factor structure named as "Rule Justice in the Classroom", "Teaching Justice in the Classroom" and "Exam Justice in the Classroom" after being adapted into Turkish.
3. Interactional Justice in the Classroom Scale was found to have one-factor structure as it has in the original form.
4. The reliability of Distributive Justice in the Classroom Scale after being adapted into Turkish was found to be .85 through test-retest method and .91 through Cronbach alfa internal consistency method. The reliability of Procedural Justice in the Classroom Scale after being adapted into Turkish was found to be .88 through test-retest method and .94 through Cronbach alfa internal consistency method. The reliability of Interactional Justice in the Classroom Scale after being adapted into Turkish was found to be .89 through test-retest method and .82 through Cronbach alfa internal consistency method.

Key Words: Justice in the classroom, distributive, procedural and interactional justice in the classroom, university student

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## 1.INTRODUCTION

Justice is becoming more and more important for students in the education organizations and especially in the classrooms. Classroom management is fundamental for the effectiveness of education. Wotruba and Wright (1975, Cit. Burdsal and Bardo, 1986) reveal that some of the criterions which have an impact on the effectiveness of education are communication skills, teachers' manners towards students, teachers' knowledge on the course, teachers' flexibility, and willingness to teach, the way teachers organize their lessons, to encourage students to think and express themselves and being fair in giving marks. According to the researches, the fact that the instructors are perceived fair increases students' motivation, effort (Rodabaugh and Kravitz, 1994, Cit. Houston and Bettencourt, 1999) and success (Marsh and Overall, 1980, Cit. Rodabaugh, 1996). Hence, it can be said that justice in the classroom is really outstanding for the realization of students' effective learning which is the main objective of the education organization. Justice in the classroom is related to justice perception on the processes and results in the educational environment (Chory-Assad and Paulsel, 2004b). Justice in the classroom consists of three dimensions as distributive justice in the classroom, procedural justice in the classroom and interactional justice in the classroom (Berti, Molinari and Speltini 2010; Rodabaugh 1996). Distributive justice in the classroom is justice perception on whether the distribution of marks are fair or not (Rodabaugh, 1996), that is to say the students are interested in to what degree the marks they have taken are fair (Kravitz, Stone-Romero and Ryer, 1997). Procedural justice in the classroom refers to that the students are concerned about the procedures in the grading techniques (Kravitz, Stone-Romero and Ryer, 1997), accordingly it is the justice perception about if the grading process in the school is fair or not. In other words, procedural justice in the classroom is whether the criteria used by the instructors in grading as result of students' performance is perceived fair or not by the students (Berti, Molinari and Speltini, 2010). Interactional justice in the classroom is to what extent the instructor is respectful, polite and open in the communication process with the students (Chory-Assad and Paulsel 2004a). In the university lessons interactional justice in the classroom is

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defined as the relation between the instructor and the students (Rodabaugh 1996). The fact that the instructors' not being perceived fair will bring about problems in classroom management resulting in harm to classroom climate and effectiveness of education so it can be said that teachers should be careful in forming and maintaining justice in the classroom which is fundamental for students' learning. This study aims to make the adaptation study of Justice in the Classroom Scale into Turkish.

## 2.METHODOLOGY

In determining the research sample of the study, unstratified sampling method was used so that subgroups of the population could be represented in the research sample in the ratio of their load in the population. The research sample of the study is made up of 720 students attending 3th and 4th grades at several faculties associated to Abant Izzet Baysal University in Turkey. In calculation of the research sample representing the population for explanatory and confirmatory factor analyses, the formula suggested by Bař (2001) was used and it was estimated as 360. Thus, 360 students for explanatory factor analysis and another 360 students for confirmatory factor analysis participated in the research.

$$n = N t^2 p q / d^2 (N-1) + t^2 p q$$

$$n = 5755 \times (1.96)^2 \times 0.50 \times 0.50 / (0.05)^2 \times (5755-1) + (1.96)^2 \times 0.50 \times 0.50 = 360$$

n = The participant number to be included in the research sample  
N = The population  
p = The potentiality of the event analyzed  
q = The nonoccurrence frequency of the event to be analyzed (1-p)  
t = Z number (at the intended confidence interval)  
d = Acceptable error rate

N= 5755
p= 0.50
q= 0.50
t= 1.96
d= 0.03

Justice in the Classroom Scale was formed by unifying Distributive and Procedural Justice in the Classroom Scales developed by Chory-Assad and Paulsel in 2004 and Interactional Justice in the Classroom Scale developed by Chory in 2007. Distributive Justice in the Classroom Scale consists of 12 items. The original form of the scale is made up of 14 items but 2 items were removed from the scale since they are the same with the other two items. This scale is the improved form of the first Distributive Justice in the Classroom Scale developed by Chory-Assad in 2002 (Chory-Assad and Paulsel, 2004b). The items in the scale measure the participants' perceptions on the fairness of the grades they got or expecting on a specific course. Procedural Justice in the Classroom Scale consists of 17 items. This scale is also based on the first Procedural Justice in the Classroom Scale developed by Chory-Assad in 2002 (Chory-Assad and Paulsel, 2004b). The items in the scale measure the participants' perceptions about the rules in the classroom, course plans and grading criterion used by an instructor in the classroom. Interactional Justice in the Classroom Scale consists of 8 items. The items in the scale measure the participants' perceptions about the fairness of an instructor's behaviors towards students (Chory, 2007). In the original form of Justice in the Classroom Scale, the scaling ranges from fair to unfair but in order to avoid confusion in terms of translation and because of the fact that the students participated in the similar implementation group said that partly fair and partly unfair statements express almost the same levels, the scaling terms were changed. The scaling is as follows; 1,00-1,79 range indicates unfair at all, 1,80-2,59 range indicates unfair, 2,60-3,39 range indicates neither fair nor unfair, 3,40-4,19 range indicates fair and 4,20-5,00 range indicates strongly fair.

In the adaptation process, firstly the scale was translated into Turkish. In order to achieve this, two foreign language experts who have a full command on both English and Turkish languages were asked to translate the items in the scale into Turkish. Secondly, two other foreign language experts were asked to translate Turkish translated items into English. A group made of three experts examined the translation in terms of meaning and cultural aspects. Finally, the scale was implemented into a similar group with the target group and the scale was reformed according to the participants' questions, opinions and suggestions. In the original form of the Justice in the Classroom Scale, the fairness of one instructor was measured but in the Turkish adapted form of Justice in the Classroom Scale, it was measured the fairness of all the instructors giving lessons to the students so the singular expressions in the items of the scale were changed into plural expressions. Because of the fact that Justice in the Classroom Scale is comprised of three sub scales, validity and reliability studies of it were done separately and explanatory and confirmatory factor analyses were applied.

## 3. FINDINGS AND DISCUSSION

Factor analysis is a statistical technique used in the scale development process (Stapleton, 1997) but it cannot always be appropriate for all data structures. The compliance of the data for factor analysis is ascertained with

Kaiser-Meyer-Olkin (KMO) and the significance of Barlett Spherity Test examines if the variables correlates with each other or not. The fact that Kaiser-Meyer-Olkin (KMO) is found to be higher than .60 and Barlett Spherity Test is found to be significant reveals that the data is compliant for factor analysis (Büyüköztürk, 2002). Factor analysis is classified as explanatory and confirmatory factor analyses. Explanatory factor analysis is used when the researcher has no knowledge about the latent variables, tries to get information about them and it is an analysis type in which it is not needed a hypothesis testing (Crocker and Algina, 1986). Confirmatory factor analysis is a technique which is used for testing or confirmation of the measured property's hypothetical structure (Tabachnick and Fidell, 2001). For the validity testimony of the Justice in the Classroom Scale, firstly explanatory factor analysis and then confirmatory factor analysis were applied to the data group. The results of the explanatory factor analysis were given in Table 1.

**Table 1:** The Results of The Explanatory Factor Analysis Regarding To Justice In The Classroom Scale

Subscales	Distributive Justice in the Classroom				Procedural Justice in the Classroom				Interactional Justice in the Classroom			
	Expected Justice in the Classroom		Comparative Justice in the Classroom		Exam Justice in the Classroom		Teaching Justice in the Classroom		Rule Justice in the Classroom			
Value	Item	Item Load	Item	Item Load	Item	Item Load	Item	Item Load	Item	Item Load	Item	Item Load
	D10	0,86	D6	0,79	P16	0,85	P8	0,83	P2	0,82	E2	0,89
	D4	0,84	D7	0,77	P13	0,82	P7	0,78	P1	0,76	E6	0,88
	D9	0,83	D1	0,76	P12	0,61	P6	0,78			E3	0,88
	D8	0,73	D11	0,75	P14	0,57	P9	0,71			E5	0,85
	D2	0,71									E4	0,85
											E1	0,84
											E7	0,83
											E8	0,77
<b>Eigenvalue</b>	7,02		1,11		13,14		4,13		10,4		5,76	
<b>Variance Explained (%)</b>	58,52		9,28		13,14		41,3		10,4		72,04	

The compliance of the data of Distributive Justice in the Classroom sub scale for factor analysis and multivariate normality hypothesis are ascertained with Kaiser-Meyer-Olkin (KMO) and Barlett Spherity Test. The results of Kaiser-Meyer Olkin (0,93) and Barlett Spherity Test ( $X^2=2921,14$ ,  $p=0,00$ ) reveal that the data is compliant for factor analysis and has multivariate normality. Then, explanatory factor analysis was applied to the data of the Distributive Justice in the Classroom Scale. According to the results of the explanatory factor analysis, because of the fact that 3rd, 5th and 12th items were cyclical, they were removed from the scale and the scale was found to consist of two dimensions named as ‘‘Expected Justice in the Classroom’’ and ‘‘Comparative Justice in the Classroom’’ which is different from the original form. Expected Justice in the Classroom includes 2nd, 4th, 8th, 9th and 10th items and Comparative Justice in the Classroom includes 1st, 6th, 7th and 11th items. The result of the study which reveals that Distributive Justice in the Classroom Scale has two-factor structure is consistent with the researches and literature. Students can perceive their grades as fair or unfair when they compare their grades with other students' grades and the grades they expect (Rodabaugh, 1996). Accordingly, it can be said that the students make evaluations about their grades in two ways. The first one is made up of the students' expectations and the second one is made up of comparing students' grades with the other students'. According to the study by Greenberg (1983, Cit. Greenberg, 1987) on distributive justice which is called egocentric bias, people perceive supreme outputs fairer than nominal outputs. A person's expectancy about his performance and benefits is higher than his expectancy about the other people's performance and benefits. Therefore, people who take supreme outputs perceive these outputs fairer than other people's nominal outputs (Greenberg, 1987, Cit. Tata, 1999) so it can be said that people have some expectancies about distribution of benefits or outputs. These researches support the Expected Justice in the Classroom dimension of the scale. Researches done on justice suggest that justice centers upon two categories as interior and exterior comparison. Interior comparison concerns with an employee's comparison of his own inputs and outputs with the other

employees' inputs and outputs in his organization and exterior comparison concerns with an employee's comparison his own inputs and outputs with the other employees' inputs and outputs out of his organization (Greenberg, Ashton-James and Ashkanasy, 2007) so it can be said that students compare their grades with the other students'. These researches support the "Comparative Justice in the Classroom" dimension of the scale. The factor loads of the items in the Distributive Justice in the Classroom sub scale range between 0,71 and 0,86 and each item has adequate factor load to represent the latent variable measured. Both two dimensions of the scale explained % 67,80 of the total variance so this result stands for that both two dimensions can explain the total variance in the measured property. The compliance of the data of Procedural Justice in the Classroom sub scale for factor analysis and multivariate normality hypothesis are ascertained with Kaiser-Meyer-Olkin (KMO) and Barlett Sphericity Test. The results of Kaiser-Meyer Olkin (0,84) and Barlett Sphericity Test ( $X^2=1217,45$ ,  $p=0,00$ ) reveal that the data is compliant for factor analysis and has multivariate normality. Then, explanatory factor analysis was applied to the data of the Procedural Justice in the Classroom Scale. According to the results of the explanatory factor analysis, because of the fact that 3rd, 4th, 5th, 10th, 11th, 15th and 17th items were cyclical, they were removed from the scale and the scale was found to consist of three dimensions named as "Rule Justice in the Classroom", "Teaching Justice in the Classroom" and "Exam Justice in the Classroom" which is different from the original form. Rule Justice in the Classroom dimension is comprised of 1st and 2nd items, Teaching Justice in the Classroom is comprised of 6th, 7th, 8th and 9th items and Exam Justice in the Classroom is comprised of 12th, 13th, 14th and 16th items. The fact that Procedural Justice in the Classroom Scale which has originally one-factor structure was found to have three-factor structure after being adapted into Turkish may result from its being adapted into Turkish culture from a foreign culture and the features of the research sample. In Turkey, there are other similar adaptation studies with different factor structures stemming from cultural adaptation (Gülbahar and Büyüköztürk 2008; Usluel and Vural 2009; Kılıçer and Odabaşı 2010). The factor loads of the items in the Procedural Justice in the Classroom sub scale range between 0,57 and 0,85 and each item has adequate factor load to represent the latent variable measured. All of three dimensions of the scale explained % 64,39 of the total variance so this result stands for that both all of three dimensions can explain the total variance in the measured property. Interactional Justice in the Classroom Scale was found to have one-factor structure as it has in the original form. The factor loads of the items in the Interactional Justice in the Classroom sub scale range between 0,77 and 0,89 and each item has adequate factor load to represent the latent variable measured. The scale has one dimension which explained %72,04 of the total variance so this result stands for that one dimension can explain the total variance in the measured property. In order to test the model-data fit,  $X^2$  (Chi-Square Goodness of fit), fit indices (Goodness of fit, GFI), Bentler's comparative fit index-CFI (1990, Cit. Stapleton, 1997), Root Mean Square of Approximation-RMSEA and the standardized root mean square residual (SRMR) are used.  $X^2$  gives the measure of what extent the observed correlation matrix moves away theoretical correlation matrix and it is affected from the sample size (Chau and Hocevar 1995; Frias and Dixon 2005). The interpretation range of Goodness of fit indices of the study is as follows, Permissible Fit for RMSEA is  $0,08 < RMSEA < 0,05$ , for SRMR it is  $0,08 < SRMR < 0,06$ , for CFI it is  $0,90 < CFI < 0,95$  and for GFI it is  $0,85 < GFI < 0,95$ . Perfect Fit for RMSEA is  $RMSEA < 0,05$ , for SRMR it is  $SRMR < 0,05$ , for CFI it is  $CFI > 0,95$  and for GFI it is  $GFI > 0,95$  (Anderson and Gerbing 1988; Marsh and Balla 1992; Frias and Dixon 2005; Schumacker and Lomax 1996; Sümer 2000). The results of the confirmatory factor analysis were given in Table 2.

**Table 2:** The Results of The Confirmatory Factor Analysis Regarding To Justice In The Classroom Scale

Sub-scales	Dimensions	Items	t	$\lambda$	$R^2$	Fit Indices	Pre Modification	Post Modification
Distributive Justice in the Classroom Scale	Comparative Justice in the Classroom	1	13,9	0,71	0,5	$X^2$	190,78	78,57
		6	14,59	0,71	0,5	sd	26	24
		7	15,38	0,74	0,55	p	0,00	0,00
		11	15,53	0,76	0,58	RMSEA	0,13	0,08
	Expected Justice in the Classroom	2	15,54	0,74	0,55	SRMR	0,06	0,04
		4	12,38	0,62	0,38	GFI	0,89	0,95
		8	16,61	0,77	0,59	CFI	0,94	0,98
		9	19,72	0,87	0,76			
		10	13,9	0,68	0,46			

Procedural Justice in the Classroom Scale	Rule Justice in the Classroom	1	8,21	0,64	0,41	X <sup>2</sup>	90,37		
		2	7,69	0,56	0,31	sd	32		
	Teaching Justice in the Classroom	6	12,09	0,64	0,41	p	0,00		
		7	13,28	0,69	0,48	RMSEA	0,07		
		8	14,95	0,76	0,58	SRMR	0,05		
		9	11,21	0,6	0,36	GFI	0,95		
		12	12,19	0,63	0,4	CFI	0,96		
	Exam Justice in the Classroom	13	15,57	0,77	0,59				
		14	10,06	0,54	0,29				
		16	15,83	0,78	0,61				
	Interactional Justice in the Classroom Scale		1	14,78	0,7	0,49	X <sup>2</sup>	23,86	309,39
			2	16,44	0,76	0,58	sd	16	20
			3	17,84	0,8	0,64	p	0,09	0,00
			4	16,34	0,75	0,56	RMSEA	0,03	0,19
			5	18,93	0,83	0,69	SRMR	0,02	0,05
			6	19,54	0,85	0,72	CFI	1	0,95
		7	17,49	0,79	0,62	GFI	0,98	0,08	
		8	15,43	0,73	0,53				

In table 2, according to the results of the confirmatory factor analysis of Distributive Justice in the Classroom, it can be seen that all the paths in the model were significant at a level of .05 (t) and all the items in the model are representative agents of the latent variable. The item loads in the model range ( $\lambda$  between 0,62 and 0,87 and the variance described of these factor loads ranges ( $R^2$ ) between 0,38 and 0,76. When the model's Goodness of fit indices were analyzed, according to the results of the first analysis it was observed that model-data fit was not at permissible fit. Furthermore, especially because Root Mean Square of Approximation and Goodness of fit were above permissible fit, modification suggestions were observed in the analysis outputs and the model was reanalyzed by interrelating between the error variances of 1st-11th, 4th-10th items. When the Goodness of fit indices were analyzed after modification, it was found that the model reached permissible fit. Therefore, it can be said that the results of explanatory and confirmatory factor analyses validate two factor measurement model. When the results of the confirmatory factor analysis of Procedural Justice in the Classroom, it can be seen that all the paths in the model were significant at a level of .05 (t) and all the items in the model are representative agents of the latent variable. The item loads in the model range ( $\lambda$  between 0,54 and 0,78 and the variance described of these factor loads ranges ( $R^2$ ) between 0,29 and 0,61. When the model's Goodness of fit indices were analyzed, according to the results of the analysis it was observed that model-data fit was at permissible fit. Therefore, it can be said that the results of explanatory and confirmatory factor analyses validate three factor measurement model. When the results of the confirmatory factor analysis of Interactional Justice in the Classroom, it can be seen that all the paths in the model were significant at a level of .05 (t) and all the items in the model are representative agents of the latent variable. The item loads in the model range ( $\lambda$  between 0,70 and 0,85 and the variance described of these factor loads ranges ( $R^2$ ) between 0,49 and 0,72. When the model's Goodness of fit indices were analyzed, according to the results of the first analysis it was observed that model-data fit was not at permissible fit. Furthermore, especially because Root Mean Square of Approximation and Goodness of fit were above permissible fit, modification suggestions were observed in the analysis outputs and the model was reanalyzed by interrelating between the error variances of 2nd-3rd, 1st-2nd, 1st-3rd, 7th-8th items. When the Goodness of fit indices were analyzed after modification, it was found that the model reached permissible fit. Therefore, it can be said that the results of explanatory and confirmatory factor analyses validate one factor measurement model. For the reliability evidence of Justice in the Classroom Scale test-retest method and Cronbach-Alfa formula were applied. In the original form of Justice in the Classroom Scale, Cronbach-Alfa values were found to be .92 for Distributive Justice in the Classroom sub scale, .94 for Procedural Justice in the Classroom sub scale (Chory-Assad and Paulsel 2004b) and .95 for Interactional Justice in the Classroom sub scale (Chory 2007). Kline (2011:70) reveals that reliability co-efficient is perfect for around “.90”, very good for around “.80”, adequate for around “.70”, and inadequate above “.50”. Cronbach-Alfa internal consistency for Justice in the Classroom Scale after being adapted into Turkish was found to be .91 for Distributive Justice in the

Classroom sub scale, .94 for Procedural Justice in the Classroom sub scale and .82 for Interactional Justice in the Classroom sub scale. Hence, it can be said that Cronbach-Alfa internal consistency for Justice in the Classroom Scale after being adapted into Turkish is at a high level. In order to find out how consistent the results of Justice in the Classroom Scale are over time, test-retest method was used and the scale was applied to the participants 20 days apart. According to the results of the analysis, test-retest reliability co-efficient was found to be 0,85, for Distributive Justice in the Classroom sub scale, 0,88 for Procedural Justice in the Classroom sub scale and 0,89 for Interactional Justice in the Classroom sub scale, so it can be said that Justice in the Classroom Scale is consistent over time.

#### 4. RESULTS AND RECOMMENDATIONS

Justice in the Classroom Scale was formed by unifying Distributive and Procedural Justice in the Classroom Scales developed by Chory-Assad and Paulsel in 2004 and Interactional Justice in the Classroom Scale developed by Chory in 2007. It was concluded that after being adapted into Turkish, Distributive Justice in the Classroom sub scale was found to make up of two dimensions named as ‘‘Expected Justice in the Classroom’’ and ‘‘Comparative Justice in the Classroom’’ which is different from the original form. Expected Justice in the Classroom dimension consists of 2nd, 4th, 8th, 9th and 10th items and Comparative Justice dimension in the Classroom consists of 1st, 6th, 7th and 11th items. According to the results of the explanatory factor analysis, due to the fact that 3rd, 5th and 12th items were cyclical, they were removed from the scale. After adaptation, Procedural Justice in the Classroom sub scale was found to have three dimensions named as ‘‘Rule Justice in the Classroom’’, ‘‘Teaching Justice in the Classroom’’ and ‘‘Exam Justice in the Classroom’’ which is different from the original form. Rule Justice in the Classroom dimension includes 1st and 2nd items, Teaching Justice in the Classroom dimension includes 6th, 7th, 8th and 9th items and Exam Justice in the Classroom dimension includes 12th, 13th, 14th and 16th items. The results of the explanatory factor analysis showed that 3rd, 4th, 5th, 10th, 11th, 15th and 17th items were cyclical so these seven items were removed from the scale. Interactional Justice in the Classroom Scale was found to have one-factor structure as it has in the original form. The use of Justice in the Classroom Scale in schools at different educational levels can contribute to the scale’s validity and reliability.

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# High school students' views on lifelong learning and motivational persistence levels

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## Abstract

This study aims to identify the relationship between high school students' views on lifelong learning and motivational persistence. The working group of the study which utilized relational screening model was composed of 433 students attending 8 public schools in Düzce Province Akçakoca District in 2014-2015 academic year. "Lifelong Learning Tendency Scale" and "Motivational Persistence Scale" were used in the study as data collection tools. Standard deviation, means and correlation analysis (Spearman's rho) were undertaken in the framework of the study. Results show that high school students "partially agreed" to the views related to Lifelong Learning in total, "agreed" to the statements regarding "motivation" and "lack of self-regulation" sub dimensions, partially agreed to the statements regarding "perseverance" sub dimension and partially disagreed to the statements regarding "lack of curiosity" sub dimension.

Student views on motivational persistence were undecided both in total and in long term purposes pursuing and recurrence of unattained purposes sub dimensions whereas they agree with the views regarding current purpose pursuing. While a low level relationship was identified between student views on lifelong learning and motivational persistence scales in total, moderate an level relationships were found among the sub dimensions.

Key Words: Lifelong learning, motivational persistence, Anatolian high school and vocational high school student

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## 1. INTRODUCTION

Reciprocal interactions between knowledge and technology, which resulted in naming this era as the information age, identify the direction of change and development of as well. Change experienced especially in economic, social and cultural areas takes place in connection with the dynamism of the knowledge flow; and the momentum of change and renewal in knowledge develops renewal of individuals as well. Variables such as economic approaches, globalization and technological developments diversify the expectations from the qualified labor force profile (ability to access information and technology, produce information and technology, critical and creative thinking ability, ability to do research, problem solving ability etc.). Feelings of anxiety experienced in cases of inability to meet the expectations of technology and the fear of staying behind technology have made learning a lifelong requirement. The fact that information becomes outdated in a short time has created the need for individuals to renew themselves throughout life and to continue training and education independently from factors such as time and setting. As a matter of fact, concepts of Lifelong Learning and learning society used to define information age are the reflections of this reality (Polat and Odabaşı, 2008).

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Lifelong Learning is a continuous process that emphasizes the expansion of learning opportunities and that develops potential and competences of individuals throughout life (Coşkun and Demirel, 2012); it is the acquisition and renewal of all types of skills, information and qualifications from birth till death. This process also supports real life practices of knowledge and skills that are acquired throughout life by increasing and strengthening them (Candy, 1994, cited in: Polat and Odabaşı, 2008). The foundation for the studies on Lifelong Learning is based on the belief that education is a tool that increases the quality of life. The concept was used for the first time by Grundtvig in 1800s (Gencel, 2013), and utilized by John Dewey, Eduard Lindeman and Basil Yeaksle in their work in 1920s (İzci and Koç, 2012). “Learning to Be/ Faure” report published by UNESCO in 1970 was effective in making lifelong learning concept one of the leading concepts of the modern world (Akkuş, 2008). International organizations such as the World Bank, UNESCO, OECD and European Council put the issue on their agenda and it became one of the basic matters in the Bologna Process in 1999. The concept reached its peak in the communiqué signed by the education ministers of 32 countries in Prague in 2001 (Beycioğlu and Konan, 2008; Budak, 2009; Göksan, Uzundurukan and Keskin, 2009; Konokman and Yelken, 2014). European Union Commission accepted lifelong learning as the required tool in 2000 for social integration, active citizenship, professional-personal development and harmony and training and education for work life and declared lifelong learning as an important indicator for European citizenship (Kıvrak, 2007). The same commission drew attention to 6 points in lifelong learning: New basic skills for all, more investment in human resources, Innovation in teaching and learning, Valuing learning, Rethinking guidance and counseling and Bringing learning closer to home (Güleç, Çelik and Demirhan, 2012). Today, regardless of development level, lifelong learning has become the fundamental goals of all societies and educational systems and is regarded as a policy that produces solutions for many economic and social hardships. Lifelong learning is regarded as a means to ensure individuals’ personal developments by creating opportunities in learning enable social integration and realize economic growth through employment (Güleç, Çelik and Demirhan, 2012). Lifelong Learning was brought to agenda in Turkey with the 17<sup>th</sup> National Education Council held in 2006. This council made a decision for the preparation of “Turkey Lifelong Learning Strategy Document” titled “Turkish Education System during Globalization and EU Process” (Barış, 2013). Also, Vocational Qualifications Authority was established ([www.myk.gov.tr](http://www.myk.gov.tr), 2015) to go over the national qualification system regarding lifelong learning and to reach European Qualifications Framework level.

Lifelong learning is a process that digresses the boundaries of schools and includes both formal and informal education. It aims to provide all citizens with continuous learning opportunities. The content, access and settings of lifelong learning, which aims to present each citizen with learning opportunities based on their needs and interests in every phase of their lives, are unique to individuals. At the same time, lifelong learning presents the individual with a second chance in addition to formal education and gives advanced learning opportunities to develop themselves (Akkoyunlu, 2008). This is rather important for development and growth in all fields especially in developing countries like Turkey. Lifelong learning increases social awareness and forms a learning culture in individuals and allows increases in schooling rate at all levels lead by basic education. In addition, it allows renewal of educational programs according to needs and ensures training individuals in line with suitable qualifications. It also provides access to learning to all individuals including disadvantaged citizens.

Motivation is the main factor that is effective in learning performances of individuals. Motivation is the consistency one presents in reaching a goal, intense directionality and persistence related to efforts in line with the process of goal and perseverance (Robbins and Judge, 2012) and the essence of all factors that activate individuals (Adair, 2006). This concept which has important implications on learning and behavioral change is one of the concepts that is often discussed and examined in the

field of educational psychology (Sarıçam, 2015). Motivation is important in revealing, directing and maintaining behaviours (Yurt and Bozer, 2015) and effort, intensity of efforts, commitment and motivational persistence are important indicators of academic achievement along with motivation (Adair, 2006; Robbins and Judge, 2012). Motivational persistence is identified with the intensity of a specific need that is parallel to physiological, affective etc. needs (Önen and Tüzün, 2005). Considering the fact that training and education process is a process of behavioral change and that motivation is an important factor in forming behaviors, the relationship between them will be self-evident. Especially, the persistence dimension in pursuing goals is important to take into consideration in learning and behaviora change since although individuals are born with innate desires to explore, communicate and unerstand their surroundings, the desire and willingness towards learning is gradually lost when they start school (Çakır, 2006). In this case, motivating individuals during the process of education and maintain their motivation is a must for achievement. Studies in the field also point to motivation as an indication for achieving success (Yılmaz, 2013).

Considering the fact that motivation of the individuals is formed of allthe factors that activate them, it will be observed that individuals will feel the need to learn throughout life and that their needs should be satisfied. Schools are the settings in which individuals are provided with these properties and the foundations of learning are established. The high school period is especially a critical period in which learning based foundations for individual preferences and future academic careers and experiences are established. While some high school graduates will have the chance to continue their formal educaiton at universities, the majority will begin to work right after high school graduation. Graduating from high school with a Lifelong Learning perspective will enable those students to feel the need for education for continuous growth and change since they will have a positive outlook to learning and education even though they are outside formal education. Therefore, preparing these students to life and careers will be possible by making the lifelong learning concept prevail.

It is one of the main goals of the education system in Turkey to prepare secondary level students for both higher education and for life and employment with the help of several programs and school types based on student interest, skills and competences (MoNE, 2015). It is imperative for these students to be motivated and sustain their motivations by being persistence in order for them realize and develop themselves, to participate in social and economic life as active citizens and to continue developments in their careers. Motivational persistence and perseverance are among the leading factors that will affect individuals' performances in coping with possible problems in life, being equipped with the necessary skills in line with the information age and in reaching their goals.

In order to be successful in this regard, motivating elements should be taken into consideration in all educational levels starting with pre-school period and continuing until after higher education. Although there are various studies in the literature regarding student motivation (Ceylan, 2003; Çakır, 2006; Aypay and Eryılmaz, 2011; Yılmaz, 2013; Tonguç, 2013), motivational persistence topic has no been explored much (Sarıçam, 2015; Sarıçam, Akın, Akın and İlbay, 2013). This study will try to fill the gap in the field by questioning high school students' views on Lifelong Learning and motivational persistence. The obtained data is beelieved to shed light to the policies that will be identified to allow high school students acquire lifelong learnnig perspectives.

### **Purpose of the Study**

This study aimed to identify the relationships between high school students' views on lifelong learning and motivational persistence. With this general aim in mind, answers to the following questions were sought:

1. What are high school students' views on Lifelong Learning?
2. What are high school students' views on motivational persistence?

3. Are there significant relationships between high school students' views on Lifelong Learning and motivational persistence?

## 2. METHOD

### Research Model

The study utilized the relational screening model. Relational screening model is used to identify the existence of covariance between two or more variables and/or its degree and can provide important results in estimating the outcome of other variables when the state of one of the variables is known rather than cause-effect relationships (Karasar, 2013).

### Working Group

The working group of the study consisted of 433 voluntary students who attended public high schools in Düzce province Akçakoca district in 2014-2015 academic year. 51% of the participating students attended Anatolian High Schools, 49% attended Vocational High Schools; 43,6% of the participating students were females, 56,4% were males; 27,7% attended 9<sup>th</sup> grade, 23,1% attended 10<sup>th</sup> grade, 21,5% attended 11<sup>th</sup> grade and 27,7% were in 12<sup>th</sup> grade at the time of the study. Special attention was paid to include similar numbers of students in the study in terms of school of attendance, gender and grade.

### Data Collection Tool

Lifelong Learning Tendency Scale developed by Coşkun and Demirel (2010) was used in the study to determine students' lifelong learning tendencies. The scale is a 6-point Likert type scale ranging from "completely agree" to "completely disagree" and it consists of 27 items. The scale includes 4 sub dimensions: motivation, perseverance, lack of self-regulation and lack of curiosity. Cronbach Alpha value, which is the internal validity of the scale, was found to be .89 for the whole scale.

Motivational Persistence Scale developed by Constantin, Holman and Hojbota (XXX) and adapted to Turkish by Sarıçam, Akin, Akin and İlbay (2013) was used to measure students' motivational persistence levels. The reliability and validity studies of the scale were also undertaken by Sarıçam, Akin, Akin and İlbay (2013) as well. The scale has 13 items and 3 sub dimensions: long-term purposes pursuing, current purpose pursuing and recurrence of unattained purposes. Cronbach Alpha internal consistency coefficient was identified to be .69 for the whole scale. In the current study, Cronbach Alpha internal consistency value was calculated to be .89 for the Lifelong Learning Scale and .81 for the Motivational Persistence Scale.

### Data Analysis

Data were analyzed by using SPSS program. Before the data were analyzed based on sub problems, normalcy of data distribution was examined by Kolmogorov-Smirnov test to identify the tests that will be undertaken. As a result of Kolmogorov-Smirnov test, it was observed that not all variables presented normal distribution ( $p < .05$ ). In this study, standard deviation and means were examined for lifelong learning tendency and motivational persistence levels whereas correlation analysis (Spearman's rho) was used to determine the relationship between lifelong learning tendency and motivational persistence levels and the level of significance was established to be .05.

## 3. FINDINGS AND DISCUSSION

### Findings Related to Lifelong Learning

**Table 1:** High school students' views on lifelong learning

Scales	Dimensions	N	$\bar{x}$	ss
Lifelong Learning Scale	<i>Motivation</i>	433	4,79	,9321
	<i>Perseverance</i>		4,24	1,0712
	<i>Lack of self-regulation</i>		4,79	,9321
	<i>Lack of curiosity</i>		3,35	1,2235
	<b>Total Scale</b>		3,94	,6727

According to Table 1, in terms of their views on Lifelong Learning, students expressed that they agreed to motivation and lack of self-regulation sub dimensions ( $\bar{x}=4,79$ ), partially agreed to perseverance sub dimension ( $\bar{x}=4,27$ ) and partially disagreed to lack of curiosity sub dimension ( $\bar{x}=3,35$ ). While the highest means in student views were found in motivation and lack of self-regulation, the lowest means were observed lack of curiosity sub dimension. Students expressed that they partially agreed with the general scale ( $\bar{x}=3,94$ ).

When the participating students were considered, it was found that 9<sup>th</sup> graders were in Generation Z whereas 12<sup>th</sup> graders were in Generation Y. One of the characteristics of Generation Z students is their constant interaction with information and communication technologies, their use of technology in all stages of their lives and realization of learning not only at school but outside the school as well. Continuous access to information will positively affect their perceptions regarding the belief that learning can be undertaken anywhere and anytime.

The fact that student perceptions in the perseverance dimension of Lifelong Learning pointed to partial agreement may be related to their age groups since this age group is very energetic and active; they want to reach their goals immediately and can be impatient. These qualities may hinder perseverance during the process and may cause uncertainties. Students were found to partially disagree to lack of curiosity sub dimension and this finding can be evaluated as positive because it also shows curiosity towards learning as well. Considered in general, the fact that students partially agreed to the statements about lifelong learning may indicate that students have a tendency towards lifelong learning ideals and willing to acquire new information and skills at later ages although this willingness is not at desired levels currently. In addition, students were found to participate in various projects in European Union Youth Projects Framework, realized that they could transmit education to all phases of their lives with the help of the experiences gained during those projects and noticed the various opportunities and chances regarding learning. This may have positively contributed to their lifelong learning perceptions. No studies that aimed to identify high school students' lifelong learning tendencies were found in the literature review undertaken in the framework of the current study. However, the results of studies targeting university students presented that lifelong learning competences of teacher candidates and teachers were sufficient to positively affect students' competences (Selvi, 2011; İzci and Koç, 2012; Gencer, 2013; Karakuş, 2013; Kılıç, 2015).

### Findings Regarding Motivational Persistence

**Table 2:** High school students' views on motivational persistence

Scales	Dimensions	N	$\bar{x}$	ss
Motivational Persistence Scale	Long term purposes pursuing	433	3,18	,8154
	Current purpose pursuing		3,65	,8261
	Recurrence of unattained purposes		3,16	,7684
	<b>Total scale</b>		3,32	,6756

According to Table 2, students were found to be undecided about the motivational persistence scale sub dimension “long term purposes pursuing” ( $\bar{X}=3,18$ ), found to agree with current purpose pursuing sub dimension ( $\bar{X}=3,65$ ) and found to be undecided about recurrence of unattained purposes sub dimension ( $\bar{X}=3,16$ ). Based on these findings, the highest means were observed in students’ current purpose pursuing in terms of their motivational persistence, students were found to be undecided in the motivational persistence scale in general ( $\bar{X}=3,32$ ).

These findings showed that students were undecided about recurring long term and unattained goals but their motivational persistence levels were higher in current purpose pursuing sub dimension. Students participated in the framework of the study were the students who were studying for the university exam through which they would be directed to specific professions. Unfortunately there are no clear policies in Turkish education system and practices and various changes are constantly made in the educational level these students are involved in. the university exam system that the students will encounter does not fully meet their requirements for career and professional expectations as well. The students who take the exam are placed in universities based on the selection they made and this may not always prove to be their desired field. This system is a barrier that hinders the realization of their long term goals. Identifying and following existing goals is much easier than following long term and unattainable goals and the former has concrete indicators such as achievement and passing grades. Since attaining existing goals is easier for students, it is also attractive. In general, students’ views on motivational persistence levels were found to be undecided. This finding may have resulted from the use of methods and techniques at schools that do not fully meet student needs and expectations, lack of motivational tools and focusing on university entrance as the sole criteria for student success as well as the high influence of extrascholastic stimulators (social, technological, cultural etc.) on students. Students find school incompetent to meet their extrascholastic needs. On the other hand, differences between students’ individual differences and their level of readiness may explain this finding as well. Informing students about learning or educational goals, keeping them informed of what they learn and why will positively contribute to their motivations.

### Relationship Between Lifelong Learning and Motivational Persistence

**Table 3:** Correlation analysis table for the relationship between students’ views on lifelong learning tendency and motivational persistence

SCALES		Long term purposes pursuing	Current purpose pursuing	Recurrence of unattained purposes	Total
Motivation	r	,369**	,429**	,352**	,486**
Perseverance	r	,371**	,332**	,309**	,373**
Lack of self-regulation	r	,029	,036	-,050	,662**
Lack of curiosity	r	,031	,036	-,013	,740**
Total	r	,839**	,818**	,831**	,243**

\* p<.05    \*\* p<.01

Table 3 shows various relationships between student views on lifelong learning and motivational persistence levels both in total and in sub dimensions.

A moderate significant relationship was identified between the motivation sub dimension of Lifelong Learning Scale and both the total motivational persistence scale ( $r=,486$ ,  $p<.01$ ) and long term purposes pursuing ( $r=,369$ ,  $p<.01$ ), current purpose pursuing ( $r=,429$ ,  $p<.01$ ) and recurrence of unattained purposes ( $r=,352$ ,  $p<.01$ ) sub dimensions. Although the relationship between lifelong

learning tendencies an motivational persistence levels was moderate, students were found to partially informed of existing or long term goals and that positively contributed to motivate them. The fact that recurrence of unattained purposes sub dimension had a moderate level relationship with motivation can be regarded as an indicator of student interest and persistence in the area. It is believed that informing students about the acquisitions that can be gained through lifelong learning and presenting them with concrete results will facilitate the formation of perceptions to the effect that lifelong learning is a necessity and will ensure high levels of motivation.

A moderate and significant relationship was identified between the perseverance sub dimension of Lifelong Learning Scale and the total Motivational Persistence Scale ( $r=,373$ ,  $p<.01$ ) and long term purposes pursuing ( $r=,371$ ,  $p<.01$ ), current purpose pursuing ( $r=,332$ ,  $p<.01$ ) and recurrence of unattained purposes ( $r=,309$ ,  $p<.01$ ) sub dimensions. Positive perceptions regarding perseverance, which can be called continuity of efforts, will also result in positive efforts towards lifelong learning.

While no significant relationships were identified between lack of self-regulation and lack of curiosity sub dimensions of lifelong learning scale and sub dimensions of the Motivational Persistence Scale, student views on the total scales were found to be significantly related. Accordingly, moderate level significant relationships existed between motivational persistence in general and lack of self-regulation sub dimension ( $r=,662$ ,  $p<.01$ ) and high level significant relationships existed between motivational persistence and lack of curiosity sub dimension ( $r=,740$ ,  $p<.01$ ). Perseverance and motivation, sub dimensions of Lifelong Learning Scale, have affective properties whereas lack of self-regulation and lack of curiosity are sub dimensions related to learning situations and reasons for learning (Coşkun and Demirel, 2010). These finding points to the fact that students' awareness levels were partially formed however they did not have sufficient accumulation especially in lack of self-regulation and lack of curiosity sub dimensions. Not being informed of the goals and misinformation about the uses of these goals will negatively affect their curiosity levels. This finding can also be regarded as an indication of spending insufficient time for planning on the part of the learners.

While a low level relationship was identified between the Lifelong Learning Scale in general and Motivational Persistence Scale in general ( $r=,243$ ,  $p<.01$ ); high level significant relationships were identified among long term purposes pursuing ( $r=,839$ ,  $p<.01$ ), current purpose pursuing ( $r=,818$ ,  $p<.01$ ) and recurrence of unattained purposes ( $r=,831$ ,  $p<.01$ ) sub dimensions. The reason for the low level relationship between lifelong learning tendencies and motivational persistence levels is believed to be caused by many reasons. Academic achievement or success in university entrance exams, which are pointed as individual goals, transforms learning into short term dimensions rather than maintaining the lifelong dimensions.

In general, there are relationships between Lifelong Learning and Motivational Persistence. Keeping students informed of lifelong learning goals, presenting them with concrete results of positive examples will be parallel to their motivational persistence levels. Concepts that will create interest and curiosity in students need to be used as the determinants of perseverance and persistence in making efforts to realize the existing goals, working diligently towards long term goals and recurring the unattained aims and students should be supported in planning their educational experiences. Providing vocational and educational guidance regularly to students, who were identified to be partially competent in lifelong learning in affective terms, will make positive contributions to their lifelong learning persistence levels.

#### **4. RESULTS AND RECOMMENDATIONS**

In general, high school students partially agreed with statement regarding lifelong learning, agreed with lack of self-regulation and motivation sub dimensions, partially agreed with perseverance sub

dimension and partially agreed with lack of curiosity sub dimension. Student views on motivational persistence were found to be undecided both in general for the scale and for long term purposes pursuing and recurrence of unattained purposes sub dimensions whereas they agreed with current purpose pursuing sub dimension. While low level relationships were detected between student views on Lifelong Learning and Motivational Persistence levels based on total scales, moderate or high level relationships were identified among the sub dimensions.

Suggestions are provided below based on the findings obtained in the study:

- It should be emphasized that learning is not only undertaken for academic achievement or for moving to higher educational levels. Students should be informed of the goals an underlying background of lifelong learning, their curiosity should be awakened and lifelong learning goals should be taken into consideration while planning their learning.
- Lifelong learning discipline should be supported with the rich resources that the technological advances offer for this age group that utilizes information and communication technologies intensely
- Teaching activities should be continued in line with principles such as learner centeredness and inclusion of life experiences.
- Students should be directed to learning activities base on their skills, competences and needs and they should be supported with motivating factors
- Individual, professional and educational guidance and counseling services should be structured based on lifelong learning approach.
- It should be emphasized that lifelong learning increases the quality of life and contributes to social prestige and career planning

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# Effective teaching strategies to the educational exclusion\*

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## Abstract

The aim of this study is to identify effective practices in education in order to address the issue of failure amongst pupils in secondary schools. The methodological design for the investigation, of descriptive nature, has been that of a case study, with three sources of information: documentary analysis, classroom observations, and the perceptions of the persons in charge of implementing the attention to diversity measures. Among the conclusions from the study about prevention of early dropouts, it is worth mentioning, on the one hand, the importance of carrying out planning, organization and teaching strategies with regard to scholar inclusion. On the other hand, the necessity of bringing out new types of coexistence based on respect, as well as developing educational policies that help to encourage a higher level of social commitment, and a better professional development for teachers. The participation of all the relevant sectors is essential if the school is to see itself as a unit of exchange or a research space which incorporates differentiation into its processes of innovation.<sup>1</sup>

Keywords Inclusion, difficulties in schools, failure in schools, vulnerability

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## 1. INTRODUCTION

The European Union has committed itself to creating a knowledge-based society in Europe, and considers the fight against failure in schools to be a basic educational problem. In fact, in June 2010, the EU Summit approved five goals to be achieved by 2020, where the need to reduce early school leavers to 10% or less is tackled once again (it had previously been dealt with in the Lisbon Strategy). According to the OECD report “Education at a Glance 2013” the Spanish education system has higher school failure rates than the European average, and one of the highest amongst neighboring countries. The numbers of early school leavers within the Spanish education system has been falling moderately since the beginning of the economic crisis and fell by 25% in 2013, although in spite of this it continues to be more than double the European average. Moreover, none of the plans approved by the Spanish Government over recent years have made a positive impact in this regard.

The latest report, “Education at a Glance. OECD indicators (2012)”, shows that 49% of Spanish people complete only their compulsory education. Although this percentage has decreased year by year (in 1997 it had reached 69%), we are still a very long way from the European and OECD figures. In Spain’s case, more than 130,000 pupils left compulsory education with no qualifications whatsoever, and with no effective way of getting back into the system, meaning they will have no upper secondary qualifications and will become what the European Union terms “early school leavers”. Such high failure rates are not justifiable in a country with income levels such as Spain’s, where nursery and primary education are good, and where there are high figures for university attendance. Such high school failure rates are therefore unjustified, and they occur for reasons and variables which are rectifiable.

There have been different approaches to understanding the phenomenon, one of which is linking school failure to social exclusion in education, where researchers agree that it should be analyzed from a multidimensional perspective (Vaquero 2011; Choi and Calero, 2013). In this regard, all the reports from the OECD that have dealt with the issue in question point to three ways in which this phenomenon may manifest itself. The first is low academic achievers, i.e. those who do not attain minimum levels of learning during their school life, the second when a pupil leaves or finishes compulsory education with no relevant qualifications, and the third points to the social consequences and employment implications for these pupils who are so ill-prepared. Educational failure, seen in terms of social exclusion in schools, can therefore be understood as a process with different stages (during a pupil’s education, at the end of it and after leaving school) which, in turn, have knock-on effects.

Within this context, we have put forward the following research questions:

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What educational practices help bring about a decrease in educational failure in underprivileged contexts?

What is the role of teachers and the managerial staff in developing effective educational practices?

To what extent do internal practices (curricular, organisational, those related to relations with surroundings, etc.) developed by schools contribute to problems involving attendance and school leaving rates.

If we are to do what we can to mitigate failure and social exclusion in schools, we must identify and develop effective educational practices to combat these tendencies in pupils. In this sense, many authors at both national and international level have researched and studied themes such as school failure and social exclusion, difficulties in schools, vulnerability and pupils at risk (Echeita, 2008, Jiménez, Luengo and Tabernet, 2009; Luzón, Porto, Torres and Ritacco, 2009; Sammons and Bakkum, 2011, Di Franco, 2013). In the last decade, failure in schools has been the subject of a variety of studies and reports within OECD, as noted above, which have approached the problem from the point of view of a “lack of inclusion in schools” (Escudero, 2009; González Faraco, Luzón, and Torres Sánchez, 2012; Fernández-Batanero, 2010; Echeita, 2013).

Examining the school context may be a good way of understanding the role it plays in why pupils leave school, and a way of considering changes in approach and organisational dynamics to prevent early school leaving. This could be achieved in a number of ways, one of which involves improving teaching practices so that they “guarantee success for all pupils”. This inevitably leads to the development of good practices in schools, in other words, those which improve learning for all pupils so that they can lead effective and productive lives i.e. acquire the skills needed to become a citizen in a democratic, plural and diverse society (Walberg and Paik, 2007, Brophi, 2007). Equally, we agree with Marqués (2002) who considers “good teaching practices” to be educational measures which facilitate the development of learning activities with high educational value, such as those involving a high incidence of disadvantaged groups, less failure in schools in general, more in-depth learning, etc. Ultimately, these are learning strategies aimed at improving the quality of life of both individuals and groups (Coffield and Edward, 2009).

Nevertheless, “good practice” is a complex subject, involving a multitude of variables. Escudero (2009) stresses that teachers should reflect on pedagogic approaches defined by others. Coffield and Edward (2009), add to the five dimensions and introduce context and students, referring specifically to the curriculum, pedagogy and assessment, highlighting the leading role of teachers and possible professional training needs, in addition to drawing attention to the importance of creating a link between good practice and family and social contexts.

If we base our description on inclusive practices on the criteria provided by the "Public Platform for Inclusive Schools" (2006), we may affirm that good practices are those which:

a. Include all pupils; b. Encourage an inclusive culture within schools; c. Involve effective cooperation between the various education players; d. Use various resources and different educational strategies; e. Have a flexible organizational model; f. Have a specific and systematic programme. However, talking about good educational practices also involves talking about high-quality teachers, who are personally committed to the success of all their pupils (Rivkin, Hanushek and Kain, 2005; Hanushek and Woessman, 2010), where the attitude of teachers represents a crucial aspect in the success of inclusive classrooms. Positive attitudes from teachers towards inclusion reflect themselves in their behaviour in classrooms (Leatherman and Niemeyer, 2005). At the same time, teachers who are aware of their teaching approaches (aims and strategies) and who use them well, obtain better academic results with their students (Maquilón and Hernández Pina, 2010).

Furthermore, it is now an indisputable fact that the collaborative relationship which must exist between the family and school depends, to a large extent, on the perceptions and attitudes that the relatives have towards the schools and their staff. There are even scholars who believe that variables related to the family environment represent the main predictors of a student's academic achievement and that these are even more important in determining such achievement than school related variables (Brunner and Elacqua, 2003). In this regard, we find an abundance of studies which reveal the relationship between family involvement in homework and the positive perceptions of parents of children with special educational needs regarding the inclusion process (Elzein, 2009; Boer, Pijl and Minnaert, 2010; Olsson and Roll-Pettersson, 2012; Arellano and Peralta, 2013).

Another variable to take into account regarding educational inclusion and school failure is the leadership exercised by managerial staff within schools as these individuals play a very important role in terms of developing changes to teaching practices, the quality of these practices and the impact of these on the quality of teaching for pupils at schools (Currie and Lockett, 2011; Jappinen, 2012). Good and inclusive managerial practices refer more to collective processes than to individual action, expanding the role of leadership to include the participation and representation of teachers, administrators at various levels and members of the school community, including of course the pupils themselves (Ryan 2006).

However, even if schools can do little about the characteristics and socio-economic circumstances of its pupil intake, they are nevertheless obliged to provide rich and effective educational environments for “all” their pupils. From this starting point, internal assessments of the school and teaching staff, as well as a good look at social and education policies may help them not only to determine whether or not there is good practice, but also to reveal the barriers which are preventing it from happening.

## 2. METHOD

The research was designed as a case study from a descriptive perspective. The general aim of the research focuses on identifying “good practices” which have been shown to be effective, in the sense that they bring about highly significant levels of learning amongst the vast majority of secondary education pupils. The following data form part of the research project detailed above. They are concerned specifically with practices and results involving pupils who experience pronounced difficulties with the curriculum and mainstream learning in compulsory secondary education, and who therefore run a high risk of being educationally and socially excluded.

### Participants

The study focused on a state secondary school (covering compulsory years of education) in Seville (Spain), situated in one of the most disadvantaged and underprivileged areas of the city. The school was selected on the basis of two criteria: firstly, because it was categorized by the Education Authority as a “Special Measures” school, and also because it had reduced its pupils’ “failure rate” at the end of their compulsory education by 27% in the last four years. There are 573 pupils enrolled at this school, of which 18% are not Spanish, these pupils coming from Morocco, Sahara, Romania, China, Bolivia and Colombia. Diversity support programmes and measures currently under development and which form the subject of our study, are the following: the *Mentoring at School programme* which is put into practice during the 1st, 2nd and 3rd years of compulsory secondary education, with 6 groups each made up of 10 pupils; the *Compensatory Education programmes* with 12 groups and a total of 317 pupils, and the *Curriculum Development programme* with one group and a total of 15 pupils.

As soon as the school had been selected, we proceeded to analyse the school’s documentation and carry out in-depth interviews with the management team, staff in the Guidance Department and teachers involved in the development of the various measures for differentiation. We also carried out classroom observations. The in-depth interviews and classroom observations were all carried out during the 2009-10 school year.

Overall, 47 in-depth interviews were carried out and 12 classes were observed, these taking part within the context of the *School Mentoring at School* (2nd and 3rd years), *Compensatory Education* (2nd and 3rd years) and *Curriculum Development programmes* (4th year).

Our theoretical reference for analysing and interpreting the data was the theory of “good practice”, and the theoretical framework helped us define some specific criteria for identifying good practice. The concept refers specifically to the beliefs, perceptions, vision and values of the teaching staff, the values and expectations inherent in the programmes and how they contribute to reducing the risk of pupils leaving school without the knowledge they require, however little that may be. It also refers to the selection and organisation of learning content, clarity in terms of the type of learning and objectives (particularly with regard to the type of contents and learning used within these measures) and tasks, activities, materials and personal/social relations in class. Finally, it involves the assessment of learning and of schools, their teaching staff, families and the community.

Most secondary schools in a socio-economically, educationally and culturally disadvantaged context, with pupils at risk of educational exclusion at school and in danger of not completing their compulsory secondary education with any degree of success, have considered within their policy documentation a series of normative measures for achieving the required learning. These, however, have their own methodological variations, reorganisation of curriculum contents or programmes for differentiation of the curriculum (whether socio-linguistic or technological/scientific), along with strategies for adapting them. The programmes and measures for differentiation currently under development, which formed the subject of our study, were as follows: the Curricular Development Programme, Compensatory Education programmes and the voluntary programme, “Mentoring at School”.

In this chapter we present the qualitative results obtained from the analysis of data gathered in a secondary school (taken as the actual unit of study), and more specifically, from the documentary analysis, which includes interviews and classroom observation.

The interview protocol was evaluated using the technique known as “expert opinion”, in which nine specialists took part from a number of Spanish universities. They were chosen according to the following

criteria (Scientific level and teaching category; Recognition as a researcher; Research work in a relevant field; Practical experience in the profession; Years of experience as a researcher).

The in-depth interviews focused on the following aspects: pupils attending the programme, the curriculum, the internal context of the school; support, resources and professional training for teachers; and general assessment of the programme. The contents were analysed using the computer program Nudit 5 (Non-numerical Unstructured Data Indexing Searching and Theorizing) and in the following phases: pre- analysis, formulation of the categorisation system, codification, analysis and interpretation.

The results are presented below in a number of heuristic categories.

### 3. RESULTS

From an analysis of its documentation, we noticed that the school had a strong interest in providing an appropriate response to differentiation in classrooms, and in guaranteeing the success of all pupils as far as possible. In this way, the Education Plan the school is developing revolves around five basic principles (safeguarding mixed, interactive groups and rejecting homogeneous forms of group organisation; incorporating as many resources as possible into the classroom; adapting the curriculum; seeking a new model for working together; training teachers).

*“All this is why there is a commitment to mixed interactive groups, which encourage communication between pupils through discussion and reasoning. They promote mutual help which benefits everyone and develops meaningful interaction between pupils.”* (Educational project, 2007).

Focusing on the measures aimed at ensuring that pupils achieve the Certificate of Secondary Education, we shall begin with the “personalised curriculum”, which can be taken as the basis for combining comprehensivity with differentiation. The first stage in adapting the curriculum, at both personal and individual level and at group level, is the assessment undertaken by the Guidance Department when pupils start their first year of secondary. The department conducts its own tests, linking them to primary school records and information from meetings with tutors in the pupil’s old school. The aim of this initial assessment or appraisal is, in fact, to consider the individual needs of each pupil. On the basis of this, support or learning reinforcement groups are formed for those who have fallen the furthest behind, especially in basic subjects (language and maths). However, it is the teacher’s job to personalise tasks and adapt them to the needs of pupils who are falling behind in their learning.

Support groups are composed of pupils who are behind in the curriculum, whether because they are considered to have less ability to learn or because they are less motivated. In third year, pupils who are motivated to succeed but are unable to do so are separated from those who display some form of disruptive behaviour. The first group is given differentiated support and, if necessary, they can enrol in the “Mentoring in Schools” programme. The second group is given help in reinforcing basic skills, mostly language and maths.

It should be noted that pupils who have repeated a year, but who are motivated and in risk of not passing, receive help from the “Differentiation Programme”. There is no doubt that this measure improves chances of success, and the vast majority of pupils succeed in their aims (a recognised school qualification). However, despite this, the teachers are aware that these pupils are not equipped to study for the Baccalaureate, and some of them are steered towards work-oriented modules.

Finally, as a voluntary measure towards differentiation, it is worth noting that those involved in the “Mentoring in Schools” programme indicated that they were very satisfied with the results. The programme had made a good impression in a number of schools which had embraced the programme from the start. They saw better academic results, higher expectations in the pupils taking part and greater involvement from families in their children’s education.

The programme involves six groups with ten pupils each, and it is aimed at pupils in the first three years of secondary school who join the programme voluntarily. They come from families with a low cultural or vulnerable social background, or who live on the edge of social exclusion. For four hours a week, spread over two afternoons, they learn how to work independently and develop their learning skills to help them carry out tasks under the guidance of a teacher or teaching assistant with whom they can discuss their work. The programme works well, thanks to the low numbers in each group (ten pupils) and written agreement from parents that pupils will not be absent without a good reason. There is even a waiting list should any pupils withdraw. During the sessions, computers are available and the library is staffed.

Following this review of differentiation strategies, we note below some of the educational practices which the school has implemented and considers effective. In order to do this, we will arrange them according to the pupils, the curriculum, teaching staff and the internal context of the school itself.

We describe here a series of learning activities relating to the field of students. Firstly, our interviews and observations highlight the need to break with what the teachers themselves term “more traditional methodologies”, which were not able to keep pupils motivated, which are based on the use of abstract language and where the pupils get used to distancing themselves from what is going on in the classroom.

*“We have to leave aside more traditional methodologies which do not succeed in motivating the pupils, where the students tend to have no interest in class work and have a negative attitude towards everything to do with school”* (Teacher, 3).

This methodology encourages smaller groups which facilitate individual attention, especially in groups of pupils within differentiation programmes. All groups in the school are mixed, and homogenous groups are rejected on the basis that they involve segregation. Interaction is seen as the basis for their learning strategy with a definite commitment to collaborative learning. More able pupils help struggling ones to overcome their difficulties. Pupils tutor others as a matter of course, and this benefits both pupils. The school also has teams of volunteers who are able to help pupils as friends rather than as teachers. These volunteers are particularly committed to the school, and this has become a cornerstone of the social support system.

*“Dividing pupils into homogeneous groups reduces the ratio, but this is not enough to change the dynamics of the classroom. It is possible to achieve exactly the same with less pupils as with twice as many. Smaller class sizes should not be based on dividing pupils according to learning levels which segregate, but should be used to take advantage of more participatory methodologies”* (Educational Curriculum Project).

In terms of work methodology, the school concentrates more on detailed understanding of the material than providing a large quantity of it, linking the contents to the pupils' interests, encouraging motivation, interrelating themes and materials, making use of themes, case studies and practical issues, and paying a great deal of attention to pupils' actual learning levels. This encourages each of them to pay attention and follow the class (personalising the content), and helps maintain positive personal relations with them in terms of support, help, encouragement, willingness to help and getting the best out of their learning.

Another aspect we wish to highlight is the level of independent learning in the classroom. The teacher has a lesser role and pupils' roles are increased, so that there is no need for constant supervision from the teacher. This is an important feature of the Mentoring in Schools programme, where the teacher can be seen guiding pupils in their work. There is not only collaboration between teachers in the classroom, pupils also work together in most of their classroom activities.

*“Throughout my years as a teacher in the Mentoring in Schools programme, I have realised that we have to change roles and that we should spend less time explaining things to pupils and more time planning, supervising and working together with the group”* (Interview n° 4).

In relation to the curriculum field, say that with respect using lesson and curriculum planning as a tool for improvement there is a basic concern with these measures is how to select and organise content, and how to clarify learning targets (aims and skills). Curricular planning for these measures (even if it is not always coordinated) in which the strategies and activities are considered to be “good practice”, require additional input from teachers, and this effort is clearly reflected in the progress in class.

In another sense, one of the main dilemmas facing the school in terms of adapting the curriculum for this type of pupil is deciding which elements should be different and which should remain similar.

*“The important thing is to work out what these pupils need to know, and then we have to make the course content meaningful for them. To do this, all the teachers have to work together in a coordinated way”* (Teacher, 14).

To say also that marking schemes based on clear criteria in terms of learning goals and how they will be assessed. In their marking schemes, teachers take into account the starting levels of each pupil, helping each one to meet any needs they may have.

Assessment is considered to be a resource for the benefit of learning, not just to provide qualifications, and it helps adjust and regulate learning processes. Evaluation is seen as an ongoing, formative and discerning process which makes it easier to individualise teaching and learning processes.

Decisions on what to include are based on fundamental concepts. The materials used in the classroom contain no academic language. The contents are organised so that the materials are interrelated and emphasise joint processes (such as making the contents easy to understand and relevant to everyday life, organising learning around projects and practical work, making use of pupils' interests, environment and real-life experiences).

The materials are created and adapted to suit different subject matter and learning levels. Staff in the language, English, social studies and maths departments create their own resources or adapt existing ones for most of their groups, especially for first and second year secondary pupils.

The elaboration of the initial diagnosis, pupils who have fallen behind by two years or more when they enter secondary education are given an initial assessment by the school's guidance team. These pupils are assessed individually to see whether they come from a vulnerable family background which may be prone to social exclusion, whether in terms of employment, cultural factors or the break-up of the family.

In the school we studied for this research, the participation of family and community is considered very important, especially in preventing absenteeism. There can only be commitment from both sides when families and the community feel that they are an integral part of the learning project. The teachers and

management team value the participation of the community very highly, and are therefore helping to open up institutional channels which enable this to happen.

Likewise, with the observations there parts that classrooms are spaces which are open to the community. Families are always encouraged to take part in academic and cultural activities or fun-type events. All available resources are brought into the classroom, avoiding anything inappropriate or anything that might lead to segregation.

Regarding to teachers it is important to highlight the huge professional and personal involvement of the teachers who are working on the various programmes to ensure that their pupils progress and improve in all aspects of their personal, academic and professional learning. The people behind these measures sometimes note that this was one of the original reasons for implementing them in this school. It is remarkable how, despite having no specific training in these programmes or differentiation strategies, and with pupils clearly at risk of social exclusion, a large number of the teachers we observed and interviewed have training or experience in a complementary area which gives them a greater variety of resources or strategies for use in their teaching work.

Training is seen as professional development, and reflective practice is one of the main strategies. The teachers are aware that working in a socially and educationally disadvantaged environment involves knowledge, training and the acquisition of skills to develop specific strategies towards “success at school” for all pupils.

One of the things we saw again and again in our observations was the personal and social support the pupils received. For this reason, we can demonstrate that there is considerable effort to ensure pupils have high expectations about their learning potential.

*“We try to make sure that these pupils start to feel capable of learning again and have the desire to learn. This means having confidence in them and using much more contextualised and pupil-centred methodologies (Teacher, 12).*

Part of the reason for this school’s success is the way it sees respect as the foundation for working together, respect for everyone as learners, especially with regard to learning in mainstream classrooms. We respect the desire to learn, and all attempts to learn, not the place in the curriculum where each individual learns. There is respect for all members of the school, whatever their role or contribution.

*“The way we interact in the classroom and at school needs to become more human. Teachers have to be able to motivate pupils, to make them hungry for knowledge and learning. We have to exchange an atmosphere of confrontation and punishment for one of reflection, understanding and shouldering of responsibilities. Respect is at the centre of our model of working together” (Educational Curriculum Project).*

The teachers try to create their own materials, teaching units, topics and projects. If material is used from books, it is seen as a starting point for preparing material which can help orient pupils in their class work.

*“We have to contextualise the materials. In most of the books, you find more learning strategies than content” (Teacher, 9).*

Amongst the teachers we interviewed and the classrooms we observed, we wish to highlight how often teachers share work within the same class. Co-teaching not only improves their ability to attend to the needs of the pupils, it also requires agreement between teachers on the learning activities they are developing. The support afforded by bringing in a second teacher is not only aimed at pupils at risk of educational exclusion at school (although with two teachers, each one can dedicate specific time to providing individual attention in the classroom) but also at the teachers and the whole class. Co-teaching is used in all language, English and maths classes. Volunteers are used in language and social studies, and Special Needs teachers are available in language and maths lessons in all first year groups.

This is an essential factor in schools where there is a high standard of learning. Not only leadership with regard to other teachers, but also leadership of pupils.

#### **4. CONCLUSIONS**

The most important conclusions we wish to highlight include the following: firstly, that no measure to prevent social exclusion in schools (and consequently failure in schools) can be effective if all the members of the school do not support it or are not prepared to make significant changes to improve the quality of their learning environments. This must also become a fundamental element in the school’s daily objectives. “Good practice” is linked to the personal, rather than the professional commitment of the teachers (Rivkin, Hanushek and Kain, 2005; Hanushek and Woessman, 2010), so it is clear that the success of any measure depends on the feelings of the school management team and the teacher or team of teachers carrying out the measure. These coincide with work carried out by Currie and Lockett (2011) and Jappimen (2012). In this sense, we were able to demonstrate that the teaching staff were highly involved with and informed about the pupils’ situations, and that they made efforts to provide innovative solutions and create

attractive teaching units and projects with a solid base. They did all this without the benefit of specific pedagogic training in these programmes and measures. Thus, we are able to say that we coincide with the findings of Leatherman and Niemeier (2005) when they state that the attitude of teachers represents a crucial aspect for the success of inclusive classrooms. Another factor which we consider to be crucial in order to implement good practices is cooperation between staff in order to adapt their teaching methods and seek out alternative strategies.

Secondly, the strategies and plans which are developed need to be based on the school's exploration and understanding of issues, such as why pupils stay away from school, why they feel alienated from the school environment or from the curriculum, and distance themselves from it, and why they are not socially engaged or focused on their learning. It is essential, therefore, to determine the extent to which the infrastructure itself, the curriculum offered, the learning which is developed in the classroom, interaction with the environment and the school's ethos contribute to the problems of support and early school leavers. Basic agreement on an analysis of the reasons for these problems is possibly the first step in improving current methods.

Thirdly, the development of classroom teaching is based on a more professional approach characterised by a relaxed atmosphere of trust and respect, where positive expectations are instilled in the pupils about their learning options and where measures are taken to adapt the curriculum to the diversity of the pupils.

The fourth, a good relationship between the school and families. In this regard, we coincide with studies by scholars such as Elzein (2009), Boer, Pijl and Minnaert (2010), Olsson and Roll-Pettersson (2012), Arellano and Peralta (2013), where a positive correlation between family involvement and academic results is found.

Finally, we wish to note the importance of pedagogic leadership in school management teams. Pedagogic training for team members considerably helps to overcome difficulties with implementing integrated projects in schools. These findings coincide with those of Ryan (2006).

Implications fall into various spheres:

The first involves a political aspect, with the aim that authorities consider and favour inclusive proposals and do not sustain a model for schools based on homogeneity, competitiveness and differences between pupils when developing legislation.

The second involves the Spanish educational authorities with the aim of them developing comprehensive training plans within the framework of the principles of educational inclusion, where this is regarded as that which rejects exclusivity in favour of diversity and which promotes high-quality educational and training processes based on human relations. However, in order for a holistic vision and subsequent development of rationality and criticality, in addition to their integration and social analysis, to be achieved, these plans must train aspiring teachers and equip them with the skill of reflecting upon their actions and ways of acting, providing them with a strategic vision of their surroundings. This vision may integrate and develop skills and competencies which a high-quality level of teaching requires, i.e. comprehensive and strategic training.

The third involves the educational community in general since it is necessary to make known and, at the same time, recognise the importance of high-quality teaching at schools, good teaching practices and contributions to knowledge on school improvements which this group develops in their day-to-day work as professionals and the results of which have been reflected in research over the past twenty years.

#### **NOTE**

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# Epistemological beliefs of teacher candidates

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## Abstract

The purpose of this study is to find out the epistemological beliefs of the teacher candidates attending fourth grade at the Faculty of Education associated to A.I.B.U. The data of the research was gathered by using "Epistemological Belief Scale" developed by Deryakulu and Büyüköztürk (2002). The scale consists of three sub-dimensions related with 35 items. 438 students were included in the research sample. In the analysis of the data, average, standard deviation, Mann Whitney U and Kruskal Wallis were applied. The findings of the study are as follows: (1) Teacher candidates' epistemological beliefs didn't show a significant difference according to the education type and sex variables at any sub-dimensions. (2) Teacher candidates' belief of Learning Depends on Effort didn't show a significant difference according to the department variable but their belief of Learning Depends on Ability and belief of There is Only One Unchanging Truth showed a significant difference according to the department variable.

Key Words: epistemology, epistemological beliefs, university students

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## 1.INTRODUCTION

Epistemology has taken place in the center of education philosophy since the Socrates 'period (Siegel, 2008, Cit. Lang, 2011). Psychologists and educators have tried to reveal the relation between personal development and epistemological beliefs (Hofer and Pintrich, 1997). Epistemology has been defined in different ways and all the definitions basically put emphasis on the three aspects of knowledge as belief, truth and explanation (Holcomb, 2010). Billett (2009) has defined personal epistemology as person's learning and behaving ways based on person's capacity, background experiences and his ongoing relations with the social and physical world. Almost all of the researches done on epistemological beliefs have rooted in studies by Perry (1970, Cit. Hofer, 2000). These studies put forth how students explain their educational experiences is not a reflection of their personality but it is a progressive development process (Hofer and Pintrich, 1997). Perry (1970, Cit. West, 2004) reveals that moral and intellectual development schema is made up of three successful epistemological phases. The first phase is dualism in which the students believe that authorities select right from wrong without questioning. The second phase is diversity in which the students think that everyone has his own truth and the knowledge is neither right nor wrong. In the third phase which is called relativism students evaluate the judgements according to the contexts and evidences. The transition from diversity phase to relativism phase is characterized by noticing that some opinions are better than the others (Hofer, 2001). Accordingly, the transition from diversity to relativism is getting easy when the students meet multi-view points and are asked to adopt these different views and to rationalize between them and when the teachers show their uncertainty to the students and behave them like their friends (Perry, 1970, Cit. Clinchy, Lief and Young, 1977). Epistemological beliefs are conceptualized differently by various researchers. According to Schommer (1994), epistemological beliefs can be redesigned as independent beliefs system. People can be advanced in some beliefs but not advanced in some. Personal beliefs may have different impacts on learning. According to Schommer (1990, 1994) epistemological belief dimensions are comprised of the source of knowledge, the certainty of knowledge, the organization of knowledge, the control over learning and the pace of learning. The source of knowledge dimension represents the range between the belief that knowledge is obtained from external sources and it is originated in subjective or objective meanings. The certainty of knowledge dimension represents the range between the belief that knowledge is stable and certain and it is constantly changing. The organization of knowledge dimension represents the range between the belief that the knowledge has been organized as isolated components and the knowledge has been organized in an interrelated and complicated way. The other dimensions are influential in students' management on their own learning. The control of learning dimension represents the range between the belief that learning ability is permanent and has been determined by birth and it can be improved through experiences and effort. The pace of learning dimension represents the range between the belief that learning happens either quickly or never happens and learning happens gradually. As stated above, according to different researchers it can be said that epistemological beliefs of people are developing progressively so the students pass through different phases in the formation of these.

Personal epistemological beliefs can be guiding in understanding learning in various training environments (Brownlee et al., 2009). A person's beliefs about himself, learning and education in the classroom are a part of personal epistemology (Magolda, 2004; Schommer-Aikins, 2004) which make it possible to forecast about

comprehension, post comprehension and academic performance (Schommer-Aikins, 2004). Furthermore, Schoenfeld (1983, 1985, Cit. Schommer, 1993) reveals that they are prevalent on academic achievement. In the learning process, the students who have advanced epistemological beliefs use more qualified studying strategies and are more successful in terms of academic achievement when they are compared to the students who have unadvanced ones (Deryakulu, 2004). Kang and Wallace (2005, Cit. Kang, 2008) suggest that teachers' epistemological beliefs and the pedagogical methods they use to actualize various learning objectives are closely related, which influence classroom practices (Hofer, 2001). According to Feucht (2008, 2010, Cit. Feucht and Bendixen, 2010) epistemological climate consists of teachers' personal epistemology, epistemological messages which underlie informing, the epistemological messages of training materials like program and books and students' personal epistemological beliefs. As is seen, there are varied relations between epistemological beliefs and regulations for teaching and learning. This process has a great importance in teacher candidates' personal academic development and arranging learning environment since teacher candidates are not just responsible for their own learning and development, but also for the education of next generations. The fact that teacher candidates are well-trained will directly influence their teaching process. Accordingly, the purpose of this study is to determine the epistemological beliefs of teacher candidates who will join education organizations in the future and if their epistemological beliefs show a significant difference according to their education type, sex and department variables.

## 2.METHODOLOGY

The model of research is search model. According to Karasar (2007), search model is a research model intending to describe the condition as it is in the present or in the past. The population of the research is made up of 863 students attending 4th grade and 438 students participated in the study. In order to determine the epistemological beliefs of teacher candidates, Epistemological Beliefs Scale which was developed by Deryakulu and Büyüköztürk (2002) based on the Epistemological Belief Questionnaire by Schommer (1998) was used. This Scale is a 5-point Likert scale and consists of 35 items under three dimensions. The first dimension is called The Belief of Learning Depends on Effort (TBLDE) which is made up of eighteen items, seventeen of which are negative and one is positive. The second one is the Belief of Learning Depends on Ability (TBLDA) which has a total of nine items, all of which are positive. The third one is The Belief That There is Only One Unchanging Truth (TBTOU) which is formed of eight items, all of which are positive (Deryakulu and Büyüköztürk, 2002:9). The internal consistency of the scale was found to be .83, .62, .59 for each dimension and .71 for the whole of it. Personal features of the participants of the study are as follows: 290 (%66,2) students participated in the study are female and 148 (%33,8) students are male. The number of students studying at daytime education is 277 (%63,2) and the number of students studying at evening education is 161 (%36,8). The number of students studying Primary School Education is 72 (%16,4), Social Studies Education is 41 (%9,4), Elementary Mathematics Education is 37 (%8,4), Elementary Science Education is 35 (%8,0), Education of the Mentally Disabled is 47 (%10,7), Early Childhood Education is 23 (%5,3), Computer Education and Instructional Technology is 36 (%8,2), Music Education is 21 (%4,8), Painting Education is 13 (%3,0), Psychological Counseling and Guidance is 24 (%5,5), English Language Teaching is 36 (%8,2) and Turkish Language Teaching is 53 (%12,1). In the analysis of data, in order to obtain epistemological beliefs of teacher candidates, average and standard deviation were applied. To find out if the teacher candidates' epistemological beliefs show a significant difference according to their sex and education type variables, it was analyzed whether the teacher candidates' scores on sub dimensions show a normal distribution in sub-groups. According to the results of Kolmogorov Smirnov test, the teacher candidates' scores on all the dimensions of epistemological belief didn't show a normal distribution in sub-groups. Accordingly in the analysis of these variables, non-parametric Mann Whitney U test was applied. In finding out if teacher candidates' epistemological beliefs show a significant difference according to their department variable, whether the teacher candidates' scores on sub dimensions show a normal distribution in sub-groups was determined through Kolmogorov Smirnov test. When the results were analyzed, teacher candidates' scores was found to show a normal distribution in some sub-groups but not on some groups. Furthermore, the number of students was found to be under 30 in some sub-groups. Therefore, the homogeneity of variance is in sub-groups ascertained with Levene F test. According to the results of Levene F test, it was concluded that the variance of scores in sub-groups of TBLDA and TBTOU dimensions was homogenous but not homogenous for TBLDE dimension so it can be said that the normality assumption for the sub-groups of TBLDA and TBTOU dimensions was violated but the homogeneity of variance assumption was working well. On the other hand, it was found that both the normality assumption and the homogeneity of variance assumption for the sub-groups of TBLDE were not working well. Because of the fact that not all of the variances were working well and the number of participants in sub-groups was under 30, in the analysis of students epistemological beliefs according the department variable non parametric Kruskall Wallis test was applied.

### 3.FINDINGS

The average and standard deviation on the epistemological beliefs of participants has been given in Table 1.

**Table 1:** Descriptive Statistics of Teacher Candidates' Epistemological Beliefs

Sub-Dimensions	N	$\bar{X}$	S
<b>The Belief of Learning Depends on Effort</b>	43	35,922	9,266
<b>The Belief of Learning Depends on Ability</b>	43	26,703	4,843
<b>The Belief of That There is Only One Unchanging Truth</b>	43	19,344	4,369

When Table-1 was examined, the teacher candidates' TBLDE was found to be ( $\bar{X}=35,922$ ) (sd=9,266), their TBLDA was found to be ( $\bar{X}=26,703$ ) (sd=4,843) and their TBTOUT was found to be ( $\bar{X}=19,344$ ) (sd=4,369).

**Table 2:** Teacher Candidates' Epistemological Beliefs According to Education Type Variable

Sub-Dimensions	Education Type	N	$\bar{X}$	ss	Mean Rank	U	p
<b>TBLDE</b>	Daytime Education	27	35,9	9,18	219,660	22255,000	,973
	Evening Education	16	36,8	9,42	219,230		
	Education	1	75	6			
<b>TBLDA</b>	Daytime Education	27	27,0	4,87	228,090	19919,500	,062
	Evening Education	16	26,0	4,73	204,720		
	Education	1	49	5			
<b>TBTOUT</b>	Daytime Education	27	19,3	4,23	223,290	21247,500	,409
	Evening Education	16	19,2	4,60	212,970		
	Education	1	54	3			

\*P<0.05

When examining Table-2, teacher candidates' epistemological beliefs were found to show no significant difference according to the education type variable at any sub-dimensions ( $p > .05$ ). This result can be interpreted even though the fact that the training is done at evening hours when the instructors and students are more tired doesn't cause the teacher candidates having evening education to evaluate the knowledge in a different way. This result is consistent with the study of Demir (2012) where it was found that teacher candidates' epistemological beliefs didn't show a significant difference according to the education type variable at any sub-dimensions of students' epistemological beliefs.

**Table 3:** Teacher Candidates' Epistemological Beliefs According to Sex Variable

Sub-Dimensions	Sex	N	$\bar{X}$	ss	Mean Rank	U	p
<b>TBLDE</b>	Female	290	35,741	8,265	221,820	20787,500	,591
	Male	148	36,277	10,990	214,960		
<b>TBLDA</b>	Female	290	26,696	4,802	219,860	21355,000	,933
	Male	148	26,716	4,939	218,790		
<b>TBTOUT</b>	Female	290	19,165	3,911	215,580	20323,500	,363
	Male	148	19,695	5,146	227,180		

\*P<0.05

When examining Table-3, it was found that teacher candidates' epistemological beliefs didn't show significant difference according to the sex variable at any sub-dimensions ( $p > .05$ ). This result can be interpreted that male and female students have similar epistemological beliefs by being influenced from the education at university. This finding of the study supports the study by Magolda (1992, Cit. Hofer and Pintrich, 1997) in which males and females experience similar epistemological developments. This result shows consistency with the study by Terzi (2005) where it was found that university students' epistemological beliefs didn't show a significant difference according to the sex variable. On the other hand, this result does not show consistency with the studies by Özşaker, Canpolat and Yıldız (2011), Eren (2006) and Eroğlu (2004) in which it was found that male university students' level on the second dimension was found to be higher than females'.

**Table 4: Teacher Candidates' Epistemological Beliefs According to Department Variable**

Sub-groups	N	$\bar{X}$	ss	Mean Rank	$\chi^2$	p	Significant Difference	
TBLDE	Primary School Education	72	36,583	13,449	203,278	6,951	0,803	
	Social Studies Education	41	36,463	12,280	209,085			
	Mathematics Education	37	35,81	5,348	233,338			
	Science Education	35	34,942	4,575	223,000			
	Education of the Mentally Disabled	47	34,744	7,170	216,426			
	Early Childhood Education	23	38,087	7,543	267,761			-
	Computer Education and Instructional Tech.	36	35,416	5,773	224,972			
	Music Education	21	37,523	10,404	238,905			
	Painting Education	13	36,307	8,209	224,731			
	Psychological Counseling and Guidance	24	34,875	7,023	219,167			
	English Language Teaching	36	37,944	12,496	225,958			
	Turkish Language Teaching	53	34,150	6,039	202,481			
TBLDA	Primary School Education	72	25,722	5,094	198,410	20,214*	0,042	Primary- Computer
	Social Studies Education	41	27,073	4,606	225,780			Primary.- Music
	Mathematics Education	37	25,513	4,735	195,797			Maths - Computer
	Science Education	35	25,714	5,131	195,986			Maths - Music
	Education of the Mentally Disabled	47	25,617	4,494	186,872			Science - Computer
	Early Childhood Education	23	26,478	3,616	213,957			Science - Music
	Computer Education and Instructional Tech.	36	28,888	5,246	268,125			Disabled - Computer
	Music Education	21	29,333	6,552	281,000			Disabled - Music
	Painting Education	13	27,307	3,614	239,462			Disabled - English
	Psychological Counseling and Guidance	24	26,666	3,930	216,438			
	English Language Teaching	36	27,666	4,381	245,236			
	Turkish Language Teaching	53	26,981	4,508	228,321			
TBTOUT	Primary School Education	72	19,083	3,687	210,604	21,432*	0,029	Primary- Childhood
	Social Studies Education	41	18,731	4,944	202,305			Social - Childhood
	Mathematics Education	37	19,513	3,891	235,284			Maths-Psychology
	Science Education	35	18,914	3,567	215,886			Disabled - Childhood
	Education of the Mentally Disabled	47	18,148	4,303	185,234			Disabled- Computer
	Early Childhood Education	23	21,521	4,230	279,565			Disabled - English
	Computer Education and Instructional Tech.	36	20,694	4,248	259,361			Childhood-Psychology
	Music Education	21	20,333	5,023	247,976			Childhood - Turkish
	Painting Education	13	18,461	4,155	198,154			Computer-Psychology
	Psychological Counseling and Guidance	24	17,916	2,764	179,125			Computer - Turkish
	English Language Teaching	36	20,861	4,952	253,389			Music-Psychology
	Turkish Language Teaching	53	18,981	5,112	202,717			Psychology- English

When examining Table-4, teacher candidates' TBLDE was found to show no significant difference according to the department variable ( $p > .05$ ) but their TBLDA and TBTOU showed significant difference according to the department variable ( $p < .05$ ). The significant difference on the second dimension was found to be between the students studying Primary School Education-Computer Education and Instructional Technology, Primary School Education-Music Education, Mathematics Education-Computer Education and Instructional Technology, Mathematics Education-Music Education, Science Education-Computer Education and Instructional Technology, Science Education-Music Education, Education of the Mentally Disabled-Computer Education and Instructional Technology, Education of the Mentally Disabled-Computer Education, Education of the Mentally Disabled--Music Education, Education of the Mentally Disabled-English Language Teaching. The level of teacher candidates' on second dimension studying at Computer Education and Instructional Technology ( $\bar{X} = 28,888$ ) was found to be higher than teacher candidates' studying at Primary School Education ( $\bar{X} = 25,722$ ), at Mathematics Education ( $\bar{X} = 25,513$ ), at Science Education ( $\bar{X} = 25,714$ ), and at Education of the Mentally Disabled ( $\bar{X} = 25,617$ ). This result may be interpreted the level of teacher candidates' on second dimension studying at Computer Education and Instructional Technology department was found to be higher because of the fact that the lesson contents at this department are mainly based on computer application abilities when it is compared to the theoretical lesson contents at the other departments. The level of teacher candidates' on second dimension studying at Music Education ( $\bar{X} = 29,333$ ) was found to be higher than teacher candidates' studying at Primary School Education ( $\bar{X} = 25,722$ ), at Mathematics Education ( $\bar{X} = 25,513$ ), at Science Education ( $\bar{X} = 25,714$ ) and at Education of the Mentally Disabled ( $\bar{X} = 25,617$ ). This result may be interpreted that the fact that lesson contents at Music Education are mainly based on artistic abilities when it is compared to the theoretical lesson contents at the other departments may have resulted in that the level of teacher candidates' TBLDA studying at this department was found to be higher. The level of teacher candidates' TBLDA studying at English Language Teaching ( $\bar{X} = 27,666$ ) was found to be higher than the level of teacher candidates' studying at Education of the Mentally Disabled ( $\bar{X} = 25,617$ ). This result may be interpreted that teacher candidates studying at this department think that ability is a major necessity in learning English compared to the education of the mentally disabled.

The significant difference on teacher candidates' TBTOU was found to be between the students attending Primary School Education-Early Childhood Education, Social Studies Education-Early Childhood Education, Mathematics Education-Psychological Counseling and Guidance, Education of the Mentally Disabled-Early Childhood Education, Education of the Mentally Disabled-Computer Education and Instructional Technology, Education of the Mentally Disabled-English Language Teaching, Early Childhood Education-Psychological Counseling and Guidance, Early Childhood Education-Turkish Language Teaching, Computer Education and Instructional Technology-Psychological Counseling and Guidance, Computer Education and Instructional Technology-Turkish Language Teaching, Music Education-Psychological Counseling and Guidance, Psychological Counseling and Guidance-English Language Teaching. The level of teacher candidates' on the third dimension studying at Early Childhood Education ( $\bar{X} = 21,521$ ) was found to be higher than the level of teacher candidates' studying at Primary School Education ( $\bar{X} = 19,083$ ), Social Studies Education ( $\bar{X} = 18,731$ ), Education of the Mentally Disabled ( $\bar{X} = 18,148$ ), Psychological Counseling and Guidance ( $\bar{X} = 17,916$ ) and Turkish Language Teaching ( $\bar{X} = 18,981$ ) departments. This result may be interpreted the fact that the age of future students of the teacher candidates studying at this department is younger than the other departments' future students results in teacher candidates studying at Early Childhood Education department having been trained on Educational sciences for a different educational age may have caused their TBTOU to be higher. The level of teacher candidates' third dimension studying at Computer Education and Instructional Technology ( $\bar{X} = 20,694$ ) was found to be higher than the level of teacher candidates' studying at Education of the Mentally Disabled ( $\bar{X} = 18,148$ ), Psychological Counseling and Guidance ( $\bar{X} = 17,916$ ) and Turkish Language Teaching ( $\bar{X} = 18,981$ ) departments. This result may be interpreted the level of teacher candidates' TBTOU studying at Computer Education and Instructional Technology department was found to be higher because of the fact that the lesson contents at this department are mainly based on computer application abilities when it is compared to the theoretical lesson contents at the other departments. The level of teacher candidates' on the third dimension studying at Mathematics Education ( $\bar{X} = 19,513$ ), Music Education ( $\bar{X} = 20,333$ ) and English Language Teaching ( $\bar{X} = 20,861$ ) were found to be higher than the level of teacher candidates' studying at Psychological Counseling and Guidance ( $\bar{X} = 17,916$ ). This result may be interpreted that the level of teacher candidates' TBTOU studying at this department was found to be lower may stem from the fact that the lesson contents at

Psychological Counseling and Guidance department are mainly based on psychology of students unlike the other departments. The level of teacher candidates' on the third dimension studying at English Language Teaching department ( $\bar{X}=20,861$ ) was found to be higher than the level of teacher candidates' studying at Mentally Disabled ( $\bar{X}=18,148$ ) department. This result may be interpreted that the lesson contents in English lessons like grammar rules may cause the teacher candidates' studying at this department to believe that there is one truth. This finding of the study is consistent with the study of King and Kitchener (1994, Cit. Kitchener, 2002) in which it was found that university education contributes to students' epistemological beliefs.

#### 4. DISCUSSION

As a result of the study, participants' epistemological beliefs were found to show no significant difference according to the sex and education type variables at any sub-dimensions. On the other hand, it was concluded that teacher candidates' TBLDE didn't show significant difference according to the department variable but their TBLDA and TBTOU showed significant difference according to the department variable. The suggestions developed in accordance with the results of the study are as follows: A study can be done to compare the epistemological beliefs of first grade and fourth grade students attending Education Faculty to see if there is a significant difference. It was found that the level of teacher candidates' TBLDA studying at Computer Education and Instructional Technology, Music Education and English Language Teaching departments and the level of teacher candidates' TBTOU studying at Early Childhood Education, Computer Education, Instructional Technology, Mathematics Education, Music Education, English Language Teaching departments were higher so these can be reduced by informing them more on educational sciences.

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# Multimediality and interactivity in e-learning\*

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## Abstract

Over the last few years, e-learning has become an integral part of tertiary education, not only within the framework of part-time study modes, but increasingly also in the full time programs of study, accredited and implemented at Czech tertiary institutions. In connection with its deployment on a larger scale a number of problems arose. That resulted in the formulation of new research hypotheses, among the most important being the presumed influence of some factors on the quality of education using e-learning, the necessity of an effective activation of students, of the creation and development of their competencies. The influencing factors are numerous, external as well as internal, acting more or less covertly, to a greater or lesser intensity. It is however of high importance to identify, describe, analyze, and minimize or maximize their influence so as to prevent them from a large-scale and negative influencing of the tertiary education under the pressure of fashion trends.

Key Words: e-learning, multimediality, interactivity, pedagogical research, quantitative research, statistical methods, nonparametric statistical methods, electronic study support

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## 1. INTRODUCTION

The perception of e-learning is often ambivalent and inconsistent, the main reason being an inhomogeneous terminology, to a great extent influenced by the linguistic impacts and by the diversity of approaches and technologies used (Saettler, 1990). Within the transatlantic space, activities related to the supporting of the education process by ICT (i.e. e-support) are not defined as e-learning, in favor of relatively set phrases of Computer-Based Training (CBT), Internet-Based Training (IBT) or Web-Based Training (WBT) (Lowenthal, Wilson, 2009). In Europe, a consensus was reached upon the use of a unified term of e-learning, which, according to the information at the e-learning portal for Europe [Elearningeuropa.info](http://Elearningeuropa.info), is understood as the application of new multimedia technologies and the Internet in education, in order to improve its quality by enhancing access to resources, services, the exchange of information and cooperation (Simonova, 2010).

According to this definition, e-learning covers not only a wide range of tools that are used for the presentation or the transfer of the educational content and for the management of studies, but also an entire spectrum of communication channels. The tools are used via LMS (Learning Management System), which is a prerequisite for the implementation of a truly effective learning process through e-learning. LMS thus represents a virtual 'classroom' environment comprised of tutorials, quizzes, study instructions, exercise plans or discussion forums (Mauthe, Thomas, 2004).

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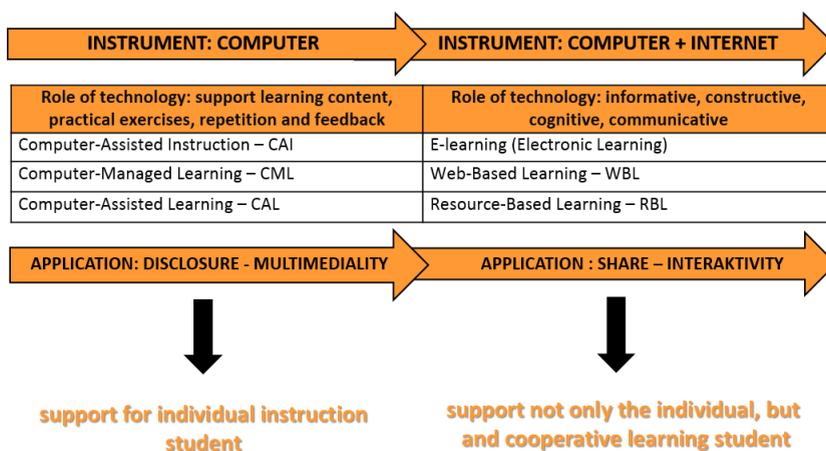
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Apart from LMS, properly structured and didactically adapted educational texts, referred to as e-learning supports (Paulsen, 2003) contribute significantly to the implementation of e-learning. To get a clear and permanent definition of the term, it is therefore necessary to focus on the structure and the arrangement of individual elements that such a teaching material is composed of. Study materials for distance learning, in both classical form and the form of e-learning, have gradually evolved from textbooks. In terms of the text structure, a classical textbook (Möhlenbrock, 1982) is composed of two basic components, i.e. text components ('written text') and extra textual components (graphical components). It should nevertheless be noted that e-learning supports have their own unique characteristics as they are intended for a particular form study, characterized above all by a higher level of independence and individuality (Bates and Poole, 2003). A characteristic feature of thus structured electronic study supports designed for e-learning is the fact that their nuclear structure is enhanced by various interactive and multimedia elements, i.e. animation, multimedia records, dynamic simulation, sound recordings, etc.

## 2. DEVELOPMENT OF CONCEPTS REFLECTING THE USE OF COMPUTERS IN EDUCATION

Information and communication technologies (or more precisely computers), have enriched training by many crucial suggestions or applications (Jandová, 1996). Although the core of the submitted paper lies in the definition of traditional and contemporary understanding of the concepts of multimodality and interactivity in education, it is necessary in this context to pay attention to the individual concepts related to the integration of the technologies into education as well. The very fact that the later took place in a time when computers were only slowly reaching public awareness enables us to document the development of the conceptual understanding of multimodality and interactivity in the traditional and the modern sense, based on the development of concepts reflecting ICT in education.

As mentioned above, computers introduced into training many crucial incentives and applications. That of course did not happen suddenly, but has undergone specific development stages. Gradually, several concepts of possible uses of computers in education were established (Zounek, 2009). There is no need to analyze them in detail; on the contrary, it is important to view them as a whole, divided into two schools of thought, which are shown in the following Picture No. 1.



**Picture 1:** Concepts reflecting the use of ICT in education

According to the aforementioned concepts, which to some extent overlap each other and of which the newer are always enrichment of the older by new tools and application possibilities, information and communication technologies play four basic roles within the training process (Zounek & Šedřová, 2009):

- They are carriers of the learning content that comprises not only texts or hypertexts, but also images, animations, photos, videos, and audios.
- They are communication tools which besides communication can also support cooperative forms of teaching.
- They represent a source of information used by pupils and students when learning, not only in classrooms.
- They can be used as creative tools or environments.

In this context, it is also possible to trace the evolution of both concepts, which are the subject of further text, in both the traditional and contemporary sense, which correspond to the educational needs of the given time period and to the technical possibilities that technology offers or offered at the particular time. First we shall treat the notion of multimodality, trying to define its traditional and contemporary perception. We shall apply the same procedure with respect to the notion of interactivity.

### 3. FROM CLARITY TO MULTIMODALITY

*“Let it be a golden rule for teachers that everything be demonstrated to as many senses as possible. Objects visible by eye, audible by ear, smellable by nose, tasteable by mouth and touchable by touch, or objects perceived by more senses at a time should be consequently demonstrated to more senses.”* (Comenius) (Komenský, 1958)

Should we explore the concept of multimodality further, the golden rule formulated by Comenius, who thus expressed one of the important principles - principles of clarity (Roubal, 2009), must not be omitted. Contemporary didactics perceives as essential the unity of sensory perception, active thinking, and activities of students. From this perspective, it is possible to distinguish two kinds of clarity as they follow (Dostál, 2008, p. 28):

- Object (external) clarity – real objects.
- Visual (internal) clarity – verbal description of phenomena.

A very important factor in the use of clarity is the level of abstraction applied. According to E. Dale, abstract symbols and ideas are better understood (and thus also retained) when supported by a specific experience. His so called cone of experience depicts the relationship a teaching method or a teaching material used and the effectiveness of learning (teaching) (Riedl, 2004).

According to this model, the effectiveness of learning is at its height when related to real situations and real experiences of pupils (Dale's cone's bottom). Gradually, going up in the cone, man becomes more of a mere observer of reality which brings about a decrease in the effectiveness of learning, all that due to the applied learning method or teaching material. At the top of the cone there are methods which use only symbols representing reality, which of all the planes is the most difficult for students.

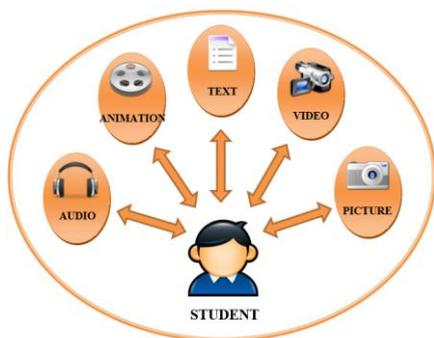
#### **Traditional concept of multimodality**

Originally, for example according to distance education principles, multimodality was understood as a set of tools which enabled a presentation of a subject matter and a mutual communication between the teacher and the pupil. Multimodality was thus perceived mainly as a way of using more devices to present the subject matter and to mediate communication with the student, which resulted in the development of these contacts.

Oxford English Dictionary (1985) defines multimodality as *“denomination or form of artistic, educational or commercial communication, which uses more than one communication medium.”*

It worked on the assumption that it was necessary to ensure the transmission of the subject matter to the learner through as many various channels as possible, however, the fact that these transmission channels should carry the information of the same content, and stimulate more elements of the pupil's perception, was not accentuated (Dostál, 2009a).

The quality of the transmission media did not allow for a comprehensive combination of several media into one and also did not provide the tools necessary to ensure the relevant level of feedback, as shown in the Picture No. 2.



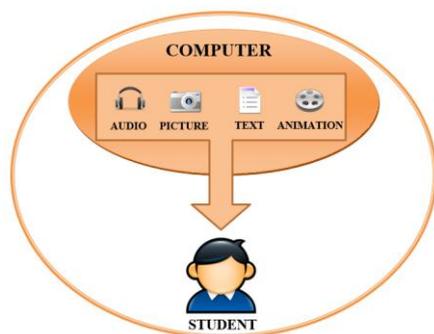
**Picture 2:** Traditional concept of multimediaity

### Contemporary concept of multimediaity

Recently, due to a frantic development of ICT, the perception of the term multimedia or multimediaity has been modified and extended, and is now understood not only as “technology”, but also “scope” (Klement, 2011).

*“Multimediaity is the interconnection of various functions which can provide media (text, images, graphics, animations, simulations, and so on.). The role of the computer is the one of a combiner of these functions which results in a multichannel mediation of information.”* (Brdička, 2003).

We can thus designate a learning object as multimedial if it integrates various document formats, or data (for example text, tables, graphs, animations, images, sound, video, and so on.) which intermediate or imitate reality, make for more clarity, and/or facilitate teaching (Dostál, 2009b). The integration is implemented exactly thanks to information and communication technologies, during both their preparation and presentation, and possible sharing. This concept is demonstrated in Picture No. 3.



**Picture 3:** Traditional concept of multimediaity

Therefore, the terms of multimedia or multimediaity are currently understood in a much broader sense than just means of presentation of the subject matter or means of communication. In this context, it would be more appropriate to use the term “multimedialization of information” (Nielson,

1990), which is closely connected to the concept of “hypermedialization” of information. Therefore, the concepts of “new media” or “hypermedia”, which can be simply defined as quaternary, network or digital, are often used. They are based “on digital, that is to say numerical data processing” (Macek, 2002), and ICT technology that enables the production, storage and recall of these media.

The new definition of multimodality, sometimes referred to as hypermodality, is thus based on the use of up-to-date modern information and communication technologies, and delimits its character as programs “that facilitate different ways to access more information.” *Hypermedia are thus understood as systems of various media controlled by computer which not only provide a variety of sources, but also a variety of forms of interaction.*” (Bertrand, 1998, p. 107).

#### 4. FROM COMMUNICATING TO SHARING

*“And as human nature is active and enjoys hustle, in particular disorganized hustle, which enables it to create and recreate things, do not start teaching until you have prepared your pupil to an active participation.”* (Comenius).

It is obvious from the aforementioned quote that as early as in Comenius` times, the necessity of active participation of the pupil in learning and the consequent interaction with their surroundings were accentuated. According to this interpretation, interaction (from the Latin interactio or interager, that is to say act between each other) means influencing each other, negotiating, affecting each other wherever the emphasis is put on mutuality and reciprocal activity, unlike unilateral, or causal impact. In terms of the educational process we talk about pedagogical interaction which takes place between people as individuals in a particular social environment where individual actors occupy different social roles (Průcha, Walterová & Mareš, 2009). It is characterized as a process of mutual influence of several personalities (parents, teacher, pupil, educator) within a particular educational environment (family, school, hobby groups, summer camp), aiming at a specific target.

##### **Traditional concept of interactivity**

An important tool of pedagogical interaction undoubtedly is pedagogical communication (Průcha, Walterová & Mareš, 2009). In the broadest sense of the word, communication can be defined as a process aiming at mutual understanding. If it takes place between people, we use the term of interpersonal (social) communication. Pedagogical communication is a specific case of social communication. It is bounded by time and space, its participants are given, the goals and contents of communication are established. According to P. Gavora, it can be defined as a mutual exchange of information between participants of the educational process which serves learning objectives. Within its framework, information is conveyed by both linguistic and non-linguistic means (Gavora, 1988).

Within the framework of the teaching process, pedagogical communication plays the following roles (Mareš & Křivohlavý, 1995, p. 25-26):

- it facilitates collective action of the participants or individual working groups,
- it mediates interactions of the participants in the broadest sense, including the exchange of information, experience, as well as motives, attitudes, and emotions,
- it provides both personal and impersonal relationships,
- it forms all participants of the educational process, especially the personality of students,
- it serves as means to carry out education and training, since the objective, curriculum, methods, and so on cannot act in the learning process directly, but only in verbal or non-verbal form,
- it constitutes each educational system, as it represents one of its main components, ensures its functioning, brings motion, evolution, dynamics into it, and maintains its stability.

As follows from the above mentioned, the traditional concept of interactivity was based primarily on the use of pedagogical communication aimed at mutual exchange of information between participants in the educational process, especially via direct, that is to say personal contact.

### **Contemporary concept of interactivity**

However, the contemporary concept of interactivity is to be encountered in particular in connection with new media, to which it is attributed as their property. From this perspective, it is possible to define the term "interactive" as "a *possibility provided to the user in order to facilitate interferences in processes and to observe the effects of these interferences in real time.*" (Lister, Grant & Giddings, 2003).

This term is also used within the framework of the theory of communication to describe human communication based on dialogue and "exchange of information". Similar to the previous definition of the term might be a somewhat narrowed down formulation by Hilf (1996), in which interactivity is referred to as "a *reciprocal effect between a human and a non-organic component, such as television, video game or computer.*" The level of interactivity is then qualitatively measurable on the basis of Laurel's method of interaction variables (Laurel, 1993), they are as follows:

- frequency of the user's interaction with the happenings in the device,
  - importance as a degree of response that will affect the outcome,
  - amount of options available to the user
- Interactivity, its consideration, identification, and measurement is quite an important factor, because it serves as a descriptor of how the user is participating in the happening within the system itself, and also as a determiner of how well the system is designed. In terms of the educational process supported by modern information and communication technologies, and considering the current state of technology, it is possible to distinguish two dimensions of interactivity.

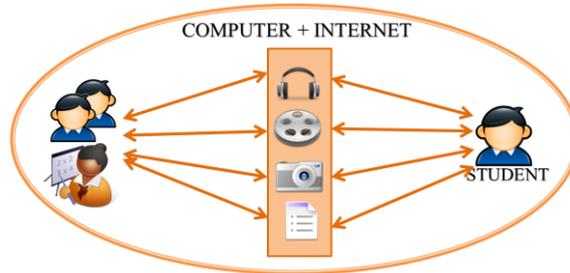
### **Two dimensions of interactivity**

The first dimension of interactivity is based on the possibility of manipulating the subject matter. This dimension enables a two-way communication and interaction between the student and the multimedia object or subject matter, conveyed through the multimedia object and vice versa. The communication element is thus suppressed and emphasis is put on the independent manipulation by the educatee of the learning objects, for example through simulation.

Simulation is one of the most effective tools that enable continuous interactive verification of interpretations and instruction itself by means of simulators in many fields of human activity. Games and simulations allow people to learn and get education through play. Educational simulations can be fun, but more importantly, they always aim at and reach a certain target, they are meaningful and purposeful.

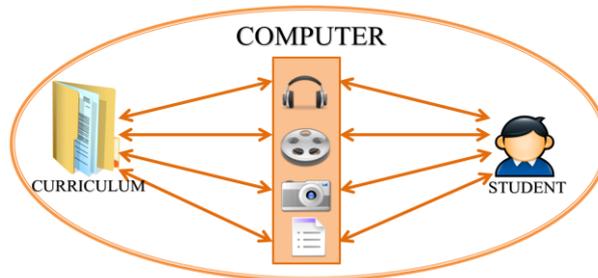
In terms of the educational process supported by information and communication technologies there are so called educational simulations, "*which helps the pupil model a part of the world and give him or her opportunity to test it safely and effectively.*" (Allesi & Trollip, 1991) The main reason for using simulations in education is an effort to base the learning on experience as the educatee undergoes an educational process in the form of so called experiential learning.

Educational simulations mediate situations which are found to be very similar to the real ones by humans. One gets an opportunity to try different procedures leading to different results. The impact of negative and positive feedback in the simulation is very strong, as the results of the actions taken are to be seen immediately. In case you have made a bad decision, you can go back and see what would have happened if the decision had been right. For a further insight into the concept of the first dimension of interactivity see Picture No. 4.



**Picture 4:** First dimension of interactivity

The second dimension of interactivity is based on the exchange of information between the participants of the educational process, which follows the traditional concept of interactivity and communication. However, this dimension stems from the theory of communication and is used to describe human communication based on dialogue and exchange, mediated by information and communication technologies. For a further insight into the concept of the second dimension of interactivity see Picture No. 5.



**Picture 5:** Second dimension of interactivity

The development of information and communication technologies has thereby enabled the transmission of both direct and indirect communications into the virtual electronic environment. In this context, we speak about so called Computer-mediated communication, which represents one of the forms of social communication. Unlike direct, or face to face (TvT) communication, computer mediated communication represents an indirect form of interaction, mediated by communication media.

## 5. METHODS AND RESEARCH SAMPLE DESCRIPTION

Electronic learning materials for distance education through e-learning consist of many elements, which are divided into static and dynamic groups. In our research, we have examined whether all of these groups of elements are the same for the different groups of students to best respect their individuality which can be manifested by a preferred learning style according to the VARK classification, i.e. whichever of student's senses are preferred in the process of learning. Based on these facts, we have decided to establish a research assumption and verify it with the help of cluster and factor analyses. The following research assumption was stated: variance of results in evaluation of the particular structural elements of electronic learning materials based on the student's learning style preferences can be explained by 4 factors, which represent 4 learning styles according to the VARK classification. We suppose that the establishment of the research assumption is sufficient to prove the validity of the proposed typology of structural elements of electronic learning materials based on learning style preference, as it is a suitable substitution of the

research hypotheses. The assumption was made by using multivariate (multidimensional) statistical methods, i.e. cluster and factor analysis, in accordance with the stated purpose of the research.

As a basic research method needed for an adequate proof of research assumption was used factor analysis (McDonald, 1991), which is a statistical method used to divide the critical combination of factors with a high degree of correlation in a large data set. Factor analysis thus allows finding of latent (indirectly observed) causes of data variability. Thanks to the latent variables (factors) it is possible to reduce the number of variables while retaining the maximum of information, and it is also possible to find the relation between the observed variables and derived factors. A separate problem of factor analysis is the so-called spin of the factors (StatSoft, 2001). It has already been shown that all factor loadings obtained by an orthogonal transformation of the initial solution (matrix multiplication of factor loads generally by orthogonal matrix) have the same ability to reproduce the initial covariance (or correlation) matrix (Hebák & Hustopecký, 1988). This transformation is called the rotation of the factors which aims to get the most convincing explanation of the various factors, which was a prerequisite for the confirmation or refutation of established research assumption.

Besides non-parametric tests for dependent samples that are used for ordinal variables and in which are necessary for the insertion of the similarity of variables that we want to identify, there are also used methods aimed at clustering. Because the diversity of groups of variables is measured simultaneously, these tasks are referred to in literature (especially in the context of the term "data mining") as segmentation (Řezanková, 2010). Therefore, the next research method used in determination of the typology the structural elements of electronic learning materials based on learning style according to the VARK classification, was the cluster analysis (Pecáková, 2008). The cluster analysis belongs to the methods dealing with the studying of similarity between multidimensional objects (objects in which more variables are measured) and their classifying into the particular groups (clusters). It is possible to apply it on objects with natural tendency to be formed into groups (it was formed as a taxonomic method), but its use is also possible in other areas (Meloun & Militký, 2006). The basic approach of cluster analysis therefore means that each object is uniquely assigned to one cluster. However, the real objects can be of different nature: it is possible to clump also living organisms, as well as text documents or web pages (Řezanková, Húsek & Snášel, 2007).

As an initial research tool for obtaining data necessary for the research investigation the questionnaire was used. The classification structure of research methods classifies questionnaires among indirect - investigative methods. It can be defined – according to N. Ničkovič - as "measuring tool by which can be examined what people mean about the different phenomena" (Horak & Chráska, 1983). The research questionnaire created for these purposes contained two parts. The first part of the questionnaire consisted of 13 questions and was focused on the finding of the preferred learning styles of students using standardized methods of VARK. The second part of the questionnaire consisted of 26 questions, in which students could use the rating scales to express their preference for individual structural elements of e-learning material. So we designed a questionnaire operated with the two types of questions. The first type were alternative questions (multiple choice) that were used for the detection of learning styles in terms of sensory preferences and in full accordance with the method of VARK. The second type of questions were polynomial scales (Horak & Chráska, 1983). By using these, respondents assessed the importance of the particular structural elements of e-learning materials according to a predetermined scale. This evaluation scale included a range of 5 degrees, where the number 1 meant that the element was not important to the respondent and vice versa the number 5 meant that this element was very important and fully complied with its preferences with regard to the learning style.

The research sample consisted of 354 students of the Faculty of Education, Palacky University in Olomouc, who studied in the full-time and combined forms of study programmes through the LMS, with the use of electronic learning materials for distance education and e-learning. The selected research sample corresponded to the overall structure of students carrying out a full or part

time study distance learning, as described investigations have been incorporated into routine schooling. The structure of the research sample is shown in the following Table 1:

**Table 1:** Research sample structure

<b>Preferred learning style according to the VARK classification</b>	<b>Preference of style</b>	<b>preference of style %</b>	<b>N of women</b>	<b>N of men</b>	<b>Women in v %</b>	<b>Men in v %</b>	<b>Average age</b>
<b>VISUAL</b>	39	11,0 %	33	6	84,6 %	15,4 %	19,8
<b>AURAL</b>	45	12,7 %	37	8	82,2 %	17,8 %	20,1
<b>READ/WRITE</b>	90	25,4 %	74	16	82,2 %	17,8 %	20,3
<b>KINESTETIC</b>	180	50,8 %	102	78	56,7 %	43,3 %	24,8
<b>In sum</b>	<b>354</b>	<b>100 %</b>	<b>246</b>	<b>108</b>	<b>69,5%</b>	<b>30,5%</b>	<b>21,25</b>

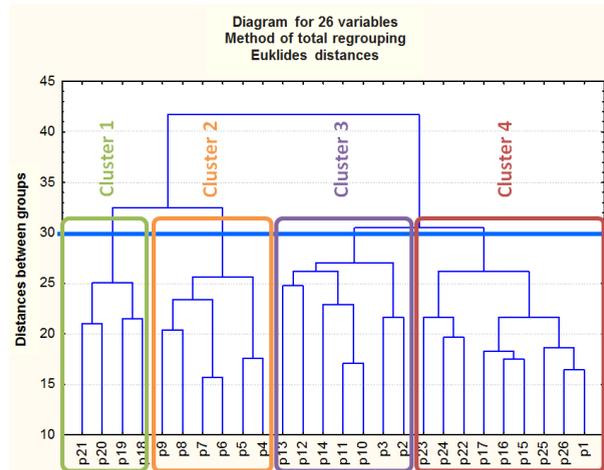
It was possible to use the above stated facts for an analysis of the research sample, which could be divided into groups according to the similarity of individual structural elements of e-learning materials used in e-learning in connection with the preferred learning styles of students according to the VARK classification, as described in further text of this study.

## **6. DESCRIPTION OF THE COURSE AND THE RESULTS OF THE RESEARCH**

In accordance with the chosen method, an initial analysis of the data was made, based on the use of statistical methods of cluster analysis (Pošík, 2008). This method can be used if a plurality of objects could be divided into several relatively homogenous groups, for example to facilitate further analysis. These groups are called clusters and their number is either pre-determined or its determination is a part of the task. Statistical procedures developed for this purpose are classified into the cluster analysis (cluster analysis). The cluster analysis is highly empirical; therefore, various clustering methods may lead to different clusters, or to different numbers of clusters.

### **The results of the first cluster analysis**

In our case, the goal was to divide the set of structural elements of electronic study materials used for education through e-learning, which represented the evaluation of characteristic groups of respondents in terms of their preferred learning style according to the VARK classification. In this way, the structural components of electronic learning materials were divided into groups with the similar range of values. In other words, if there had occurred several structural elements that respondents rated very similarly with regard to the preferred learning style, these elements have created a cluster. The whole situation is evident from the Figure 1.



**Figure 1:** The evaluation of cluster analysis the structural elements of electronic learning materials according to the preferred learning style

According to the cluster dendrogram presented in Figure 1, it can be concluded that the investigated structural elements of electronic learning materials used in e-learning have a strong tendency to split into 4 separate clusters, which could correspond to 4 preferred learning styles according to the VARK classification. This fact can be observed at distances connection of around of value 30 (shown in the picture by the blue horizontal line).

#### Verification of the research assumption

Furthermore, the factor analysis was performed. Given that this method is mathematically very difficult, the statistical module Statistica 7.0 (factor analysis procedure) was used for elaboration (Blahuš, 1985). The factor analysis was performed with the following parameters (Blahuš, 1988): The main components of rotation - Varimax normalized, in order to prove or reject the established research assumption. The following Table 2 shows how many of percent of variance can clarify the particular factors which represent the groups of structural elements of electronic learning materials divided to the preferred learning style according to the classification VARK. By these 4 factors was explained 60.57% of the variance.

**Table 2:** Factor analysis of evaluation the particular structural elements.

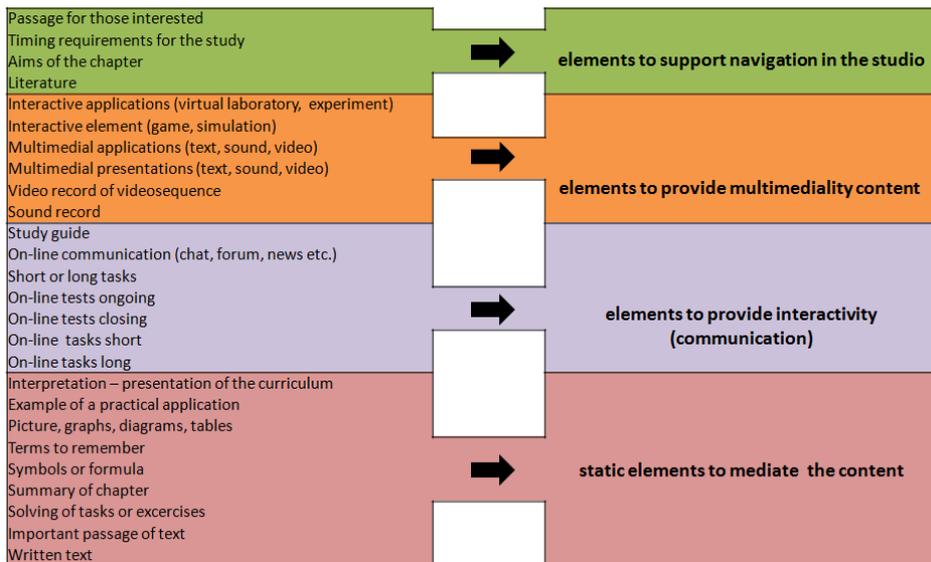
<b>Eigenvalues; Number of variables – 26</b>				
<i>Extraction: Main components; Rotation: Normalized varimax</i>				
<b>Factor</b>	<b>Eigenvalue</b>	<b>Total variance (%)</b>	<b>Cumulative eigenvalue</b>	<b>Cumulative variance (%)</b>
1	6,272504	22,43271	6,27250	22,43271
2	4,193476	15,28260	10,46598	37,71531
3	4,037126	12,83510	14,50311	50,55041
4	3,566294	10,02421	18,06940	60,57461

On the basis of the factor analysis we can conclude that our research assumption that *the variance of results in the evaluation of the particular structural elements the e-learning materials based on the student's learning style preferences can be explained by 4 factors, which represent 4*

*learning styles according to the VARK classification* was possible to accept and considered it as proven.

### Interpretation of the results

Based on the results of our research it can be concluded that students with regard to their preferred learning style according to the VARK classification can see 4 groups of structural elements the electronic learning materials used in education through e-learning, which they evaluate in a similar way. The first group was named on the basis of the characteristics the structural elements which it contains and which students have perceived as similar to a group of *elements to support navigation in the studio*. The second group consists of dynamic *elements for multimodality content* with a strong emphasis on interactivity content, thus an ability to manipulate with it. The third group consists of *elements for interactivity in education*, i.e. for mediation direct and indirect communication. Finally, the fourth group consists of *static elements to mediate the content*. The situation is shown in the Figure 2 below:



**Figure 2:** New typology of structural elements the electronic learning materials.

## 7. CONCLUSIONS

On the basis of the above stated comparison, it is possible to devise a new formulation, or come up with new understanding of the **principle of interactivity**, as a prerequisite for effective learning of pupils, and a means of achieving a wider range of learning objectives. Its assurance is now possible by means of educational simulation and/or virtual reality. This principle allows for long-term development of electronic ways of education, based on the consistent application of new knowledge in the field of pedagogy and psychology. The principle of interactivity in the “upgraded” concept not only comprises the communication component (communication in all directions, that is to say teacher - pupil, pupil - teacher, pupil - pupil), but also emphasizes the component of the manipulation by the pupil of the curriculum, which is presented by means of modern educational simulations and/or virtual reality. The said manipulation can involve the optional participation of the teacher, spontaneous or programmed. The application of this principle, important for education carried out with the support of information and communication technologies, facilitates the

achievement of a wider range of learning objectives, not only in the cognitive, but especially in the affective and psychomotor areas.

The **principle of multimodality** used to be perceived as a way of facilitating the application of a wide range of transmission media for presenting the curriculum within the framework of distance education. It stemmed from the presumption of it being necessary to ensure the transfer of the subject matter to the educatee via the maximum possible number of channels; on the other hand, it did not accent the demand on these channels to carry the same information content, and thus stimulate more elements of the pupil's perception. This way of presentation of the subject matter was mainly reflected in the fact that only cognitive learning objectives could be achieved, which substantially limited the range of applicable learning strategies. Based on previously conducted analyses (Klement, Chráska, Dostál & Marešová, 2012), both theoretical and empirical, it is possible to argue that this perception of the multimodality no longer corresponds to the current level of knowledge, and it is necessary to reconsider its contents. However, in terms of education implemented with the support of information and communication technologies, it is more effective to use only one transmission medium - the Internet, and thus stimulate several elements of pupil's perception at a time. It is possible to present one piece of information simultaneously via text, static pictorial element, dynamic pictorial element, audiovisual recording, or any combination thereof. This new understanding of the concept of multimodality is a necessary condition for the effective implementation of this type of education. Nowadays, *multimodality has to be understood as a means to stimulate multiple sides to pupil's perception, and not just as a transfer of information via multiple media. This application is important especially for education carried out with the support of information and communication technologies, and enables the development of a wider range of learning strategies.*

*\*NOTE This article was presented at the 1st International Conference on Lifelong Education and Leadership, in Olomouc, Czech on October 29-31, 2015.*

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# Reviewing the conformity of illustrated children's books to the book features mentioned on the preschool education program\*

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## Abstract

This research aims to study the books used at preschool institutions in respect to book features described on Family Support Training Guide (OBADER) which is integrated with Preschool Education Program issued by Ministry of Education (MEB) General Directorate of Primary Education.

This research is a descriptive study in the "Form of a Survey". Work group consists of 270 books selected by random sampling method from the illustrated children's books used in these infant's schools. Books in the work group were evaluated individually according to every single item on the "Book Evaluation Form". The data obtained were analyzed by using frequency and percentages.

When the illustration features of the books of work group are analyzed generally, it can be derived that most of the books are on a sufficient level.

Keywords Illustrated children books, book feature, physical features, illustration features, content features.

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## 1. INTRODUCTION

At the beginning, it is possible to mention that the area didactics can be understood either in a *narrower* or a *broader* sense. In a *broader sense*, we understand the area didactics as specifics and rules of the group of the related subjects to the given area of study (electrotechnical subjects, mechatronical subjects, etc.). In this sense, we search for an intersection – common elements, laws and rules, strategy of the instruction of the given group of subjects. When talking about the area didactics in a *narrower sense*, we refer it of a particular subject (theory of the electrical network, the electrical machines, etc.). In the following text, we focus on the selected issues of the instruction of the group of specialized technical subjects of the electrotechnical nature. From this perspective, we can speak about the didactics of the specialized technical subjects of the electrotechnical nature as a group area didactics, or as a didactics in a broader sense.

The area didactics are the applied scientific disciplines, which form a fundament in the professional training of the teachers of the area-oriented subjects (Asztalos, O. 2008). They are based not only on the general theory of education and general didactics, but also on a scientific base of the given area. On the contrary, the pedagogical practice relates to the area didactics and the knowledge resulting from them. The bond of the transition and application from the general to the special, and from the special to the concrete is the defining bond for the area didactics, since they research the objective principles of the instruction of the given area. However, it is necessary to add also their subjective character, since they result from the teachers' experience.

## 2. DEFINITION OF THE ELECTROTECHNICAL INSTRUCTION CONCEPT

In the scientific educational literature, we encounter different approaches to define the concept of the didactics at its general level. Skalková, J. (2007) defines the general didactics as a theory of education and instruction, which deals with the issues of the content as well as the process, during which the pupils acquire this content – therefore teaching and learning. Průcha, J. (2006) understands the general didactics as a theory "of the intentional learning and teaching processes, and of the contents and forms of those processes". It does not matter, where they take place: "whether they are realized in the classroom, during the company course, during the artistes' training, etc."

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The more detailed analysis by Janík, T. (2012) indicates that it is possible to understand the general didactics as a basic pedagogic discipline which strives for a scientific reflection, analysis and the clarification of the processes of teaching and learning at all levels and forms of the education – based on that, it contributes to their improvement.

The aim of the general didactics is the clarification of the crucial didactic terms. i.a.: education, teaching, learning, etc., and elaborating of the theories connected to the teaching and learning. The didactics (as a professional science for a teacher) pursues also the practical aims. According to Janík, T. (2012), the teacher needs the general didactics in order to connect his/her activity within the instruction with the intersubjectively accepted criteria.

The area and subject didactics together with the general didactics belong are one of the pedagogic disciplines, which describe and clarify the processes of teaching and learning. If we focus the general didactics on the teaching of the subjects, we get from the general level to the specific level, therefore to an area didactics (Uljens, M. 1997).

The area and general didactics (Ouroda, S., Švec, V. 2000), (Janík, T. 2012) deal with the processes of teaching and learning according to their membership to the particular area and their specificity. These disciplines are situated between a specific technical, artistic or other area and the educational sciences. The general term *area/subject didactics* is often substituted by a term expressing the didactics of the particular subject or area of study (didactics of mathematics, didactics of electrotechnics, etc.).

By a term area we designate the particular professional field; in its framework, the specific problems are solved. The relation between the area didactics and the area is a dynamic one – it takes on different expressions, however, it is necessary every time to have the conditions of the pupil's learning and the area quality of the teaching in balance. The area didactics is therefore a science, which mediate the area towards the pupils/students<sup>1</sup> with a help of knowledge from the field of educational science and general didactics, pedagogical and developmental psychology, and other disciplines. Therefore, the area didactics has a nature of an interdisciplinary science (Průcha, J., Walterová, E., Mareš, J. 2003).

The subject didactics deal with the problems of instruction in particular educational subjects and they are generally seen as their methodologies (Průcha, J., Walterová, E., Mareš, J. 2003). The subject didactics directly relate to the corresponding educational subjects – the area didactics are shaped as a relatively autonomous scientific disciplines and their aim is to catch the whole communicative process in a particular area and its corresponding area of education (Brockmeyerová-Fenclová, J., Čapek, V., Kotásek, J. 2000).

Didactics of elektrotechnics is a theory and practice of the teaching and learning of the electrotechnical subjects relating to the education and forming of the knowledge, skills, competences, attitudes and other dispositions. It is a summary of the individual electrotechnics-related subjects' didactics, however, it is not a sum of the didactics and however, it is not a sum of the didactics.

We can divide the didactics of electrotechnics into 2 parts:

- a) The general part dealing with the object of didactics of electrotechnics, the history of the teaching of the electrotechnics and the educational importance of the electrotechnics.
- b) The special part dealing with the content of the electrotechnical subjects and their means, which can facilitate the achievement of the main educational aims of the electrotechnical subjects.

If we describe the didactics of the electrotechnical subjects as a science, we understand the didactics of electrotechnics as an interdisciplinary, independent boundary scientific discipline, which processes didactically the knowledge of the electrotechnics and it integrates them with the knowledge from the social sciences and forms the didactic system of the electrotechnical subjects.

#### Relation of the didactics of electrotechnics to the electrotechnics itself as an object of teaching

The relations between the didactics (methodology) of electrotechnics and the electrotechnical science are very close. Mainly because that the didactic transformation of the subject matter as well as the scientific content are based on the mentioned science. While describing of the relation between the didactics and electrotechnics (from which is the school subject – electrotechnics – derived), it is necessary to realize that the didactics does not research the principles of the specialized science (e.g. physics), but the principles of the electrotechnical education.

#### Relation of the didactics of electrotechnics to the other sciences

For the successful realisation of the instruction, a teacher of the specialized subjects has to have a basic knowledge from a number of scientific disciplines and not only from the electrotechnical subjects. As it was already mentioned, special importances have the following sciences (to name at least some of them): philosophy, psychology, theory of education, general didactics and specialized technical sciences as well as the specialized natural sciences.

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<sup>1</sup> Note: however, not the whole content of the area is mediated – only the parts which seems useful from the perspective of teaching and learning are – i.e. the ones contributing to the development of knowledge, skills, competences, attitudes and other pupils' dispositions (either the didactic transformation, or the didactic reconstruction)

As well as the electrotechnics, the didactics of electrotechnics has a close relation to the mathematical and natural scientific disciplines, mainly to the physics. Furthermore, it emphasizes their engineering and technical. Apart from the mentioned scientific disciplines, a few others also play a significant role in the educational process, e.g.:

- Sociology researching the structure of the class collective, the action in different social situations, the communication and the relationships within the group, etc.
- Logic which provides the base for the analysis of the principles and norms of the right thinking and enabling (according to the laws of logic) the right ordering of the subject matter and the educational process
- Cybernetics – a science about the information and managing processes in the organized systems; it provides a base for the program management of the teaching, for the concept of the teaching machines, etc.
- Statistical mathematics enables the quantitative analysis of the teacher's methodological work
- etc.

The mentioned and also other scientific disciplines may facilitate the didactics of electrotechnics, and a teacher of the specialized electrotechnical subject has to realize all of these relations and to strive for their reflection in his/her methodological work and educational activity.

### 3. EDUCATIONAL PROCESS IN THE ELECTROTECHNICAL EDUCATION

The electrotechnical education in the high schools' conditions may include the acquiring process – **learning** – during which the pupils acquire the knowledge, skills and habits, and the **teaching** process, in which the teacher of the electrotechnical subjects educates the pupils.

These processes take place in the electrotechnical education in various forms; the following ones may be understood as the most important:

- 1) individual pupils' work, individual teacher's work with the individual pupils (e.g. individual study, consultations) not present in the set of the lessons;
- 2) set of the lessons in the school education in the divided as well as the undivided classes (educated groups), mainly in the specialized classrooms (e.g. devoted for the electrical measurements);
- 3) operating electrotechnical training of the pupils at the workplaces of companies;
- 4) connections with the practice outside of the company practical activity (e.g. in form of educational excursions, exhibitions and trade fairs).

#### The essence and the constituents of the didactic transformation in the electrotechnical education

The individual work of a teacher with the pupils and the teaching of a teacher of the electrotechnical subjects in a set of lessons strives to achieve the aim to transform the knowledge of the electrotechnical theory and practice into the pupils' knowledge (a process called "didactic transformation"). The concept of the didactic transformation is specific for the Czech didactic environment (Drahovzal, J., Kilián, O., Kohoutek, R. 1997), (Kropáč, J., et al. 2004), in the foreign literature (non-Czech), we encounter more the term 'didactic reduction' (Kath, Fritz M. 1981), (Lehner, M. 2012) or a term "didactical reconstructions", which was introduced by U. Katmann (1997). This principle is based (apart from the orientation to the choice and mediation of the subject matter to the pupils) mainly on the systematic research of the pupils' ideas of the scientific knowledge, which will, retroactively, reflect in the process of choosing of the educational contents. The research process is based on:

- 1) the research of the pupils' opinions, ideas, precepts and other existing knowledge, which they have about the concrete subject matter or a school subject;
- 2) the confrontation of these facts with the past and current knowledge of the particular scientific disciplines, which are represented in the curriculum;
- 3) the reconstruction of the current educational contents, which are in accordance with the abovementioned findings as well as the educational aims.

It is obvious from the abovementioned facts that the model of the didactic reconstruction is based mainly on the results of the educational research and based on them, the reconstruction of the school curriculum is taking place. The crucial role here is played by the area didactics. Shulman, Lee. S. (Shulman, Lee. S. 1987) states that the didactic knowledge of the content includes *the most efficient analogies, illustrations, examples, clarifications, verbal demonstrations, ways of representation and formulation of the topic, which makes it understandable for others.*

The teacher's preparation for the mediation of the subject matter to the pupils is (within a framework of electrotechnical subjects) focused on:

- study, analysis and interpretation of the pedagogical documentation (mainly the syllabi of the electrotechnical subjects);

- textbooks and the teaching aids;
- specification of the educational aims of the subjects as well as the lessons;
- clarification and concretisation of the content of an electrotechnical subject;
- psychological justification of the transformation of the subject matter;
- pedagogical analysis and realisation of the content intended to transformation.

The transformation (or reconstruction<sup>2</sup>) of the subject matter is, from the perspective of the preparation and the presentation by a teacher, a continuous and mainly a constant process. There are some connection between the individual constituents and phases, penetrating each other. The transformation process is for a teacher a very demanding process since it requires not only electrotechnical, but also the pedagogical expertise from him/her.

#### **4. THE APPLICATION OF THE DIDACTIC PRINCIPLES IN THE ELECTROTECHNICAL EDUCATION**

The educational process in the electrotechnical education represents a process, which is not taking place according to the subjective wish and discretion of a teacher. Even a pupil will not able to acquire the electrotechnical knowledge systematically, if he/she in progressing elementally and passively. The educational process has to be based on the objective principles, which are usually formulated as the didactic principles (Skalková, J. 2007):

- Principle of the active participation of a pupil

The aim of the electrotechnical education is not the memorizing of the electrotechnical facts and the mechanical reeling off the memorized definitions and formulations of the electrotechnical phenomena and processes. It would not be useful for a life, nor for the professional practice. In order to create a high-quality electrotechnical education, a pupil has to make effort to understand the issue. A pupil has to think through the subject matter with an aim to understand the acquired information. The pupil's thinking is managed by the teachers and their logical explanation. The application of the knowledge in the practice motivates the pupils to cognizing of new knowledge and to discovering deeper connections.

- Principle of constancy

The fragmentary, incomplete and superficial knowledge do not allow the workers to fulfil the tasks and functions in practice. The systematic approach is a significant sign of a good technician's work. Mainly the pieces of knowledge, which were acquired as results of a long-term acquirement, are essential for the practical destination of the graduate. For the quality of knowledge, the constancy is typical for the education in some electrotechnical subjects. The constancy in the educational process is reflected mainly in:

- the creating of the pedagogical documentation. The electrotechnical subjects create a system in the curriculum which systemizes the subject matter in the syllabi of every electrotechnical subject;
- the creating of the textbooks and other texts used in the teaching. The subject matter is divided into smaller portions in every textbook, and it is presented in a logical and factual connection to the individual parts of a textbook (chapters, topics);
- the didactic transformation by the inner ordering of the subject matter submitted in every lesson and a set of all the lessons, which constitute the educational process of the electrotechnical subject;
- the systematic work of a pupil as well as the teacher, which leads to well-acquired knowledge and to a feeling of responsibility for the the constant working activity at school and in practice.

- Principle of permanency

The active participation of the pupils during the acquiring of the electrotechnical knowledge based on a system approach in the electrotechnical education leads to the permanency of knowledge. The quality electrotechnical knowledge is required by the professional practice, the graduate's practical application, and the rational and effective behaviour of a technician. The acquirement of the electrotechnical knowledge and their application has to be well thought-out and well understood. We have to obey the principle of permanency in these didactic situations:

- we should incorporate the knowledge with a longer-term legitimacy (a larger orientation to more general approaches and principles than to variable facts) – these pieces of knowledge should be acquired more permanently by the pupils;

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<sup>2</sup> TN: As mentioned above, in the Czech Republic, the process is usually named didactic transformation. However, in the German-speaking countries is more common the term didactic reconstruction.

- we should manage the educational in a way that the pupils should contribute to the cognition and solution of the electrotechnical problems and examples, too;
  - we should choose the teaching methods in a way that lead to a fixation of the acquired knowledge (the methods of practise have a significant importance in the electrotechnical subjects);
  - practical exercises with the technical devices (measuring in the electrical networks) lead to their systematic application at work.
- Principle of suitability
- We approach each pupil of the electrotechnical education differently according to their age, and type and level of education. The criterion in this case is the graduate destination in different professions with a required qualification by the practise. The adequateness of the educational process in the terms of electrotechnical education is pushed forward in these forms:
- we choose the pieces of knowledge that the pupils are able to understand;
  - we set the quantity of the findings (the depth of the cognition) according to the requirements of the practise on the graduates;
  - we choose adequate teaching methods regarding the pupils and also the nature of the electrotechnical subject (example's solving);
  - we choose the incorporation of the electrotechnical subject into the set (into the grade of study) not only according to the factual connections of the electrotechnical disciplines, but also according to the pupils' maturity (e.g. the electroenergetics<sup>3</sup> is not taught in the lower grades);
  - we order the subject matter rather stepwise (concentrically) than linearly in order to incorporate the basic findings into the first stage which are the pupils able to acquire with understanding. In later stages of teaching, we can demand managing of the more demanding subject matter of the pupils;
  - in the instrction, we approach the pupils individually according to their abilities, interests and hobbies;
  - in the instruction of the same electrotechnical subject in different classes, we respect the distinctiveness of the classes from the perspective of the relation to the subject and to the abilities of the whole class.
- Principle of illustrativeness
- From the perspective of the pupils' ideas about the essence and progress of the electrotechnical phenomena, the electrotechnical knowledge in the electrotechnical education is not all the same. To illustrate with, the pupils may have a correct idea about some phenomena, some of them are less understandable, and the essence of the others may be very difficult grasp by the pupils. The difficulty is based also on the abstractness of the reflection of some difficult electrotechnical phenomena. It is essential to use the illustrativeness (models, animations) when presenting the subject matter and enabling the pupils to understand the subject matter in the electrotechnical education. These following modifications of illustrativeness may be included in the electrotechnical education:
- demonstration (with a use of the electrotechnical kits);
  - educational excursions and other forms of connection with the practise (exhibitions, internships in companies, teacher training, etc.);
  - visual aids to facilitate the idea's creation (models), expressing of the essence (electrical networks' schematics), representing of the relation between the theoretical findings and the practise (demonstration of the electric motor).

## 5. THE GNOSEOLOGICAL APPROACHES IN THE ELECTROTECHNICAL EDUCATION

The acquiring of the electrotechnical terms and connections between them is one of the aims of the electrotechnical education. Their derivation is difficult not only for the science, but for the pupils as well. The work with the electrotechnical terms is also a difficult issue demanding on the thinking. The teacher's explaining of the issue while using a particular teaching method is based on the thought processes. The gnoseological processes are, therefore, a fundamental feature of the educational process in the electrotechnical education. We count in the basic gnoseological approaches/processes the following ones:

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<sup>3</sup> TN: also known as power engineering

- **analysis** – the disassembling of the electrotechnical phenomenon/item on the individual parts (e.g. when dismantling the electric motor – a rotor, a stator, a cage and a winding) in order to learn their significant features and elements to determine the relations between them. We analyse not only the real electrotechnical phenomena, but also their depiction in the imagination;
- **synthesis** – assembling of the elements of the real electrotechnical phenomenon/item into a whole, e.g. we create an electrical network from the individual elements. The synthesis, too, is a thought process aiming to reveal the essence and relations, which determine the basis of the electrotechnical phenomenon or the electrotechnical term;
- **abstraction** – the setting aside of the significant attributes and aspects of the electrotechnical phenomenon, process and/or item (alternatively also electrotechnical term) from the matter which is unimportant, insignificant, or unique. Therefore we emphasize the important and typical perspectives for the particular phenomenon and term. The relations and connections between the aspects of the phenomenon and term are put to the front – during the abstraction, we emphasize the aspects which characterize the given phenomenon, process or item;
- **comparison** – comparing of the particular electrotechnical phenomena, processes and items according to certain regards in order to find out, whether there are some difference or identity of them, or not. E.g. we compare different types of rotating electric machines according to the revolution speed characteristics, we found out also the possibility of the application from the perspective of the propulsions;
- **differentiation** – is connected to the comparison. We differentiate the particular electrotechnical phenomena, processes and items when we say that they differ in some significant aspect. E.g. the DC motor differs from the compound engine);
- **generalisation** – a difficult gnoseological process in which we proceed from the finding of the important attributes, aspects, relations and connections of the electrotechnical phenomena, processes and items, which are common for the particular group of phenomena of the same nature and class;
- **genetic approach** – it is taking place in the electrotechnical education while we introduce the origins of the particular phenomenon, process or item the pupils, or how the opinions on the given reality were developing. Through the genetic approach, we explain the knowledge, which is suitable for this type of approach from the perspective of logic;
- **dogmatic approach** – it presumes that the pupils are presented the knowledge about the electrotechnical phenomena, processes and items, which completed their developmental process to the stage of final validity and reality, or when we explain the theoretical rule in way, how it is interpreted nowadays.

## 6. THE RELATION OF THE THEORY AND PRACTICE IN THE ELECTROTECHNICAL EDUCATION

One of the features of the electrotechnical education is its organic connection to the practise, mainly the industry.

The concept of the pragmatic education further emphasizes this feature. The connection of the electrotechnical education with the industry takes place depending on the structure of the educational aims:

- a) acquiring and strengthening of the pupils' ideas in the technical reality;
- b) acquiring and strengthening of the motion skills;
- c) acquiring and strengthening of the intellectual skills;
- d) synthesis of the knowledge and skills.

The electrotechnical education cannot take part without the connection to the electrotechnical practise. By the observation and exploration of the electrotechnical activity in concrete conditions, in companies, the pupils acquire the sensory contact with the electrotechnical phenomena, processes and items.

The sensory experience of the electrotechnical reality is a prerequisite to understand the essence of the electrotechnical.

The performing of the electrotechnical tasks and electrotechnical activities in the industrial practise requires a logical and rational approach to solving of the practical issues from the qualified workers. The contemplation and rethinking of the situation serves to the correct decision-making. The task of the professional education is to facilitate the preparation of the future technical professionals to the requirements of the practice. The forms of the connections of the theoretical education and the industrial practice may be, during the development of the intellectual skills, different, e.g.:

- solving of the problem-based situations, examples and cases from the industrial practise, involving the active teaching methods into the instruction. Development of the intellectual skills is taken to a level, which is demanded by the practice;

- working-out of the partial continuous examples, which are incorporated into the instruction of the individual topics of the electrotechnical subject;
- application of the didactic principle of illustrativeness by giving examples from the practice.

## 7. CONCLUSION

The teacher training is currently receiving a great deal of attention. The systems and models of the teacher training are, however, different and not only in their relation to the specialized subjects. The differences are also based on the type of the institution – school (dual educational school, vocational school, secondary technical school, etc.), on the grade of the autonomy of the institution (a state school, a private school, a school run by a company), on the conditions of the entrance exams for the pupils, and also on the organisation – structure of the preparation of the pupils (the proportion of the general and professional subjects; the proportion of the theory and practise given by the School educational programme). The diversity of the systems and models of the teacher's preparation is also determined by a number of factors while the most important ones are either the economic conditions or the traditions. Both of these factors are connected to the expectations of the society in terms of the results of the educational activity.

Apart from the national and regional specific, the school is also influenced by the factors having also some kind of a global nature. Those are mainly the needs of the labour market, and also, to some extent, the socio-political situation in a country. Although there is no generally accepted and respected optimal model of the professional training, it is possible to observe some specific general trends – courses of development, which were discussed in the present paper.

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# Role of School Principals in Conflicts Experienced at Schools

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## Abstract

This study aimed to identify conflicts at schools resulting from school principals, behaviours of principals during conflicts and the reasons of conflicts and suggest constructive ways that school principals can use during conflict management. The study based on the survey model utilized a qualitative research method. Working group of the study was composed of 57 teachers employed in Bolu in 2013-2014 academic year. Data were collected with the help of semi-structured interview form and analyzed by using content and descriptive analysis. Results of the study are as follows: Personal attitudes of school principals (being insistent, inability to listen to others, indifference, differences of opinion and political views, bias etc.) and their professional behaviours (lack of knowledge about professional tasks, unfairness, lack of discipline, creating authority gap etc.) cause conflicts. Principals can present democratic-constructive, authoritarian, mediator, oppressive and indifferent approaches during the conflict process. Personal (character, feelings, world view, culture, attitude etc.) and professional (experience, status, performance, education, knowledge of legislations etc.) factors are effective on the behaviours of the principals during this process. Principals should present humanistic positive personal characteristics (be respectful, principled, virtuous, tolerant etc.), be able to assess the situation from multiple aspects and have healthy communication. Professionally, school principals should be objective, unbiased, constructive and mediating as well as democratic based on legislations and rules.

Key Words: School principal, conflict at schools and conflict management

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## 1. INTRODUCTION

Organizations, obligatory products of individual and social life, provide the necessary functions to meet various needs of both the individuals and the society. However, organizations may sometimes face undesired situations since they do not always have regular structures. If necessary precautions are not effectively taken early in these situations and they are not effectively managed, conflicts will follow that divert organizations from their goals and slow down their operations. Existence of the human element- the input of socialization- in organizations causes various discordances and conflicts among the staff based on individual differences (Arslantaş and Özkan, 2012). Hence, differences among the members and groups that constitute the organization in terms of goals, skills, beliefs, expectations, attitudes, feelings and thoughts and the inherent complications in the organizational structure itself (Akkirman, 1998; Karataş, 2007; Arslantaş and Özkan, 2012) are the basic elements that create conflicts. As a concept, conflict is defined as the incompatibility in terms of needs, motivations, desires and wishes (Bodine and Crawford 1998) and the disagreement

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between two or more people or groups due to various reasons (Koçel, 2003). Conflict is a part of everything that grows and develops (Slaikeu and Hasson, 1998). Continuous change of expectations and differences in the individuals and groups that constitute social structures in which communication and interaction takes place makes conflicts perpetual. Disharmony between the individual and the formal organization generates conflict and disappointment (Lunenburg and Ornstein, 2013; Argyris, 1993) and this cycle renews itself continuously. If the individuals who experience conflict are staff members, they display positive or negative behaviors in the face of the conflict. In the context of the behaviors that are displayed and the attitudes that are presented, a conflict may be a constructive or destructive concept based on the availability of control (Coleman and Yoshida, 2004).

While all types of conflict are regarded as unnecessary and destructive in organizations which are governed with traditional approaches, managers of these organizations deem the indications of conflict as clear signs of discomfort. On the other hand, behavioral approach which is a more modern outlook states that conflicts may indicate the existence of some problems in organizations (Şimşek, 2010) and that they provide the momentum to find healthier resolutions to these problems (Sökmen and Yazıcıoğlu, 2005). In both approaches, first hand responsibility in the conflict process and its resolution lays with the managers of organizations. The meanings ascribed to conflicts by the managers, the behaviors they display during the process and their competences can allow them to regard conflicts as important inputs that motivate the staff in line with organizational goals rather than regarding the conflicts as problems. Although conflicts are perceived negatively in meaning, today, they are also regarded as the tools for organizational and personal development (Gray and Stark, 1986).

Conflicts are inevitable at schools which include the human element and in which informal relations are experienced to the fullest degree. The role of the school principal is not limited to school management based on laws. They are also expected to create a positive school climate by regulating the relationships among the staff. In this sense, one of the important goals of school principals should be conflict management in line with the goals of the school (Açıklan, 1994).

School principals' views on the concept of conflict, the meaning they ascribed to the concept and their competences to direct the conflict to meet the school goals are important issues that need to be taken into consideration in terms of school management. Literature review shows that the studies undertaken in the field are mostly related to school principals' conflict management focusing on the relationships between conflict management styles, conflict management and different variables. Çatakdere's (2014) study that investigated managers' conflict management strategies and organizational climate based on teacher views; Korkmaz's (2013) study that examined conflict management strategies used by teachers at times of conflict with their colleagues and their job satisfaction and Özcihan's (2014) study that focused on the effects of emotional conflict on conflict management styles can be given as examples of these studies. Other studies in the field presented the result that, based on teacher perceptions, school principals used collaborating style the most and dominance style the least during the conflicts experienced with teachers and pointed to the fact that the conflict style that was most distressing to teachers was dominance and the least distressing style was compromise (Erol 2009; Horata, 2013; Odabaşoğlu, 2013; Yıldızoğlu and Burgaz, 2014; Yiğit, 2015). Current study focused on school conflicts caused by school managers rather than focusing on conflict types or styles. School principals were examined in the current study since managers are the individuals who are expected to manage conflicts. Principals' inability to manage conflicts successfully can be costly for the staff and schools and result in various problems such as deterioration of relationships at schools, stress, job dissatisfaction, alienation, physical and emotional problems etc. on the other hand, successful conflict management can create unity among staff, cooperation and synergy and may be the source of stability and determination (Erdoğan, 2000). Current study, undertaken in this context, aimed to identify school conflicts caused by

principals, the reasons behind these conflicts, approaches used by principals towards the teachers in the process and what should be done by principals in terms of conflict management based on teacher views. It is believed that results of this study will contribute school management by identifying the conflicts resulting from school principals and proposing preventive measures.

### **Purpose of the Study**

Based on teacher views, this study aimed to identify conflicts originating from school principals and establish principals' behavior and the underlying reasons and to provide suggestions related to successful conflict management.

## **2. METHOD**

### **Research Model**

The study utilized the survey model and made use of qualitative research method in data collection, analysis and interpretation.

### **Working Group**

The study was undertaken in 2013-2014 academic year with 57 volunteer teachers employed in Bolu central district schools. 23 of the participating teachers were females, and 34 were males; 25 of the teachers were classroom teachers and 32 were ..; 39 of the participating teachers worked less than 10 years and 18 worked between 11-20 years; 52 participating teachers had undergraduate diplomas and 5 had graduate diplomas.

### **Data Collection Tool**

Semi-structured interview form was used in the study as data collection tool to determine teacher views on conflicts originating from school principals and the conflict process. During the preparation phase, related literature was reviewed and open-ended questions were prepared. Views of three experts in the field of educational sciences were sought in order to ensure internal validity and during the piloting, the views of three teachers and three principals were taken as well. The form finalized with the help of those views was given to voluntary teachers who were asked to provide their ideas in writing. The final form included 4 open-ended questions:

1. What are the conflicts at school that originate from principals?
2. What behaviors and approaches are displayed by school principals during school conflicts?
3. What factors affect school principals' behavior during conflict resolution?
4. What should school principals do in order to manage conflicts in a positive manner?

### **Data Analysis and Interpretation**

Research data were analyzed with content analysis and descriptive analysis. Data analysis started by coding each interview form as T1 (Teacher 1), T2 (Teacher 2)...T57 (Teacher 57) and the analysis process was actualized in 4 stages.

First Stage: Answers provided by teachers for each question in the interview form were examined separately and in detail and similar and common ones were marked and coded.

Second Stage: Following the coding, similar answers and common points provided to the same questions were reexamined, findings were collected under specific categories and themes were obtained. The frequency of each view was calculated digitalize data.

Third Stage: Data obtained by analyzing the coded teacher views were placed under themes by quoting them either directly or indirectly. Interesting teacher views were provided as they were expressed in the interview forms.

Fourth Stage: Findings obtained via data analysis were interpreted. Possible causes and effects were emphasized during interpretation and connections among data were explained. Expert view was sought for the categories obtained after data analysis for reliability study.

### 3. FINDINGS AND DISCUSSION

#### Conflicts originating from school principals

**Table1:** Causes of conflicts originating from school principals

Main Theme	Sub Category	Rationale/Sample Statements	f
<i>Personal</i>	Extreme insistence	<i>The principal generally tries to hush up the situation, does not listen to the other party, believes that his/her own views are correct (T1), The principal not interested in anything, he/she takes a back seat stating that it is almost time for him/her to retire (T7), Conflicts arise due to unfair and undemocratic behaviors and lack of accurate knowledge related to tasks (T13), School principal does not make any compromises (T19)</i>	22
	Lack of listening		
	Indifference and disregard		
	Extreme understanding and tolerance		
	Differences of opinion		
	Political differences		
	Biased behavior		
Caprice			
<i>Professional</i>	Inability to completely fulfill his/her duty	<i>The principal expects us to fulfill out tasks without undertaking his/her own duties, he/she gives us a hard time before even searching the cause of the problems (T3),School principal persistently asks the students to pay fees but the students do not want to pay, the principal does not come to work on time but he/she asks us to fulfill our duties although he /she does not shoulder his/her responsibilities, he/she does not provide any support, it is a long time until the school principal does what we ask him/her (T4)</i>	19
	Asking students to pay fees		
	Lack of support provided by the principal		
	Unfair management		
	Lack of knowledge related to work/tasks		
	Expecting the staff to fulfill off duty tasks		
	Inability to meet expectations		
	Lack of discipline		
Authority gap			
<i>No Conflict</i>	There are no conflict situations	<i>There are no conflict situations originating from school principals (T2,6,8,9,14,15,16, 17,20)</i>	16

According to Table 1, while 16 teachers stated that there were no conflicts at their schools originating from the principal, the remaining teachers expressed that conflicts were experienced at school due to personal and professional characteristics of the principal. While personal characteristics of the principals such as extreme insistence, lack of listening, indifference and disregard, differences of opinion, political differences, biased behavior and caprice are causes for conflicts, extreme understanding and tolerance displayed by principals are also reasons for conflicts

at school. In professional terms, inability to completely fulfill duties, lack of support, unfair management, lack of knowledge related to work/tasks, inability to meet expectations, lack of discipline and authority gap result in conflicts. Literature reviews suggest that several variables such as differences in goals, uncertainties related to management field, inspection style, uncertainties related to authority and responsibility, communication problems, differences in management styles, lack of common decisions, cooperation, meager resources, size of the organization, differences in staff, behaviors, bias and work relationships cause conflicts in organizations (Aydın, 1984; Gümüşeli, 1994; Şimşek, 1999; Seval, 2006). Almost all conflicts originating from principals in the current study correspond to conflict reasons cited in the literature. In addition, many studies present communication as one of the fundamental causes of conflicts (Akkirman, 1998; Demirbolat, 1997; Dökmen, 1988; Elma and Demir, 2003; Ertürk, 2000; Karip, 2000; Korkmaz, 1994; Mirzeoğlu, 2005; Sütlü, 2007). In the current study, lack of communication was found to be the underlying factor behind the causes related to personal aspects. Lack of listening, lack of understanding, biased behaviors, inability to express their messages clearly and insensitivity towards differences on the part of principals will cause teachers to develop negative attitudes. It is highly probable for conflict-prone individuals who have negative attitudes to get into conflict situations related to communication issues. Therefore it is crucial for teachers to express themselves comfortably, to feel and be valued as a member of the group (Kısaç, 2002). Inability to fulfill tasks on the part of the principals due to lack of complete knowledge in their field of work and therefore creating authority gap and undisciplined climate will result in the development of perceived competence for principals on the part of teachers. This perception is one of the reasons that result in problems experienced by principals while doing their duties. In addition, lack of support for teachers, unfair practices, inability to meet expectations also negatively affect the quality of relationships among the staff and damage the characteristics of schools as organizations that educate humanity and hinder their functions.

### Behaviors and Approaches Displayed by School Principals during the Conflict Process

**Table 2:** Behaviors and approaches displayed by school principals during the conflict process

Main Theme	Sub Category	Rationale/Sample Statements	f
<i>Democratic Constructive</i>	Democrat	<i>School principal tries to behave objectively (T2),</i>	28
	Planned and programmed	<i>Acts in line with the legislation (T17), Produces fair resolutions calmly (T20), Tries to act fairly (T23),</i>	
	In line with legislations	<i>Listens patiently and tries to maintain his/her</i>	
	Calm and patient	<i>equanimity (T24), In general the principal is patient</i>	
	Tolerant	<i>and prudent, approaches situations with equanimity</i>	
	Matter of Fact	<i>and determination (T53)</i>	
	Good humored		
<i>Mediator</i>	Respectful		27
	Fair		
	Alleviating-placating	<i>Tries to reach reconciliation between parties (T2),</i>	
	Moderate	<i>Very optimistic, tries not to hurt anyone's feelings or</i>	
	Constructive	<i>upset them. Has extreme understanding and</i>	
	Accommodating	<i>tolerance (T10), Tries to resolve the issue (T9,</i>	
<i>Indifferent</i>	Talks about problems	<i>12,24), Displays accommodating behaviors</i>	11
	Conflict resolution	<i>(T18,22), Acts positively and constructively (T25),</i>	
	Pacific	<i>Tries to placate (T31), Solves problems</i>	
	Insouciant	<i>(T14,15,16,1757)</i>	
	Indifferent	<i>Displays an insouciant attitude (T4,11),Tries not to</i>	
Hushes up	<i>get interested in the situation, displays an indifferent</i>		
Blocks problems out	<i>attitude (T3,7), Cannot be said he/she is highly</i>		
	<i>responsive (T34), mostly hushes up the situation</i>		

	Unresponsive	<i>and waits for it to resolve on its own, does not do anything (T54), Does not have ideas about the situations and their resolutions (T55), Unless he/she is the target of the conflict, he/she does not mess with anyone, acts indifferently (T56)</i>	
<i>Authoritarian</i>	Issues orders Aggressive Uncompromising Advocates his/her own truths Gives notices	<i>He/she advocates his/her won truths (T5), Has an attitude that shies away from dialogue (T39), Approaches situations authoritatively and calmly, he /she dominates the situation (T46), Maintains his/her silence but later issues practices to as a pay back (T56),</i>	7
<i>Dominant</i>	Vengeful Oppressive Dominant Trouble-maker Biased	<i>He/she says "OK, OK" but avoids the situation (T1), The principal generally is the trouble maker, he/she has weak conflict management skills (T3), He/she acts in a manner that says "I want it this way" (T5), Most of the time the principal creates new problems himself/herself (T29,49,33), He/she generally tries to get his/her own ideas accepted (T38)</i>	5

According to the teacher views presented in Table 2, principals display democratic-constructive, mediator, indifferent, authoritarian and dominant approaches during the conflict process. While democratic-constructive principals act in a democratic, planned and programmed manner in line with legislations and are calm, patient, tolerant, matter of fact, good humored, respectful and fair; authoritarian principals issue orders and act aggressively and uncompromisingly in order not to lose authority and advocate their own truths and give notices. Mediating principals are observed to display alleviating, placating, moderate constructive, accommodating and pacific behaviors; they prefer talking problems through and resolve conflicts. Dominant principals display vengeful, oppressive, dominant, troubling and biased behaviors. Behaviors of indifferent school principals who ignore conflicts include being uninterested in situations, hushing them up and ignoring them or being unresponsive. Since democratic and mediating principal behaviors include positive styles, these are the desired cases for resolutions that will create win-win situations. On the other hand, dominant principal behaviors bring one-sided solutions since wishes of other parties are ignored. This may cause the development of negative attitudes in other parties and result in bigger conflicts. Indifferent principal behaviors ignore conflicts completely. Authoritarian principal behaviors are the ones that generate principal's dominance at schools. For win-win situations, democratic, constructive and mediating principals are desired. Other studies in literature undertaken in educational organizations also present the fact that management strategies of managers are causes of conflict (Mirzeoğlu, 2005; Sütü, 2007). Similar to the current study, studies by Erol (2009), Horata (2013) Yıldızoğlu and Burgaz (2014), Odabaşoğlu (2013) and Yiğit (2015) also identified that school principals utilized collaboration, accommodation, avoidance, compromise and dominance styles. As can be seen, principal attitudes and behaviors are similar to those identified in previous studies.

### **Factors That Affect The Behaviors Of School Principals During Conflict Resolution**

**Table 3:** Factors that affect the behaviors of school principals during conflict resolution

<b>Main Theme</b>	<b>Sub Category</b>	<b>Rationale/Sample Statements</b>	<b>f</b>
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<i>Personal Factors</i>	Character	<i>Character (T3), they are completely personal and emotional factors (T7), Attitude (T36), mutual trust, love, respect (T46), world view, value judgments, and manner of upbringing (T49), good intentions, keeping the same distance from everyone, being unbiased (T51), Attitudes of the groups or individuals in conflict (T52), personal approach and understanding (T53), Financial factors (T54)</i>	32
	Feelings		
	World view		
	Culture		
	Human relationships		
	Empathy skills		
<i>Professional Factors</i>	Perspective	<i>Management experiences are influential in school principal's conflict resolution (T9), Status, school environment and culture (T10), Seniority, specialty and in-school performance (T13), protecting the personnel, fair approach, understanding the essence of the situation and being solution oriented (T20),support from teachers (T45)</i>	23
	Attitude		
	Experience		
	Status		
	Performance		
	Nature of the situation		
<i>Education</i>	Parties involved		
	Knowledge of legislation		

According to teacher views presented in Table 3, personal and professional factors affect the behaviors of principals during conflict resolution. Principals' characters, feelings, world views, cultures, human relationships, empathy skills, perspectives and attitudes affect their behaviors during conflict resolution as personal factors whereas their experiences, statuses, performances, educations, their knowledge of legislation and the nature of the situation and the parties that are involved in the conflict are influential as professional factors. Personality characteristics are effective in the identification of approaches that will be used in the conflict and its resolution (Basım, Çetin and Tabak, 2009; Yıldızoğlu and Burgaz, 2014). When principals act according to negative traits, the chances of conflict will increase since effective conflict management is directly related to how one views conflicts (Pelit, 2003). It is highly important for principals to display positive personality characteristics at schools in order to resolve conflicts positively and to maintain social relationships at schools. In addition to personality factors, professional factors such as principals' education, statuses, experiences and competences will ensure effective conflict management and will be important advantages for resolution.

### What Should School Principals Do In Order To Manage Conflicts In A Positive Manner?

**Table 4:** What should school principals do in order to manage conflicts in a positive manner?

Main Theme	Sub Category	Rationale/Sample Statements	f
<i>From Humanistic aspect</i>	Open to criticism	<i>It will be easier to manage conflicts positively when the school principal displays an unbiased and principled stance. A trusted school principal manages and resolves conflicts more easily (T16), The school principal should be unbiased, consistent and be able to communicate in a healthy manner (T18), The school principal should be objective and unbiased (T14,29,30, 31,32), The school principal should have good intentions but should not delay the resolution (T57)</i>	30
	Tolerant, patient, calm		
	Able to assess the situation form multiple perspectives		
	Reliable, unbiased and fair		
	Able to generate unity and cooperation		
	Respectful		
	Principled, virtuous		
	Consistent		
	Able to communicate in a healthy manner		
	Able to develop himself/herself		
Democratic			
	Able to make good observations		
	Objective, transparent, unbiased	<i>The school principal should keep the same</i>	

<i>Professional aspect</i>	Able to provide solutions	<i>distance from everyone and should approach the problems in line with laws and regulations (T15), The school principal should be unbiased, assess the data well, should not be unreliable (T19), The school principal should be solution oriented (T24), The school principals should educate and develop themselves (T25), The school principal should take contributions from all personnel at school 's point of views into consideration (T36)</i>	29
	Knowledgeable, experienced,		
	Knows about the legislation		
	Follows the rules		
	Mediator		
	Leader		
<i>Organizational aspect</i>	Authoritarian	<i>The school principal should know conflict resolution techniques very well and use them (T1),The school principal should be informed of the situations and know the legislation very well (T17), The school principal should make the decisions together with other administrators and teachers (T43)</i>	20
	Knows about conflict resolution rules		
	Takes everyone's point of view into consideration		
	Has management skills		
<i>Organizational aspect</i>	Solution oriented	<i>The school principal should know conflict resolution techniques very well and use them (T1),The school principal should be informed of the situations and know the legislation very well (T17), The school principal should make the decisions together with other administrators and teachers (T43)</i>	20
	Knows his/her organization very well		
	Can foresee problems		

Based on teacher views presented in Table 4, what principals should do in order to manage conflicts positively changes according to humanistic, professional and organizational aspects. Therefore, from humanistic aspect, school principals should have positive personality traits such as being calm, respectful, principled, virtuous, consistent, fair, democratic, reliable, tolerant, patient, unbiased and they should be open to criticism, able to assess the situation from multiple perspectives, have empathy skills, be able to communicate in a healthy manner, generate unity and cooperation, make good observations and develop themselves. From professional aspect, school principals should be objective, unbiased, mediating, constructive, transparent and authoritarian leaders and have knowledge and experience in management and legislation; should follow rules and know about the rules of conflict resolution. They should be able to take everyone's point of view into consideration, propose solutions and not delay the resolution. When the volume of teacher views is taken into consideration, it is observed that teachers stress the need for specific personality traits in terms of humanistic and professional aspects. It shows that teachers find personality characteristics of principals to be more important than organizational characteristics. As a matter of fact, individuality dimension of the school is more sensitive than its organizational dimension, its informal aspects are heavier than its formal aspects and its sphere of influence is wider than its scope of authority (Bursalioğlu, 1994). Removing conflict situations at schools and creating a positive climate is as important as the tasks principals undertake in line with the legislations. Therefore, school principals should attach more sensitive importance to human relations compared to other managers.

#### 4. RESULTS AND RECOMMENDATIONS

Conflicts arise at schools based on school principals' personality characteristics such as extreme insistence, lack of listening, indifference and disregard, differences of opinion, political differences, biased behavior and caprice and their professional characteristics such as inability to completely fulfill duties, lack of support, unfair management, lack of knowledge related to work/tasks, inability to meet expectations, lack of discipline and authority gap. Principals display democratic-constructive, mediator, indifferent, authoritarian and dominant approaches during the conflict process. Democratic-constructive principals act in a democratic, planned and programmed manner in line with legislations and are calm, patient, tolerant, matter of fact, good humored,

respectful and fair; authoritarian principals issue orders and act aggressively and uncompromisingly in order not to lose authority and advocate their own truths and give notices. Mediating principals are observed to display alleviating, placating, moderate constructive, accommodating and pacific behaviors; dominant principals display vengeful, oppressive, dominant, troubling and biased behaviors and behaviors of indifferent school principals ignore conflicts, are uninterested in situations, hush them up and ignore them.

Principals' characters, feelings, world views, cultures, human relationships, empathy skills, perspectives and attitudes affect their behaviors during conflict resolution as personal factors whereas their experiences, statuses, performances, educations, their knowledge of legislation and the nature of the situation and the parties that are involved in the conflict are influential as professional factors. In order to manage conflicts positively, school principals should have positive personality traits from humanistic aspect such as being calm, respectful, principled, virtuous, consistent, fair, democratic, reliable, tolerant, patient, unbiased and they should be open to criticism, able to assess the situation from multiple perspectives, have empathy skills, be able to communicate in a healthy manner, generate unity and cooperation, make good observations and develop themselves. From professional aspect, they should be objective, unbiased, mediating, constructive, transparent and authoritarian leaders and have knowledge and experience in management and legislation; should follow rules and know about the rules of conflict resolution.

Based on the results of the study, it is suggested that conflict management and communication skills should be taken as criteria in the selection and assignment of school principals, applied and theoretical courses should be provided at schools that include conflict management and sample cases of conflicts in human relationships and that specific measures should be taken so that school principals who are uninterested in conflicts experienced at schools, who are unable to analyze its causes and effects and who cannot effectively manage conflicts can develop themselves.

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# Novice school principals' sense of self-efficacy

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## Abstract

This study aimed to identify conflicts at schools resulting from school principals, behaviours of principals during conflicts and The study aimed to identify novice school principals' self-efficacy perceptions. The universe of the study, which was undertaken by using the survey model, was composed of 284 novice school principals starting their administrative careers in Bolu and Düzce after completing the Administrative Training Course organized by the Ministry of Education in 2014-2015 academic year. The total universe was accessed during the lifetime of the study and 217 of 284 principals provided feedback. Data were collected with the help of Competency Scale for School Administrator and means, standard deviation, Mann-Whitney U and Kruskal-Wallis tests were used in data analysis. The results obtained in the study are as follows: In general, school principals perceived themselves as having high level of self-efficacy. The highest levels of self-efficacy perception were found in educational leadership, personnel development and decision making based on legal and ethical principles and data sub dimensions whereas the lowest self-efficacy levels were observed in developing cooperation with the community sub dimension. While career status, method of administrative assignment, level of education and seniority did not point to significant differences in novice school principals' self-efficacy perceptions, gender variable was found to be in favor of female principals in the scale in general and in the following sub dimensions: developing the school climate and vision, educational leadership and personnel development and decision making based on legal and ethical principles and data. The study suggests that school principals should develop themselves in terms of teaching-learning processes, school budget and getting to know the environment, that it is essential and of high priority to provide quality personnel to the schools administered by novice principals and that the number of female principals should be increased.

**Key Words:** Self-efficacy perception, school principal

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## 1. INTRODUCTION

Self-efficacy concept, first developed by Bandura (1986) as the extent or strength of one's perceptions regarding one's own ability to succeed by organizing the required activities to reach a specific performance, is one of the fundamental concepts developed in the framework of Social Cognitive Theory and Social Learning Theory (Senemoğlu, 1997; Slavin, 2013; Lunenburg, Ornstein, 2013). Self-efficacy is the extent of one's judgment and belief in one's own ability to overcome challenging situations that will be faced in the future (Senemoğlu, 1997). Compared to individuals with lower self-efficacy levels, individuals with higher self-efficacy make more efforts to rise to challenges and behave in a more persistent and perseverant manner, are less frightened of new experiences and trying new things and better cope with events since they can control their environment more successfully (Bandura, 1980). Self-efficacy is not a function of the individual's ability but the product and result of judgments acquired by using this ability and it is a self-perception regarding the ability and capacity to accomplish a task.

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Hoy and Miskel (2012) term self-efficacy also as self-efficiency and state that it is individual's personal evaluation and perception during tasks. They believe that administrators with high self-efficacy positively affect student acquisitions and improve the significance of academic learning at schools. Self-efficacy beliefs of individuals contribute to their motivations by determining the extent of their goals, level of efforts and resistance to challenges. The more people believe in their capacities, the more and continuous efforts they will make. On the other hand, people tend to avoid situations and tasks that are beyond their capacity and look for actions that they think they can manage. In addition, self-efficacy is dynamic, it can be obtained through various experiences and may change in time as a result of new experiences and information. Self-efficacy of individuals changes and develops as their expertise, experiences, modeling, persuasion and physiological impersonations develop (Gist and Mitchell, 1992; Hoy and Miskel, 2012).

Self-efficacy affects selection of all activities, effort, anxiety or trust levels and self-efficacy perceptions are influenced by information that the individual receives from four basic sources. The first of these resources (Aydin, 2013; Hoy and Miskel, 2012) is the one's judgment obtained from information based on personally successful or unsuccessful activities and on others' successful or unsuccessful activities and the one's own belief about whether one can succeed in these activities or not. If the acquisitions in this process are significant and positive, the individual's efforts will increase. According to Bandura, the most important resource that increases self-efficacy perceptions is past experiences. If individuals successfully accomplished a task in the past, they will trust themselves more in undertaking similar tasks. The second resource is observing the role models and achievements of these role models whereas the third resource is verbal encouragement, i.e. convincing individuals that they possess the required abilities to succeed. The last resource states that the physiological state increases self-efficacy. Stimulation makes individuals energetic and supports them in the direction of task completion (Robbins and Judge, 2012). As can be seen, belief in the self to undertake a task and expectations for successful outcomes are effective in performing tasks. Outcome of the behavior is important, but believing in the ability to perform this behavior is more important. Self-efficacy affects the individual in two ways. In the first, the individual does not wish to perform the task thinking the activity is beyond self-capacity. In the second, individual's inclination to perform the task increases when it is believed that one is capable of performance. As stated by Korkmaz (2006), this situation can be identified as the realization of the self about the congruence between the required behavior and the capacity of the self.

Self-efficacy has significant impact at schools. When educational administrators have high self-efficacy, they are able to set higher goals, make more efforts to reach goals and have more positive outcomes. Self-efficacy beliefs affect the efforts made in order to teach, the level of professional targets and the goals that will be in line with these targets (Hoy and Spero, 2005). Additionally, when self-efficacy is associated with effort and performance (Lunenburg and Ornstein, 2013), it is a crucial element of motivation that affects the outcomes of performance (Hoy and Miskel, 2012). Furthermore, administrators with high self-efficacy levels have more trust in their ability to succeed. Therefore, while administrators with high self-efficacy levels take on challenges, administrators with low self-efficacy levels decrease their efforts or give up in the face of hardships. Also, administrators with high self-efficacy levels make more efforts and are more motivated when they receive negative feedback but administrators with low self-efficacy levels may tend to have diminished efforts (Robbins, Decenzo and Coulter, 2013). This is rather important for educational organizations that focus on continuous development. It is necessary for school principals to have high self-efficacy because school principals are responsible from the development of both the staff and themselves. This situation is more crucial for novice school principals because a separate training does not exist for administrators in Turkey and principals are selected from among teachers. The fact that they do not have prior administrative experience, training or knowledge may sometimes cause problems for them. Also, principals' personal beliefs regarding whether they would be successful in a situation or in problem solving will affect their behaviors in terms of preferences, efforts, determination, initiatives. In this context, the current study aimed to determine

novice school principals' self-efficacy perceptions. The findings can be regarded as the insight into effective, efficient and productive management of schools.

### **Purpose**

This study aimed to identify self-efficacy perceptions of novice school principals who were assigned in 2014-2015 academic year. In this context, the study sought answers to the following questions:

- a. What are the self-efficacy levels of novice school principals assigned to their posts in 2014-2015 academic year?
- b. Do self-efficacy levels of novice school principals assigned to their posts in 2014-2015 academic year differ significantly according to personal variables (gender, career status, manner of assignment, level of education and seniority) and?

## **2. METHOD**

### **Research Model**

The study utilized survey model. According to Karasar (2007), survey model is a research approach that aims to describe a past or present event/situation as is.

### **Study Universe**

The universe of the study was composed of novice school principals starting their administrative careers in Bolu and Düzce after completing the Administrative Training Course organized by the Ministry of Education in 2014-2015 academic year. The number of school principals is 215 in Düzce and 69 in Bolu. All the principals were contacted during the study and 217 provided feedback. 34 of the participating principals were females and 183 were males; 143 were teachers and 74 were expert teachers; 38 had associate degree, 162 had bachelor's degree and 17 had master's degree; 117 principals were assigned to their posts as a result of an exam and 100 were assigned without a formal exam. 29 of the school principals had 0-5 years teaching experience, 47 had 6-10 years teaching experience, 41 had 11-15 years teaching experience and 100 had 16 years or more teaching experience

### **Data Collection Tool**

Competency Scale for School Administrators, developed by McCollum, Kajs and Minter (2006) and adapted to Turkish by Öztürk (2012), was used in the study as the data collection tool. The Likert type scale was composed of 40 items and six sub dimensions. Cronbach Alpha reliability coefficient of the scale was found to be .97 for the whole scale, .95 for developing the school climate and vision and decision making based on legal and ethical principles and data sub dimensions, .91 for educational leadership and personnel development and management of resources and opportunities sub dimensions, .92 in cooperation with the community sub dimension and .87 in use of community resources sub dimension. In the current study, Cronbach Alpha reliability coefficient of the scale was found to be .96 for the whole scale, .91 for developing the school climate and vision and use of community resources sub dimensions, .90 for decision making based on legal and ethical principles and data and cooperation with the community sub dimensions, .88 for educational leadership and development of the personnel sub dimensions and .75 in management of resources sub dimension.

### **Data Analysis**

Data distribution was examined via Kolmogorov Smirnov normality test in order to determine the analysis that needed to be taken to identify novice school principals' self-efficacy perceptions. It was found that data distribution was not normal. In this direction, the study utilized means, standard deviation, Mann-Whitney U and Kruskal-Wallis tests.

### 3. FINDINGS AND DISCUSSION

#### Novice School Principals' Self Efficacy Perceptions

**Table 1:** Views of novice school principals regarding the self-efficacy scale

Scales	N	$\bar{x}$	SS
Developing the school climate and vision	217	6,028	,649
Educational leadership and personnel development	217	6,140	,678
Management of resources and opportunities	217	6,021	,723
Developing cooperation with the community	217	5,595	,960
Decision making based on legal and ethical principles and data	217	6,142	,682
Use of community resources	217	6,013	,967
Total self-efficacy scale	217	6,012	,620

According to Table 1, self-efficacy perceptions of participating novice school principals were found to be high ( $\bar{x}=6,012$ ). In terms of sub dimensions, the highest self-efficacy perceptions for participating novice school principals were in educational leadership and personnel development ( $\bar{x}=6,140$ ) and decision making based on legal and ethical principles and data ( $\bar{x}=6,142$ ) sub dimensions and the lowest were in developing cooperation with the community ( $\bar{x}=5,595$ ) sub dimension. In the other sub dimensions, novice school principals' self-efficacy perceptions were similar and high. The fact that novice teachers perceived their self-efficacy as high especially in educational leadership and personnel development may be regarded positive in terms of educational management, realization of school goals and use of human resources. Although lack of experience and knowledge in administration is a disadvantage for the novice school principals, it can be claimed that their indirect experiences are effective on their self-efficacy perceptions. In Turkey, school administration does not require specific and separate training and being a teacher is the basis. The fact that novice school principals indirectly witnessed and observed various management situations during their service as teachers provides them with knowledge and skills in management. In addition, high self-efficacy levels in educational leadership and personnel development issues will enable the novice school principals to make more and continuous efforts to overcome challenges. Hence, they will be able to control the staff and the events at the school and will be able to manage administrative practices more easily. The challenges will not dismay them and their expectations for success will be higher. A principal who trusts himself/herself and who can evaluate situations objectively is closer to achievement (Üstüner, Demirbaş, Cömert and Özer, 2009). Principals with higher self-efficacy perceptions will not only be open to innovations and change at schools; they will also be more tolerant towards errors and more willing to different management practices. A similar study examined the self-efficacy perceptions of experienced school principals and found that their self-efficacy perceptions were high (İnanlı, Tunç and Gündüz, 2013). This finding shows that, just like the novice school principals, experienced school principals also have high self-efficacy perceptions. Also, the fact that novice school principals feel competent in decision making based on legal and ethical principles and data sub dimension can be regarded as an important finding in terms of following legal principles and rules in administrative processes and fulfilling the requirements of juridical texts. Based on the existing data, it can be claimed that novice school principals trust their capacities in the performance they will display and have high beliefs in the fact that they can perform successfully.

On the other hand, the lowest means in novice school principals' views were related to developing cooperation with the community sub dimension. This finding is an indicator that the novice school principals did not have beliefs in this area as they did for the interschool interactions. This finding may be related to the fact that novice school principals were aware of the problems in school-environment relationships prior to their assignment to administrative posts.

## School Principals' Self Efficacy Perceptions Based On Personal Variables Gender

**Table 2:** Mann-Whitney U test results based on gender variable

Scale	Variable	N	$\bar{x}$	Rank Sum	U	p
Developing the school climate and vision	Female	34	133,99	4555,50	2261,500	,011*
	Male	183	104,36	19097,50		
Educational leadership and personnel development	Female	34	133,69	4545,50	2271,500	,012*
	Male	183	104,41	19107,50		
Management of resources and opportunities	Female	34	120,00	4080,00	2737,000	,263
	Male	183	106,96	19573,00		
Developing cooperation with the community	Female	34	124,63	4237,50	2579,500	,113
	Male	183	106,10	19415,50		
Decision making based on legal and ethical principles and data	Female	34	132,60	4508,50	2308,500	,017*
	Male	183	104,61	19144,50		
Use of community resources	Female	34	110,65	3762,00	3055,000	,865
	Male	183	108,69	19891,00		
Total self-efficacy scale	Female	34	132,93	4519,50	2297,500	,016*
	Male	183	104,55	19133,50		

\*p<,05

Table 2 shows that novice school principals' self-efficacy views based on gender significantly differed in the whole scale (U=2308,500; p<,05) and in developing the school climate and vision(U=2261,500; p<,05), educational leadership and personnel development (U=2271,500; p<,05), decision making based on legal and ethical principles and data(U=2297,500; p<,05) sub dimensions in favor of female principals. In other words, female principals perceived themselves as more competent in self-efficacy compared to male school principals in the whole scale and the sub dimensions specified above. Based on the current findings, it can be claimed that gender variable is an effective variable in self-efficacy perceptions. This outcome may have resulted from the fact that the number of participating female school principals was limited as well from the fact that female school principals actually have higher self-efficacy perceptions than their male counterparts. School administration in Turkey is a position with more challenging conditions than teaching when working conditions and the process of assignment are taken into consideration. Due to personal reasons and the reasons cited above, the number of female teachers who apply for administrative posts is limited. It is expected that female teachers' self-efficacy and self-confidence perceptions will be higher considering the fact that female teachers start in administrative careers after having been aware of these conditions. Izgar and Dilmaç's (2008) study on teachers who were candidates for administrative positions and Erişen and Çeliköz's (2003) study on teachers found that gender created significant differences and the findings of these studies are parallel to the findings in the current study.

## Career

**Table 3:** Mann-Whitney U test results based on career variable

Scale	Variable	N	$\bar{x}$	Rank Sum	U	p
Developing the school climate and vision	Teacher	143	105,32	15061,00	4765,000	,230
	Expert Teacher	74	116,11	8592,00		
Educational leadership and	Teacher	143	108,82	15561,50	5265,500	,953

personnel development	Expert Teacher	74	109,34	8091,50		
Management of resources and opportunities	Teacher	143	104,68	14969	4673,500	,157
	Expert Teacher	74	117,34	8683,50		
Developing cooperation with the community	Teacher	143	105,89	15142,50	4846,500	,309
	Expert Teacher	74	115,01	8510,50		
Decision making based on legal and ethical principles and data	Teacher	143	107,31	15345,50	5049,500	,581
	Expert Teacher	74	112,26	8307,50		
Use of community resources	Teacher	143	105,41	15074,00	4778,000	,234
	Expert Teacher	74	115,93	8579,00		
Total self-efficacy scale	Teacher	143	105,95	15151,00	4855,000	,320
	Expert Teacher	74	114,89	8502,00		

According to Table 3, novice school principals' self-efficacy views based on career did not significantly differ either in the whole scale or in sub dimensions. In other words, career, i.e. being teachers or expert teachers, did not act as an effective variable in their self-efficacy perceptions. This result could have originated from the idea that being a school principal and being an expert teacher were two congruent tasks but it may also have originated from the fact that school principals who were not expert teachers still regarded themselves as competent as the school principals who also had the status of expert teachers.

#### Manner of Assignment

**Table 4:** Mann-Whitney U test results based on manner of assignment

Scale	Variable	N	$\bar{x}$	Rank Sum	U	p
Developing the school climate and vision	Exam	117	113,41	13269,50	5333,500	,262
	No Exam	100	103,84	10383,50		
Educational leadership and personnel development	Exam	117	11,93	13095,50	5507,500	,456
	No Exam	100	105,58	10557,50		
Management of resources and opportunities	Exam	117	109,06	12759,50	5843,500	,989
	No Exam	100	108,94	10893,50		
Developing cooperation with the community	Exam	117	112,93	13212,50	5390,500	,317
	No Exam	100	104,41	10440,50		
Decision making based on legal and ethical principles and data	Exam	117	113,62	13293,50	5309,500	,240
	No Exam	100	103,60	10359,50		
Use of community resources	Exam	117	104,44	12220,00	5317,000	,240
	No Exam	100	114,33	11433,00		
Total self-efficacy scale	Exam	117	112,26	13134,50	5468,500	,408
	No Exam	100	105,19	10518,50		

According to Table 4, novice school principals' self-efficacy views based on manner of assignment did not significantly differ either in the whole scale or in sub dimensions. In other words, having been assigned to administrative posts with or without an exam was not an effective variable in the self-efficacy perceptions of novice school principals. This finding also shows that school principals assigned to their posts without an exam had as high self-efficacy levels as the school principals who were assigned to their posts subsequent to a test. Unfortunately, assignment of school principals in Turkey is not based on a continuous policy and changes are frequent. Perceptions regarding the objectivity of exams given in this regard are not highly positive as well. Therefore, regardless of the exam, it is thought that school principals are not that different from one another. As a matter of fact, findings support this belief as well.

## Level of education

**Table 5:** Kruskal-Wallis Test results based on level of education variable

Scale	Variable	N	$\bar{x}$	sd	$\chi^2$	p
Developing the school climate and vision	Associate degree	38	110,41	2	1,081	,583
	Bachelor's degree	162	107,14			
	Master's degree	17	123,59			
Educational leadership ve personnel development	Associate degree	38	106,51	2	,420	,810
	Bachelor's degree	162	108,64			
	Master's degree	17	118,03			
Management of resources and opportunities	Associate degree	38	108,20	2	1,025	,599
	Bachelor's degree	162	110,69			
	Master's degree	17	94,95			
Developing cooperation with the community	Associate degree	38	111,53	2	1,125	,599
	Bachelor's degree	162	106,91			
	Master's degree	17	123,26			
Decision making based on legal and ethical principles and data	Associate degree	38	110,42	2	2,027	,363
	Bachelor's degree	162	106,55			
	Master's degree	17	129,15			
Use of community resources	Associate degree	38	116,43	2	1,176	,555
	Bachelor's degree	162	108,49			
	Master's degree	17	97,26			
Total self-efficacy scale	Associate degree	38	110,53	2	,393	,821
	Bachelor's degree	162	107,76			
	Master's degree	17	117,44			

According to Table 5, novice school principals' self-efficacy views based on level of education did not significantly differ either in the whole scale or in sub dimensions. In other words, having an associate, bachelor's or a master's degree is not an effective variable in novice school principals' self-efficacy perceptions. This finding shows that novice school principals with associate or bachelor's degrees had similar self-efficacy levels as the novice school principals with master's degrees or that level of education did not affect self-efficacy levels of individuals. As a matter of fact, school administration in Turkey is not acquired through training or attending a specific school. All principals undergo similar training processes and graduate from similar programs. They also need to work as teachers for a certain period of time. These facts can be effective in obtaining similar self-efficacy perceptions regarding the administrative tasks.

## Seniority

**Table 6:** Kruskal-Wallis Test results based on seniority

Scale	Variable	N	$\bar{x}$	sd	$\chi^2$	p
Developing the school climate and vision	0-5 years	29	101,64	3	4,980	,173
	6-10 years	47	93,33			
	11-15 years	41	114,49			
	16 years and higher	100	116,25			
Educational leadership and	0-5 years	29	103,41	3	1,682	,641
	6-10 years	47	100,49			

personnel development	11-15 years	41	112,32	3	1,933	,586
	16 years and higher	100	113,26			
Management of resources and opportunities	0-5 years	29	102,67	3	1,933	,586
	6-10 years	47	100,19			
	11-15 years	41	111,43			
	16 years and higher	100	113,98			
Developing cooperation with the community	0-5 years	29	107,31	3	2,112	,549
	6-10 years	47	98,60			
	11-15 years	41	117,31			
	16 years and higher	100	111,07			
Decision making based on legal and ethical principles and data	0-5 years	29	104,09	3	3,705	,295
	6-10 years	47	95,38			
	11-15 years	41	118,21			
	16 years and higher	100	113,05			
Use of community resources	0-5 years	29	107,17	3	5,906	,116
	6-10 years	47	90,55			
	11-15 years	41	112,84			
	16 years and higher	100	116,63			
Total self-efficacy scale	0-5 years	29	103,19	3	5,019	,170
	6-10 years	47	92,67			
	11-15 years	41	116,61			
	16 years and higher	100	115,24			

According to Table 6, novice school principals' self-efficacy views based on seniority did not statistically differ either in the whole scale or in sub dimensions. In other words, the fact that novice school principals worked as teachers for 0-5 years, 6-10 years, 11-15 years or 16 years and higher was not an effective variable in their self-efficacy perceptions. Views of school principals were found to be similar in terms of seniority. This finding can be interpreted in a manner that professional seniority did not quite affect novice school principals' self-efficacy perceptions, that regardless of seniority, teachers regarded themselves as competent in school administration and that school administration tasks was not regarded to be very different from teaching posts. However, Ungüren and Ercan (2015) found that self-efficacy perceptions significantly differed based on period of employment and that as period of employment increased, so did self-efficacy perceptions. Differences in those findings may be based on the fact that study groups in these studies had different characteristics.

#### 4. RESULTS AND RECOMMENDATIONS

Self-efficacy perceptions of novice school principals were found to be high in general and in the sub dimensions of the scale. In terms of sub dimensions, the highest self-efficacy perceptions were found to be in *educational leadership and personnel development* and *decision making based on legal and ethical principles and data* sub dimensions, whereas, the lowest self-efficacy perceptions were observed in *developing cooperation with the community* sub dimension.

While novice school principals' career statuses, method of administrative assignment, level of education and professional seniority did not create significant differences in their self-perceptions, gender variable was found to make statistically significant differences in favor of female school principals in the whole scale in general and in the following sub dimensions: *Developing the school climate and vision*, *educational leadership* and *personnel development*, *decision making based on legal and ethical principles and data*.

Based on these findings, the study suggests that school principals should develop themselves in terms of teaching-learning processes, school budget and getting to know the environment, that it is essential and of high priority to provide quality personnel to the schools administered by novice principals and that the number of female principals should be increased.

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# Attitudes of preschool teacher candidates towards the teaching profession.

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## **Abstract**

The purpose of this study is to determine the attitudes of preschool teacher candidates towards the teaching profession. Teaching is a very special profession. Not only a person who will choose teaching as a profession should really have a great desire for it, s/he should also have the required personal qualities appropriate for the profession. This is a profession that is very demanding, but rewarding at the same time, requires great responsibilities, is open to innovations, is informed of the developmental features that knows and understands children, values spirituality rather than materiality, requires to have good communication skills; in short, it is a profession that requires its candidates to have many professional as well as personal characteristics. One wonders if the teacher candidates who will acquire this profession requiring many crucially important qualities really possess all these qualities. What do those teacher candidates think which qualities are needed to become a teacher? In this study, it was aimed to determine the attitudes of teacher candidates who chose to study at this department towards the teaching profession and examined whether the education they received at the university made a difference on their opinions and views about the teaching profession. The population of the research was comprised of the teacher candidates studying at the preschool departments of universities and the sample of the study was composed of a total of 173 teacher candidates 106 whom were first year and 67 final year (fourth year) students studying at the preschool department of Uludag University. For this purpose, first and final year teachers candidates were asked questions prepared by the researcher. Firstly percentage and frequency calculations were made on the data obtained from the study and then interpretations and evaluations were carried out. In this study, the qualities required in a preschool teacher in order of importance were determined as; "love of children", "possessing the professional personality characteristics", "being active and full of energy", "possessing positive personality characteristics", and "love of the profession".

Key Words: Teaching profession, teacher candidate, preschool education.

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## **1. INTRODUCTION**

Preschool education is a period in person's life that occupies a very significant place. It is a very sensitive period during which solid foundations should be laid. This period is also crucially important since it is this period when the existing potentials of children should be discovered and supported in order to enhance it to the next level. The most important people who have an impact over a child are primarily the family of the child, friends, circle of acquaintances and the educators. These people who have an impact over the child may have a negative effect as well as a positive one in terms of child development. This, in turn, may shape what kind of an individual the child is going to be.

Preschool education is very important. In order for preschool education to be beneficial, only qualified preschool education program is not sufficient. At the same time, there is a need for a

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qualified preschool teacher as well who will be able to implement this program. The teacher does not have a great impact over the child like the mother and the father. Teachers are mostly the persons who are taken as role models (Gürkan, 1982).

The achievements obtained at early childhood period maintain their continuity to a great extent in the future as well. In order to succeed in the education of child, it is not sufficient to have appropriate education programs, methods, tools and materials. At the same time, a qualified teacher is needed as well (Başal and Taner, 2004).

The children who spend most of their time with a teacher in preschool institutions take the teacher as a role model and imitate him/her, and adopt the personality of the teacher. Therefore, the personality and professional perspective of the teacher is crucial (Argun and İkiz, 2003).

We live in a fast-changing world. We need individuals who will be able to keep up with this fast-changing society and update themselves on a regular basis. Therefore, both families and teachers have great responsibilities. Special attention needs to be paid to the training of teachers and efforts should be exerted in order to train qualified teachers. It is the education faculties of universities that will implement this crucial duty. Gürkan, (2005) stated that teachers were underpaid in their profession, did not have a high status, and was a very demanding profession.

There are some professional qualities that the teachers need to have in order to implement this profession. The success of a teacher lies in the possession of these qualities. Demirel (2007) stated that when the previous studies were examined, the basic qualities of an efficient teacher were collected under eight. These qualities were enthusiasm (being energetic), sincerity, reliability, anticipation of high level of success, providing support, cooperation, flexibility and being knowledgeable.

The purpose of this study is to determine the attitudes of preschool teacher candidates towards the teaching profession. Do the teacher candidates possess very important professional and personal qualities needed to acquire this profession? What do those teacher candidates think which qualities are needed to become a teacher? In this study, it was aimed to determine the attitudes of teacher candidates who chose to study at this department towards the teaching profession and examined whether the education they received at the university made a difference on their opinions and views about the teaching profession.

## **2. METHOD**

The population of the research was comprised of the teacher candidates studying at the preschool departments of universities and the sample of the study was composed of a total of 173 teacher candidates 106 whom were first year and 67 final year (fourth year) students studying at the preschool department of Uludag University. For this purpose, first and final year teachers candidates were asked questions prepared by the researcher. The reason why first and final year teacher candidates were chosen in this study was to understand whether the education they received at the university made a difference on their opinions and views about the teaching profession.

91,9% of the teacher candidates were female and 8.1% male. 36,4% of the teacher candidates were aged between 18-19; 34,1% between 22-23; 23,1% between 20-21 and 6,4% aged 24 and over. 30,1% (52) of the students were girls' vocational high school graduates; 25,4% Anatolian high school graduates; 22,5% teacher's training school graduates; 20,2% basic high school graduates; and 1,7% business high-school graduates. Most of the students (85%) studied their first major and 15% studied their second major at the university. Given the graduation status of the parents of the teacher candidates, it was found that majority of their mothers (57,8%) were elementary school graduates and again majority of them (85,5%) were house wives; fathers, on the other hand, were mainly high school graduates (32,6%).

The data was collected through an opinion specification form prepared by the researcher. The form was comprised of two sections. The first section contained the demographic information about the teacher candidates. The second section was the one where the teacher candidates were asked questions and expected to present their attitudes and opinions about the teaching profession.

The data obtained in this study were analysed with the SPSS 20 package program. While examining the relationships between groups of nominal variables, the Chi-square analysis was applied. In the case of the expected values in the cells not having the sufficient volume on the 2x2 tables, the Fisher's Exact Test was used and the Pearson Chi-square analysis was applied through the assistance of the Monte Carlo Simulation on the RxC tables.

In the interpretation of the findings, the level of significance was considered to be 0,05; it was reported that when the level of significance was  $p < 0,05$ , there was a significant relationship; when the level of significance was  $p > 0,05$ , there was no significant relationship.

### 3. FINDINGS

The findings obtained in this study are given in tables in this section.

The Table 1 below illustrates the Chi-square test results regarding the relationship between the reasons why the teacher candidates chose to study at this department and different years (grades).

**Table 1.** The Chi-Square Test Results Regarding the Relationship between the Reasons for Choosing to Study at this Department and Different Years (Grades)

		Year (Grade)						Chi-square Test	
		1.Year		4.Year		Total		Chi-square	p
		n	%	n	%	n	%		
<b>The reason for choosing to study at this department?</b>	<b>Because I had to</b>	45	42,5	33	49,3	78	45,1	0,767	0,381
	<b>Because I loved this profession</b>	61	57,5	34	50,7	95	54,9		
	<b>Total</b>	106	100	67	100	173	100		

Table 1 illustrates that there was no statistically significant relationship between the reasons for choosing to study at this department and the year (grade) they are in ( $p > 0,05$ ). Although it was not statistically significant, 1<sup>st</sup> and 4<sup>th</sup> year students chose to study at this department because they loved the teaching profession (54,9%). However, almost half of the students (45,1%) indicated that they chose to study at this department because they had to. The case of having to study at this department was because they wanted to be able to be appointed to a teaching position easily, be able to find a job easily, university entrance exam score was just sufficient for this department or just to fulfil the family's wishes. Preschool teaching is not a profession one can be done just to earn a living. In order to be a productive and successful teacher, one has to choose this profession because s/he loves it (Oktay, 2004). Whether one chooses the teaching profession willingly is a factor that has an impact over their professional success (Demirel, 1995). However, almost half of the teacher candidates in our study indicated that they chose this profession due to other reasons. In her study, Argun (2003) stated that 49% of the teacher candidates chose the profession due to their love of children, and 29% due to their love of this particular field of study.

The Table 2 below illustrates the distribution of the case of whether the teacher candidates thought they possessed the qualities to become a teacher.

**Table 2.** The distribution of the case of whether the teacher candidates thought they possessed the qualities to become a teacher.

		Year (Grade)						Chi-square Analysis	
		1.Year		4.Year		Total		Chi-square	p
		n	%	n	%	n	%		
<b>Do you think you possess the qualities to become a teacher?</b>	<b>Yes</b>	95	91,3	65	97,0	160	93,6	Fisher's Exact	0,205
	<b>No</b>	9	8,7	2	3,0	11	6,4		

Table 2 illustrates that when the teacher candidates were asked whether they possessed the qualities needed to become a teacher, almost all the participants (93,6%) responded positively saying yes. Although almost half of the teacher candidates responded that they chose to study at the department because they had to, the fact that they indicated that they possessed the qualities needed to become a teacher can be regarded positively with regards to their motivation for the profession. Similarly, in their study, Küçükoğlu *et al.* (2014) concluded that most of the teacher candidates thought that the teaching profession was suitable for them even though they did not choose to study at this department in accordance with their interest and abilities. In their study, Ay and Yurdabakan (2015) stated that although the teacher candidates indicated completely or partially possessed all the qualities needed to become an efficient teacher.

The Table 3 below presents the Chi-square test results between the qualities teacher candidates liked best in themselves and the qualities needed to study at this department, and the year (grade) they were in.

**Table 3.** The Chi-square test results between the qualities teacher candidates like best in themselves and the qualities needed to study at this department, and the year (grade) they are in

		Year (Grade)						Chi-square Test	
		1.Year		4.Year		Total		Chi-square	p
		n	%	n	%	n	%		
<b>The qualities you like the best in yourself</b>	<b>Possessing Professional Personality Characteristics</b>	29	27,4	26	38,8	55	31,8	*	0,144
	<b>Being Active and Full of Energy</b>	25	23,6	12	17,9	37	21,4		
	<b>Possessing Positive Personality Characteristics</b>	17	16	17	25,4	34	19,7		
	<b>Having Good Communication with Children and Parents</b>	14	13,2	6	9	20	11,6		
	<b>Being Open to Innovations</b>	11	10,4	2	3	13	7,5		
	<b>Love of Children</b>	6	5,7	1	1,5	7	4		
	<b>Being Proficient in the Relevant Field</b>	3	2,8	3	4,5	6	3,5		
	<b>Love of the Profession</b>	1	0,9	0	0	1	0,6		
	<b>Total</b>	106	100	67	100	173	100		
<b>The Qualities Needed to Study at this Department</b>	<b>Love of Children</b>	37	34,9	26	38,8	63	36,4	*	0,272
	<b>Possessing Professional Personality Characteristics</b>	38	35,8	22	32,8	60	34,7		
	<b>Being Active and Full of Energy</b>	9	8,5	6	9	15	8,7		
	<b>Possessing Positive Personality Characteristics</b>	3	2,8	7	10,4	10	5,8		
	<b>Love of the Profession</b>	6	5,7	3	4,5	9	5,2		
	<b>Having Good Communication with Children and Parents</b>	7	6,6	1	1,5	8	4,6		
	<b>Being Proficient in the Relevant Field</b>	3	2,8	2	3	5	2,9		
	<b>Being Open to Innovations</b>	3	2,8	0	0	3	1,7		
<b>Total</b>	106	100	67	100	173	100			

\*Since 20% of the expected values in the cells are lower than 5, Chi-square analysis was applied through the assistance of the Monte Carlo Simulation.

As it is seen in Table 3, there was no statistically significant relationship between the best-liked qualities and the year (grade) that the teacher candidates were in ( $p>0,05$ ). Although it was not statistically significant, possessing professional personality characteristics was the best-liked quality for the first and fourth year teacher candidates.

No statistically significant relationship was found between the qualities needed to study at this department and year (grade) the teacher candidates were in ( $p>0,05$ ). Although it was not statistically significant, it was stated that while possessing the professional personality characteristics was the highest rate of the response for the first year, the love of children was the quality needed for the 4<sup>th</sup> year teacher candidates. In their study, Özabacı and Acat (2005) concluded that “love of children” was the most important characteristic of a teacher as regarded by the students of Education Faculty. The fact that “love of children” was on the top of the list in this study might be related with the fact that the study only included preschool teacher candidates.

A person who will choose the teaching profession should decide whether the demands and returns of this profession is compatible and appropriate with his/her own strengths, interests, and personal goals (Colker, 2008. Akt. Sue Bredekamp). The teacher candidates in our study were asked to state what their best-liked quality was. The aim of this question was to determine what field they thought they were proficient at when choosing to study at this department.

Table 4 below demonstrates the Chi-square test results between the qualities needed in a preschool teacher and the year (grade) they were in.

**Table 4.** The Chi-square test results between the qualities needed in a preschool teacher and the year (grade) they are in

		Year (Grade)						Chi-square Test	
		1.Year		4.Year		Total		Chi-Square	p
		n	%	n	%	n	%		
1 <sup>st</sup> Degree Significant Quality	Love of Children	43	42,6	32	47,8	75	44,6	*	0,065
	Possessing Professional Personality Characteristics	24	23,8	18	26,9	42	25		
	Possessing Positive Personality Characteristics	9	8,9	8	11,9	17	10,1		
	Being Active and Full of Energy	8	7,9	4	6	12	7,1		
	Being Proficient in the Relevant Field	7	6,9	0	0	7	4,2		
	Love of the Profession	5	5	1	1,5	6	3,6		
	Having Good Communication with Children and Parents	1	1	4	6	5	3		
	Being Open to Innovations	4	4	0	0	4	2,4		
	Total	101	100	67	100	168	100		
2 <sup>nd</sup> Degree Significant Quality	Possessing Professional Personality Characteristics	37	37,4	18	26,9	55	33,1	*	0,672
	Possessing Positive Personality Characteristics	18	18,2	15	22,4	33	19,9		
	Being Active and Full of Energy	9	9,1	11	16,4	20	12		
	Love of Children	10	10,1	7	10,4	17	10,2		
	Love of the Profession	8	8,1	6	9	14	8,4		
	Having Good Communication with Children and Parents	7	7,1	5	7,5	12	7,2		
	Being Proficient in the Relevant Field	5	5,1	4	6	9	5,4		
	Being Open to Innovations	5	5,1	1	1,5	6	3,6		
Total	99	100	67	100	166	100			
3 <sup>rd</sup> Degree Significant Quality	Possessing Professional Personality Characteristics	24	25	16	23,9	40	24,5	4,012	0,778
	Possessing Positive Personality Characteristics	19	19,8	17	25,4	36	22,1		

	<b>Characteristics</b>								
	<b>Love of Children</b>	11	11,5	7	10,4	18	11		
	<b>Being Active and Full of Energy</b>	12	12,5	3	4,5	15	9,2		
	<b>Love of the Profession</b>	8	8,3	7	10,4	15	9,2		
	<b>Being Proficient in the Relevant Field</b>	8	8,3	6	9	14	8,6		
	<b>Being Open to Innovations</b>	8	8,3	5	7,5	13	8		
	<b>Having Good Communication with Children and Parents</b>	6	6,3	6	9	12	7,4		
	<b>Total</b>	96	100	67	100	163	100		
<b>4<sup>th</sup> Degree Significant Quality</b>	<b>Being Active and Full of Energy</b>	21	24,4	10	15,2	31	20,4	8,756	0,271
	<b>Being Proficient in the Relevant Field</b>	12	14	10	15,2	22	14,5		
	<b>Possessing Positive Personality Characteristics</b>	10	11,6	11	16,7	21	13,8		
	<b>Possessing Professional Personality Characteristics</b>	10	11,6	10	15,2	20	13,2		
	<b>Love of Children</b>	12	14	5	7,6	17	11,2		
	<b>Having Good Communication with Children and Parents</b>	11	12,8	6	9,1	17	11,2		
	<b>Being Open to Innovations</b>	5	5,8	11	16,7	16	10,5		
	<b>Love of the Profession</b>	5	5,8	3	4,5	8	5,3		
	<b>Total</b>	86	100	66	100	152	100		
		<b>Being Proficient in the Relevant Field</b>	14	25	9	15,3	23		
<b>5<sup>th</sup> Degree Significant Quality</b>	<b>Possessing Professional Personality Characteristics</b>	10	17,9	12	20,3	22	19,1	*	0,348
	<b>Possessing Positive Personality Characteristics</b>	10	17,9	11	18,6	21	18,3		
	<b>Being Open to Innovations</b>	5	8,9	12	20,3	17	14,8		
	<b>Being Active and Full of Energy</b>	6	10,7	9	15,3	15	13		
	<b>Having Good Communication with Children and Parents</b>	6	10,7	5	8,5	11	9,6		
	<b>Love of Children</b>	3	5,4	1	1,7	4	3,5		
	<b>Love of the Profession</b>	2	3,6	0	0	2	1,7		
	<b>Total</b>	56	100	59	100	115	100		

\* Since 20% of the expected values in the cells are lower than 5, Chi-square analysis was applied through the assistance of the Monte Carlo Simulation.

As it is seen in Table 4, there was no statistically significant relationship between the 1<sup>st</sup> degree significant qualities and the year (grade) that the teacher candidates were in ( $p>0,05$ ). Although it was not statistically significant, it was found that love of children was the most important quality for the 1<sup>st</sup> and 2<sup>nd</sup> year students. Previous studies discussed the significance of teacher candidates possessing qualities such as being affectionate and love of children for effective teaching (Walls *et al.*, 2002).

No statistically significant relationship was found between the 2<sup>nd</sup> degree significant qualities in a teacher candidate and the year (grade) that the teacher candidates were in ( $p>0,05$ ). Although it was not statistically significant, it was stated that possessing positive personality characteristics was the second most important quality for the 1<sup>st</sup> and 4<sup>th</sup> year students.

No statistically significant relationship was found between the 3<sup>rd</sup> degree qualities needed to be available in a preschool teacher and the year (grade) that the teacher candidates were in ( $p>0,05$ ). Although it was not statistically significant, it was reported that while possessing professional personality characteristics was the most significant option for the 1<sup>st</sup> year students, possessing positive personality characteristics was the 3<sup>rd</sup> degree most significant quality for the 4<sup>th</sup> year students. The fact that possessing positive personality characteristics was the 3<sup>rd</sup> degree most

significant quality for the 4<sup>th</sup> year students makes us think that the teachers candidates were more aware of the fact that being a student at the university, the fact that the course they took made a difference in the students and possessing positive personality characteristics had a positive impact over the children.

No statistically significant relationship was found between the 4<sup>th</sup> degree significant qualities in a teacher candidate and the year (grade) that the teacher candidates were in ( $p>0,05$ ). Although it was not statistically significant, it was reported that while being active and full of energy was the most significant option for the 1<sup>st</sup> for the year students, possessing positive personality characteristics and being open to innovations were the 3<sup>rd</sup> degree most significant quality for the 4<sup>th</sup> year students. The fact that possessing positive personality characteristics and being open to innovations were the most important qualities for the students makes us think that 4<sup>th</sup> year students had detailed knowledge and information about the requirements of the profession. Furthermore, it is possible to state that the fact that the students already completed their school practices and all the courses they took may have helped to get to know their profession better. In addition, this particular situation makes us think that the teacher candidates managed to grasp the significance of personal development for their profession.

No statistically significant relationship was found between the 5<sup>th</sup> degree significant qualities needed to be available in a teacher candidate and the year (grade) that the teacher candidates were in ( $p>0,05$ ). Although it was not statistically significant, it was reported that while being proficient in the relevant field was the most significant option for the 1<sup>st</sup> year students, possessing professional personality characteristics and being open to innovations were the 5<sup>th</sup> degree most significant quality for the 4<sup>th</sup> year students.

#### 4. RESULTS AND DISCUSSION

Within the framework of the study, a total of 173 teacher candidates 106 whom were first year and 67 final year (fourth year) students studying at the preschool teacher candidates were involved in the research. 91,9% of the teacher candidates were female and 8.1% male. It was found in this study that a little more than half of the current preschool teaching department students chose to study at this department because they loved the subject and the department; however, a little less than the remaining half chose to study here because they had to. The case of having to study at this department was because they wanted to be able to be appointed to a teaching position easily, be able to find a job easily, university entrance exam score was just sufficient for this department or just to fulfil the family's wishes. In general, the teacher candidates love children. They were of the opinion that they possessed the necessary qualities to become a teacher. The first qualities that the teacher candidates liked the most about themselves were collected under title *professional personality characteristics*. These characteristics were being disciplined, being consistent, being prudent, being orderly, being respectful, being patient, being objective, being determined, and being attentive, organized, ambitious etc. The second most-like quality was *being active and full of energy*. When a teacher is enthusiastic with heartfelt humour and trustworthy, this proves that s/he has a motivating personality. Enthusiastic teachers with a heartfelt sense of humour are more creative; as they have self-confidence, this is reflected on their students as well and their heartfelt sense of humour help students to maintain their focus on the lesson (Demirel, 2007). Focused teachers are determined as well as playful. *Having fun* is one of the things that spring to mind when children are involved. Education programs prepare children to become successful at school; but at the same time, it enables them to experience fun while learning. Children should have fun at home as well as at the preschool education institutions. It is because children love having fun. When teachers provide an environment where children can spend time having fun, both children and teacher prove to be more successful (Bredenkamp, 2015). Due to all these reasons, it is thought that when the teacher

candidates described themselves as being active and full of energy, it is sure to have a positive impact over their professional teaching careers. The third most important quality was possessing positive personality characteristics. Possessing positive personality characteristics included having moral values, being tolerant, being conscientious, being helpful, being compassionate, being affectionate etc. The fourth most important quality was grouped as having good communication with children and parents. The characteristics in this group included being gracious, being sociable, being a good listener, having good listening skills, being eloquent, appealing to the masses, being able to communicate easily, being harmonious, having empathy etc. The fifth most important quality was being open to innovations. The characteristics of this group were comprised of having a creative mind, being able to improve oneself, being an explorer, being able to produce different ideas, being open to changes etc.

Similarly, when the teacher candidates were asked to name the qualities needed to study at the department, the following were their responses in order of importance; “love of children”, “possessing professional personality characteristics”, “being active and full of energy”, “possessing positive personality characteristics” and “love of the profession”.

In the study carried out by Küçükoglu *et al.* (2014), they stated that Turkish teacher candidates emphasised their affective characteristics more. Similarly, Kelchtermans (1993) emphasised that there was a close relationship between the personal characteristics or values of the teachers and their professional values. If the personal values of the teachers overlapped with their professional values, it was found that these teachers had higher professional motivation.

In conclusion, the participating teacher candidates reported that the qualities they thought they possessed were compatible with the qualities required to study at the preschool teaching department, and they expressed positive opinions about the teaching profession.

No significant relationship was found between the responses of 1<sup>st</sup> year and 4<sup>th</sup> year students. This particular finding shows that although almost half of the students stated that they chose to study this subject because they had to, they still possessed the qualities needed to study and become successful at this department.

A future study on this subject can be repeated with a larger group and the teacher candidates of other subjects.

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# Teachers' opinions about lifelong education, the teaching profession, distance education and leadership\*

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## Abstract

The aim of the present study is to examine teachers' opinions about lifelong education, professional development, the teaching profession, distance education, leadership and, the Internet via their metaphors. The teachers (n=24) working during the spring semester of the 2014-2015 academic year in the city center of Bolu in Turkey formed the study group of the present study. A survey method was used in the study. The qualitative data were collected by means of a semi-structured interview format prepared and developed by the researchers. For the analysis of the qualitative data, a content analysis technique was used. The findings of the study revealed that the teachers are aware of the fact that lifelong education is important for their professional development. As a consequence, they believe that distance education and the Internet are important means for this and have an important place not only in the present educational system but also for their professional development.

Keywords: Metaphor, lifelong education, teaching profession, distance education, leadership

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## 1. INTRODUCTION

Metaphors are useful rhetorical devices for facilitating understanding between people when meaning is shared and negotiated (Palmer-Wackerly and Krieger 2015) and are the cognitive tenses we use to make sense of all situation and intimately interconnected with the way we think (Kendall and Kendall 1993). Metaphor is fundamental in shaping reality, as [Kendall](#) and [Kendall \(1993\)](#) pointed out. Saban (2010) states that a metaphor describes something by using another and adds that it refers to comparing two unrelated phenomena and, by doing so, it creates knowledge of at phenomenon that is unfamiliar to us by linking it to the phenomenon with which we are familiar. Accordingly, as she (2010) points out, a metaphor employs cross-domain mapping in the conceptual system.

Metaphors are widely used in educational settings (Gillis and Johnson 2002; Jensen 2006; Saban 2006) and are considered as part of teaching-learning process (Gultekin 2013; Levine 2005; Martínez, Sauleda and Huber 2001; Zhao, Coombs and Zhou 2010). When the literature (Gillis and Johnson 2002; Jensen 2006; Saban 2006; Zhao, Coombs and Zhou 2010) about the uses of metaphors in educational settings is examined, it can be said that metaphors are considered as indispensable elements of the educational settings and the teaching-learning process. In this regard, Gillis and Johnson (2002) state that through the metaphors we create we clarify our relationships to the people with whom we work and to the teachers we were, are, and want to be. In other words, Gillis and Johnson (2002) say that, "Thinking metaphorically, we articulate assumptions we bring to the classroom: assumptions about teaching, learning, and literacy, and assumptions about power, authority and community in our classrooms (p:38)". In this framework it is seen that metaphors are regarded as a valuable research tool for gaining new insights in to education practice and theory (Jensen 2006).

Additionally, Saban (2006), referring to the literature in relation to the subject area, listed the functions of educational metaphors as, "a blue print of professional thinking, an archetype of professional identity, a pedagogical device, a medium of reflection, a tool for evaluation, a research tool, a curriculum theory, a mental model, an instrument of discovery, a spring board for change (p: 310)".

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According to Gultekin (2013), metaphors are a cognitive tool that facilitate teachers' and students' tasks, help both teachers and students focus in educational environments, and help construct new significations. Levine (2005) pointed out that the metaphor is a timely connecting tool that bridges past to present and theory to practice through helping all of us in the selection of paths that impact our practice and spark our passion for the teaching and learning process. In the meantime, Martínez, Sauleda and Huber (2001) point out that metaphors are not just figures of speech, but constitute an essential mechanism of mind, and that metaphors exert powerful influences on processes of analyzing and planning in education and, in particular, that they profoundly affect teachers' thinking about teaching and learning (Martínez, Sauleda and Huber 2001). In this regard, they state that "as blue prints of thinking, metaphors of learning will guide and facilitate teachers' understanding of what it means to learn... (p:966)". Furthermore, as stated by Zhao, Coombs and Zhou (2010), metaphors are therefore creative features of language use in teaching and learning environments, and consequently teachers' conceptions of their own educational practice.

Keeping these in mind, teachers' metaphors can be considered as an important tool not only to investigate and to identify their opinions, feelings, thoughts, perceptions about and their attitudes towards certain concepts and/or words, but also to understand their classroom activities and behaviors, their classroom performances, their students' academic achievements, their relations and interactions with their students and with other people during their professional and daily personal activities. Within this framework the aim of the present study is to investigate teachers' opinions via their metaphors about lifelong education, professional development, the teaching profession, distance education, leadership, and the Internet. In line with the aims of this research, during the present study the following questions were answered:

1. What metaphors do teachers use about lifelong education?
2. What metaphors do teachers use about professional development?
3. What metaphors do teachers use about the teaching profession?
4. What metaphors do teachers use about distance education?
5. What metaphors do teachers use about leadership?
6. What metaphors do teachers use about the Internet?

## **2.METHODOLOGY**

In the present study, as in Nartgun and Ozen (2015), a descriptive approach (Karasar 1995) and survey method were used, as the aim of this study is to examine and investigate the teachers' opinions about lifelong education, professional development, the teaching profession, distance education, leadership, and the Internet by means of their metaphors. The teachers (n=24) who were working in the city center of Bolu in Turkey in the spring semester of the 2014-2015 academic year and participated in the present study voluntarily formed the study group of this study. When the teachers are examined in terms of their gender, it can be seen that 70.8% (n=17) were female and 29.2% (n=7) were male. When the teachers are examined from the view point of years of teaching experience, it can be seen that 50% (n=12) had been teaching for 6-10 years and 16-20 years, and 50% (n=12) had been teaching for 0-5 years, 11-15 years, and 20 years or more. In terms of their professional status 62.5% (n=15) were classroom teachers and 37.5% (n=9) of them were subject teachers. When the teachers' grade level is the focus of attention, it can be seen that 70.8% (n=17) were working in primary schools and, 29.2% (n=7) were working in secondary schools and high schools. In the study, the qualitative data were collected through a semi-structured interview format prepared and developed by the researchers. During the preparation and development of the interview format, the literature was reviewed and subject specialists' (n=8) opinions were considered. In the meantime, in order to analyze the qualitative data collected, a content-analysis technique was used.

## **3.RESULTS**

The results in relation to the teachers' opinions about lifelong education, professional development, the teaching profession, distance education, leadership, and Internet are presented in Tables 1, 2, 3, 4, 5 and 6.

### What metaphors do teachers use about lifelong education?

**Table 1.** Teachers metaphors for lifelong education

Category	Metaphor(s)	Expressions used to explain the metaphors
Lifelong Education	✓ Train	✓ Life is a long journey.
	✓ Present box	✓ The more you learn, the more you get what you like.
	✓ Tree	✓ You benefit not only from its fruit, but also its shadow.
	✓ Experience	✓ Every experience teaches us something.
	✓ Life	✓ An unfed body dies.
	✓ Space	✓ The more we learn, the more improved we become.
	✓ Water	✓ It is a need.
	✓ Improvement	✓ We need to follow the requirements of the era. ✓ Human beings are social creatures. ✓ Humans learn at every age.
	✓ Light	✓ It lightens our life.
	✓ Voyage	✓ Humans are always in need of learning.
	✓ Politics	✓ We are creating a good future for the upcoming generations.

Where the results about the metaphors that teachers use about lifelong education are concerned, it can be seen that they developed a total of 11 metaphors (Table 1). The teachers developed “train”, “present box”, “tree”, “experience”, “life”, “space”, “water”, “improvement”, “light”, “voyage” metaphors for lifelong education, as seen in Table 1. The teachers used different expressions to explain the metaphors for an ideal teacher, as shown in Table 1. When Table 1 is examined, it can be seen that the teachers used the following expressions to explain metaphors: “life is a long journey, the more you learn, the more you get what you like, you benefit not only from its fruit, but also its shadow, every experience teaches us something, an unfed body dies, the more we learn, the more improved we become, we need to follow the requirements of the era, human beings are social creatures, humans learn at every age, it lightens our life, humans are always in need of learning, we are creating a good future for the upcoming generations.” (see Table 1).

### What metaphors do teachers use about professional development?

**Table 2.** Teachers’ metaphors for professional development

Category	Metaphor(s)	Expressions used to explain the metaphors
Professional Development	✓ Qualifications	✓ Makes you an expert in your field. ✓ It raises you up.
	✓ Advantage	✓ It gives the person strenght and vision.
	✓ Innovation	✓ No innovation, no success and no sustainability.
	✓ Locomotive	✓ Life is a train.
	✓ Drama	✓ Each opportunity for improvement is a different role.
	✓ Seminar	✓ Education must be given by subject area specialists.
	✓ Mirror	✓ It reflects us.
	✓ Mountain	✓ As the years pass, you reach a climax.
	✓ Requirements	✓ Those who are undeveloped are condemned to disappear.

Where the results about the metaphors that teachers use about professional development are concerned, it is seen that they developed a total of 9 metaphors (Table 2). The teachers developed “qualifications”, “advantage”, “innovation”, “locomotive”, “drama”, “seminar”, “mirror”, “mountain”, “requirements” metaphors for professional development, as seen in Table 2. The teachers used different expressions to explain the metaphors for professional development, as shown in Table 2. When Table 2 is examined, it can be seen that the teachers used the following expressions to explain metaphors: “makes you an expert in your field, raises you up, gives at person strength and vision, no innovation, no success and no sustainability, life is a train, each opportunity for improvement is a different role, education must be given by subject area specialists, it reflects us, as the years pass, you reach a climax, those who are undeveloped are condemned to disappear” (see Table 2).

### What metaphors do teachers use about teaching profession?

**Table 3.** Teachers' metaphors for the teaching profession

Category	Metaphor(s)	Expressions used to explain the metaphors
Teaching Profession	✓ Bread	✓ Raises new generations.
	✓ Holy	✓ It is guiding/redirecting a life.
	✓ Effect	✓ It affects society.
	✓ Picture	✓ The value of some pictures is seen afterwards.
	✓ Journey	✓ It tries to arrive somewhere.
	✓ Light	✓ It lights up the society.
	✓ Model	✓ It becomes a role model for the students.
	✓ Captain	✓ It bears the responsibility of thousands.
	✓ Solver	✓ It is the best problem solver.
	✓ Sea	✓ It benefits numerous living things.
	✓ Love	✓ It is dedicated to teaching.
	✓ Art	✓ It is kindness and beauty.
	✓ Young tree	✓ It raises the students.

Where the findings about the metaphors that teachers use about teaching profession are concerned, it can be seen that they developed a total of 13 metaphors (Table 3). The teachers developed “bread”, “holy”, “effect”, “picture”, “journey”, “light”, “model”, “captain”, “solver”, “sea”, “love”, “art”, “youngtree” metaphors for the teaching profession, as seen in Table 3. The teachers used different expressions to explain the metaphors about teaching profession as shown in Table 3. When Table 3 is examined, it can be seen that the teachers used the following expressions to explain metaphors: “grows up new generations, is guiding/redirecting a life, affects society, the value of some pictures is seen afterwards, tries to arrive somewhere, lights up society, becomes a role model for students, bears the responsibility of thousands, is the best problem solver, benefits from numerous living things, is dedicated to teaching, is kindness and beauty, is raising the students” (see Table 3).

### What metaphors do teachers use about distance education?

**Table 4.** Teachers' metaphors for distance education

Category	Metaphor(s)	Expressions used to explain the metaphors
Distance Education	✓ Access	✓ It makes the remote closer.
	✓ Television	✓ We choose the programs fitting our needs and requirements.
	✓ Cinema	✓ In the future you will recall what you have learned.
	✓ Unscented Rose	✓ An education without interaction is worthless.
	✓ Flexible	✓ It does not depend on time and setting.
	✓ Development	✓ It combines technology and education. ✓ It ensures equality of opportunity. ✓ We can follow the innovations.

Where the findings about the metaphors that teachers use about distance education are concerned, it can be seen that they developed a total of 6 metaphors (Table 4). The teachers developed “access”, “television”, “cinema”, “unscented rose”, “flexible”, “development” metaphors for distance education, as seen in Table 4. The teachers used different expressions to explain the metaphors about distance education, as shown in Table 4. When Table 4 is examined, it can be seen that the teachers used the following expressions to explain metaphors: “it makes the remote closer, we choose the programs that fit our needs and requirements, in the future you will recall what you have learned, an education without interaction is worthless, it does not depend on time and setting, it combines technology and education, it ensures equality of opportunity, we can follow innovations”.

### What metaphors do teachers use about leadership?

**Table 5.** Teachers metaphors for leadership

Category	Metaphor(s)	Expressions used to explain the metaphors
Leadership	✓ Lion	✓ Leaders are both powerful and decisive.
	✓ Art	✓ It is required to use a variety of features together.
	✓ King	✓ It is a prerequisite in chess.
	✓ Tree	✓ It takes people under its wings.
	✓ Talent	✓ It is not available in everyone.
	✓ Charisma	✓ It must over rule a group.
	✓ Virtue	✓ Impossible without virtue.
	✓ Make a difference	✓ Routines can never make you accepted to the crowds.

Where the findings about the metaphors that teachers use about leadership are concerned, it can be seen that they developed a total for 8 metaphors (Table 5). The teachers developed “lion”, “art”, “king”, “tree”, “talent”, “charisma”, “virtue”, “make a difference” metaphors for leadership, as seen in Table 5. The teachers used different expressions to explain the metaphors about leadership, as shown in Table 5. When Table 5 is examined, it is seen that the teachers used the following expressions to explain metaphors: “leaders are both powerful and decisive, it is required to use a variety of features together, it is a prerequisite in chess, it takes people under its wings, it is not available in everyone, it must over rule a group, it is impossible without virtue, it routines can never make you accepted by the crowds” (see Table 5).

#### What metaphors do teachers use about the Internet?

**Table 6.** Teachers’ metaphors for the Internet

Category	Metaphor(s)	Expressions used to explain the metaphors
Internet	✓ Amusement park	✓ Dangerous toys are not permitted for kids.
	✓ Knife	✓ It is both harmful and helpful.
	✓ Close friend	✓ People became distant from each other.
	✓ A way of civilization	✓ A short way of reaching science.
	✓ Power	✓ Effective when used purposefully.
	✓ Opportunity	✓ Knowledge can turn into opportunity.
	✓ Danger	✓ It may not contain dependable knowledge.
	✓ A herd of data	✓ It is a sea of knowledge when used appropriately.
	✓ Invention	✓ It must be used purposefully.
	✓ Literacy	✓ It must be used effectively in terms of education.

Where the results about the metaphors that teachers use about the Internet are concerned, it can be seen that they developed a total of 10 metaphors (Table 6). The teachers developed “amusement park”, “knife”, “close friend”, “a way of civilization”, “power”, “opportunity”, “danger”, “a herd of data”, “invention”, “literacy” metaphors for the Internet, as seen in Table 6. The teachers used different expressions to explain the metaphors about Internet, as shown in Table 6. When Table 6 is examined, it can be seen that the teachers used the following expressions to explain metaphors: “dangerous toys are not permitted for kids, it is both harmful and helpful, people became distant from each other, a short way of reaching science, effective when used purposefully, knowledge can turn into opportunity, it may not contain dependable knowledge, it is a sea of knowledge when used appropriately, it must be used purposefully, it must be used effectively in terms of education” (see Table 6).

#### 4. DISCUSSION

The findings of this study revealed that teachers are aware of the importance of lifelong education for their professional development, and as a consequence of this they believe that distance education and the Internet are important means and have an important place and role in the current educational systems. For example, the teachers developed “train”, “present box”, “tree”, “experience”, “life”, “space”, “water”, “improvement”, “light”, and “voyage” metaphors for lifelong education. Demirel and Yagci (2012) found the following description for lifelong education, as: “The concept of lifelong education was associated with learning time by some participants, the others explained this concept related with personal development and integration” (p:100). Additionally Poyraz and Titrek (2013) stated that “lifelong education isn’t only the responsibility of the individual or school, in this regard government has an important role”(p:129). In their study Senyuva and Caliskan (2014) found similar teaching profession metaphors as the present study, “baby, water, tree and children” (p:372). In this respect it can be said that there is a similarity between the results of the present study and the literature. The teachers developed “qualifications”, “advantage”, “innovation”, “locomotive”, “drama”, “seminar”, “mirror”, “mountain” and “requirements” metaphors for professional development. In relation to professional development metaphors, Pearson, Scott and Sugden (2011) found the following descriptions: “individuals’ progress can be viewed in terms of both acquiring knowledge and also progress from ‘novice to expert’” (p:42). In this respect it can be said that there is a similarity between the results of the present study and the literature. The teachers developed “bread”, “holy”, “effect”, “picture”, “journey”, “light”, “model”, “captain”, “solver”, “sea”, “love”, “art” and “youngtree” metaphors for the teaching profession. When the literature is examined about the teaching profession it can be said that there is a similarity between the results of the present study and the literature (Alger 2009; Kucukoglu, Tasgin and Saadine 2014; Nartgun and Ozen 2015). In their study Nartgun and Ozen (2015) found similar teaching profession metaphors as the present study: “happiness”, “patience”, “future”, “prestige”, “pedagogy knowledge”, “holiness”, “valuable”, “patience”, “liberal education”, “valuable professional”

(p:2674). Additionally, Alger (2009) found “guiding, nurturing, molding, transmitting, providing tools, and engaging in community metaphors in relation to teaching in his study” (p:744). Meanwhile, Kucukoglu, Tasgin and Saadine (2014) found the following descriptions and metaphors: “ being a specialist in his/her field, achieving the objectives, guidance, openness to innovation, being a leader” (p:395). In this respect it can be said that there is a similarity between the results of this study and the literature. The teachers developed “access”, “television”, “cinema”, “unscented rose”, “flexible” and “development” metaphors for distance education. When the literature is examined it can be said that there is a similarity between the results of the present study and the results of the literature (Tuncay and Ozcinar 2009; Tuncay and Poyraz 2013). In relation to the distance education metaphors Tuncay and Poyraz (2013) reported: “impossible, magic, space, light and laptop” (p:150). Likewise, Tuncay and Ozcinar (2009) reported: “ocean” (p:2883). In this respect it can be said that there is a similarity between the results of this study and the literature. The teachers developed “lion”, “art”, “king”, “tree”, “talent”, “charisma”, “virtue” and “make a difference” metaphors for leadership. In relation to the leadership metaphors, Angel (2004) found the following descriptions: “leadership characteristics derived from the mentor, hero and prophet” (p:1). In this respect it can be said that there is a similarity between the results of this study and the literature. The teachers developed “amusement park”, “knife”, “close friend”, “a way of civilization”, “power”, “opportunity”, “danger”, “a herd of data”, “invention” and “literacy” metaphors for the Internet. When the literature is examined about the Internet, it can be seen that the literature (Arabacioglu and Gokdas 2015:8; Isomursu, Isomursu, Hinman, and Spasojevic 2007:259; Porto-Requejo 2007:195; Sahin and Baturay 2013:183; Senyuva and Kaya 2013:89; Taniguchi 2003:18; Wu and Chen 2013:65) presents the following metaphors and descriptions about the Internet: “a source of information, trail, link, thread, highway, person, friend, cyberspace, communication tool, world, book, library, encyclopedia, water, sea, bread, drug, meal, chocolate, knife, entertainment, toy, magic box, compass, cobweb, campfire, watering, hole and cave, virus”. In this respect it can be said that there is a similarity between the results of the present study and the literature.

## 5. CONCLUSION

As a conclusion, our experience regarding metaphors in the research indicates that metaphors can be a very powerful and useful creative tool. Additionally, they can help us understand the nature of lifelong education, professional development, the teaching profession, distance education, leadership, and the Internet.

The results of this study reveal that teachers consider lifelong education as a necessary and essential means to develop themselves and they perceive professional development as one of the requirements of lifelong education. Also, they stated certain characteristics a teacher should have where their metaphors about the teaching profession and leadership are concerned. Concerning their metaphors about distance education and Internet, it can be seen that they were referring to some of the basic characteristics of distance education and the Internet.

## 6. RECOMMENDATIONS

Further studies need to be planned and actualized with large sample groups. Based on the teachers’ opinions about the Internet and distance education, various professional development opportunities need to be planned and organized to develop their professional knowledge and skills and to increase their awareness of professional development.

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# Modernization of education as illustrated by international cooperation practices.

## Poland - Uzbekistan

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### Abstract

Nowadays, modernisation of higher education institutions is an important, not only educational task. It is supported by local, national and international cooperative initiatives and involves different areas of education, including research intensification, knowledge transfer, and the implementation of innovative solutions as well as R&D cooperation. The article discusses good practices concerning the modernisation of higher education based on the experience of the Jan Kochanowski University in Kielce and other members of the project consortium.

Keywords modernisation, knowledge triangle, education, innovations, research

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## 1. INTRODUCTION

Nowadays, in the modern educational reality, we are facing increased demand for support of higher education. It is a priority for educational politicians in European countries. Higher education systems, according to the specialist literature, need to be reconsidered to facilitate the needs of economies and knowledge-based communities. Since higher education plays a crucial role in societal development, the number of higher education diploma holders should increase. As part of the “Europe 2020 strategy”, European Union leaders have set a common target for all member states that 40% of people aged 30-34 should have higher education qualifications by 2020. One of the key priorities included in the modernisation agenda is to increase the number of higher education graduates.

Taking all the above into consideration and with the aim to promote the knowledge triangle: education – innovation – research, the Jan Kochanowski University (UJK) has taken actions focusing on the collaboration of higher education institutions with the world of business and with public authorities. Thanks to these actions, the UJK contributed to creating new places of work, making them more attractive in the international labour market, and to economic growth. The three vertices of the knowledge triangle: education, research and innovation have been involved in the project “Towards the Modernisation of Higher Education Institutions in Uzbekistan” (MATChES).

As a member of the project team, I would like to discuss the benefits resulting from the implementation of TEMPUS IV - Sixth Call for Proposals - EACEA/35/20112.

Good practices in cooperation between Poland and Uzbekistan

Recently, the growing pressure on open innovations has increased the flow of knowledge and contributed to establishing new types of cooperation between educational institutions, scientific organisations and businesses.

As previous stages of the MATChES project prove, scientific exchange facilitates the development of three Regional Knowledge Platforms, one in each region taking part in the project. Promoted by the universities, the Regional Knowledge Platforms engage all the stakeholders. In the project Consortium there are 13 partners collaborating together:

1. The University of Ruse „Angel Kanchev”, Bulgaria – Leader
2. The Bukhara Engineering-Technical Institute of High Technologies – Uzbekistan
3. The Chamber of Commerce and Industry of the Republic of Uzbekistan
4. The Committee for Coordination of Science & Technology Development – Uzbekistan
5. Research and Production Company “Express-Technolog” DPS – Uzbekistan
6. Educational Center Business Incubator of Bukhara – Uzbekistan
7. Consulta Europa Projects and Innovation S.L. – Spain
8. The University of Las Palmas de Gran Canaria – Spain
9. Kielce Technology Park – Poland
10. The Jan Kochanowski University in Kielce – Poland

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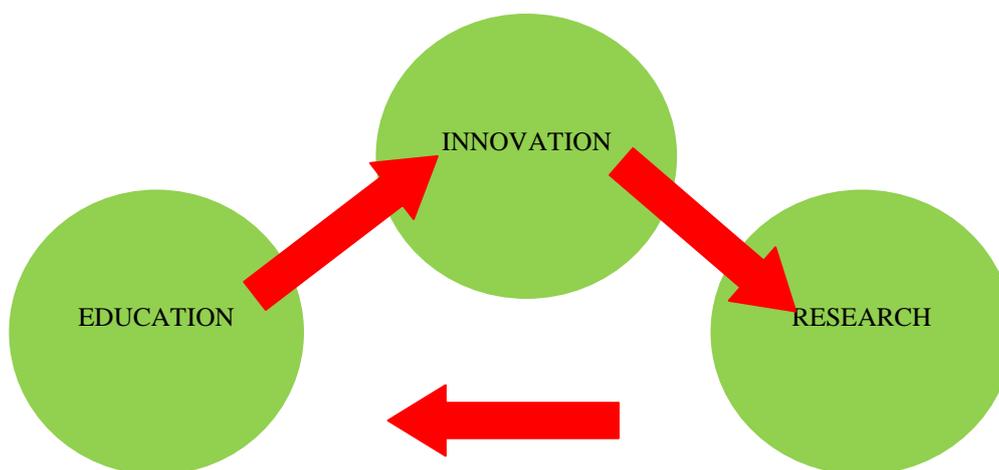
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11. “Uzbek Tourism” National Company – Uzbekistan
12. Karshi Engineering-Economic Institute – Uzbekistan
13. Namangan Engineering Pedagogical Institute – Uzbekistan

The above-mentioned members of the project Consortium as well as their partners participated in innovation training and now, they are working on the Joint Action Plan for future initiatives.

All the project stakeholders take actions aimed at boosting the cooperation between universities, businesses and local authorities which will result in development and consolidation of the Knowledge Triangle in three relevant regions. This is illustrated by the following diagram.

**Figure 1.** Project aims



Source: <http://www.ujk.edu.pl/webujk/files/2014/11/Brochure-MATcHES.pdf>

It should be emphasized that the Jan Kochanowski University in Kielce, Poland focuses on the research task concerning the analysis of the needs for cooperation between universities and businesses (the Knowledge Triangle). The University is developing a model for innovation and cooperation which could be implemented in Uzbekistan. The table below shows the objectives of cooperation between Poland and Uzbekistan.

**Table 1.** The objectives of cooperation between Poland and Uzbekistan

No.	Cooperation objective	Objective description
<b>Main objective</b>		
1.	Overall objective	– to modernise and to reinforce the capacities of universities in Uzbekistan based on the Knowledge Triangle; – to develop three Regional Knowledge Platforms, operating as technology transfer centres and involving three universities in Uzbekistan, in three different regions, which will become the main centres for innovation in these regions.
<b>Specific objectives</b>		
2.	Objective 1	– to develop regional strategies for innovation and to create a knowledge basis on innovation systems mainly inspired by European regional policies.
3.	Objective 2	– to reinforce the capacities of universities and businesses through implementation and development of educational programmes based on the Knowledge Triangle and knowledge commercialisation; – to develop and to implement training and mobility programmes for employees of educational institutions, business sector and local authorities, with the aim to visit European countries.
4.	Objective 3	– to establish three Regional Platforms for Knowledge and Technology Transfer and to develop strategies to integrate research, educational activities and businesses into a network of innovation.

**Source:** Author’s elaboration based on Brochure-MATcHES,  
<http://www.ujk.edu.pl/webujk/files/2014/11/Brochure-MATcHES.pdf>

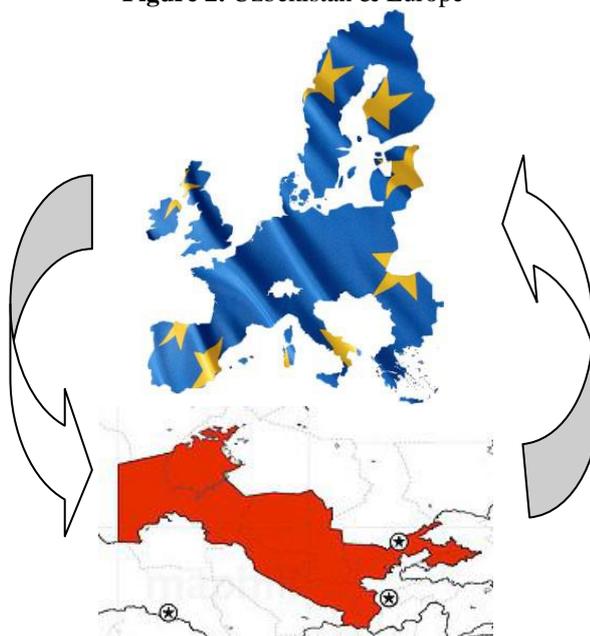
Modernisation of education should result in the report written in collaboration with Spanish and Bulgarian partners. The Jan Kochanowski University will conduct research on the functionality of the Knowledge Triangle: education – research – innovation in three Uzbek regions. It will also participate in creating the library of best practices on European systems in the field of cooperation between education and business sectors and

technology transfer. Additionally, the university is responsible for developing an effective quality management strategy and monitoring project implementation progress, including task-based internal and external evaluation.

It should be emphasized that these actions correspond with Horizon 2020, the European Union programme for research and innovation. The initiative of cooperation between Poland and Uzbekistan attempts to meet the need for modernisation of higher education and focuses on innovation. Along with driving economic growth and competitiveness, it also facilitates European needs for tackling societal changes. The MATcHES project complies with the Network of Excellence which supports research within the European Research Area. The Polish – Uzbek cooperation initiative, based on the EU funds, has a positive impact on the knowledge market, scientific research and innovations. It also facilitates the flow of scientists, their knowledge and achievements and it guarantees the exchange of knowledge and ideas. This kind of coordinated approach complies with the EU strategy for international cooperation in research and innovations, which remains open to scientists from all over the world. During the project new ideas were developed and expert knowledge was transferred.

Here is a geographical representation of inter-regional cooperation.

**Figure 2. Uzbekistan & Europe**



Source: <http://www.ujk.edu.pl/webujk/files/2014/11/Brochure-MATcHES.pdf>

To conclude, the project, in relation to the Europe 2020 strategy, transfers and adapts the EU approach to innovation, regional development and economic growth in Uzbekistan.

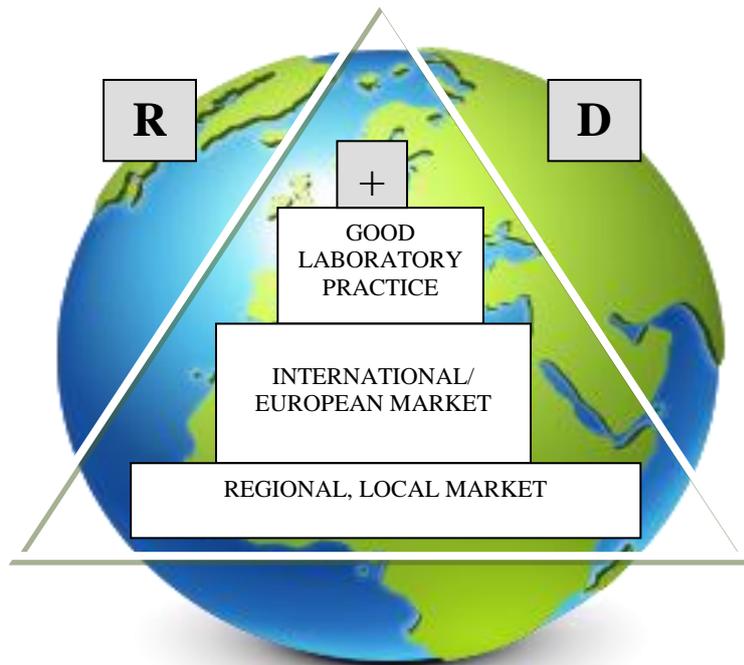
Undoubtedly, higher education has a significant impact on achieving specific, national, social and economic goals. It plays a crucial role in providing highly skilled human capital. In this context, education and scientific research are key priorities for adapting individuals and societies to changes and for creating better future.

The cooperation of Poland and Uzbekistan revealed transformation processes in Polish higher education which were manifested, among others, by accepting responsibility for monitoring and supervising Uzbek universities in terms of tasks performed in the area of teaching standards or scientific research. According to N. Simonov and D. Antonowicz (2006, pp.517 - 536), the following aspects should be taken into consideration: 1) difficulties in measuring teaching standards; 2) information asymmetry in the higher education market; 3) academic teachers' shortage. As the researchers investigating these issues claim, there is little competition in higher education market and insufficient supervision of higher education institutions by government agencies (OECD, 2010, p.9).

It is worth emphasizing that the MATcHES project involves joint actions of universities and entrepreneurs in the area of possibilities for cooperation or promoting innovation-based businesses.

These activities have become standards in modern thinking not only in the area of R&D sectors experience, but also in higher education sector (A. Dziedziczak-Foltyn, K. Musiał, 2014, pp.30-59). It is clearly visible in the processes of institutionalisation and in creating the Quality Action Plan, a tool for quality assessment originally used in management.

**Figure 3.** Inter-sector collaboration between countries



**Source:** Author's elaboration

Based on the experience of the Jan Kochanowski University, which I am affiliated to, I need to point out that the university contributes to improving the quality of the knowledge transfer through building up, extending and disseminating knowledge and through teaching how to implement it for the benefit of individuals and societies. What is more, the university improves the quality of public services. It carries out the mission of higher education with the task to link national academic environment with global academic community, as well as with national and international businesses or public institutions. By doing this, the UJK promotes the achievements of Polish scientists, which has a positive effect on the image of Poland in the world. Thanks to the Polish - Uzbek cooperation, the institutions break barriers and ethnic prejudice. They provide opportunities to develop positive relationships between people.

## **2.CONCLUSIONS**

Taking into account contemporary needs concerning the modernisation of higher education, it may be assumed that the above-mentioned good practices may become a model for other, not only European universities to create conditions and incentives which will encourage them to achieve high, international standards of education and research, and to build valuable relationships with social, economic and international bodies.

In terms of education, the tasks conducted under the MATCHES project:

- enable researchers/scientists to develop their personalities;
- develop abilities to obtain and extend knowledge throughout the life course;
- encourage critical thinking;
- develop creativity and improve the ability to use new technologies which enable individuals to work efficiently and live consciously in a complex world;
- develop abilities for cooperation based on mutual trust;
- improve team management skills;
- encourage building links with the global labour market and gaining work-related skills;
- develop civic engagement and civic attitudes;
- encourage openness to the world and sensitiveness to culture and to natural environment.

The modernisation of higher education illustrated by international cooperation reveals individualisation in practices of different universities and institutions, in terms of liberation from heteronomous relationships and

reconstruction through reflexive monitoring and supervision (K. Kaczmarszuk, 2009, p. 90). Additionally, modernisation processes contribute to development of the knowledge society and to “soft revolution” where physical assets are replaced by knowledge which becomes a driving force of economic development. In this context higher education institutions, aimed at training qualified employees, shortening the distance between sectors and enhancing businesslike transformations of universities, are important for knowledge-based economies (K. Kaczmarszuk 2010, p.)

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# Education of seniors at the universities of the third age. Analysis of the solutions adopted in Poland

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## **Abstract**

In Polish specialist literature lifelong learning, often defined as continuing or permanent education, is the presently preferred model of education which involves constant updating and extending knowledge as well as improving general and professional qualifications undertaken throughout life. The model emerges from constantly changing socio-cultural reality and globalisation processes which require adaptation and understanding, also from the person in the third stage of life. The elderly or seniors, due to increasing life expectancy, should keep themselves mentally and physically active so that they could stay fit and healthy when they reach old age. These opportunities are offered by the Universities of the Third Age.

Keywords: Lifelong learning, an elder person, senior, the university of the third age.

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## **1. INTRODUCTION**

In Polish specialist literature lifelong learning, often defined as continuing or permanent education, is the presently preferred model of education which involves constant updating and extending knowledge as well as improving general and professional qualifications undertaken throughout life. The model emerges from not only constantly changing political and socio-cultural reality, but also globalisation processes and technological advancement which undoubtedly require adaptation and understanding.

Lifelong learning involves seniors, in other words people in their third “age” of life which naturally comes after youth and maturity. European and Polish research prove that people at the retirement age have become healthier, more physically fit and well educated (Kryszkiewicz, 2006, p. 281). As a result, the elderly tend to be more physically active when they reach a late stage of life. The Universities of the Third Age (U3A) offer a range of activities intended for seniors. The concept of U3A was developed to keep the elderly mentally and physically active through engagement in lifelong learning process. The article discusses activities available at the Universities of the Third Age in Poland, which provide seniors with lifelong learning or continuing education. Before I discuss them in detail, I would like to address such issues as the ageing process, different forms of activities undertaken by the elderly, and finally, the U3A movement in Poland, its origins and principles.

### ***Ageing, old age and forms of keeping seniors active***

Ageing is a natural process in human life, which involves physical, psychological and social changes. In everyday life and in specialist literature, ageing is defined as the most complicated stage of human life. It is associated with a progressive functional decline of physiological functions, the loss of mobility and a weaker immune system (biological and physiological ageing). Ageing is also characterised by limiting ability to adapt to any changes, in socio-economic context, by impoverishment, loneliness (psychological ageing), and finally by living on the social margin (social ageing). Bio-psychological limitations, health and physical fitness deficits connected with ageing contribute to the stereotype of decline in social position and marginalisation (Trafiałek, 2006, p. 945).

In Poland, old age is the most frequently considered to be a time of deactivation, passivity and withdrawal from any kind of activity. According to the Polish Society of Gerontology, seniors, when retired, admit that they feel a sense of loneliness, which arises due to the limitation of social interactions, professional activity, prestige and a sense of usefulness (Wiatrowski, 2009, p. 54). Attitude to ageing is determined by numerous biological and psychological factors, including type of personality, life experience, fitness and health condition. Our attitudes to ageing are also influenced by social aspects e.g. prestige, economic status and the type of profession.

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It is emphasised in specialist literature that people who spend time with seniors day-by-day, e.g. family members or personnel in care homes, should encourage them to be active. Old age ought to be perceived as a time to define and complete new tasks. People in their third stage of life need to be encouraged to live independent and active life. The best support for seniors should rely on stimulating them to be creative and active. The forms of assistance can be different and, if possible, involve physical activity e.g. walking, gymnastics, dancing, sports activities or swimming. Other forms activities may include developing hobbies or interests such as gardening, photography, knitting, playing musical instruments and other things. Another group may comprise educational activities. The Universities of the Third Age and a variety of training can help seniors improve their knowledge. Additionally, professional activity (full- or part-time) can be accessible for the elders. Self-study based on reading or mass media appears to be also important for seniors. It may involve studying foreign languages, computer skills, healthy eating etc.).

Drama and creative activities also serve old people (Chabior, 2000, p. 156 and the next pages). Thanks to this type of activities seniors can express themselves through different forms of art and through participation in cultural events e.g. going to the cinema, going to the theatre or to the concert hall. Staying active within a family is also important for seniors. It may involve looking after grandchildren or helping other family members e.g. to run business.

Seniors will benefit from any kind of physical activity since it slows down the process of ageing; it makes sense of life and brings joy. Physical activity facilitates socialising and prevents social exclusion. It is proved by numerous research results which show that active way of life influences the brain functions in the elders. The brain of an old person can adapt to new challenges similarly to the brain of a young person. Regular brain training slows down the process of ageing. For instance, seniors who trained 2 hours a day for 5 weeks improved their memory by 26% and the ability to think logically by 74%. What is more, the speed of information processing increased by 87%. The elderly who engage in any kind of creative activities seldom visit a doctor or suffer from depression. They also take fewer drugs (Na temat..., 2005, p.34).

Slowly but constantly, Polish style of living is changing. The Poles are becoming healthier and fitter. In addition, more commonly now, they are well educated. The elderly seem to be more active in their later years (Kryszkiewicz, 2006, p.281). They often stay educationally active which enables them to develop themselves constantly. Seniors benefit from the process of learning since they exercise brain to improve memory and thinking skills, to acquire knowledge, to meet new people as well as to achieve new skills and competencies.

A plenty of institutions supporting the elderly offer the programmes to keep them active. The Universities of the Third Age provide the elderly with different forms of education and social integration (Nowicka, Majdańska, 2008, p. 284).

### ***Lifelong learning as illustrated by the universities of the third age***

The Universities of the Third Age provide lifelong learning opportunities and offer the elderly possibilities to stay physically, intellectually, socially and culturally active.

The first U3A was established in Toulouse (France) in 1973 by Pierre Vellas, a lawyer and a sociologist. He decided to involve in education people with a vast experience who did not have a chance to study when they were young. The other reason to develop the Universities of the Third Age was the need to take advantage of already existing universities and their facilities as well as the need to conduct research on the ageing process. According to P. Vellas, the U3A aimed to improve seniors' living conditions and support their self-development. Educational activity and research involved health education, promotion of physical and mental activity as well as artistic expression (Dzięgielewska, 2006, p.169 and the next pages).

At the end of the 20th century, approximately 2100 U3A operated all over the world which brought together thousands of people in their third stage of life, those interested in the world, science and desired to meet others.

All the Universities of the Third Age are associated in AIUTA (International Association of Universities of the Third Age) established in France in 1975. Members of the Association address various issues, particularly those referring to culture, education and retirement policy, concerning people of advanced age. The U3A are democratic institutions which support the process of education. They prove that learning and teaching is possible at any stage of life and it is one of the greatest treasures. What is more, the U3A show the specificity of learning and teaching older people.

In Poland, the first U3A was established in Warsaw in 1975 by Halina Szwarz, a doctor. The main tasks of the university were to provide seniors with physical and mental activity and engage them in lifelong learning process (Dzięgielewska, 2006, p. 170). The university provides life enhancing opportunities for the elderly regardless of their educational background. It also offers a range of attractive courses and helps seniors extend knowledge of different fields. The programme involves not only lectures, discussions or seminars, but also visiting museums, visiting places of historical interest, sightseeing or going to the theatre. The research supporting learning strategies for older people and preventive gerontology seem to be other important aspects of the U3A activity.

Nowadays, in Poland the Universities of the Third Age are associated in a separate section of approximately 100 universities within Polish Gerontology Society. The number of U3A is increasing. There are two models of U3A. One of them is associated with a local university, which is traditional university system. The other model is not so strongly associated with local educational bodies. The universities are developed by scientific, cultural or recreational institutions and depend on local government. In Poland the latter type of the U3A has been successfully adopted. The universities emerge from the growing demand for this kind of services especially in specific local communities.

The U3A are aimed at:

- getting older people involved in lifelong learning;
- regular physical and mental activities intended for seniors;
- developing and reviewing learning methods;
- promotion of preventive gerontology;
- conducting research and observations (Konieczna-Woźniak, 2001, p. 48 and the next pages).

Apart from primary purposes, there are also specific goals such as promotion of healthy lifestyle, implementation of preventive gerontology, providing rehabilitation services, tourism and recreational activities, managing local community activities, developing hobbies or interests including painting, weaving, singing in a band, cabaret learning foreign languages and socialising.

R. Konieczna-Woźniak (2001, p. 49 and the next pages) identified the following functions of the Universities of the Third Age:

- meeting cognitive needs;
- offering various activities to people of similar age;
- providing activities which help the elderly keep physically fit;
- complementing knowledge;
- enhancing personal development;
- helping seniors find a new hobby;
- improving family relationships.

According to O. Czerniawska, who was engaged in developing the U3A in Poland, “The intended function of the U3A in Poland is to provide older generation with opportunities and conditions to perform a wide range of activities which can be enjoyed constantly and for a long time contributing to efficiency and development in a selected discipline”, (Czerniawska, 1982, p. 329).

The success of the U3A proves that people of advanced age can lead an active life and, what is more, they can also enjoy this stage of life which often brings joy and opportunities to support others. The U3A activities help seniors meet their cognitive needs, meet people of similar age and similar interests, thanks to which the elderly do not feel lonely.

Generally, membership of a U3A is open to all in their third age, which is defined by a period in life in which full time employment has ceased, to all who want to extend their knowledge. People who have a lot of free time can join activities offered by U3A. However, some of the U3A require at least secondary education from their members. U3A members do not have to take part in all the activities offered by the university. There are no examinations and no qualifications. The certificates of appreciation are awarded. Almost all U3A are voluntary community organisations which support those in need, including their members (Dzięgielewska. 2006, p. 174).

As Czerniawska claims, “Universities of the Third Age strive to provide life-enhancing and life-changing opportunities so that an old age could be a valuable time of life, full of activities that are worth doing so much that an individual is ready to change their attitude to the world or people, if it appears to be right. The U3A does not want to be a poor substitute for knowledge or a quasi-educational institution which does not require any intellectual, physical or mental effort. The U3A aspires to support dialogue that is meeting different people and different cultures meeting the past with the present. Perhaps it will sound grandiloquent, but in the third stage of life a time devoted to something unexciting or prosaic is a waste of life. It leaves a sense of emptiness and brings dilemma. Therefore, the U3A, intended to support seniors, should avoid commercialisation and try to keep high standards” (Czerniawska, 1987, p. 111).

### ***Seniors' motivations behind attending U3A courses and their benefits***

Most of seniors who decide to attend courses or events offered by Universities of the Third Age desire to extend their knowledge and to remain intellectually active. They often choose lectures of different disciplines, seminars or foreign languages courses. The knowledge people of advanced age acquired can be used for their own purposes or shared with the family.

The other reason behind entering a U3A is the need to stay healthy and physically fit. Universities of the Third Age offer a wide range of physical activities intended to keep fit, including Nordic walking, yoga, Tai-Chi, swimming and any kind of physical exercise. In addition, the universities offer long walking tours thanks to which seniors can visit interesting places not only in their local areas but also all over the world. What is more,

the universities encourage walking tours not only around local areas but also all over the world. The Universities of the Third Age cooperate with travel agencies to arrange holiday events, trips or tours.

The other reason to join a U3A is the need for continuous personal development. The U3A offer creative activities, self-learning groups or workshops devoted to specific disciplines. There are also art classes where seniors can learn painting techniques (silk painting, watercolour painting), weaving, dancing or drama.

Self-learning groups and workshops usually involve literature, memoirs, art, music, the fine arts, drama, bridge, astronomy etc. Recently, IT and computer skills classes have been growing in popularity (the elderly willingly attend them to avoid digital exclusion).

All these activities help people in their third "age" of life discover talents or new forms of expression. In these classes participants are creators who express themselves through writing poems, writing memoirs and painting. One more reason behind entering the university is the opportunity to participate in cultural life. The U3A arrange trips to the theatre, to the cinema and to art galleries or they encourage seniors to attend drama or cabaret classes (<http://www.e-mentor...2015>).

It is important that the elderly join activities which enable them to gain knowledge or develop skills useful for themselves and for others. Educational activities seem to be very important as they can meet seniors' cognitive needs. This kind of knowledge enables them to adapt to the modern world. It also helps acquire new skills and decreases fear of the unknown. What is more, knowledge obtained or extended at the U3A can play educational role thanks to which participants can develop a positive outlook on life and new attitudes. In addition, mental activity will contribute to brain and memory fitness.

An old age is only one of the periods in human life encompassing physical, psychological and social changes. They may be beneficial since the elderly may still learn, develop new skills, change behaviour patterns or beliefs and, as a result, improve their personality or character. Seniors who engage in activities supporting personal development tend to be more independent and satisfied with their life. They also have higher self-esteem (Leszczyńska-Rejchert, 2010, p. 201 and the next pages).

Thanks to the opportunity of lifelong learning, the elderly are able to face up the challenges resulting from disproportions in social development of seniors, caused by war and post-war conditions in Poland which took a long time and resulted in education deficiency among adolescents of that time. The Universities of the Third Age prepare their members for old age, as well (Fabiś, Cyboran (ed.), 2009, p. 256 and the next pages).

## 2. CONCLUSIONS

The Poles, similarly to other well-developed nations all over the world, live longer. According to demographic forecast, there will be a constant increase in average life expectancy of males and females. It means that societies are ageing. Therefore, the problem of ageing and seniors is nowadays one of the most important social issues.

Due to increasing retirement age it is suggested to support this social group so that the retired could lead active life. There is a real desire for this kind of learning. That is why more and more such educational institutions as Universities of the Third Age are established as the most common form of education for seniors. They offer lifelong learning or permanent education which is necessary at all ages and stages of life, particularly nowadays, when socio-cultural, educational and ICT reality is rapidly changing.

Seniors who attend courses available at U3A make positive changes in their lives as well as improve the quality of life. For many of U3A members, especially when retired or no longer working full-time, only the university classes can prevent them from social exclusion. Participation in U3A activities enables the elderly to maintain their social status and to develop a sense of self-esteem. In addition, people in their third age feel that they have to adapt to reality and catch up with new technologies to remain active in the labour market and to face up challenges of the modern world. There is no doubt that education of older people is significant.

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# Primary education pre-service teachers' perceptions on equality in education: a metaphor analysis study<sup>1</sup>

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## Abstract

The purpose of the research is to reveal the mental images of the primary education pre-service teachers on the concept of equality in education through the metaphors. The research was conducted with the 2nd, 3rd, and 4th grade university students studying in the Faculty of Education, Department of Primary Education in a state university during 2015-2016 school year fall term. . The students were asked to fill in the blanks in the sentence "Equality in education is like ....; because ....". The questionnaires filled out by the students constitute the data source of the research as documents. Perceptions of the primary education pre-service teachers on the concept of equality in education were analyzed via the metaphor analysis method. The metaphors developed by the pre-service teachers are mainly divided into five categories: "Equality in Education is Necessary.", "Equality in Education is an Utopia.", "Equality in Education must be Fair.", "Equality in Education should be Improved.", and "Equality in Education cannot be Assessed.". It is observed that the pre-service teachers developed the most the "surrealistic" and "water" metaphors by 6.93%. Second comes the "justice" and "scales" by 3.96%, and third comes the "emotion", "imagination", "breathe" and "none" metaphors by 2.97%.

Key words: Primary education pre-service teacher, equality, equality in education, metaphor analysis

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## 1. INTRODUCTION

Equality is a concept, which has been the most, discussed issue throughout the history and no common definition of which has been provided yet. This inconvenience, just like liberty and justice, arises from the fact that the form and content of equality, an intangible and ambiguous concept, have been described differently by different classes, groups or people at different times. The idea of equality continuously changes and improves as an historical fact thanks to the social and political challenges made for it. In other words, the idea of equality matures in parallel with the social and economic developments (Özsoy, 2007; cited by: Tanman, 2008).

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Turner (1986, cited by: Tural, 2002) cites four main kinds of equality. These are equality of human beings, equality of opportunity, equality of condition, and equality of results and outcome. The term “equality” has several definitions in education. Researchers and educators assess the schools in terms of financial status, expenses, resources, access to curriculum, distribution of students, academic and social variability, in-class processes, and education policies (Hallinan, 2002). Basically, it is a human right that every individual must have an opportunity to improve his potential and to reach a position within the society. Unless such opportunities are equally given, some individuals will not be able to improve their talents and skills. This loss shall not only belong to them, but also the society (Levin, 2003).

Equality in education cannot be solely considered as the equal distribution of the existing material resources to those with educational requirements (Sarigöz, 2009). With regards to equality in education, the first approach is to ensure the formal equality. This approach suggests that the differences among the success grades of the individuals benefiting from educational activities completely stem from the “natural” differences between their abilities or aptitudes. The fact that these differences might be related to socio-economic conditions of students, regional differences or social gender roles is ignored. Natural abilities and aptitudes determine the upper threshold the individual would hope to obtain. According to this approach, the education system should treat all individuals equally and aim to allow the talented ones access to higher educational levels with the appropriate scientific assessment and evaluation methods. So that the social benefit will be ensured to be at the top level (ERG, 2009).

The first of the legal regulations on equality in education is the Universal Declaration of Human Rights (UDHR) dated 1948. Accordingly; “Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available. Higher education shall be equally accessible to all on the basis of merit” (UDHR Article 26).

Right to education is given as following in the Turkish National Education Basic Law ( Milli Eğitim Temel Kanunu-METK):

1. Universality and equality: The educational institutions shall be open to everyone regardless of language, race, gender, and religion. No privilege shall be made available to any person, family, coterie or class (METK, Article 4).

2. Right to education: Every Turkish citizen has the right to primary education. Citizens shall benefit from the secondary and higher education programs in line with their interest, ability, and merit (METK, Article 7).

3. Equality of opportunity and possibility: Equality of opportunity and possibility shall be made available to every citizen, man or woman. In order that the successful students lack of financial possibilities can go up to the highest educational levels, supports are provided by means of free boarding education, scholarships, credits, and other ways. Special measures shall be taken to raise the children in need of special education and protection (METK, Article 8).

4. Mixed education: Mixed education of girls and boys at schools shall be compulsory. However, some schools might provide education solely for girls or solely for boys based on the type of education, possibilities and obligations (METK, Article 15).

5. Education everywhere: The purpose of the National Education is to be maintained not only in the public and private schools but also at home, in the neighborhood, at everywhere and every opportunity. Every activity of public, private and voluntary aided schools is subject to inspections by Ministry of National Education to ensure conformity with the purposes of National Education (METK, Article 17).

Equal educational opportunities, which is to say equality of opportunity in education, is a requirement of being a social state. The equality of opportunity, therefore, is one of the most important subjects requiring care while planning the educational activities in social states (Sarier, 2010).

What are pre-service teachers' conditions of individual innovativeness?

1. Do students' conditions of change readiness differentiate according to gender, academic average, type of instruction and department variables?
2. Is there a relationship between individual innovativeness conditions and change readiness conditions of pre-service teachers?

## **2. METHOD**

“Phenomenological approach” among the qualitative research designs was utilized in the study. Phenomenological approach focuses on the phenomenon that we are aware of but we do not have detailed and in-depth information. Phenomenology forms a suitable research basis for us on the studies which are familiar to us but complicated to understand (Yıldırım and Şimşek, 2008).

The research was conducted with the 2nd, 3rd, and 4th grade university students studying in the Faculty of Education, Department of Primary Education in a state university during 2015-2016 school year fall term.

A questionnaire was prepared so as to reveal the metaphors of the primary education pre-service teachers on the concept of equality in education. The students were asked to fill in the blanks in the sentence “Equality in education is like ....; because ....”. Before collecting the data, some information regarding the metaphors was provided to students but they were not canalized. The questionnaires filled out by the students constitute the data source of the research as documents.

Perceptions of the primary education pre-service teachers on the concept of equality in education were analyzed via the metaphor analysis method. Metaphors are strong mental modeling mechanisms to allow the individuals analyze and create their own worlds. (Şahin and Baturay, 2013). Metaphor centered data collection studies, as a process, are not so different than individual or focus group interviews based on open ended questions. It is an easier and more practical data collection method based on the nature of the data collected when compared to individual interview, focus group interview or some types of document review (Erdoğan and Gök, 2008).

Of the metaphors obtained, similar ones were assigned to same groups and numerated. Reason of each metaphor was investigated separately and then they were categorized. Then the metaphors generated were evaluated within their categories.

In the coding and sorting phase of the research, metaphors generated by the students were alphabetically listed, metaphors associated with the equality in education were assessed whether the relation was apparent or not and papers with no metaphorical image and logical basis (n: 12) eliminated. Then the metaphor used by each participant was coded one by one.

During the classification phase, 100 valid metaphors were analyzed for their similarities and common characteristics to put them under a certain category and a sample metaphor list created.

Each metaphorical image was analyzed according to the subject of metaphor, source of metaphor, and the relation between the subject of metaphor and source of metaphor during the category development stage and 5 different conceptual categories were formed by means of linking each metaphor to a theme.

For ensuring the validity and reliability of the research, data analysis process was explained in detail and 100 metaphorical images collected were used as the basic data source and each conceptual category was supported with metaphorical image. Furthermore, expert opinion was obtained to investigate whether the metaphorical images united under 5 categories represent the conceptual categories. A list of metaphors and categories with a number adjacent to was provided to an academician studying in the same field and he was asked to match the numbers of the relevant category with each metaphor. Then this matching was compared to the researcher's own matching activity.

## 2. FINDINGS

The pre-service teachers included in the research generated 66 metaphors on the concept of equality in education. Frequency and percentage values for the metaphors generated by the pre-service teachers on the concept of equality in education are given in Table 1.

**Table1:** Metaphors generated by the pre-service teachers on the concept of equality in education

<b>Metaphor</b>	<b>f</b>	<b>%</b>	<b>Metaphor</b>	<b>f</b>	<b>%</b>
Air inside a Car Wheel	1	0.99	Mother	2	1.98
All	1	0.99	Non-living	1	0.99
Apple	1	0.99	None	3	2.97
Baby	1	0.99	Nutrition	1	0.99
Belt	1	0.99	Oxygen	1	0.99
Birth	2	1.98	Phoenix	1	0.99
Book	1	0.99	Point	1	0.99
Breathe	3	2.97	Puzzle	1	0.99
Brotherhood	1	0.99	Rain	2	1.98
Conscience	1	0.99	Rainbow	1	0.99
Dining Hall	1	0.99	Religious Belief	1	0.99
Diving in Water	1	0.99	Roots of a Tree	1	0.99
Dream	2	1.98	Scales	4	3.96
Emotion	3	2.97	Scent of Violet	1	0.99
Empathy	1	0.99	Skeleton	1	0.99
Equal Approach to Everyone	1	0.99	Sky	1	0.99
Family	1	0.99	Step	1	0.99
Fingerprint	1	0.99	Sun	1	0.99
Fingers of a Hand	1	0.99	Surrealistic	7	6.93
Flower	2	1.98	Tire	1	0.99
Glass	1	0.99	Togetherness	1	0.99
Growing of a Sapling	1	0.99	Tom & Jerry	1	0.99
Imagination	3	2.97	Torch	1	0.99
Impossible	2	1.98	Touchstone	1	0.99
Justice	4	3.96	Tree	1	0.99
Key	1	0.99	Unbalanced Scales	1	0.99
Life	1	0.99	Union	1	0.99
Liking	1	0.99	Utopia	2	1.98
Living Being	1	0.99	Watch	1	0.99
Love	2	1.98	Water	7	6.93
Marathon	1	0.99	Watering Hose	1	0.99
Meeting When Two Sundays Come Together	1	0.99	Weather	1	0.99
Mirage	2	1.98	Wheel of a Car	1	0.99

Based on the data in Table 1, it is observed that the pre-service teachers developed the most the “surrealistic” and “water” metaphors by 6.93%. Second comes the “justice” and “scales” by 3.96%, and third comes the “emotion”, “imagination”, “breathe” and “none” metaphors by 2.97%.

The metaphors developed by the pre-service teachers are mainly divided into five categories. The categories on the metaphors developed are; “Equality in Education is Necessary.”, “Equality in Education is an Utopia.”, “Equality in Education must be Fair.”, “Equality in Education should be Improved.”, and “Equality in Education cannot be Assessed.”.

Frequency and percentage distribution of the metaphors generated by the pre-service teachers on the category of “Equality in Education is Necessary” is given in Table 2.

**Table 2:** The metaphors generated by the pre-service teachers on the category of “Equality in Education is Necessary”

Metaphor	f	%
Air	1	5.88
Breathe	3	17.65
Conscience	1	5.88
Emotion	1	5.88
Key	1	5.88
Nutrition	1	5.88
Oxygen	1	5.88
Skeleton	1	5.88
Sun	1	5.88
Touchstone	1	5.88
Water	4	23.53
Wheel of a Car	1	5.88
Total	17	100

Based on the data in Table 2, it is apparent that the pre-service teachers generated 17 metaphors under “Equality in Education is Necessary” category. In the “Equality in Education is Necessary” category, teachers associate the equality in education the most with water. Sample statement developed for this category and for why this metaphor was generated is as following:

*“Equality in education is like water, because tree needs water to grow up. And children grow up with education.”*

Frequency and percentage distribution of the metaphors generated by the pre-service teachers on the category of “Equality in Education is an Utopia” is given in Table 3.

**Table 3.** The metaphors generated by the pre-service teachers on the category of “Equality in Education is an Utopia”

Metaphor	f	%
Apple	1	3.23
Dream	2	6.45
Empathy	1	3.23
Fingers o a hand	1	3.23
Imagination	3	9.68
Impossible	2	6.45
Life	1	3.23
Meeting When Two Sundays Come Together	1	3.23
Mirage	2	6.45
None	3	9.68

Phoenix	1	3.23
Rainbow	1	3.23
Religious Belief	1	3.23
Scent of Violet	1	3.23
Sky	1	3.23
Surrealistic	7	22.58
Utopia	2	6.45
Total	31	100

Based on the data in Table 3, it is apparent that the pre-service teachers generated 31 metaphors under “Equality in Education is an Utopia” category. In the “Equality in Education is an Utopia” category, teachers associate the equality in education the most with surrealism. Sample statement developed for this category and why this metaphor was generated is as following:

*“Equality in education is surrealistic, because realizing this fact in today’s world is a fiction.”*

Frequency and percentage distribution of the metaphors generated by the pre-service teachers on the category of “Equality in Education must be Fair” is given in Table 4.

**Table 4:** The metaphors generated by the pre-service teachers on the category of “Equality in Education must be Fair”

Metaphor	f	%
Birth	2	8.7
Brotherhood	1	4.35
Dining Hall	1	4.35
Diving in Water	1	4.35
Emotion	1	4.35
Equal Approach to Everyone	1	4.35
Justice	4	17.39
Liking	1	4.35
Mother	2	8.7
Non-living	1	4.35
Rain	2	8.7
Roots of a Tree	1	4.35
Scales	4	17.39
Tom & Jerry	1	4.35
Watering Hose	1	4.35
Total	24	100

Based on the data in Table 4, it is apparent that the pre-service teachers generated 24 metaphors under “Equality in Education must be Fair” category. In the “Equality in Education must be Fair” category, teachers associate the equality in education the most with justice and scales. Sample statement developed for this category and why this metaphor was generated is as following:

*“Equality in education is like scales, because the more equal load is placed the more balance is ensured.”*

*“Equality in education is like justice, because people live what they deserve thanks to the justice, just like people take the education and come to a position they deserve thanks to equality in education.”*

Frequency and percentage distribution of the metaphors generated by the pre-service teachers on the category of “Equality in Education should be Improved” is given in Table 5.

**Table 5:** Metaphors generated by the pre-service teachers on the category of “Equality in Education should be Improved”

<b>Metaphor</b>	<b>f</b>	<b>%</b>
Air inside a Car Wheel	1	5
Baby	1	5
Emotion	1	5
Family	1	5
Flower	1	5
Flower Garden	1	5
Glass	1	5
Growing of a Sapling	1	5
Living Being	1	5
Love	2	10
Puzzle	1	5
Step	1	5
Togetherness	1	5
Torch	1	5
Union	1	5
Watch	1	5
Water	3	15
Total	20	100

Based on the data in Table 5, it is observed that the pre-service teachers generated 20 metaphors under “Equality in Education should be Improved” category. In the “Equality in Education should be Improved” category, teachers associate the equality in education the most with water. Sample statement developed for this category and why this metaphor was generated is as following:

*“Equality in education is like water, because once the route is charted out and the obstacles are removed, then this route will be beneficial for everyone.”*

Frequency and percentage distribution of the metaphors generated by the pre-service teachers on the category of “Equality in Education cannot be Assessed” is given in Table 6.

**Table 6:** The metaphors generated by the pre-service teachers on the category of “Equality in Education cannot be Assessed”

<b>Metaphor</b>	<b>f</b>	<b>%</b>
Belt	1	12.5
Book	1	12.5
Fingerprint	1	12.5
Marathon	1	12.5
Point	1	12.5
Tire	1	12.5
Tree	1	12.5
Unbalanced Scales	1	12.5
Total	8	100

Based on the data in Table 6, it is apparent that the pre-service teachers generated 8 metaphors under “Equality in Education cannot be Assessed” category. Sample statement developed for this category and why this metaphor was generated is as following:

“Equality in education is like a tree, because not all trees are at same height or they do not yield the same amount or same quality fruit because they were treated same. Because all students have been treated same and had the same opportunities, they will not have the same qualifications.”

#### 4. RESULTS AND DISCUSSION

It is observed that the pre-service teachers develop the most the “surrealistic” (Equality in education is an Utopia) and “water” (Equality in education is necessary) metaphors on the concept of equality in education. It is no wrong to come to conclusion that the pre-service teachers consider the equality in education as a necessary concept while, however, they also believe that it is impossible.

While the high-quality education is popularized to the maximum extent, it should also be aimed in this regard that the barriers before the high-quality education arising from socio-economic status, social gender discrimination or regional differences must be removed through the use of social policy means. So that equality in education can almost be ensured and it might be a concept, desired but not impossible.

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# Content and language integrated learning as a topic for mathematics teachers lifelong learning

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## ABSTRACT

Lifelong learning is defined as learning that is pursued throughout life: learning that is flexible, diverse and available at different times and in different places. Lifelong learning can develop creativity and individual skills needed for adaptability in a rapidly developing modern society. Teachers are expected to develop as professionals and they need to acquire new knowledge, become familiar with new didactics trends, learn about new teaching and learning methods. Content and Language Integrated Learning (CLIL) is a teaching method based on teaching a non-language school subject through a foreign language. Pupils acquire knowledge and skills in both subjects at the same time. Suitable subjects include mathematics, biology, art and physical education. The CLIL method is supported by the European Commission in its Action Plan 2004-2006 yet, because it enables pupils to apply their newly acquired language skills. The paper describes the proposed course *Application of English in teaching primary mathematics through CLIL*. This course, for students and teachers, provides a better view of the possibilities of cross-curricular links Mathematics and English based on CLIL. The course includes examples of selected activities, realisable in school practice. The authors are convinced, in agreement with the results of international studies, that the inclusion of information on the method CLIL and its implementation in individual subjects has potential use for lifelong learning of both teachers and students. Successful integration of CLIL contributes significantly to the transformation of schools towards international communication and cooperation.

Key words: CLIL, primary mathematics, lifelong learning

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## 1. INTRODUCTION

The paper deals with teacher training in lifelong learning, namely with an offer of a proposed course *Application of English in teaching primary mathematics through CLIL* for lifelong students at Faculty of Education, Palacký University in Olomouc.

Lifelong learning may be broadly defined as learning that is pursued throughout life: learning that is flexible, diverse and available at different times and in different places. Lifelong learning crosses sectors, promoting learning beyond traditional schooling and throughout adult life (i.e. post-compulsory education). The concept of Lifelong learning was introduced in Denmark as early as 1971 (the Bologna Process).

Lifelong learning has a rich tradition at Czech universities, and its importance and potential are growing all the time to meet the challenges of the modern world. We can say that Czech universities offer lifelong learning activities to suit various levels of ability, experience, proficiency, ambition and expectations these days. The publication entitled "Strategy of Lifelong Learning in the Czech Republic" (2007) deals with the strategy of lifelong learning in the Czech Republic, and was created in conjunction with the National Institute of Technical and Vocational Education and approved by Government Decree No. 761/2007. Among other things, the publication includes the following

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quotation: “The insufficient education of teachers also constitutes a fundamental retardant to changes in teaching. As a consequence, education of teachers in innovative pedagogical approaches, based primarily on activities, cooperative and project learning and connection of information with the life experience of the student, is fundamental for the success of the curriculum reform. In order to introduce teaching that develops the skills and competencies of students, teachers should be able to communicate examples of good practice, and obtain methodological support and other supportive services so that they can devote themselves maximally to teaching. It is also important to establish the criteria and framework of methodological assistance so as to guarantee its high level. This supportive sector is substantially under-dimensioned in the CR.”

The concept of CLIL means “Content and Language Integrated Learning”. It was introduced by David Marsh in Finland in 1994. CLIL constitutes an innovative approach to integrated teaching and learning. It interconnects a non-language subject and a foreign language, thus helping pupils not only to remove the language barriers and learn to use the foreign language in practice, but also to deepen the knowledge and skills in the non-language subject and learn it in an interesting way. Therefore, the approach brings advantages into both thus interconnected subjects. CLIL is suitable for all age categories of pupils, therefore also for the youngest of pupils, who are not much experienced in any foreign language yet. That is why the method has gained many supporters. The CLIL approach is very popular internationally, has spread across a large part of Europe, and is gradually finding its way into Czech schools.

CLIL was first intended to describe the methods used in teaching non-language subjects in a foreign language (Šmídová, Tejkalová and Vojtková, 2012). Initially, the CLIL method was presented as a method which would bring advantages primarily in terms of the quality of the teaching of foreign languages. However, it has been demonstrated that the method brings advantages into both of the taught subjects at the same time. Since its introduction, the approach has undergone many modifications; today, it is primarily a method which uses many organisational forms and ways of work, and is perceived as a specific type of teaching that integrates the didactics of both of the interconnected subjects.

In the Czech Republic, the teaching method is relatively new and is only now gaining its supporters. The concept of CLIL was first introduced in the Czech Republic in 2004, and several Czech schools have started using the method in teaching over the past few years. Since then, the Ministry of Education, Youth and Sports has published several methodological handbooks, implemented several projects and held several conferences in order to train teachers in the CLIL method principles. The issues of CLIL in the Czech Republic are addressed in particular on the websites of the Ministry of Education, Youth and Sports (Content and Language Integrated Learning in the Czech Republic, 2009) and the National Institute for Education (Ball et al., 2013).

The National Institute for Further Education conducted researches of the CLIL method implementation in the Czech Republic in the years 2008 and 2011. The 2008 research indicated that the CLIL method was used in practice in only 6% of all Czech schools including all elementary and secondary schools. It was found that the CLIL method was mostly applied by teachers of the first level of elementary schools and by teachers of secondary schools. The most frequently used languages were English and German, most often interconnected with Mathematics, Music and Art. In 2011, the CLIL method was incorporated in teaching at 30% of Czech schools, where the method was again mostly applied by teachers of the first level of elementary schools and by teachers qualified to teach two non-language subjects. The most frequently used language was English again, this time mostly in combination with the Czech Language and Literature and Mathematics (Kubů, Matoušková and Mužík, 2011). According to teachers, the low degree of implementation of the CLIL method in teaching is due to a lack of time during the lessons and also due to a low level of language skills in their pupils and many a time in the teachers themselves. It is also necessary to admit that the method is rather demanding in terms of the lesson preparation.

Teaching using the CLIL method tries to utilise many activating and communication methods. The teachers also use different types of organisational forms so that their lessons are as interesting as possible and so that the method is applied as effectively as possible. The CLIL teachers try to teach their pupils to discover all information for themselves and put it in context with previous findings, thus building their own knowledge and skills. One of the most important parts of such lessons is an active involvement of the pupils in the teaching process, while the role of the teacher is shifted to the position of an advisor and assistant.

In 2013 in the course of the IGA project implementation at Palacký University, Jan Wossala was trying to establish the current situation in terms of the use of CLIL in teaching at elementary schools and grammar schools in the Olomouc and South Moravia Regions. The return rate of the prepared questionnaires was between 16% and 18% in both regions. The following information followed from the responses. In the Olomouc Region, 10% of all the responses were positive. The survey was concerned not only with the current situation but also with the use of CLIL in the previous years and the preparation of teaching using the method in the following school year. Non-language subjects were taught with the application of the English language with only one exception, where the French language was used. There was no predominant subject among the subjects taught in such an integrated manner. Almost all subjects were equally represented. The situation in the South Moravia Region was similar – 13% of all the responses were positive. As it was the case in the Olomouc Region, the English language was predominant and it was applied to a wide range of non-language subjects. There was only a minor difference in the dominance of certain subjects. The most frequent non-language subjects taught with the application of a foreign language included Mathematics, Art, Music, Civics and Physical Education. The pupils also mentioned Informatics, Social Sciences, Natural Science and History relatively frequently (Wossala, 2014).

It is necessary to continuously innovate the activities offered as part of lifelong learning. We will focus on the primary teacher training and the support of teaching mathematics and the English language, as considerable attention is currently paid to both of these subjects in terms of their application in practice. Students of the study field of Teaching at the 1<sup>st</sup> Level of Elementary Schools are systematically trained in foreign languages as well as in primary mathematics and the didactics of mathematics. Students of this field thus possess the basic field-specific and didactic competencies which are necessary for the implementation of the CLIL method in practice. Prior to the preparation of the proposed course entitled *Application of English in teaching primary mathematics through CLIL*, members of the Department of Mathematics conducted a survey concerning the educational needs of teachers.

## 2. METHOD AND FINDINGS

The survey entitled “Educational Needs of Mathematics” (ENMT) is focused on the educational needs of teachers, specifically on the educational needs of teachers of mathematics at the first and second levels of elementary schools. The objective of the survey was to identify and analyse the educational needs of mathematics teachers. The form of a questionnaire survey was chosen for the research. The survey was conducted in May 2015. A total of 84 respondents – teachers of 15 elementary schools – participated in the survey. Of those respondents, 53 teachers (63.1%) taught mathematics at the 1<sup>st</sup> level of elementary schools and 31 teachers (36.9%) taught mathematics at the 2<sup>nd</sup> level of elementary schools. The group of respondents consisted of 79 women (94%) and 5 men (6%). The respondents included teachers – beginners as well as experienced teachers. The average length of teaching practice of the respondents was 14.8 years. The paper mentions only the partial results of the survey relating to the issue of further education of mathematics teachers in the field of CLIL. We focused on the preferred form of education and contentual orientation.

The teachers were asked to arrange the proposed forms of further education (options A – D) according to their personal preferences. The option which was preferred by the majority of the teachers consisted in *Lectures, workshops and seminars taught by an instructor and attended by the learning participants*. The overall results can be seen in Table 1. The individual items are arranged according to the achieved scores; n means the total achieved scores and p means the average scores.

**Table 1:** Form preference in further education of teachers

Item	Forms of education	n	p
A.	<i>Lectures, workshops and seminars taught by an instructor and attended by the learning participants</i>	125	1.49
D.	<i>Self-study – field-specific literature, the Internet</i>	208	2.48
B.	<i>Combined form – lesson attendance and studying in the form of e-learning</i>	242	2.88
C.	<i>Distant form – a minimal lesson attendance, e-learning is the predominant form</i>	265	3.15

Out of the total number of 37 proposed topics, the respondents were asked to choose a set of ten topics to which they would like to devote themselves as part of further professional education. All the topics had been projected with a focus on the didactics of mathematics. The respondents had the opportunity to add any other topics. However, none of the respondents used that opportunity. Table 2 lists the topics whose relative selection frequency  $r$  exceeded 50%.

**Table 2:** Selected topics in further education of mathematics teachers

Item	Topics in further education of mathematics teachers	r (%)
3.	<i>The use of English mathematical terminology</i>	51.19
4.	<i>Ways of solving mathematical tasks, in particular non-standard/unconventional tasks</i>	61.90
7.	<i>Working with materials that constitute didactic tools – models, games etc.</i>	69.04
9.	<i>Working with ICT – mathematical software, Internet sources, the creation of one's own interactive and dynamic materials</i>	70.23
10.	<i>Working with ICT – interactive boards</i>	52.38
15.	<i>Teaching methods and didactic procedures – unconventional, alternative</i>	73.80
16.	<i>The preparation of mathematics project days, outdoor mathematics, subject integration</i>	52.38
17.	<i>Methods of research-oriented teaching</i>	52.38
18.	<i>The use of the CLIL methods and approaches</i>	51.19
24.	<i>The development of (mathematical) thinking in pupils</i>	69.04
25.	<i>Diagnostics of pupils talented in mathematics</i>	51.19
27.	<i>The causes of failures of pupils in mathematics</i>	65.47
33.	<i>Ways of motivating pupils in mathematics with a focus on internal motivation</i>	66.67

The selected topics include topics which are directly related to the CLIL methodology and the possibility of its use in the teaching of mathematics – topic No. 18 *The use of the CLIL methods and approaches* and topic No. 3 *The use of English mathematical terminology*. Their relatively low selection frequency may be attributed to the fact that the CLIL issue and the possibility of its inclusion in the teaching of mathematics is not widespread in teaching practice yet. The greatest interest in topics No. 18 and No. 3 was mostly demonstrated by teachers at the 1<sup>st</sup> level of

elementary schools who teach both mathematics and a foreign language. However, the issue of CLIL is also closely related to topic No. 33 *Ways of motivating pupils in mathematics with a focus on internal motivation*, topic No. 24 *The development of (mathematical) thinking in pupils*, and topic No. 16 *The preparation of mathematics project days, outdoor mathematics, subject integration*. On the basis of the collected data, we believe that the integration of a foreign language and mathematics as a topic of further education is interesting and beneficial to teachers.

### 3. RESULTS AND DISCUSSION

On the basis of the results of the conducted researches, we decided to conceive the course entitled *Application of English in teaching primary mathematics through CLIL* at the Department of Mathematics of the Faculty of Education of Palacký University in Olomouc. The objective of the course is to provide future elementary-school teachers with a deeper insight into the possibilities of inter-subject connection of mathematics and the English language on the basis of the CLIL method. In terms of content, the course deepens and develops selected topics in the field of the didactics of mathematics and the didactics of English, aiming at language-integrated teaching. The content of the course is focused both on language (terminological) knowledge through the development of field-specific vocabulary and on the necessary knowledge in the field of the methodology of language-integrated teaching.

The content of the course has been divided into the following thematic units.

1. **CLIL methodology** (Content and Language Integrated Learning) – a method of content and language integrated learning – the basic starting points and methodological approaches in the context of the educational environment of elementary schools with a focus on primary mathematics. The principles and objectives of the CLIL teaching, CLIL methods and tools (pedagogical constructivism, project teaching, scaffolding), the CLIL forms.

2. **Field-specific mathematical vocabulary** – the definition of basic mathematical concepts within the scope of the 1-st-level-elementary-school curricula, the compilation of a set of basic English mathematical terminology. Mathematical and explanatory dictionaries, active work with English field-specific (mathematical) terminology.

3. **New roles of the teacher and the pupil in Content and Language Integrated Learning (CLIL)** – suitable methods and forms of teaching, the duality of teaching objectives, new approaches to the evaluation of the pupil's performance. Working with mistakes, concept mapping – concept structuring.

4. **Suitable communication platforms between the teacher and the pupil** – the principles of active CLIL communication, means of communication, types of communication (verbal, non-verbal, graphic, contextual), unconventional communication media (mathematical notice-boards, mathematics-oriented portals, cognitive computer environments)

5. **Themes of suitable pupil activities and activities that support CLIL** – language showers, worksheets, learning activities.

The basis of a “student paper portfolio” has been created. In the teaching of the course, emphasis is placed on independent creative work of the students with a focus on the didactic quality of the resulting papers and the level of their practical presentation. We endeavour to familiarise the students with the possibilities of the educational implementation of the CLIL method in the context of the elementary-school-education reality at elementary schools, specifically in terms of primary mathematics. It is not our plan to present the students with “ready-made” guidelines; we would rather like to provide the students with suggestions in order to inspire their own creative work.

**Concept mapping** – an example of a proposal and practical implementation of a concrete mathematical activity intended for the 5<sup>th</sup> grade of elementary schools – proposed and implemented by P. Škeříková (2013). The proposed activity is the last activity within a suggested set of 6 short

mathematical activities (*the so-called language showers*) with the unifying topic of integration of English and geometry in plane and space.

*Activity title:* Concept mapping

*Topic:* The basic concepts of geometry in plane and space

*Contentual objectives:* To summarise and organise the basic concepts in mathematical terminology

*Language objectives:* To practice English terminology related to geometry in plane and space.

Written and verbal tests, revisions, phonetic imitations.

*Time required:* 15 minutes.

*Characteristics of the activity*

- A mind map is a learning strategy which supports active learning. It is suitable in the stage of reflection, in which it serves as a means of summarisation of the new knowledge or the graphic depiction of the new knowledge. A mind map can also help pupils to put the new knowledge in context.
- It is the task of the pupils to find and graphically record as many concepts and mutual links as possible, and thus create a branched network of concepts and their mutual relations – a *concept map*.
- Upon the expiry of the set time limit, reflection follows; the pupils compare their maps with the maps created by their classmates. Each map is an individual reflection of the mind processes of its author. The map reflects the degree and depth of understanding of the given field and provides topics for a subsequent discussion.
- It followed from the final evaluation that the pupils enjoyed the creation of the mind maps and the inclusion of the English language in the mathematics lesson; they mostly evaluated the implemented activity in a positive way.

**Figure 1:** Example of the implementation of concept mapping



Given the above, we believe that the inclusion of information on the CLIL method and the possibilities of its educational implementation in individual non-language subjects is justified and makes sense in pre-gradual as well as post-gradual training of future teachers. The newly conceived course entitled *Application of English in teaching primary mathematics through CLIL* responds to the educational needs of elementary-school teachers and can develop their creativity and individual skills.

The authors are convinced, in agreement with the results of international studies, that the inclusion of information on the method of CLIL and its implementation in individual subjects has potential use for lifelong learning of both teachers and students. A successful integration of CLIL

significantly contributes to the transformation of schools towards international communication and cooperation.

#### NOTE

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# Forming a cloud computing based lifelong learning platform: integration of basic computer courses as mass open online courses to university

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## ABSTRACT

Today's formal educational institutions remain incapable of keeping people's knowledge up to date. Updating information in fields like general culture, information technology, language education and vocational education is needed. Online learning settings, certificate trainings, in service trainings and social network settings greatly contribute to updating information. The learning function is a lifelong process besides formal educational institutions. **Lifelong learning** can be defined as individual's whole collaboration of events which aims to develop their knowledge, skills and talents individually, vocationally or socially in order to manage their lives. It can be said that a web based learning settings has contributed to the learning processes the most these days. In this regard, people and especially universities grants free access to supply of information they have through Mass Open Online Courses (MOOC). In order for users to access MOOC, having an internet browser is enough. **MOOC** is also able to develop lifelong learning skills and brings the participants ways of self-learning and information gathering. Strong hardware and software substructure is needed for an MOOC system which will be accessed by thousands. Rapid developments in information technology have decreased hardware costs significantly. By decreasing the costs, developed software and hardware platforms are formed and brought into mutual use of people. Bringing the hardware and software components (storage, data base, mail services and some private software) into people's mutual use form the basis of **cloud computing**. Cloud computing systems provide great advantages in terms of cost and workforce. Also, through cloud, many subunits can be managed at one origin. In this study, processes of forming a cloud computing based MOOC platform where basic computer technology subjects are included are given place. Through the formed platform, individuals learn new information in the information technology field or keep their knowledge up to date. This will ease people's learning interest and provide lifelong learning opportunity.

Keywords: Lifelong Learning, Mass Online Open Course, Cloud Computing, Distance Education

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## 1. INTRODUCTION

Computer and internet which became an indispensable part of people's and institutions' daily lives became more preferable in various areas by being affected positively by the recent and quick developments in information technologies. In addition to these developments, using a developed technology will be the future of all education steps for an efficient learning.

### *E-learning*

When we consider the development of interpersonal data communication, we see that data transfer starts with writings and figures which are written on stones and leather in ancient times and replaced by paper, radio, television and information technologies with the help of new discoveries. Today, the quickest environment of data communication is known as internet. Learning function has also been affected by this quick development and has started to use technologic devices efficiently.

Gülbahar defines e-learning as "execution of teaching activities in electronic environments" or "transferring knowledge and capabilities through electronic technologies".

E-learning can also be defined as the execution of learning in a web based format through internet or computer network systems".

### *Life long learning*

Since people constantly need to renew their knowledge out of date, the concept of "lifelong learning" has emerged (Lambeir, 2005:350). The concept of lifelong learning (LLL) was firstly expressed by Basil Yeaxlee in 1929. LLL is included in the studies of many international organizations. European Commission (2000) defines lifelong learning as "learning activities which will help us survive in personal, social and economic life as well as knowledge and capabilities in every aspect of life". Sönmez defines lifelong learning as "the expression of a

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concept which prescribes the acquaintance of knowledge, capability, attitude and habits by an individual who derives benefit from all learning environments in order to develop himself/herself” (Sönmez, 2007).

Candy defines lifelong learning as “equipping the individuals with skills and capabilities which are necessary for them to continue their own education”.

Researches for increasing and developing lifelong learning has been continuing for sustainable developments. For sustainability, knowledge is more efficient for redirection of values and academic curriculum, therefore, the development of general awareness and perception of sustainable development concept (Lozano, 2006; Læssøe et al., 2009; Wals, 2009). Sustainable science (having its own science, technical capabilities and methodologies although it is a unique area together with the capacity) has strong links with ESD which have been developing within pedagogy.

### ***Massive open online course (MOOC)***

Rate of participation in online courses in America has been increasing between 6 % and 36 % each year since 2002. Moreover; thousands of users can simultaneously be enrolled and they can follow the courses in worldwide known and prestigious universities (such as MIT, Standford and Harvard) for massive online courses which are free of charge and open to everyone (MOOCs).

MOOCs are platforms which are generally prepared and presented by the universities virtually providing the opportunity of being enrolled and following all the course content for all the users.

The name of Massive Open Online Courses which were firstly used in 2008 comes from “massively multiplayer online role playing game”. George Siemens and Stephen Downes are the first to use this name.

Massive Open Online Courses is an experience of lifelong learning and provides the opportunities, which are presented to us by digital age, to the learners by gathering them through BYTES. Lifelong learning is important in digital age in which information constantly changes and is renewed in terms of enabling global world citizens to renew themselves and fulfill their learning needs. The only precondition which is expected by the environments of Massive Open Online Courses is the desire for learning. By using different approaches, Massive Open Online Courses both provide the opportunity of lifelong learning to the individuals and also teach the learners how to research, how to earn and how to analyze and reflect the lessons which are learnt.

2325 students (25 of them paid for the lesson and calculated it as a credit while 2300 of them didn't pay any Money for the lesson and took it without any credit) were enrolled online to “Connectivism and Connected Knowledge” course, which was opened in Manitoba University in Canada in 2008 and lasted for 12 weeks (Downes, 2011). When Stanford University opened the course named artificial intelligent in 2011, it was announced that 160 thousand students were enrolled in this course from 190 different countries and so that this type of courses succeeded to attract the attention of many people. However; since these two courses were structurally different in pedagogical terms, a differentiation was used as “cMOOC” and “xMOOC” in order to differentiate them. C abbreviation stands for the word “connectivism” while x abbreviation stands for the word “exponential” and these are used in order to express “massive participation” or “extension”. For example, courses with the extension of MITx or HarvardX represent for the courses which are delivered off the campus, not the courses which are delivered in those universities' campuses (for example online courses).

### **Cloud computing**

The origin of the term “cloud computing” inexplicitly dates back to 1950s. Since computers are expensive, the concept which is recently known as time sharing was applied as hardware and processor sharing in that era. In time, costs started to decrease in information sector and the number of computer and internet users increased. So, the concept of cloud computing started to develop.

Concept of cloud computing, which became popular with the sharing of computers physically, provides such services as storage, mail services, common usage of software and access to simultaneous knowledge today and provides the facilities of easy management of costs, labour force, security and knowledge to its users.

Cloud systems can be used with infrastructure, platform and software presentation models.

Cloud computing is put into service with distribution models of special cloud, public cloud, mixed cloud and community cloud. In this study, community cloud model was addressed.

### **Cloud applications in education**

It has been observed for the last 15 years that developments occurring in technology especially after 2000 are quickly applied in the field of education and add innovative applications to educational strategy and methods. When we consider the learning needs of an information society, it can be said that information can quickly be accessed from everywhere at any time and learning becomes important when there is a need. Learning needs which emerge independently from time and space reveal the education model of “mobile learning”. Today, this new learning model gives a new dimension and acceleration to education. In case of a need and movement, it facilitates access to information and adds innovative strategies, methods and learning approaches to educational programs.

Infrastructures of information technologies of private or state institutions lose their validity after a while and so new infrastructures are needed. However; cloud computing based systems decrease the information infrastructure costs of the institutions and provide more flexible software and hardware options. In other words, the obligation of investment in education is removed with the help of cloud computing infrastructures and so it provides access to less expensive software licenses and quicker hardware sources.

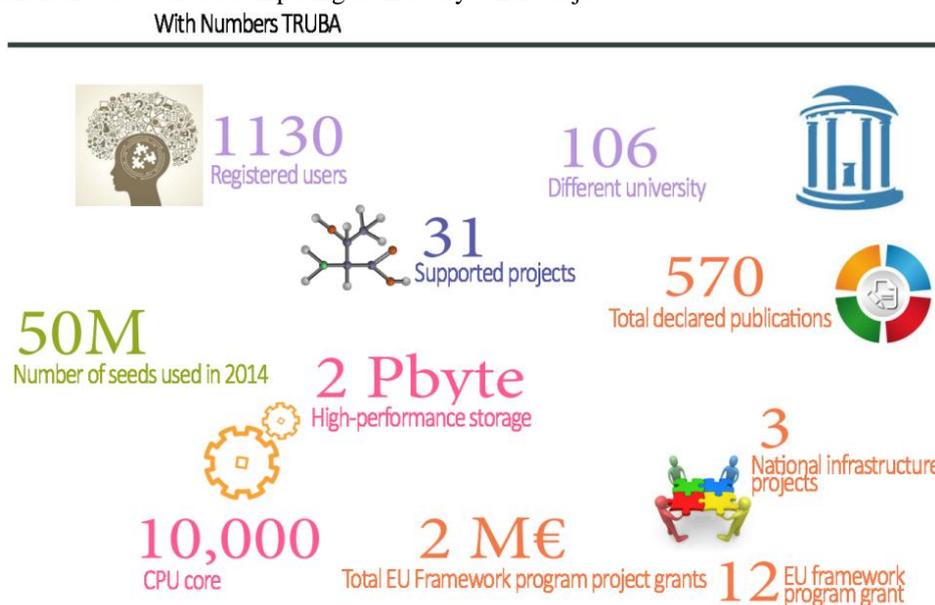
Google Apps has many applications while such applications as Gmail, Calendar, Google Drive, Google Documents, Google E-tables, Google Slides, Google Sites and Google Translation can also be used for education purposes.

## 2. METHOD

In this part of study, characteristics of Turkish TUBITAK ULAKBİM cloud system and integration of MOOC application with Hitit University through this infrastructure were addressed.

### *Cloud infrastructure and its usage in university*

TÜBİTAK ULAKBİM has been carrying out leading studies in cloud computing as well as many services and technology and closely following the developments and innovations in this field. Within TÜBİTAK ULAKBİM, which provides important services such as national academic network and high performance computing center, there is an important speciality in the field of high speed network management, large scale processor, memory and storage technologies. Acquisition from both large scale national projects and projects which are carried out with European Union and other international partners has made ULAKBİM one of the most important players in the sector in terms of developing and applying new technologies. TÜBİTAK ULAKBİM makes contribution to country's economy by transferring its knowledge and experience to the relevant stakeholders about cloud computing as in every other subject.



**Figure 1.** TRUBA with Figures (TUBITAK, 2015)

In Figure 1, infrastructure of Turkish national science is displayed with figures. It is seen in the figure that there is a high performance infrastructure as storage (Pbyte) and processor core (10.000), it provides service to many projects, it has a strong budget (2 million Euros), it makes lots of publications and this infrastructure serves for 106 different universities.

Many government entities and education institutions in our country don't know that we have such a big national infrastructure. In this study, we took the student opinions by developing an application regarding how to use this high performance infrastructure in the universities. As an application, our university's distance learning center integrated basic computer courses which are available in this huge platform having a cloud computing infrastructure into its website and put into service for the usage of the students and other individuals.

## 3. RESULT

In Figure 2, basic computer courses which are available in TUBITAK ULAKBİM were integrated to HUZEM web site. People who are not enrolled in the university can follow this course or people who formally

study this course can derive benefit from it as a source. In other words, this course which is provided to the groups free of charge provides the opportunity of both following a course having a credit and passing grade and basic computer knowledge to other individuals.



**Figure 2.** Hitit University Distance Learning Center (HUZEM) Web Site

In Figure 3, there are basic computer courses which are added to university's HUZEM web site. These courses include basic operation system functions and the usage of such Office programs as word processor, spreadsheet and presentation program.

Note: This lesson infrastructure by TUBTAK ULAKBIM is provided by cloud-based infrastructure. Not: Bu kursun altyapısı TUBITAK ULAKBIM bulut tabanlı altyapısı ile sağlanmaktadır.
<b>Bilişim Teknolojilerine Giriş</b>
Temel Bilgisayar Dersleri
<b>Microsoft MS Office 2010 Dersleri</b>
Word 2010
Word İleri Seviye
Excel 2010
Excel İleri Seviye
PowerPoint 2010
PowerPoint İleri Seviye
Access 2010
Outlook 2010
Publisher 2010
OneNote 2010

**Figure 3.** Cloud Based Open Access Basic Computer Courses

#### 4. CONCLUSION AND DISCUSSION

In this study, information about Turkey's information infrastructure was provided and it was explained how to use this huge infrastructure in education in a cloud based manner. This infrastructure which is available in our country is shared with universities and private institutions in a way that it will provide benefit for the public when needed. Also, few institutions have knowledge about it.

It can be defined as a huge warehouse and data processing environment especially for small universities which have difficulty in establishing their own infrastructures. Through this system, course materials which are kept in normal web domains (video, audio file, PDF, animation, simulation) are preserved in cloud domain. Cloud systems can keep much more data and provide a quicker access. Moreover; it is easier to manage the sources, to process data and to analyze the results. With the help of cloud software, progress periods of the students who follow these courses can be reported. When these reported data are processed, it becomes easier to manage the students in their learning process.

Cloud based systems have also some disadvantages. For example: Their first installation process is expensive and qualified information staff is required for the management of cloud based systems. Also, a computer with an internet connection is required in order to be able to use cloud based system. Technical problems in the Internet may also negatively affect the access to sources.

For the next phase of the study, it is aimed at determining motivations and successes of students in two student groups that are supported and not supported by MOOC for one course.

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# Self-Image and psychological well-being among Turkish adolescents

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## Abstract

Recent literature suggests that poor self-image is related to various types of mental disorders among adolescents and young adults such as depression. In this sense, this study investigates self-image and psychological well-being among seventy two adolescents in Turkey. The first purpose of this study is to evaluate psychometric properties such as factor structure, reliabilities and validity of Self-Image Questionnaire for Young Adolescents. The second purpose of this study is to investigate the relationships between mental health problems such as depressive symptoms and three important constructs of selfimage: (a) social relationships, (b) emotional tone and (c) body image. To argue the reliability of analysis, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were made. The multiple regression analysis was conducted for the second purpose of this study. Using scale from CDI describing depressive symptoms as dependent variable, its associations with subscales in SIQYA such as family relationships, peer relationships, emotional tone and body image were examined. All the analyses were performed using SPSS except that confirmatory factor analysis was conducted using SAS. Results indicate that there is a significant negative relationship between depressive symptoms and social relationships among Turkish adolescents, and much more.

Keywords: Self-image, Psychological well-being, Turkish adolescents

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## 1. INTRODUCTION

Self-knowledge and a sense of identity are central for our existence. Childhood and adolescence are periods of identity formation. Adolescence, especially, is a dynamic and turbulent phase of human life and it is perhaps young adult fiction that has the strongest potential to offer readers somewhat accurate portrayals of selfhood. Scholars of young adult fiction have recently learned some important facts from neuroscience. Adolescence is a period of human life when the brain, still more intensively than before, learns to recognise and attribute mental states to ourselves as well as other people. Adolescents' deviant behaviour is the consequence of the social brain's development. Strong emotions override adolescents' ability to take other people's perspectives. Actions such as planning, decision-making and synthesis of information are still underdeveloped in the adolescent brain. All these processes take more effort in adolescence than in adulthood (Adams & Berzonsky, 2003; Blakemore & Frith, 2005; Goswami, 2007). More specifically, in this matter, self-image (also normatively called self-concept) is considered the central indicator and sub- indicator of psychosocial functioning; and, in particular this claim is accurate and precise for adolescents since adolescence is the most crucial stage for identity development. During this stage, adolescents experience dramatic physical, cognitive and psychological changes as well as changes in social relationships which all have significant effects on one's self-image.

Recent literature suggests that poor self-image is related to various types of mental disorders among adolescents and young adults such as depression. In this sense, this study investigates self-image and psychological well-being among seventy two adolescents in Turkey. The first purpose of this study is to evaluate psychometric properties such as factor structure, reliabilities and validity of Self-Image Questionnaire for Young Adolescents (SIQYA; Petersen). The factor structure and psychometric information is analyzed based on a Turkish sample that was also discussed with respect to findings from Western society. The second purpose of this study is to investigate the relationships between mental health problems such as depressive symptoms and three important constructs of self-image: (a) social relationships, (b) emotional tone and (c) body image. To argue the reliability of analysis, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were made. Specifically, EFA was conducted to explore the underlying factor structure and to eliminate potential items with a low factor loading for further testing. The multiple regression analysis was conducted for the second purpose of this study. Using scale from CDI describing depressive symptoms as dependent variable, its associations with subscales in SIQYA such as family relationships, peer relationships, emotional tone and body

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image were examined. All the analyses were performed using SPSS except that confirmatory factor analysis was conducted using SAS. The results of the factor analysis showed that the original 9-factor structure of SIQYA did not hold as expected. A 5-factor structure was retained after revision, including "Social Relationships", "Emotional Tone", "Adjustment Abilities", "Life Satisfaction" and "Body Image". The results of regression analysis supported the hypothesis that depressive symptoms are inversely related to social relationships, "Emotional Tone" and "Body Image". Results indicate that there is a significant negative relationship between depressive symptoms and social relationships among Turkish adolescents, and much more. This study initially argues the definition of self-image, and the how adolescents to improve her/him self-image. This study shall then present deeper methodological informations. In the second section, this study puts its argumenrations through its finding as well as the literature. In the conculusion, thus, this study finally put forward some suggestions in that matter.

### **Purpose of the study**

Self-image (also normatively called self-concept) is considered the central indicator and sub-indicator of psychosocial functioning; and, in particular this claim is accurate and precise for adolescents since adolescence is the most crucial stage for identity development. During this stage, adolescents experience dramatic physical, cognitive and psychological changes as well as changes in social relationships which all have significant effects on one's self-image.

The initial aim of this study is to assess psychometric qualities like structure, reliabilities and validity of self-image questionnaire for young adolescents (SIQYA; Petersen, 1984) for adolescents living in Turkey. The factor structure of psychometric information in Turkey sample will be debated with those findings from Europe. Moreover, if suitable, available instrument revisions will be used to improve its suitability in Turkey. Next purpose of the current study is to check relationships between mental health problems like depressive symptoms and three significant structures of self-image; social relationships, emotional tone and body image.

## **2. DEFINITION OF SELF-IMAGE**

Self-image is defined by Perera (2009) as how a person perceives her or himself. It may be how they perceive themselves physically or their opinion of who they are; typically this is called self-concept. Self-conception is important as it affects a person's self-esteem and confidence. Self-image includes these perceptions: what you think you look like, how you see your personality, what kind of person you think you are what you believe others think about you, how much you like yourself or you think others like you, and the status you feel you have (Perera, 2009). Bell (1991) suggested that adolescent, while constructing their selfimage, will use four points of reference: (1) the ideal body accepted by society; (2) her perceived ideal body; (3) her present body image; and (4) body shape by an objective perspective. Prendergast, Yan and Zeng (2006) suggested that an adolescent's objective selfimage is physically limited by her/him genetics. However, s/he can never evaluate her/him body objectively, because s/he will always compare it subjectively to her/him own body image. Furthermore, the socially accepted body image is ascertained from cultural representations of physical beauty ideals. Self-image and self-esteem are closely related connected and associated. Self-esteem is how a person feels about him- or herself. Self-image is how a person sees herself and/or himself and how that person believes others see herself and/or himself (Perera, 2009). Erikson (1968) noted that self-identity occurs when one's true self and one's ideal self are confused and synthesized. In Erikson's opinion, individuals are most attuning to their identity as it is changing (Erikson, 1968). In Bandura's (1994) Social Cognitive Theory, he asserted that people's conceptions about themselves influence their behavior and motivations. Hattie (1992) confirmed Bandura's theoretical assertions in a study that noted a moderately positive correlation between self-image and academic achievement. In educational settings, self-image and self-esteem may affect academic performance and students' social interactions.

## **3. IMPROVEMENT OF SELF-IMAGE**

In children who follow loved growth patterns, self-image begins to develop at approximately age 9 and continues until late into their teen years thus coinciding with a developmental increase in the number of brain cells in the frontal lobe (Hattie, 1992). Prior to age 9, children give conditional responses in the form of primary and secondary reactions without evaluating their sense of selves (Lewis & Brooks-Gunn, 1979). Between the ages of 3 and 8 children derive their concepts of self through their interactions with others and the external perceptions that others communicate with them about themselves (Hattie, 1992). As young children gain information about themselves through interactions with their families, they use these interactions to lay the foundation for their social and emotional development (Robinson, Shore, & Enersen, 2007). In the next stage of development, children between the ages of 8 and 12 begin to differentiate between themselves and others as they relate to specific emotional experiences (Lewis & Brooks-Gunn, 1979). Children gain emotional experiences

through relationships with individuals in their lives (Robinson et al., 2007). In the final stage of development between the ages of 12 and 24 individuals develop complex emotions such as empathy, embarrassment, and guilt. In this stage, individuals also begin to label themselves according to their own beliefs (ibid).

When examining self-image in children, Uszynska-Jarmoc (2004) suggested that 8-year-old children's self-images depended on the informal feedback they receive from others. The feedback that individuals receive at an early age affects their self-perceptions, and it is difficult for others to change an individual's perceptions about information that received when at a young age (Cross, 2011). Individuals frequently evaluate and modify their self-perceptions when they receive new information about themselves from either personal experiences or interactions with others (Hattie, 1992). The children of the study Uszynska-Jarmoc's (2004), expressed their self-images in terms of their actual self, ideal self, potential self, and self as it related to the expectations of important people in their lives. Larned and Muller (1979) comprehensively completed a study that examined the changes in self-concept or self-image, in first through ninth grade students. The researchers examined self-concept in relation to physical maturity, peer relationships, academic achievement and ability to adapt to school. The results revealed that students' self-concepts in the areas of physical maturity and peer relationships remained stable across grade levels. The students demonstrated a decline in perceptions of academic achievement and ability to adapt to school as they moved through the grades. In addition, self-perceptions of academic achievement correlated with actual academic achievement data, but the female participants showed a drop in their perceptions of their academic achievement at grade 7, indicating that educators should provide additional encouragement and support to female middle school students (Larned & Muller, 1979). Children form their overall self-image by combining the four perspectives of self; actual self, ideal self, potential self, and self as it is related to the expectations of individuals who are important to them; then they combine their knowledge of themselves with their self-evaluations (Uszynska-Jarmoc, 2004). When children perceive that they have a negative self-evaluation, this may lead to a low self-esteem. This perception of low self-esteem may indicate that the children could reject themselves in the future. Children tend to base their perception of self-image on their present lives and rarely reference past experiences, thus demonstrating that the present environment and experiences are most important in students' self-images. Finally, children are more likely to discuss their self-images in verbal conversation rather than in written narrative (ibid).

Several studies examining the impact of geographical residence on image have noted that the differences in images due to geographical residence or distance might be attributable to familiarity (past experience) with the destination (Crompton, 1979; Ahmed, 1991; Fakeye & Crompton, 1991). Ahmed (1991) found differences in individual image groupings and overall image between visitors and non-visitors to Utah.

#### **4. MEASUREMENT OF SELF-IMAGE IN ADOLESCENTS**

The need for research into adolescent self-concept or self-image has increased over the years. Collin (1991) stressed, "Speculation abounds about the inner identity of the adolescent but research is sparse." A major international study on self-image of adolescents conducted by Offer and his colleagues (1988), using the OSIQ, compared self-image of 5,938 normal middle-class adolescents from ten countries in five aspects including Psychological Self (impulse control, emotional tone, and body and self-image), Social Self (social relationships, morals, and vocational and educational goals), Sexual Self (sex attitudes), Familial Self (family relationships), and Coping Self (mastery of the external world, psychopathology, and superior adjustment). The results suggest surprisingly agreement on an overall positive self-image between adolescents from those ten countries. The OSIQ measure has been acknowledged by reviewers for its usefulness and used and tested increasingly in study of adolescents (Patton & Noller, 1994). However, its limitations and bias such as lacking of variety in socioeconomic levels (Patton & Noller, 1994) and insensitivity to different developmental stage within adolescence (Petersen 1984) have been pointed out by researchers. Based on OSIQ, Petersen et al. (1984) modified the instrument and developed the SIQYA using nine scales from OSIQ, which is a downward extension of the original one. She emphasizes on early adolescence since it is a phase of development that characterized by rapid biological, psychological, and social changes distinct from later adolescence (Hamburg, 1974). Noting the differences, Petersen (1984) suggests that cognitive and psychological functioning of young adolescents are particularly important to the assessment of self-image at this age. In this sense, the SIQYA is more sensitive to different teen age groups and more appropriate to measure self-image among young adolescents than OSIQ. Furthermore, this model considers self-image as transactional involving interactions between ontogenetic and contextual factors (ibid).

#### **5. SELF-IMAGE AND PSYCHOLOGICAL WELL-BEING DURING ADOLESCENCE**

Self-image has proven to be a significant predictor of psychological wellbeing among adolescents, especially depressive symptoms (Offer, 1996; Teri, 1982; Beck, 1972). Clinical research has clearly indicated that adolescents with major depression disorder frequently include a poor self-image (Fine et al. 1993; Koeing,

1998). Using the OSIQ, a measure to evaluate self-image among adolescents within five broad dimensions, investigators found that depression is associated with OSIQ scales relating to emotional tone, mastery, body image sexual attitude, and family relationships (Koeing, 1998; Fine et al., 1993; Patton, 1991). Consistently, Petersen (1984) modified OSIQ and developed a questionnaire for self-image among young adolescents (SIQYA). She found that groups reporting four kinds of mental health problems also report overall poor self-image. Moreover, Teri (1982) reported depression is significantly related to numerous areas of adolescent adjustment. She found a high correlation between self-image and depression by utilizing Offer self-image questionnaire (OSIQ) with Beck Depression Inventory (BDI). Although the primary predictor of depression was the subscale of Body and Self-image from OSIQ, social and family relationships also found that each contributed to the prediction of depression in her study. In addition, studies also show a higher correlation of self-image and depression among adolescent girls than boys (Teri, 1982; Erklohti et al., 2003, Korhonen et al., 2001). Conversely, adolescents with major depression (MDD) are also found to have poorer self-image. Therefore, it can be concluded that there is significant relationship between various aspects of self-image and depressive symptoms among adolescents. Moreover, either variable could be the predictor of the other. Based on the review above, it seems that pubertal changes, interpersonal relationships, and body image, as central aspects of self-image, all play an important role in adolescents' psychological well being.

## 6. METHOD

The purpose of this study was to (1) study the factor structure of the SIQYA in Turkey adolescents; (2) examine the relationships between depressive symptoms and some important constructs of self-image: body image, emotional tone, family relationships and peer relationships. This study was also conducted used a sample consisting of 72 students in Grade 15 and 17 from receiving education in Rize Çayeli Vakıfbank Anatolian high school within 2014/2015 school year. The gender ratio was fairly even, with 49.0% male and 51.0% female. The average educational level of participants' parents was middle schools. In addition, the participants share similar experiences, which shaped by the same economic and cultural conditions.

## 7. RESULTS

This study is aimed to investigate SIQYA in Turkey sample. In addition to reliability analysis, the analyses included exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The number of factors was selected based on the following criteria: (1) eigenvalues of 1.00 or greater, (2) pattern factor loading of .40 or higher, (3) no double loading, that is, no secondary factor loading of .30 or higher, and (4) no item divergence in content. All the analyses were performed using SPSS except that confirmatory factor analysis was conducted using SAS. The results of exploratory factor analysis indicated that the original 9-factor structure did not hold as expected. For instance, the scales Family Relationship and Peer Relationship along with several items from other scales such as Emotional Tone and Psychopathology merge into one factor. First, in the original questionnaire, 55 items are negative worded out of 98 items. Studies have suggested that reliability could be reduced by the use of reverse-coded items (Barnette, 2000; Weems & Onwuegbuzie, 2001). Second, the original SIQYA was developed based on American samples.

The results of the factor analysis showed that the original 9-factor structure of SIQYA did not hold as expected. A 5-factor structure was retained after revision, including "Social Relationships", "Emotional Tone", "Adjustment Abilities", "Life Satisfaction" and "Body Image". The results of regression analysis supported the hypothesis that depressive symptoms are inversely related to social relationships, "Emotional Tone" and "Body Image". As expected, results indicated that there is a significant negative relationship between depressive symptoms and social relationships among Turkish adolescents.

## 8. DISCUSSION

Adolescence is a critical period of development during the transition from childhood to adulthood. The ages associated with adolescence are commonly considered to be 12 years to 20 years (Spear, 2000). During this period, physical and brain functions undergo dramatic changes, which lead to quicker development of cognitive and social abilities. For example distinct changes in thinking (Keating, 2004). The purpose of this study was to examine the factor structure of the SIQYA in Turkish adolescents, as well as investigate the relationships between depressive symptoms and three important constructs of self-image: body image, emotional tone and social relationships (family relationships and peer relationships). The results of factor analysis showed that the original 9-factor structure did not hold as expected. Some factors merged into one factor, some factors were divided to load with other factors. Five factors were retained after revision, including Social Relationships, Emotional Tone, Adjustment Abilities and Body Image. Among these five factors only scale Social Relationship showed high reliability, which may support the collectivist nature of Turkish society. Perhaps, theories about self-image

developed from individualistic cultures may only capture the social aspect when applied in collectivistic oriented culture. Hence, it may argue that the constructs of self-image among Turkish adolescents differ from what Western theories suggest. More importantly, cultural context may play the most significant role when studying the constructs of adolescent self-image.

## 9. CONCLUSION

This study supplied us with enough proof about adolescents' emotional adjustments, especially among adolescents from collectivistic cultural contexts. Initially, this study was the first to examine whether European measures about adolescent self-image development in Turkey were valid. Later, this study offered a new factor structure depending on adolescent development in collectivistic society. Thirdly, this study suggested that social relationships particularly parent relationships was the most important factor to shape Turkish adolescents' emotional adjustment. But, prominent structures in Western theories like sex, emotional tone and body image were not considered to be important among Turkish adolescents in terms of psychological health. In conclusion, varieties in cultural orientations such as collectivistic versus individualistic peoples, authority versus autonomy, child rearing practices and interdependence versus independence family values appeared to be the best explanation for varieties in structures of self-image and factors in Eastern and Western cultures in terms of adolescent emotion adjustment.

Even though results obtained from this study were preliminary, it can ensure the debate about the significance of social relationships, particularly parent relationships in adolescents from Turkey (Greenberg et al., 2000; Petersen, 2004; Leung et al., 2010). In Turkish culture, parents have great influence on the shaping of Turkish adolescents' self-image development and emotional adjustment. If a future researcher is to question Turkish adolescent emotional adjustment and comprehend changes in adolescent psychological development, he/she should set his setting in the countryside and in the city center. Furthermore, factors which have connections with Turkish adolescents' self-image development have to be kept and studied carefully for future to develop measures used in collectivistic cultures. Moreover, further studies have to be carried out on dimensions of Turkish parents and compared with practices from other cultures because it is certain that parenting is the key factor to determine adolescent development in collectivistic cultures, like Turkey. Also, in Western contexts, the roles of gender and age differences on adolescent emotional adjustment have been documented well (Petersen, 1984; Erkoalahti et al., 2003; Korhonen et al., 2001; Nolen-Hoeksema & Girgus, 1994). But Turkey still has not got these emphases. Lastly, as some of the factors had correspondence, the positivity or negativity of the sentences e.g. family, relationships, life satisfaction, future research, to evaluate the effect of item wording can be justified.

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# The education based on toys improved lifelong learning skills oriented effect on students' visual perception skills

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## Abstract

The research was made for determine the effect of education which consist toys designed lifelong learning skills oriented on 66 month aged students' visual scope abilities. According to this aim, the toys were used which prepared by specialists because of developing the lifelong learning skills. The research was composed of pre-test and post-test semi empirical model and its' sample composed of 104 first class of 66 month aged student including 52 experimental group and 52 control group which were training in Duzce city primary schools depended On National Education Ministry Before starting the education the test entitled 'Frostig Developmental Test Of Visual Perception' was developed by Marianne Frostig and studied of validity and reliability by Sokmen (1994) was used as pre-test and post-test. For education programme, the ambiance was disagned for purpose by specialists and trained during the 12 week of 2 days 60 min.per a week. The datas, according the research results were determined by SPSS packet programme and the education orientation of toys based on lifelong learning skills was stated that the education differentiated the 66 month aged of students' visual memory and percept mechanisms for positive rounded significantly.

Keywords: Lifelong learning, education, student, visual perception.

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## 1. INTRODUCTION

It has become mandatory that individuals should also gain such skills defined as conceptual skills as well as technical and humanitarian skills which people are to have in professional life, and they should renew themselves according to the conditions of the constantly changing world (Titrek, Zafer, Gunes, Sezen, 2013). Required human profile is changed in there is a constant change in the information society in all areas of life. This change and development concepts based in the experienced economic and technological necessitates a high level of skilled manpower almost every sector. Successful individuals of our era will be individuals can use information in intensely in solving a problem they encountered or in deciding on any topic in an environment that information flowing is so intense and fast. The successful individuals of information society must be individuals can learn and life-long by itself referring to information on everything (Polat & Odabas, 2012).

Lifelong learning (LLL) is a fact that to develop mechanisms of European societies for half a century, to embody education and professional development policies and they are trying to invent a focus on human resources (Toprak & Erdogan, 2012).

Lifelong learning is the fact that the change and development of qualification due to reasons personal or professional it was permanently specific and which is voluntary throughout the life (Ireland Ministry of Education and Science, 2000). Essentially lifelong learning is a fact that enforcement of the requirements of the employment market and occurring personal perseverance (Chapman & Asp, 1997a). Can be said that it has three main functions of lifelong learning (Akt: Toprak &Erdogan, 2012): (i) lifelong learning for economic development; (ii) lifelong learning for personal development and self-realization; (iii) lifelong learning for social inclusion and democratic understanding and action. Lifelong education is a general arrangement aimed at reconfigure existing system and all potential development of educational systems outside of formal education and it is a broad concept including formal, non-formal educational activities of all kinds (Gulec et al. 2012).

It is seen that it is entered to re-questioning process in education with various problems in the developed countries the education system and finally this process it was put forward the concept of lifelong learning for everyone in the 1980s. The difference between the educational concepts put forward previously and the concept of lifelong learning is highlight the adoption of an individual-centered approach, the emphasis on learning outside of school, changing the school role, reducing the weight of the state in education, and education should not be limited to a certain period of time (Gulec et al. 2012).

According to Kalen (1979), 'Learning to Be' or 'Faure' documents made by UNESCO in 1970 is a document which pioneered the concept of lifelong learning (Akkus, 2008). UNESCO describes the concept of lifelong learning in this report as follows:

- Spread outside the borders of school age the education services,
- Increase the interest shown as a means of enhancing the quality of life to education,
- Focus on the development of education connection with the needs of everyday life,
- Employees, their families and community members participation to make decisions regarding education,

- To emphasize the open-minded in the planning, management and goal setting,

In this context, structured approach to the development of lifelong learning skills providing the integration the educational process and the above-mentioned qualifications is contemplated it will lead to the acquisition at an early age.

The life-long learning skills of young students is expected to be effective on a lot of qualifications. One of these visual perception skills of students. Sensing; meaning the sensory information and it is a process of interpretation. This interpretation is made based partly objective facts, partly because we have our already our subjective knowledge (Senemoglu, 2005). The concept of visual perception literally means that recognition of visual stimuli, discrimination, grouping and the ability to interpret in relation to previous experiences (Yuksel, 2009).

World detection is performed by the interaction of all the senses. However, visual detection is the most effective and the most powerful in the our other senses. Visual perception is not only good eyesight. It takes place in the brain be with the visual stimuli review (Sarp, Turkoz, 2013).

Visual perception is the ability to interpret combining them with previous experience and recognition of visual stimuli, discrimination (Kulp et al., 2004). Children through visual detection capabilities create mental structures with sensations from the environment, they are reorganized that the changing structure of the mind each new stimulus (Koc, 2002). Also, Harber (1979), stated that they children need to learn look and see and children discovered that objects, how they see the environment, they will differentiate, they detect with visual perception training. When was examined the literature, it is seen that the positive impact on the students highlighted and the importance of visual perception while being designed interactive instructional practices in many studies (Gulbahar, 2005; Graham 2008; Weiskopf, 2004 ).

Between features of the individuals lifelong learners Which is based on interactive environment it is seen that including have the desire to learn, take responsibility for their own learning, to have effective communication skills, to develop itself, have higher-order thinking skills and their research skills features and so on. (Adams 2007; Cornford 2002). The opinion can be supported by lifelong learning activities of the visual perception that is one of these high-level skills has emerged in recent years.

As mentioned by Budak (2009) and Knapper and Cropley (2000) the link between visual perception and lifelong learning strategies reveals that processes of the 'by itself learning', 'creativity in self-expression with artistic way and sensitivity' 'information and understanding and use of the information technology especially Located between the key competences of lifelong learning. Departing from here in study it was aimed that whether the effect the education they have received with improved toys towards lifelong learning skills on visual perception skills of students and to provide recommendations related to the subject determining what effect this would be at a level.

## 2. METHOD

In this section, model of study, universe and sampling, data collection instruments used in research, content and implementation of the educational program, collection of data, analysis of the collected data and statistical methods used in the analysis and techniques are explained.

### *Universe and sample*

The universe of the investigation constitutes that 66 monthly first year students whose are undergoing training in the primary school connected to the Ministry of Education located in Duzce in the 2015-2016 academic year. The sample of the study constitutes 104 pieces 66 monthly first year students whose are including 52 experimental group and 52 control group obtained from two primary school connected to the Ministry of Education located in Duzce.

### *Model of research*

Research is planned in experimental models with pretest - education - post test control group.

Experimental operation process of research takes place in three stages:

- 1- It is a stage that preparations were made and applying the 'Frostig Developmental Test of Visual Perception' to both creating the experimental and control groups groups before and after the education.
- 2- It is a stage that applying with the completion of preparations towards the relevant training programs and with for 12 weeks of program to students whose located in the experimental group.
- 3- Implementation the 'Frostig Developmental Test of Visual Perception' is located for the measurement of visual perception mechanism to experimental and control groups after a week of the end of the program.

While was being created the experimental and control groups of the study it has been paying attention that to show normal development the students whose in both groups, family structures to be equal and previously they haven't participated in any training program to lifelong learning. Students were selected with random sampling method from designated schools.

### **Data collection tools**

*Personal Information Form* and *Frosting Visual Perception Test* was used as pretest and post test created by researchers in order to collect data in this study. Frosting Visual Perception Test was applied to all students whose participated in this study before and after the Language Education Program Based Concept Map.

'Personal Information Form' has been created to obtain demographic characteristics of the data by researchers. This form will include information such as students' age, gender, family structure, socio-economic and cultural levels and time to school attendance of students.

### **Frosting developmental test of visual perception**

Test was developed as a result of long years of studies with children with learning difficulties by Marianne Frostig in 1961 subsequently it have been reviewed twice. Frostig Developmental Test Of Visual Perception has been standardized as a result of studies that made with 2116 normal children whose between 3-9 years of age. Since the test was developed that it carries feature to be the most frequently used tests in research involving the evaluation of visual perception skills. Dr. M.Frostig who observed that they show lack in activities involving visual perception of children whose showing learning disability she has developed the visual perception test based on this hypothesis and clinical experience.

Frostig visual perception test and program and the study made by Talkington (1968), was applied to children whose have on the highest level in mental disabilities. Five times a week "Frosting Visual Perception Training Program" has been given to the experimental group with three months. When the pre-test - final test scores were evaluated it was found to be significant progress in the experimental group. She argued that it is beneficial for children who have mental disabilities of visual perception education.

- Test was applied to children whose up to age 4.0-7.11 shaped to individual and group. Norms are ready for this ages. To mentally handicapped children are also applicable depending on the status of the child.

- Frosting test is applied individually better. Practitioner can better observed that whether understand the instructions of the child's individual practice. Can not have needing more details and repeats. The students were informed previously explained rules that are required at each subtest and prior to the test.

- The usage of Frostig test takes 60 minutes together preparation. Individual application lasts 30-45 minutes.

- If applied to the test group for mentally handicapped children, the group should certainly be considered to be small.

- In performing this test, table should be empty, only to be found in materials to be used. Practitioner should give frequent breaks to test and he should rest to the child. Have a break to application at each subtest during the test because their distractibility can be easily of educable mental retarded children.

The Frostig Visual Perception Test was developed by Marianne Frostig is a test for the measurement towards five distinct areas of the visual perception. Frostig Visual Perception Test consists of five subtests. M. Frostig has examined the visual perception in five areas (Kephart, 1978):

- 1- Eye - motor coordination (EMC)
- 2- Figure-ground perception (FGP)
- 3- Figure stability (FS)
- 4- Detecting the location and the venue (DLV)
- 5- The perception of location relationships (PLR)

Each of these areas were formed so that it is a part of the test.

1- Eye - Motor Coordination

It is required that they draw the straight, curve, arcuate, angled lines and merging certain points by a straight line from children (Mangir ve Cagatay, 1990).

2- Figure- Ground Perception

Some figures are given as intricate patterns in this section. It is required to distinguish a certain figures within this complex shapes from children.

3- Figure Stability

It is expected that the presence of all of the equivalents of the desired shape within the various geometric shapes available in different sizes (Mangir ve Cagatay, 1987).

4- Detecting the Location and The Venue

It includes that could decomposition of the figures presented in an array in the cases which inverted (reversal) and rotated (rotation). It is required that it finding the spouse of the same shape in the venue it is rotated in various positions within the similars (Sagol, 1998).

#### 5- The Perception of Location Relationships

It is expected that to copy the same figure the shown example to the areas where particular points in equal intervals.

#### ***Implementation of the test***

Test can be applied individually or in groups using standard guidelines. Marianne Frostig emphasized that should be implemented the test as individually to disabled children. The test application time is between 45-60 minutes. This period may extend to 60 minutes with the given intervals in the test implementation and preparation of the test. Test is applied to normal children in a small groups and it is applied to disabled children in individual (Mangir & Cagatay, 1990).

#### ***The reliability and validity of the test***

Reliability: Test-retest reliability were examined by Frostig, Lefefer and Whittlesey (1961). Coefficient of the test-retest reliability was determined as 0.98 based on P.Q. Validity: The correlation between results of Frostig test and teacher ratings about on compliance in the classroom was found as 0.441, the correlation between motor coordination was found as 0.497. It was analyzed the relationship between the I.Q obtained from the verbal section of WISC test and Frostig Visual Perception Test; were obtained correlation between subtest the Eye-Motor Coordination of the Frostig Visual Perception Test with I.Q is 0.60; between subtest the Figure-Ground Separation is 0.72; between subtest the Figure Stability is 0.53; between subtest the Detecting the Location and The Venue is 0.50; between subtest the The Perception of Location Relationships is 0.75 level (Sagol, 1998).

Frostig Visual Perception Test reliability study of the Turkish form in Turkey have made by Sokmen (1994), and he found the results of the determination coefficient significant at the 0.01 level with test-retest method. Frostig Visual Perception Test used as a measuring tool for the visual perception of preschoolers and elementary school children in first class. It can be used as clinical assessment tool for older children with learning disabilities. Also, it is stated that the test is useful in assessment visual perception skills of adults have undergone trauma or other brain injury (Sokmen, 1994).

#### ***Scoring the test***

Standard scoring criterias are available belonging the area of Frostig Developmental Test Of Visual Perception. There is a standard provision points of the raw scores received from each sub area of the child. The standard score is derived from the percentage table for developed the Frostig Developmental Test Of Visual Perception. Standard score is score in the column corresponding to the age of the child (Tugrul, Aral, Erkan & Etikan, 2001: 70).

16 question is located in the Eye - motor subtest and a maximum of 30 score can be obtained from this section. Scores ranged from 2 to 0 points. The ninth question is worth 1 point. When the children draw the desired shape 2 points is given, When the child's fault is mildly 1 point is given, If the child's fault is a high level 0 points is given. Locate and draw to child is required that 4 circle and 5 square in the first section and 2 circle and 6 square in the second section. Each finds and draw the right figure gets the 1 point. Unlike other chapters in this section, false drawings will be scored as -1. Instead of drawing the outside of the right shape through the draw, painting the inside are not prevent the receiving points (Ferah, 1996).

It is expected to find the child that 4 objects with the same initial and which differs from the original 4 objects in the subtests in the field of detection of the position with the venue. 1 point for each object that receives the correct mark. The total number of score is 8. If the child mark right shape in this area or if he marking the wrong and leave blank the correct he gets 1 point. The rate of detection of spatial relations can be get a maximum of 8 score and each work is scored as 0 or 1. No matter the child's proper drawing in this area, it is important to draw the line in examples shown sections. Only he gets point in the first section if he draws the other line then passed over the sample. Drawings made between the wrong spots and incorrect figures gets 0 points. There are objective scoring criteria of the Frostig visual perception test. One, three, four and fifth subtest scores can be taken at 0,1 and 2. The second subtest items scored as 0, 1, 2, 3, 4 or 5. These are raw scores. The total score is obtained for each subtest collected all raw scores taken in the subtest. In the third subtest raw scores of correct and incorrect responses are collected and the total raw score for this subtest is obtained by subtracting the wrong answers from the correct answers. If result is negative raw scores of these subtests received as (0). The total raw score was obtained collecting raw scores from each subtest in the Frostig Visual Perception Test. In total raw score an overall score of visual perception in children may be obtained converted to a standard score from the table (Sagol, 1998).

### ***Education that given with improved toys towards lifelong learning skills***

Educational program applied to the experimental group was held in twelve sessions in the form of 60-minute sessions two days a week. Sessions are structured for key competences of lifelong learning skills. These key competencies that within content according to the information obtained from Project of Strengthening Vocational Education and Training System [SVET] 2007 is shaped:

- Orientation to profession
- Lisbon Strategy
- Innovation
- Personal consultation
- Adjustment the learning to daily living

The training process is organized according to all these activities were carried out with the active participation of students. The content of lifelong learning activities in the literature and researches that are done with this training was examined before the training program wasn't developed. Programs was applied same time by two educational science specialist and psychometric measurement expert and it has tried to provide the necessary objectivity in order to reduce the effect of many variables to students whose located in the experimental group in the classroom environment every week.

**Table 1.** Content of the training programme

<b>Lifelong Learning Key Competencies</b>	<b>Program Activities</b>
Orientation to profession	Each profession-specific toys are located in this area and this is the section where belong to subject of animation-themed toys.
Lisbon Strategy	In this theme including the foresight of making more investment in human resources, toys and games are the section which introduces the requirements of all kinds of students.
Innovation	Issues that introducing the new global innovation-themed toys and using the creative ideas of them were processed in education and training.
Personal consultation	This is the section where so as to will allow guidance themselves of students including labyrinths, personal activity and the fiction toys.
Adjustment the learning to daily living	The section is containing the process to continue and playing the activities associated with toys and toys in the home, school, cinema, picnic, in the playground, cafe.

### **Analysing the data**

The data in the study were examined according to norms located in the study. Firstly, to identify the existing developmental level was taken as a basis when evaluating the data of test. Sample applications were made before the test and averages are calculated by researchers. Each of the tests were applied approximately the same time to each student, the necessary objectivity has tried to provide and not made routing to students to minimize the effect of different variables in the same physical environment by two experts in psychometric measurement. Both two researchers whose scale evaluating has been unaware of the consequences of each other and after completion of the evaluation of all students written and oral data were analyzed entered into the computer. Data collection process has been terminated bringing together the test questions answered by students. Also as a part of the contiguity principle, to be balanced the distance among processes the pretest - training - final test and taken under control the effects of control disruptive variables were intended.

### **3. RESULTS AND DISCUSSION**

In this section is devoted the findings obtained from as a result of statistical analysis the data collected sought to answer the research questions and to comment on the findings.

**Table 2:** Results of the independent group t-test of pre-test score and post test scores obtained from the test of FDVP of the students whose they located in the experimental group

	<b>Experiment Group</b>	<b>N</b>	<b><math>\bar{X}</math></b>	<b>ss</b>	<b>sd</b>	<b>t</b>	<b>p</b>
<b>Tests</b>	<b>Pre Test</b>	52	15,67	3,41		-0,43	P> .001
	<b>Post Test</b>	52	21,87	3,95			

p<0,5 level is significant.

Comparison of pre-test score and final test scores obtained from the test of FDVP of The Students whose they located in the experimental group are located in Table 2. It is seen that the average score of the final test of the experimental group (21.87) which is significantly higher than the average pre-test score (15.67) ( $p < .05$ ). Accordingly, it can be said that the given educational process with improved toys towards lifelong learning skills has a positive effect on mechanisms of visual perception of students. Saglam, Ozudogru and Ciray (2011), stated that for enhancing the education quality and raising the teachers' qualification there would be more studies based on lifelong learning in Turkey.

**Table 3:** Results of the independent group t-test of pre-test and post test scores obtained from test of FDVP of the students whose they located in the experimental group

		Control Group	N	$\bar{X}$	ss	sd	t	p
Tests	Pre Test		52	16,09	3,55		-0,49	P< .375
	Post Test		52	16,42	3,48			

$p > 0,5$  level is significant.

When Table 3 was examined it is seen that the average score of pre-test score (16.09) amount is higher than the average score of final test control group (16.42) but in the statistical analysis performed this difference was not statistically significant ( $p < .05$ ). The above results depicted in Table 2 and Table 3 indicate an increase in success only after application to the experimental groups.

**Table 4:** Results of the independent group t-test of pre-test scores obtained from test of FDVP of the students whose they located in the experimental and control groups

		Group	N	$\bar{X}$	ss	sd	t	p
Groups	Experiment		52	15,67	3,41		-0,79	P< .097
	Control		52	16,09	2,05			

$p > 0,5$  level is significant.

In Table 4, it appears to be quite close together that the average of the FDVP Test Scores of the students of experiment (15,67) and control (16,09) groups. In the results of T-test (-0.79) was performed to examine whether there is a statistically significant difference showed no significant difference. In terms of investigation the obtained results demonstrate that the groups are equal in terms of visual perception skills before starting the experimental application.

**Table 5:** Results of the dependent group t-test of post test scores obtained from test of FDVP of the students whose they located in the experimental and control groups

		Group	N	$\bar{X}$	ss	sd	t	p
Groups	Experiment		52	21,87	3,95		3,65	P>.007
	Control		52	16,42	3,48			

$p < 0,5$  level is significant.

When was examined the results in Table 5, the average of post test score of the students whose located in the experimental group obtained from the FDVP Test is (21,87), seems to be higher than the average of final test score of the students whose located in the control group (16,42) . In this case, there is a significant difference between the average scores of the visual perceptual skills of students whose passing the given educational process with improved toys towards lifelong learning skills and the average score of the control group of students whose aren't involved in this educational process ( $t = 3,65, p < 0.05$ ). Accordingly, it can be said that the given educational process with improved toys towards lifelong learning skills has a positive effect on visual

perception skills of students located within the scope of research. Similarly it is stated most of study, lifelong learning is supplement incomes for individuals' self development skills for entirely of life subjects so with this consideration all levels of education systems must contain lifelong learning activities (Budak, 2009; Sağlam, Ozudogru ve Ciray, 2011; Chapman ve Aspin, 1997b).

#### 4. CONCLUSION

In this research, it is determined the effect of education which consist toys designed lifelong learning skills oriented on 66 month aged first class of students' visual scope abilities. In this context the research will be guide for next studies due to being the first study about this subject. The study is a turning point because of being very rare research made in area about relationship with lifelong learning and visual perception skills. In this study, there found a significantly distinction as statistically betwixt the experimental group which was trained lifelong learning education programme and the control group which wasn't trained any lifelong education programme. This finding is so conspicuous because of lifelong learning area is a new education paradigm yet. For this finding, the education programme which orientation of toys based on lifelong learning skills was put forward that the education differentiated the 66 month aged of first class of students' visual memory and percept mechanisms for positive rounded significantly.

The research discuss the lifelong learning about the clue competency of Orientation of occupation, Strateji of Lizbon, Innivative, Self consultant and Integration the learning on daily life. So according to results, this competencies of lifelong learning effect the first class of students' visual perception mechanisms for positive direction.

Similarly most of researches express that lifelong learning effects the childrens' configured school education therefore also the students perceptual skills (Simmons, McDonald, 2009; Koper & Verjans, 2008). Lifelong learning includes all of developmental scope in individuals. So it may effect the primary students' perceptual and visual aspect (Hitendra, Lynn and Lewis 2008; Cassin 2002; Lu Ann & Muray 2005; Titmus, 1999). Educational recommendations and policies for "developing countries" applied and emphasized a restricted notion of basic education and basic learning needs, and promise even access to start at primary school (Medel, 2002). The researchers said that we need individuals, groups, and organizations to personally engage in and experience these new forms - risk takers who use their creativity and imagination to explore alternative ways of learning (Rausch, 2003; Fischer, 2000).

The next studies can determine to reveal how students' lifelong learning competences can affect the varieties of students' other skills or suitabilities with studies in depth. For this conclusions the study reveal this suggestions:

- Lifelong learning needs to promote effective educational opportunities in the all learning process through which teachers or educationalist pass including all lesson activities, home, home work, playing courts, cafes and the larger political community. So the teachers and educationalists must illuminated about this factors.
- Lifelong learning needs progress and a deeper comprehensive of new theories about it, innovative systems, applications, and assessments. The systems can conduct for students' visual perceptions.
- The specialists, teachers and parents create new intellectual subjects, new physical spaces, new visual spaces and new organizational forms to make lifelong learning an important part of students' visual skills.
- The fundamental student activities must be arranged with considering the lifelong learning key context.
- In some of situations or class atmosphere a lifelong learning activities is more important than training and going on education, the specialists must know this especially conditional perspectives and design the class and non-class activities with consider lifelong learning.

In conclusion, it would be efficacious that vocational schools should prepare their program activities in a qualified way that provide students develop lifelong learning skills and plan the teaching process accordingly.

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# Methodology of theoretical physics in economics: non-relativistic physics as rediscovered approach to economics

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## Abstract

One of the necessary outcomes of the application of physical-mathematical methods in economics has been the gradual creation of conditions in basic and applied economic research during the course of the twentieth century, which at the turn of the millennium gave rise to physical economics. 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. This article is motivated by research on the consilient use of the methodologies of theoretical physics in economics and social physics. The article examines one possible area of consilience in theoretical physics by deriving Reilly's law of retail gravitation in a direct manner from Newton's law of gravitation. This relationship is also the basic relationship for deriving the law of demographic gravitation directly from Newton's law of gravitation and Newton's laws of motion (law of inertia, law of force, law of action and reaction). Contributions of the Czech School of Economics to the field of physical economics are also documented.

Key Words: Consilience, differential equation, law of retail gravitation, Newton's law of gravitation, Newton's laws of motion

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## 1. INTRODUCTION

In 1687 Newton published his work "*Philosophiae naturalis principia mathematica*" where he stated three principles or laws of motion and the universal law of gravitation.

1. Corpus omne perserverare in statu quo quiescendi vel movendi uniformiter in directum, nisi quatenus a viribus impressis cogitur statum illum mutare (Newton, 1687).

Motte's translation into English: Law 1. Every body continues in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by forces impressed upon it (Newton, 1952, 1960).

2. Mutationem motus proportionalem esse vi motrici impressae et fieri secundum lineam rectam qua vis illa imprimitur (Newton, 1687).

Motte's translation into English: Law 2. The change of motion is proportional to the motive force impressed; and is made in the direction of the right line in which that force is impressed (Newton, 1952, 1960).

3. Actioni contrariam semper et aequalem esse reactionem: sive corporum duorum actiones in se mutuo semper esse aequales et in partes contrarias dirigi (Newton, 1687).

Motte's translation into English: Law 3. To every action there is always opposed an equal reaction: or, the mutual actions of two bodies upon each other are always equal, and directed to contrary parts (Newton, 1952, 1960).

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The Newton's laws of motion can be expressed in the modern language of physics as follows (Yavorsky and Detlaf, 1972):

1. Newton's first law of motion (the law of inertia) states: Every material point persists in the state of rest or uniform motion in a straight line until the actions of other bodies compel it to change that state; This law is called the law of inertia, and the motion of a particle, free of external action, is called inertial motion.

2. Newton's second law of motion (the law of force) may be stated as follows: The first time derivative of the momentum of a particle is equal to the force acting on it;

Thus

$$\frac{d\vec{p}}{dt} = \vec{F} \quad \text{or} \quad \frac{d}{dt}(m\vec{v}) = \vec{F}. \quad (1)$$

The vector  $\vec{F} \cdot dt$  is called an impulse of force  $\vec{F}$  acting over time  $dt$ . In Newton's formulation, the 2<sup>nd</sup> law is also applicable to the mechanics of bodies having variable mass, thus in relativistic mechanics.

Newton's second law of motion can also be stated in the form: an elementary change in the momentum of a particle is equal to the elementary impulse of the force acting on it, i.e.

$$d(m\vec{v}) = \vec{F}dt. \quad (2)$$

However, since  $m = const.$ , the acceleration vector  $\vec{a}$  is determined by the equation

$$\vec{a} = \frac{d\vec{v}}{dt} = \frac{\vec{F}}{m}. \quad (3)$$

3. Newton's third law of motion (law of interaction): The action of two particles on each other are equal in magnitude and opposite in sense;

Thus

$$\vec{F}_{12} = -\vec{F}_{21}, \quad (4)$$

where  $\vec{F}_{12}$  is force acting on the 1-st particle and exerted by the 2-nd particle and  $\vec{F}_{21}$  is force acting on the 2-nd particle and exerted by the 1-st particle.

According to (3) force  $\vec{F}$  is directly proportional to the product of the mass  $m$  and acceleration  $\vec{a}$

$$\vec{F} = const \cdot m\vec{a}. \quad (5)$$

By selecting suitable units, it is possible to make the constant of proportionality,  $const.$ , equal to one.

The relationship which describes possible movement of a body in space is called an equation of motion. We understand a body to be a body or particle or possibly a set of particles. Space is understood to be the forces and fields of force acting upon the body and the mechanical relationships which limit its motion. By solving the equation of motion we obtain the position of the body at any given moment. In classical mechanics the solution describes the trajectory of the body. In quantum mechanics it is the result of a time-varying wave function (Karjakin, Bystrov and Kirejev, 1972).

In their most general form, equations of motion are typically differential equations of the second order, where we take the derivation of time. The solution is a vector function describing the position of the body in relation to time  $\vec{r} = \vec{r}(t)$ , which is an expression of the trajectory of the end point of the vector radius (Kohlmann, 1960). If  $m = const.$ , the basic dynamics equation takes the form

$$\vec{F} = m\vec{a} = m \frac{d\vec{v}}{dt} = m \frac{d^2\vec{r}}{dt^2}, \quad (6)$$

resultant force  $\vec{F}$  and acceleration  $\vec{a}$  of the rigid body are vectors in the same direction. We call this a motion equation. For force we substitute the functions of time, position or velocity, i.e. in general  $\vec{F} = \vec{F}(\vec{r}, \vec{v}, t)$ .

## 2. AIMS

With respect to consilience in economics and physics as well as social sciences and physics, physics is presented with the question of whether it is possible to derive Reilly's law of retail gravitation from Newton's law of gravitation. In this paper we will attempt to provide a brief answer to this question.

## 3. METHOD

The universal law of gravitation formulated by Isaac Newton (Newton, 1687, 1952, 1960) can be expressed in the modern language of physics as: „every body of the universe attracts every other body towards its centre of gravity, with a force, which is proportional to the product of the gravitational masses of the bodies and inversely proportional to the square of the distance between them“. For mass points at a distance  $r$  with gravitational masses  $M_1$  and  $M_2$ , the law of universal gravitation is expressed in the form

$$F_g = \kappa \frac{M_1 M_2}{r^2}, \quad (7)$$

where  $F_g$  is the value of the force of attraction between the two mass points. The constant of proportionality  $\kappa$  is the universal gravitational constant. The value of the universal gravitational constant is as follows:  $\kappa = 6.67408 (31) \cdot 10^{-11} m^3 kg^{-1} s^{-2}$ .

Prof. W. J. Reilly called his book *The Law of Retail Gravitation*. The word gravitation is derived from the Latin *gravitatem*, i.e. mass, gravity, and the law of retail gravitation states that the amount of retail trade that a city attracts is dependent on the number of inhabitants of that city and the distance of the town from which the trade is drawn. This correlates directly with Newton's Law of Gravity. Let us attempt to explain the significance of this claim using a model. Let us assume that on a Euclidean plane there are two cities with different populations. The number of inhabitants  $N_B$  of city  $B$  is much smaller than the number of inhabitants  $N_A$  of city  $A$ . Let  $r_{AB}$  be the shortest distance between the borders of the two cities. The large city  $A$  attracts retail trade from town  $B$  to the territory of the city  $A$ . The amount of retail trade attracted from town  $B$  to city  $A$  is directly proportional to the product  $N_B \cdot N_A$  of the number of inhabitants of both cities and inversely proportional to the square of the distance between the cities  $r_{AB}$ . That is why Reilly's law is called "law of retail gravitation".

In the United States in autumn of 1927, Prof. Reilly began a preliminary study of retail relationships that exist between different-sized cities and towns in the State of Texas. One of the basic goals of this study was to quantify the relocation of retail activities from areas outside a particular city to inside that city. One of the study's findings was that the number of loans taken out by long-term economically active adult inhabitants from outside a city decreased inversely to the

square of increasing distance from that large city and grew in direct proportion with the number of inhabitants of the large city (Reilly, 1931).

#### 4. FINDINGS

Everyone knows two qualitative laws which describe retail flow from smaller cities and towns to larger cities. The first law states that, under similar conditions, the larger a city is the greater external retail trade it attracts (Reilly, 1931, p. 7). The second law states that a large city attracts more retail trade from closer towns than from more distant towns (Reilly, 1931, p. 7).

Let us assume that long-term economically active adult inhabitants of the attracting large city have a dominant influence on attracting external retail trade to the large city. We will divide the long-term economically active adult inhabitants of the city into two groups. The first group consists of inhabitants who are economically active in the market as passive consumers and only occasionally share their experience regarding certain commodities with other consumers. Only by sharing their experience with commodities with other inhabitants do they affect the draw of retail trade to the large city, but they are less influential than the second group. The second group consists of adult inhabitants who in addition to passive participation are also active participants in the market exchange. This means that every member of this group of inhabitants intentionally maximizes his/her benefit from the exchange of goods on the market, both with respect to the quality and quantity of goods offered. This active market participation of the second group of inhabitants attracts the majority of retail activity to the large city (e.g. through the number of business loans, expressed in *c.u.* (currency units); targeted advertising in newspapers, which is quantitatively characterized by costs for advertising and distribution expressed in *c.u.* etc.).

Let there be two separate self-governing cities in Euclidean plane (cities *A* and *B*) with respective areas  $S_A$  and  $S_B$ . The number of long-term economically active adult inhabitants in city *A* at time *t* is  $N_A$ . The gravitational mass  $M_A$  of the given part of the population of city *A* at time *t* equals the sum gravitational masses  $m_{i,A}$  of the individual long-term economically active adult inhabitants, i.e.

$$M_A = \sum_{i=1}^{N_A} m_{i,A} . \quad (8)$$

Then  $M_A/N_A$  is the average gravitational mass  $\overline{m_A}$  of a single long-term economically active adult inhabitant in city *A* at time *t*;

$$\overline{m_A} = M_A / N_A = \left( \sum_{i=1}^{N_A} m_{i,A} \right) / N_A . \quad (9)$$

The gravitational mass of all long-term economically active adult inhabitants in city *A* at time *t* is expressed by the average gravitational mass of a single long-term economically active adult inhabitant and the relationship

$$M_A = \overline{m_A} N_A . \quad (10)$$

The average gravitational mass  $\overline{m_B}$  of a single long-term economically active adult inhabitant in city  $B$  at time  $t$  is expressed by the relationship

$$\overline{m_B} = M_B / N_B = \left( \sum_{i=1}^{N_B} m_{i,B} \right) / N_B, \quad (11)$$

where

$$M_B = \overline{m_B} N_B. \quad (12)$$

is the total gravitational mass of the number of long-term economically active adult inhabitants at the time  $t$  in city  $B$ ;  $N_B$  is the number of long-term economically active adult inhabitants in the city  $B$  at time  $t$ .

In the next step we will no longer consider the unequal density distribution of the long-term economically active adult inhabitants of cities  $A$  and  $B$ . For simplicity of expression allowing the application of Newtonian physics, we will consider cities  $A$  and  $B$  to be mass points with masses  $M_A$  and  $M_B$ . The magnitude of the gravitational force  $F_g$  between mass points  $A$  and  $B$  with gravitational masses  $M_A$  and  $M_B$  respectively is given by Newton's Law of Gravitation  $F_g = \kappa M_A M_B / r_{AB}^2$ , where  $\kappa = 6.67408 (31) \cdot 10^{-11} m^3 kg^{-1} s^{-2}$  is the gravitational constant and  $r_{AB}$  is the distance between mass points  $A$  and  $B$ .

The magnitude of intensity vector of gravitational field generated by the long-term economically active adult inhabitants of city  $B$  outside city  $B$  at a distance  $r_B$  from city  $B$  at time  $t$  is expressed by the relationship  $K(r_B) = \kappa M_B / r_B^2$ . If we express the magnitude of intensity vector of gravitational field of city  $B$  through the gravitational potential

$$\phi(r_B) = -\kappa M_B / r_B, \quad (13)$$

then the magnitude of the gravitational field intensity vector is determined by the relationship

$$K(r_B) = \left| \frac{d\phi(r_B)}{dr_B} \right| \cdot \left| \frac{\vec{r}_B}{r_B} \right| = \left| -\frac{\kappa M_B}{r_B^2} \right| \left| \frac{\vec{r}_B}{r_B} \right| = \frac{\kappa M_B}{r_B^2}, \quad (14)$$

and then

$$F_g(r_B) = M_A K(r_B). \quad (15)$$

Analogously, the magnitude of the gravitational field intensity vector exerted by long-term economically active adult inhabitants of city  $A$  outside city  $A$  at a distance  $r_A$  from city  $A$  at

time  $t$  is obtained by the relationship  $K(r_A) = \kappa M_A / r_A^2$ . If we express the magnitude of gravitational field intensity vector of city  $A$  through the gravitational potential

$$\phi(r_A) = -\kappa M_A / r_A, \quad (16)$$

then the magnitude of the gravitational field intensity vector is determined by the relationship

$$K(r_A) = \left| \frac{d\phi(r_A)}{dr_A} \right| \cdot \left| \frac{\vec{r}_A}{r_A} \right| = \left| -\frac{\kappa M_A}{r_A^2} \right| \left| \frac{\vec{r}_A}{r_A} \right| = \frac{\kappa M_A}{r_A^2}, \quad (17)$$

and then

$$F_g(r_A) = M_B K(r_A). \quad (18)$$

## 5. RESULTS AND DISCUSSION

### 5.1 Reilly's law of retail gravitation in the Euclidean plane

The relationships  $M_A = \overline{m}_A N_A$  and  $M_B = \overline{m}_B N_B$  expressing the gravitational mass of the numbers of long-term economically active adult inhabitants of cities  $A$  and  $B$  are then placed into Newton's law of gravitation. Following this step, Newton's law of gravitation now becomes

$$F_g = \kappa \frac{\overline{m}_A \overline{m}_B N_A N_B}{r_{AB}^2}. \quad (19)$$

If we assume that  $\overline{m}_A = \overline{m}_B = \overline{m}$ , then Newton's law of gravitation acquires a simpler form

$$F_g = \kappa \left(\overline{m}\right)^2 \frac{N_A N_B}{r_{AB}^2}. \quad (20)$$

From this last expression of Newton's law of gravitation we obtain the direct relationship

$$\frac{F_g}{\kappa \left(\overline{m}\right)^2} = \frac{N_A N_B}{r_{AB}^2}, \quad (21)$$

which is the methodological foundation of the vector theory of retail gravitation law and law of demographic gravitation (Zeithamer 2016).

## 5.2 The incorporation of theoretical physics into economics in the framework of the Czech School of Economics

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 (Zeithamer, 2012 a, 2012 b, 2013), i.e. in econophysics in broader sense, i.e. in physical economics. 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 and 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 Drožen's work (Drožen, 2008).

## 7. CONCLUSION

The main objective of this paper is to verify methods of deriving equations of motion for commodity pricing theory in a market with nearly perfect competition (Zeithamer 2014, 2015) in comparison to the equations of motion of non-relativistic mechanics based on Newton's laws of motion. A secondary objective of this paper is to outline the possible future development and use of equations derived from classical Newtonian mechanics in theoretical economics. From the analysis of Newton's Law of Gravitation, it is shown that the basic construction of three-dimensional vector theory of retail gravitation on a geoid (i.e. in space and time with respect to the cosmic space near Earth, i.e. in Space Economics) is a new direction for basic economic and physical research founded upon the causal mechanisms of change in the market value of commodities.

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# The determination of lifelong learning competence levels in social studies lesson

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## Abstract

Our changing and evolving world requires us to be individuals who are lifelong learners. Therefore, lifelong learning competencies have taken its place in the literature. The most influential institutions in the gaining of these qualifications are primary school, undoubtedly. Social Studies lesson which is basic course in primary school played an important role in gaining of these qualifications. The purpose of this study is to explain the level of lifelong learning competence in Social Studies Lesson Book taught in schools by the Ministry of Education in primary 1, 2 and 3 classes in the school year 2015-2016. Document review which is a qualitative research method was used in the research. According to study results, it was seen that while competence of "communication in the mother tongue" is given in textbooks mostly, the competence of "communication in foreign languages" is not specified in the textbooks. It was observed that the competence of "Learning to learn", "cultural awareness and expression", "personal initiative and entrepreneurship" are stated in all class levels. It was observed that "digital competence" which is one of the most important requirements of our age is given in the textbook, limitedly. In addition, "mathematical competence, basic competence in science and technology" and "social and civic competences" has increased since the second class.

Keywords: Lifelong Learning, Social Studies, Textbook, Competence.

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## 1. INTRODUCTION

Globalization which marks our age has affected education along with all the spheres of life. Significant changes and developments in technology and informatics gives rise to an understanding that education and training activities are carried out not only in the school but also in anytime and anywhere. Along with this understanding, lifelong learning concept has entered our lives. (Şişman, 2015). Development occurring in Technology reminded again that the only constant is change itself. As well as technologies, large-scale changes are happening in social, political, cultural and economic fields. As a result of these experienced changes, the quantity and quality of information varies, severely. Therefore, experienced era is the information age and communities of this age are the knowledge society. (Polat and Odabaş, 2008). Changes and developments in globalization, technology, identify and science determines the manpower profile needed by information society. Today's society always need individuals who always renewing and has lifelong learning skills. (Soran, Akkoyunlu and Kavak, 2006). As a result of the changes and developments in our age, information quickly loses its validity. Lifelong learning has an important role in gaining the skills and up to date information that individuals need. (Oral and Yazar, 2015).

There are a lot of definitions for Lifelong learning term. Ministry of Education defined the lifelong learning as "all kinds of learning activities that individual participate throughout the life in order to improve the knowledge, skills, interests and competencies with an approach related to personal, civic, social and employment. (MEB, 2014). Lifelong learning is all kinds of learning activities conducted throughout the life in order to increase the ability or qualification due to the personal, social or professional reasons and this concept is the need of today's information society. The aim of the lifelong learning term is to gaining the needed knowledge and skills which is required for individuals in the world of constant change. (Demirel, 2009). The concept of lifelong learning is separated from former educational concept by some aspects. Lifelong learning adopts an individual-centered approach. Also, it gives considerable importance to learning outside of school, reduces the weight of the state in education and changes the role of school. Lifelong emphasizes that the education should be limited to a certain period of time. (Güleç, Çelik and Demirhan, 2012).

According to Şişman (2015), lifelong learning is a learning approach which aims to integrate new and former information as long as update their already existing abilities and acquiring always new knowledge and skills. The basic purpose of this approach is to control the learning process by self-diagnosis. Also, it is expected from individual to gain self-learning ability. Lifelong learning covers the learning practices occurred during formal and informal educational process. This concept can be defined as completion of the parts which left as inadequate in formal education and the discovery of previously undiscovered talent in the next process or the discovery of previously undiscovered talent (Çilek, 2002; Akt. Gökşan, Uzundurukan and Keskin, 2009). Lifelong learning makes it compulsory for individuals to learn throughout a whole life. Lifelong learning concept for educational institutions means providing the information when and how much need of individuals.

According to the principle of lifelong learning, education is defined as system aiming to provide the training they need for all the individuals in that time and in appropriate conditions. (Demirel, 2015). Lifelong learning is all random or purposeful learning activities realized lifelong with the aim of development of knowledge and skills in terms of individual, social and work related aspect whether has an official attribute or not. (Edwards ve Usher, 2008).

Lifelong learning cannot just be limited with knowledge and skills acquired at school. The basic principle of this concept is that learning continues throughout lives and by purpose. This concept expresses the ability which provides individuals to acquire new knowledge and skills in personal and business life. In this context, the most important lifelong learning skills can be basic skills, thinking skills and personal characteristics. (Erdamar, 2011). According to the lifelong learning model, there are some attributes that individuals must have. Accordingly, individuals should take responsibility, should be open to innovation and adapt to these changes, and should be able to communicate effectively with the people around, be willing to obtain information, should be able to control their own learning process, should solve problems by benefiting from higher level thinking skills and offer solutions. Also, individuals should be able to use information technologies, realize him/herself and should contribute to the economy by providing employment in appropriate jobs in their own abilities. (Epeçan, 2013).

The European Union has identified the lifelong learning basic proficiency into eight main competence areas. These are; communication in the mother tongue, foreign language communication competence, basic competence in math and science and technology, digital competence, competence of learning to learn, social and civic competence, initiative taking and entrepreneurship competence, cultural awareness and expression competence (European Commission, 2006). Necessary information of skills, behaviors, attitudes and competencies for life and citizenship information for children in primary school in Turkey are being taught through Social Studies Lesson. (Sağlam, 2015). In the first years of primary school, students are faced with the true face of life outside the family. Experiences gained in this period provide the basis for the remaining life of individuals. The purpose of Social Studies Lesson is to provide for children to gain life experience and develop social aspects. Therefore, Social Studies Lesson is important in terms of transferring the gained information into life. (Bektaş, 2001). Understanding of education has differentiated in our changing and improving world and education has brought the individual characteristics to the fore, as a result. Within this context, Social Studies Lesson prepares individuals for changing and improving community life. Also, Social Studies Lesson set the foundation of individual for the development of appropriate behavior along with the requirements of age. (Belet, 1999). Social Studies Lesson has always been involved into primary education program developed form the founding of the Republic until today. In line with the changing needs and demands, lifelong learning has taken its place in the Social Studies Lessons curriculum with the training programs carried out in 2005. It is seen that skills takes place in this program such as critical and creative thinking, research, communication, problem solving, use of information technology, entrepreneurship, correct, good and effective use of Turkish, decision making show parallelism with lifelong learning skills. (Ministry of Education, 2009).

While these targeted skills are imparted to individuals in the program, one of the most useful sources is the textbooks. The textbooks are one of the most important tools in the teaching-learning process. While textbooks are providing great benefits forth both teachers and students, they also guides for education and training activities. (Semerci, 2004). There are various tools that can be used in Social Studies Lesson. Textbooks are the oldest and most common tolls among. Nowadays, textbooks diversified and differentiate in order to meet the age requirements. (Erol ve Kıroğlu, 2012).

When examining the literature related to the lifelong learning, there are lots of study (Adams, 2007; Akçay and Yıldırım, 2014; Aksoy, 2013; Aspin and Chapman, 2000; Berberoğlu, 2010; Beycioğlu and Konan, 2008; Coşkun and Demirel, 2012; Dehmel, 2006; Edwards and Usher, 2001; Epeçan, 2013; Evers, Rush and Berdrow, 1998; Kaya, 2014; Knapper, 2006; La Belle, 1982; Polat and Odabaş, 2008; Toprak and Erdoğan, 2012; Yavuz Konokman and Yanpar Yelken; 2014). Despite these studies, it is seen that there are limited studies regarding the level and place of lifelong learning qualifications in primary school level.

The purpose of this study is to explain the level of lifelong learning competence in Social Studies Lesson Book taught in schools by the Ministry of Education in primary 1, 2 and 3 classes in the school year 2015-2016. In accordance with this purpose, the following questions are tried to be answered.

1. What is the distribution of “Lifelong Learning Competences” located in the Studies Lesson Book in primary 1, 2 and 3 classes?
2. What is the distribution of “Lifelong Learning Competences” located in the Studies Lesson Book according to class level?

## 2. METHOD

Document review which is a qualitative research method was used in the research. Document review is performed as analysing the written materials which includes the necessary information about facts or events that targeted to research. (Yıldırım ve Şimşek, 2011). While performing document review, the used stages are; reaching documents, checking the authenticity, understanding of documents and analysis of data. The textbook were used as documents within the research context and Social Studies Lesson Book taught in schools by the Ministry of Education in primary 1, 2 and 3 classes in the school year 2015-2016 were examined.

### *Collection and analysis of data*

Lifelong learning competencies located in Social Studies Lesson textbooks were examined by using document analysis technique. In order to examine the text located in Social Studies Lesson Book of primary 1, 2 and 3 classes in terms of sufficiency, lifelong learning competencies identified by the European Union was taken as basis. (European Commission, 2006).

After examination of literature, these competencies and characteristics of these competencies were determined in accordance with the opinion of the experts. Also, word or phrases that are thought to explain relevant property as meaning even they not expressed the properties of lifelong learning competencies, directly. Frequency and percentage were used in data analysis. The frequency and percentage in findings expresses the text number that the lifelong learning skills are given in life science textbooks. The lifelong learning skills and properties representing these skills are given in Table-1.

**Table 1.** Properties Representing Lifelong Learning Competencies

<b>Lifelong Learning Competencies</b>	<b>Properties</b>
Communication in the mother tongue	Expressing thoughts, feelings and facts both orally and in written form, interact appropriately through language, oral and written communication.
Communication in Foreign Languages	In Foreign language; Expressing thoughts, feelings and facts both orally and in written form, interact appropriately through language, oral and written communication.
Math Competency, Basic Competency in Science and Technology	Problem solving, addition, subtraction, multiplication, division and detection rate in mental and written calculation, spatial and logical thinking, ability to use basic number skills,
Digital competence	Using the features of computers such as bringing knowledge, evaluation, storage, production, presentation and sharing, communication in networks open for collaboration via internet, information literacy, technology literacy, digital literacy, media literacy, internet and computer literacy.
Learning to learn	Pursuit for Learning, the effective time and information management, learning needs, put it on the previous learning, planning and measuring the learning, develop different learning strategies
Social and civic competences	Participation into social life effectively, recognition of social and political structures, participate in the working group
Personal Enterprise and Entrepreneurship	Risk-taking, creativity, planning, watch for an opportunity, put forward a new product, efficient use of time, critical thinking.
Cultural awareness and expression	Express themselves using Music, performing arts, literature and visual art.

The analysis of lifelong learning competencies located in the Social Studies Lesson was analysed independently by the investigators in line with the lifelong learning competencies and properties representing these competencies. For calculating the reliability of research, the reliability formula proposed by Miles and Huberman (1994) ( $\text{Reliability} = \frac{\text{Consensus}}{\text{Consensus} + \text{Dissidence}}$ ) was used. Reliability levels of each class level are calculated separately. Accordingly, the calculations are as follows;

For 1<sup>st</sup> class textbook = 0.89

For 2<sup>nd</sup> class textbook = 0.81

For 3<sup>rd</sup> class textbook = 0.85.

According to Miles and Huberman (1994), the acceptance criteria for reliability are  $0.70 >$ . Therefore, the obtained results are accepted as reliable.

## 3. FINDINGS

The finding obtained from data analysis was presented in accordance with two sub-object of research

### 3.1. Findings for the question of “What is the distribution of “lifelong learning competences” located in the studies lesson book in primary 1, 2 and 3 classes?

The frequency of “Lifelong Learning Competences” located in the Studies Lesson Book in primary 1, 2 and 3 classes are presented under this heading. The distributions of “Lifelong Learning Competences” in Studies Lesson Book in 1st Class based on themes are presented below Table-2.

**Table 2.** The distributions of “Lifelong Learning Competences” in Studies Lesson Book in 1st Class based on theme

Class / Competency	Communication in the mother tongue	Communication in Foreign Languages	Math Competency, Basic Competency in Science and Technology	Digital competence	Learning to learn	Social and civic competences	Personal Enterprise and Entrepreneurship	Cultural awareness and expression	Total f (%)
School Excitement	28	-	3	-	9	6	2	-	<b>48</b> <b>(47,5)</b>
My unique home	16	-	3	1	-	9	1	1	<b>31</b> <b>(30,7)</b>
Yesterday Today Tomorrow	13	-	4	-	-	2	-	3	<b>22</b> <b>(21,8)</b>
<b>Total f (%)</b>	<b>57</b> <b>(56,4)</b>	<b>-</b>	<b>10</b> <b>(9,9)</b>	<b>1</b> <b>(1,0)</b>	<b>9</b> <b>(8,9)</b>	<b>17</b> <b>(16,8)</b>	<b>3</b> <b>(3,0)</b>	<b>4</b> <b>(4,0)</b>	<b>101</b> <b>(100)</b>

It was seen from the above Table-2 that; In Studies Lesson Book in 1st Class; the competency of communication in the mother tongue is located more than any other qualification (57 text), Cultural awareness and expression (4 text), Personal Enterprise and Entrepreneurship (3 text), Digital competence (1 text) were referred less. And, no place is given to the communicative in a foreign language competence. Also, it was seen that more place is given for Lifelong Learning Competences, Studies Lesson Book in 1st Class, in “School Excitement” theme. (48 text)

The following examples can be given for the Lifelong Learning Competences, Studies Lesson Book in 1st Class ;

For communication in the mother tongue: “I will not say a bad word. Excuse me”

For Math Competency, Basic Competency in Science and Technology: Excellent. The taste was as good as smell. God bless your hands.”

For Digital competence: “I was doing research on the computer.”

For Learning to learn competency: I can ask questions to others to get information.”

For Social and civic competency: “If we didn’t work together, we couldn’t be successful.”

For Personal Enterprise and Entrepreneurship Competency: “Why do you take my rubber without permission?”

For Cultural awareness and expression Competency: "Yes, Atatürk launched to Samsun and started the the War of Independence and, gift to young people as feast.”

The distributions of “Lifelong Learning Competences” in Studies Lesson Book in 2nd Class based on themes are presented below Table-3.

**Table 3.** The distributions of “Lifelong Learning Competences” in Studies Lesson Book in 2<sup>nd</sup> Class based on theme

Class / Competency	Communication in the mother tongue	Communication in Foreign Languages	Math Competency, Basic Competency in Science and Technology	Digital competence	Learning to learn	Social and civic competences	Personal Enterprise and Entrepreneurship	Cultural awareness and expression	Total f (%)
School Excitement	20	-	2	-	7	7	4	1	<b>41</b> <b>(29,3)</b>
My unique home	21	-	8	-	4	15	2	7	<b>57</b> <b>(40,7)</b>
Yesterday Today Tomorrow	16	-	11	-	3	8	2	2	<b>42</b> <b>(30)</b>
<b>Total f (%)</b>	<b>57</b> <b>(40,7)</b>	<b>-</b>	<b>21</b> <b>(15)</b>	<b>-</b>	<b>14</b> <b>(10)</b>	<b>30</b> <b>(21,4)</b>	<b>8</b> <b>(5,7)</b>	<b>10</b> <b>(7,1)</b>	<b>140</b> <b>(100)</b>

It was seen from the above Table-3 that; In Studies Lesson Book in 2nd Class; the competency of communication in the mother tongue is located more than any other qualification (57 text), No place is given to the communicative in a foreign language competency and Digital competency.

Cultural awareness and expression (4 text), Personal Enterprise and Entrepreneurship (3 text), Digital competence (1 text) were referred less. And, no place is given to the communicative in a foreign language competence. Also, it was seen that more place is given for Lifelong Learning Competences, Studies Lesson Book in 1st Class, in “School Excitement” theme. (48 text). Also, it was seen that Math Competency, Basic Competency in Science and Technology and Social and Civic competences has increased compared to the first class.

The following examples can be given for the Lifelong Learning Competences, Studies Lesson Book in 2<sup>nd</sup> Class;

For communication in the mother tongue: “Hasan, today you looking at me very nervous. Can I do something to you?”

For Math Competency, Basic Competency in Science and Technology: “Hello Doğu, yes, it was almost a month.”

For Learning to learn competency: “I need to research my homework.”

For Social and Civic competency: “He thanks a lot to Elif for sharing her.”

For Personal Enterprise and Entrepreneurship Competency: “Two weeks later, he succeeded to save enough money to buy dolls pen.”

For Cultural Awareness and Expression Competency: “Selim and his family were discussing in order to determine the rules in the house.”

The distributions of “Lifelong Learning Competences” in Studies Lesson Book in 2nd Class based on themes are presented below Table-4.

**Table 4.** The distributions of “Lifelong Learning Competences” in Studies Lesson Book in 3<sup>rd</sup> Class based on theme

Class / Competency	Communication in the mother tongue	Communication in Foreign Languages	Math Competency, Basic Competency in Science and Technology	Digital competence	Learning to learn	Social and civic competences	Personal Enterprise and Entrepreneurship	Cultural awareness and expression	Total f (%)
School Excitement	27	-	1	1	7	14	2	1	53 (46,5)
My unique home	14	-	3	2	2	7	3	4	35 (30,7)
Yesterday	10	-	1	7	1	4	1	2	26 (22,8)
Today									
Tomorrow		-							
<b>Total f (%)</b>	<b>51 (44,7)</b>	<b>-</b>	<b>5 (4,4)</b>	<b>10 (8,8)</b>	<b>10 (8,8)</b>	<b>25 (21,9)</b>	<b>6 (5,3)</b>	<b>7 (6,1)</b>	<b>114 (100)</b>

It was seen from the above Table-4 that; In Studies Lesson Book in 1st Class; the competency of communication in the mother tongue is located more than any other qualification (51 text), No place is given to only the communicative in a foreign language competence. Also, social and civic competency is being mentioned more considering the class level and other competency. Math Competency, Basic Competency in Science and Technology (5 text) has increased compared to 2<sup>nd</sup> class and It is understood that the less place is given in 3<sup>rd</sup> class.

Also, it was seen that more place is given for Lifelong Learning Competences, Studies Lesson Book in 1st Class, in “School Excitement” theme (53 text) when compared to other two theme.

The following examples can be given for the Lifelong Learning Competences, Studies Lesson Book in 3<sup>rd</sup> Class; For communication in the mother tongue: “Good day, my dear Ali. I am your teacher. How are you?”

For Math Competency, Basic Competency in Science and Technology: “If you spend your money properly, you can buy the pencil box by yourself.”

For Digital Competency: “I’m making my research online.”

For Learning to learn competency: “Pilots, captains and people deals with nature activities use different methods and tools for finding way.”

For Social and Civic competency: “He thanks a lot to Elif for sharing her bicycle with him.”

For Personal Enterprise and Entrepreneurship Competency: "We use these rights without hurting others. This is all of us responsibility."

For Cultural Awareness and Expression Competency: "despite we are from different language, religion, colour and culture, we all shares the same planet."

### 3.2. Findings for the question of "what is the distribution of "lifelong learning competences" located in the studies lesson book according to class level?"

The distributions of "Lifelong Learning Competences" in Studies Lesson Book based on class level are presented below Table-5.

**Table 5.** The distributions of "Lifelong Learning Competences" in Studies Lesson Book (1-3) in 1st Class based on class level

Themes/ Competency	Communication in the mother tongue	Communication in Foreign Languages	Math Competency, Basic Competency in Science and Technology	Digital competence	Learning to learn	Social and civic competences	Personal Enterprise and Entrepreneurship	Cultural awareness and expression	Total f (%)
1 <sup>st</sup> Class	57	-	10	1	9	17	3	4	101 (28,5)
2 <sup>nd</sup> Class	57	-	21	-	14	30	8	10	140 (39,4)
3 <sup>rd</sup> Class	51	-	5	10	10	25	6	7	114 (32,1)
<b>Total f (%)</b>	<b>165 (46,5)</b>	-	<b>36 (10,1)</b>	<b>11 (3,1)</b>	<b>33 (9,3)</b>	<b>72 (20,3)</b>	<b>17 (4,8)</b>	<b>21 (5,9)</b>	<b>355 (100)</b>

It was seen from the above Table-5 that;

The most specified competency in Social Studies Lesson for all the class level themes is Communication in Mother Language (165 texts). The social and civic competency is seen in the entire class level theme, frequently. (72 texts) content for basic competence in Math Competency, Basic Competency in Science and Technology decrease in 3<sup>rd</sup> class level (36 texts) but content for digital competency increase in 3<sup>rd</sup> class (11 texts).

In Studies Lesson Book in 1st Class; the competency of communication in the mother tongue is located more than any other qualification (57 text), Cultural awareness and expression (4 text), Personal Enterprise and Entrepreneurship (3 text), Digital competence (1 text) were referred less. And, no place is given to the communicative in a foreign language competence. Also, it was seen that more place is given for Lifelong Learning Competences, Studies Lesson Book in 1st Class, in "School Excitement" theme. (48 text) Content related to Learning to Learn (33 texts), Cultural Awareness and expression (21), Personal Enterprise and Entrepreneurship (17 texts) are specified in all class level. Another notable issue is that communicative competence in a foreign language isn't take place in all class levels

## 4. RESULTS, DISCUSSION AND RECOMMENDATIONS

This study was carried out to determine the level of Lifelong Learning in Social Studies Lesson textbook. Based on the results obtained from findings, literature was discussed and proposals were submitted.

According to findings obtained from study, the most stated competencies are Communication in Mother Language and Social and Civic Competencies in the Social Studies Lesson textbooks. There is an undeniable fact that the most effective environment for a child is school after family where began to socialize. According to Bektaş (2009, s.3), children establish relationships with their peers especially people with not from family and interact with them. Therefore, it is thought that the level of Communication in Mother Language and Social and Civic Competencies in the Social Studies Lesson textbooks should be rich in this context and will help the individual to perceive the life as a whole in the elementary school level. Math Competency, Basic Competency in Science and Technology was stated in the Social Studies Lesson Textbook as follows; For 1<sup>st</sup> Class; 10 different texts; For 2<sup>nd</sup> Class; 21 different texts, For 3<sup>rd</sup> Class; 5 different texts.

The significant decrease in the text number of this competency in the 3<sup>rd</sup> class may be associated with science lessons inn 3<sup>rd</sup> Class. it is thought that the content of these competencies are given in the Science Lesson. Learning to Learn Competency which is the ability of the individuals to organize their own learning, using time and knowledge effectively (European Commission, 2006) are given in Social Studies Lesson textbook in 33

different texts. According to the study of Demirel (2009), Learning To Learn Competency is more emphasized in Social Studies program in elementary school. It is thought that this similarity between this results and research results is a factor that increases reliability. Personal Enterprise and Entrepreneurship Competency is given in 17 different texts in Social Studies Lesson textbooks. As a purpose form National Education Basic Law, it is stated to bring up individual who values personality and enterprise. According to Altan (2014; s.26); rapid change in almost every area of the world made it impossible for educational institutions to bring up individuals as armed with traditional job roles. Therefore, Personal Enterprise and Entrepreneurship Competency can be stated more in textbooks in the Social Studies Lesson which has an important role in elementary school. Digital Competency is given in 11 different texts in Social Studies Lesson textbooks. One of these texts is given in 1<sup>st</sup> Class textbook and 10 of them are given in 3<sup>rd</sup> Class textbooks. A new one is added to technological developments everyday as information exponentially increased now. Children are one of the fastest-adapt to technological innovation. Therefore, it is very imported to state Digital Competency in textbook in terms of bringing up individuals who adapt to technological innovation that age brought. Another striking result is that Communication in Foreign Language Competency is not given in Social Studies Lesson textbook. One of the reasons that may be cited as justification for this situation is the foreign language lesson given in elementary school. The foreign language education is started to apply in 2014-2015 school year in 2-3-and 4 Class as to be two hours in a week with the 4+4+4 education reform in Turkey. But even if the foreign language is given as lesson in school, it is important to adapt an interdisciplinary approach by determining a certain level for each lesson.

Consequently, it was detected that Communication in Mother Language, Social and Civic Competency, Math Competency, Basic Competency in Science and Technology and Learning to Learn is stated in textbook more than other competencies, digital competency, Personal Enterprise and Entrepreneurship Competency and competencies of expression is given less. Also, it was detected that Communication in Foreign Language is not given any in the textbooks. The importance of the individuals with lifelong learning competency is obvious in the changing world order with globalization. Accordingly, it seems very important to state/mention these competencies in Social Studies Lesson textbook in the elementary school level. Within this content and based on the results of research, the Communication in Foreign Language, digital competency, Personal Enterprise and Entrepreneurship Competency and cultural awareness and expression should be given more in Social Studies Lesson textbook.

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# Effect of gender, school type, school achievement level and grade level on learning styles of students<sup>1</sup>

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## Abstract

Learning style is one of the individual differences. In this study, after determining the learning styles of the students; their school type, school achievement level, gender and grade level were investigated to see whether these factors affected their learning styles. The research was carried out with a total of 472 secondary school students (231 female, 241 male students) from the 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grades of 6 state and 2 private schools in İzmit. The data were collected within the spring semester of 2013-2014 using the Kolb's Learning Style Inventory, which identifies four different learning styles including accommodator, diverger, converger and assimilator. According to the results of this study, the types of learning styles of 472 students were found as follows: the assimilator (27,8%), the converger (24.6%), the diverger (26.9%), and the accommodator (%20.8). Students' learning styles did not display difference according to gender, school achievement level and school type but students in different grade levels have different learning styles. As the grade level increases, in other words as the students get older, they leave the accommodator learning style and adopt assimilator learning style.

Keywords Secondary school students, learning style inventory, grade level.

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## NOTE

<sup>1</sup>This article was presented at the 1st International Conference on Lifelong Education and Leadership, in Olomouc, Czech on October 29-31, 2015.

## 1.INTRODUCTION

People are different from each other. The most easily observed individual properties which create these differences are physical properties such as height, weight, hair color, face shape and fingerprints, etc. Some of their properties such as having different life styles, perspectives and behaviors are more intrapersonal and complicated and cannot be easily observed or understood. According to Erden and Akman (2001), individual differences stem from the factors related to heredity, learnings and social environment. These factors are extremely difficult to distinguish from each other. Mostly, three of them affect the cognitive, affective and personality traits of individuals together in different ways. Due to this effect, individuals act and think in different ways and become successful at different levels.

The sense of psychology and education which started to be dominant after 1970s brought forward the requirement to take the different traits of individuals in consideration in learning and teaching processes. In this context, it started to be accepted that learning is an individual activity and there are individual differences in the learning process from acquiring the information to the organization of it and the meaning attributed to it. This means that no learner is the same as the other and each learner uses different methods and approaches in the learning process (Biçer 2010).

According to Steinfeld's (2000) quotation, the sense of "teaching teacher" is replaced with "learning student" and "student's learning" today. Each student is unique and has unique traits. Undoubtedly, the best education is possible with the provision of an educational environment appropriate to the unique traits of the individuals.

Cognitive styles, learning styles, gender, attitudes and intelligence are some of the individual differences. However, many researchers agree that learning style and cognitive style are distinctive and consistent coding, retention and behavior forms independent from the other individual differences (Kuzgun and Deryakulu 2006).

The concept of learning style was first introduced by Rita Dunn in 1960. Since then, it has been continuously studied on and several researches have been carried out. The purpose of these studies is to show that people acquire information and process, store, recall and learn it in different ways from each other. This issue penetrated into schools quite a long time after 1960s and found a field of application (Boydak 2001).

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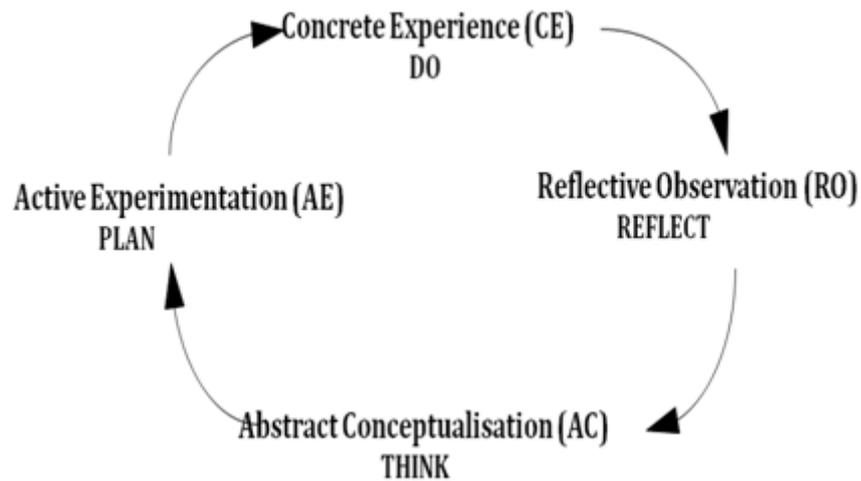
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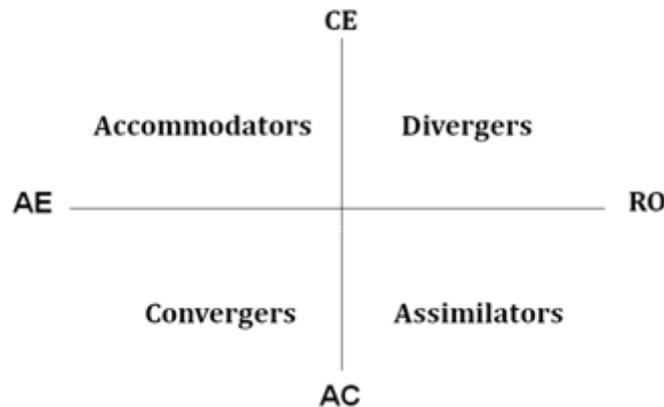
After 1980s, researches on learning styles increased considerably both in terms of quality and quantity (Babadoğan 1994).

Learning styles help to know the individuals and reveal individual differences. It reveals what we will learn, how we will learn, how much we will learn and how we will use what we have learnt. The learning style of an individual affects his behaviors in every moment of his life and changes his life (Boydak 2001).

The concept of learning style, which is the subject of our research, was explained in the experiential learning theory developed by Kolb (1984). According to this theory, thoughts are not stationary and change constantly depending on experiments. Learning is designed as “learning cycle” in the experiential learning theory as shown in Figure 1. Four basic learning styles are included in the learning cycle. These four different skills need to be used by the students in order to be effective. These constitute four successive stages. Kolb (1984) identified four different learning styles, which are converger, assimilator, diverger and accommodator learning styles, in line with concrete experience, reflective observation, abstract conceptualization and active experimentation skills (Kolb and Kolb 2005).



**Figure 1.** The experiential learning cycle (Kolb and Kolb 2005).



**Figure 2.** Four different learning styles of Kolb (1984)

An individual with diverging style has concrete experience and reflective observation as dominant learning abilities. People with this learning style are best at viewing concrete situations from many different points of view. An individual with an assimilating learning style has abstract conceptualization and reflective observation as dominant learning abilities. They are best at understanding a wide range of information and putting it into concise, logical form. An individual with a converging style has abstract conceptualization and active experimentation as dominant learning abilities. This people are best at finding practical uses for ideas and theories. They have the ability to solve problems and make decisions based on finding solutions to questions or

problems. An individual with an accommodating style has concrete experience and active experimentation as dominant learning abilities. People with this learning style have the ability to learn from primarily “hands-on” experience. They enjoy carrying out plans and involving themselves in new and challenging experiences (Kolb and Kolb 2005).

In the primary school curriculum including constant changes since 2004, the importance of especially individual differences in learning was emphasized and they were penetrated in all topic contents and activities. Learning style is one of these individual differences.

**Aims:**In this study, the learning styles of the students were determined and the effect of whether the school they attended was a state or private school, school achievement level, gender and grade level on their learning style was investigated.

**Problem and Sub Problems:**

Which factors affect the learning styles of secondary school students?

1. Does gender have an effect on the learning styles of students?
2. Do the learning styles of the 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grade primary school students differ?
3. Do the learning styles of the students studying in schools at different achievement levels differ?
4. Are the learning styles of the students attending private schools different from the students in state schools?

## 2.METHOD

Screening models are research approaches aiming to describe a situation existing in the past or today as it is (Karasar 1999). In the study, the cognitive and learning styles of the 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grade students were analyzed in terms of various variables and the current situation was tried to be described. In the light of these, the study was designed in the relational screening model.

The population of the study is the primary schools in İzmit district of Kocaeli province. For the sample of the study, 8 secondary schools, two of which are private and 6 of which are state schools, were selected according to the achievement level determined by taking 2013 placement test scores into account. 480 students including 120 students from each grade level was planned to be included in the sample. 8 students were excluded from evaluation as they did not fill in the survey completely. The findings were obtained through the evaluation of the data of 472 students. 48.9% (231) of the students were female and 51.1% (241) were male. The numbers of students included in the study according to the achievement and grade levels are given in Table 1.

**Table 1.** The distribution of students according to grade level and school success level

Class degree	f	%	School level	f	%
5	120	25,4	High	116	24,6
6	115	24,4	Middle	118	25,0
7	117	24,8	Low	113	23,9
8	120	25,4	Private school	125	26,5
<b>Total</b>	472	100,0	<b>Total</b>	472	100,0

In the study, the Learning Style Inventory developed by Kolb (1999) was used to determine the learning styles of the students and a Personal Information Form was used to determine the several variables included in the sub-problems.

The Learning Style Inventory prepared by David A. Kolb (1985) was adapted to Turkish and the reliability and validity studies of it were performed by Aşkar and Akkoyunlu (1993). The inventory consists of 12 items each with 4 choices. Each of the items in the inventory represents a learning style. As a result of the points given for each option, a score between 12 and 48 points is obtained (Kolb 1984; Kolb 1985). The Cronbach-Alpha reliability co-efficient of the inventory in the sample of this research, which was adapted to Turkish and the reliability and validity studies of it were performed by Aşkar and Akkoyunlu (1993), was found as .71 for Concrete Experience (CE), .72 for Reflective Observation (RO), .74 for Abstract Conceptualization (AC) and .71 for Active Experimentation (AE).

Which learning style (Converger, Assimilator, Diverger and Accommodator) the students had was found through the placement of the scores obtained from the Abstract Conceptualization-Concrete Experience and Active Experimentation-Reflective Observation stages of the learning cycle into the Kolb’s Learning Styles Diagram (Askar and Akkoyunlu 1993; Kolb 1984). The data collected in the study were analyzed with SPSS 16.0 software package

### 3.RESULTS AND DISCUSSION

The learning styles of the students were determined and whether gender, grade level, school achievement level and the school they attended being a state or private school affect their learning styles was investigated and the findings are statistically included in this section.

Firstly, the learning styles of the students were analyzed in terms of frequencies and percentages and the results are shown in Table 2. Table 3 shows the difference between the learning styles of female and male students.

**Table 2.** Frequency and percentage values of learning styles of students

Learning styles	f	%
Accommodators	98	20,8
Divergers	127	26,9
Convergers	116	24,6
Assimilators	131	27,8
<b>Total</b>	<b>472</b>	<b>100,0</b>

According to Table 2, Learning styles of 472 students were found to be of the type: the accommodator (%20.8), the diverger (26.9%), the converger (24.6%), and assimilator (27,8%).

**Table 3.** Determining of effect of gender on learning styles with Chi-Square Test..

Gender	N	Lerning Styles								Chi-Square Test		
		accommodator		diverger		converger		assimilator		X <sup>2</sup>	sd	p
		f	%	f	%	f	%	f	%			
Girl	231	51	22,1	54	23,4	66	28,6	60	26,0	8,41	6	,21
Boys	240	47	19,6	72	30,0	50	20,8	71	29,6			
Total	472	98	20,8	127	26,9	116	24,6	131	27,8			

Examining Table 3, it is seen that the learning styles of female students differ from male students, however this difference is not statistically significant ( $X^2_{(6)}=8,41$ ,  $p> .05$ ). In the literature, studies on whether gender is a determinant in learning styles carried out with teachers and teacher candidates have also been encountered (Özgür 2013; Cavaş 2010; Demir 2008; Kayes 2005).

Whether the grade level of the students affected their learning styles was analyzed with Chi square test and the findings are shown in Table 4.

**Table 4.** Determining of effect of grade level on learning styles with Chi-Square Test

Grade Level	N	Learning Styles								Chi-Square Test		
		accommodator		diverger		converger		assimilator		X <sup>2</sup>	sd	p
		f	%	f	%	f	%	f	%			
5	120	37	30,8	35	29,2	30	25,0	18	15,0	36,38	9	,00
6	115	28	24,3	36	31,3	27	23,5	24	20,9			
7	117	17	14,5	34	29,1	23	19,7	43	36,8			
8	120	16	13,3	22	18,3	36	30,0	46	38,3			
Total	472	98	20,8	127	26,9	116	24,6	131	27,8			

Examining Table 4, it is seen that the grade level of the students is a factor which affects their learning styles ( $X^2_{(9)}=36.38$ ,  $p< .01$ ). It is seen that as the grade level increases, in other words as the students get older, they leave the accommodator learning style and adopt assimilator learning style. The fact that the accommodator learning style consists of the combination of concrete experience and active experimentation learning styles, whereas the assimilator learning style consists of the combination of reflective observation and abstract conceptualism learning styles can be said to be effective in this result. It is seen that orientation from concrete experience to abstract conceptualization show parallelism with the age of the students.

It is possible to encounter similar and different results in the related literature. Durdukoca and Arıbaş (2010) stated that there was a significant difference in learning style preference according to grade level, whereas in a study Tuna (2008) carried out with teacher candidates studying in the Department of Art Teaching, he revealed

that there was no statistically significant difference between the learning styles of the students according to grade level.

Whether the learning styles of the students in schools at different achievement levels differed was investigated and the findings are shown in Table 6.

**Table 5.** Determining of effect of school achievement level on learning styles with Chi-Square Test

School achievement level	N	Learning Styles								Chi-Square Test		
		accommodator		diverger		converger		assimilator		X <sup>2</sup>	sd	p
		f	%	f	%	f	%	f	%			
High	116	25	21.6	25	21.6	38	32.8	28	24.1	5.91	6	.43
Middle	118	25	21.2	31	26.3	28	23.7	34	28.8			
Low	113	25	22.1	36	31.9	25	22.1	27	23.9			
Total	347	75	21.6	92	26.5	91	26.2	89	25.6			

**Table 6.** Determining of difference between private school and state school in each achievement level interms of learning styles.

School succes level	N	Learning Styles								Chi-Square Test		
		accommodator		diverger		converger		assimilator		X <sup>2</sup>	sd	p
		f	%	f	%	f	%	f	%			
High	116	25	21.6	25	21.6	38	32.8	28	24.1	10.09	9	.34
Middle	118	25	21.2	31	26.3	28	23.7	34	28.8			
Low	113	25	22.1	36	31.9	25	22.1	27	23.9			
Private	125	23	18.4	35	28.0	25	20.0	42	33.6			
Total	472	98	20.8	127	26.9	116	24.6	131	27.8			

According to Table 5, it was determined that there was no significant difference between the learning styles of the students studying in schools at different achievement levels ( $X^2_{(6)}=5.91, p>.05$ ). Whether there was a difference between the students of state schools and private schools at each achievement levels in terms of learning styles was investigated and no significant difference was found from Table 6 ( $X^2(9)=10.096, p>.05$ ). Achievement of schools is determined with the achievement of students. In this case, it can be said that neither achievement nor studying in state or private schools affects learning styles of the students.

#### 4. CONCLUSION AND SUGGESTIONS

In this study, the effect of the students' gender, grade level, school achievement level and studying in a state or private school on their learning style was investigated and the following results were obtained:

1. The learning styles of female students are not different from male students.
2. Students in different grade levels have different learning styles. As the grade level increases, in other words as the students get older, they leave the accommodator learning style and adopt assimilator learning style.
3. Neither achievement nor studying in state or private schools affects learning styles of the students.

This study is limited to the primary schools located in İzmit district of Kocaeli province and included in the sample. In further studies, researchers can study with schools in different regions and make comparisons.

Some environmental and social (economic situation of the family, social life, school environment, access to facilities) factors which affect the learning styles of children have been ignored in this study. Further studies taking these factors into consideration can be performed.

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# Disaster preparation: participant opinions for management of potential post-earthquake industrial emergency<sup>1</sup>

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## ABSTRACT

It is inevitable to experience disasters by the region we live in. However, it is quite important to foresee and manage the following chaos to occur. As in all over the world, scenarios which might occur after disasters are also planned in our country and various drills are carried out in this regard. In this study, a drill activity was organized for the management of potential post-earthquake industrial emergencies by the researchers within the scope of the 5<sup>th</sup> International Earthquake Symposium. A total of 18 people including engineers/technical staff employed in various industrial institutions in Kocaeli region, Disaster and Emergency Management Presidency (AFAD) Kocaeli Provincial Directorate and Kocaeli University participated in the activity voluntarily. After the drill, the participants were asked some questions by the researchers to get their opinions. Evaluating the responses to the questions, it was determined that each individual participating in the activity had participated at least one disaster drill activity and all of them believed that the drills were useful and necessary. It was found out that the participants had the opinion that this study, carried out for the building of a drill scenario, met their expectations or partly satisfied their expectations. In disaster and emergency drill scenario building, the participants specified the benefit of collaborative teamwork and knowledge sharing with people from different public and private institutions and organizations and brainstorming in positive aspects and the time being limited, corporate identities coming to the fore and there being few different institutions participating in the drill in negative aspects. In this study, it was observed that although both public and private sectors had trainings, plannings and drill studies carried out for disaster and emergency management, they had difficulty in forming a common language. It is recommended that private sector and public institutions cooperate for disaster and emergency management.

Keywords Disaster, emergency management, industrial emergency, drill.

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## NOTE

<sup>1</sup>This article was presented at the 1st International Conference on Lifelong Education and Leadership, in Olomouc, Czech on October 29-31, 2015.

## 1. INTRODUCTION

Turkey is a country that frequently experiences natural and man-made disasters. Due to 285 earthquakes occurred in Turkey, where seismicity and earthquake hazard is extremely high, between 1900 and 2003, 100.000 people lost their lives and nearly 700.000 dwellings were seriously damaged. According to the official seismic zoning map published in 1996 and still in effect, 96% of the land area of Turkey is at risk from earthquakes in differing degrees of intensity. Even only the earthquake hazard is considered, it is clearly seen that the likelihood of experiencing such events that will lead to a disaster, except for the situations requiring immediate responses, is very high. As in various countries in the world, disaster and emergency plans should definitely be prepared and implemented effectively in order to minimize the damages caused by disasters and emergency situations in Turkey as well (Özmen et al., 2015).

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The experiences after the 1999 earthquakes in Turkey clearly showed that Turkey is not very well-prepared for emergency situations and there is a lot to do about it. It is difficult to manage emergency situations with the potential to damage people and the environment which are unplanned and develop beyond the normal process as well as managing disasters that are likely to affect a region or a country. To be able to keep the loss of life to a minimum in any kind of possible emergency situations and prevent negative effects on the environment, it is necessary to design a work plan for the management to plan everything beforehand and make quick and right decisions in an emergency situation.

The sudden and negative effects of a natural event on people and environment cause a crisis since they disturb the existing order. Coping with the crisis depends on the size of it and can be possible with preventing and solving the crisis, in other words, with the development of an understanding of crisis management. Being able to successfully cope with crisis to be caused by disasters is possible with an effective crisis management. Therefore, crisis management is one of the main components of disaster and emergency management (Şengezer and Kansu, 2001).

Pre-disaster works provide both communities and managements with power in the process of post-disaster struggle. Carrying out these works, eliminating deficiencies and conducting drills are capacity developing factors and they also quicken the restructuring process by minimizing the need for a response.

The main purpose in a disaster response is to save as many lives as possible in the shortest time. The reduction of chaos at the time of a disaster can be maintained by means of preliminary works carried out by institutions and individuals. The preparation of disaster plans and scenarios, carrying out trainings and drills are indispensable for a successful response at the time of a disaster (Gerdan, 2010; B.İ.B., 2009)

At the time of an event or emergency situation, individuals' panicking may cause damages and losses to increase. The most effective way to prevent this is training and drills. It is an inevitable need to train individuals that will face the event at the time of a disaster and people who will take charge of the disaster response. The training of response teams by supplying necessary equipment can only be mentioned in ordinary situations before a disaster. These works should be supported with drills to help people turn this into a habit. The adoption of the prepared plans by the assigned people and experience of them with drills are also a very important detail. It is also necessary to determine the problematic parts of the plans by implementing them at certain intervals and eliminate the deficiencies (İSMEP, 2009). Therefore, drills have a special place in disaster management systems and disaster plans. While trainings contribute to the development of knowledge and awareness, drills contribute to the acquisition of skills and the determination of problems in plans. Unfortunately, as many disaster related drills conducted in our country are not assessed and the results are not shared, it can be said that the efforts and endeavors made have not reached the specified goal yet.

In the study based on this problem, the results related to a tabletop drill about "industrial emergency management after an earthquake" whose scenario was created by the AKUT Training and Research Institute were evaluated within the scope of the 5th International Earthquake Symposium Kocaeli 2015.

## **2. METHOD**

Totally 18 voluntary people including engineers/technical staff working for various industrial enterprises in Kocaeli region, Disaster and Emergency Management Presidency (AFAD) Kocaeli Provincial Directorate and Kocaeli University participated in the tabletop drill about "Industrial emergency management after an earthquake" created by the AKUT Training and Research Institute. 61.2% of the participants were male, and 38.8% were female.

While planning the drill, its purpose and goals were determined as the determination of the necessary steps to be taken, the issues including the response to secondary emergency situations expected at the time of and after an earthquake and emergency management being approached from a multidisciplinary point of view by the participants from various sectors and academic scientific fields and prioritization of those steps.

Participants were divided into heterogeneous groups that would bring various sectors together and homogenous groups that would bring those in the same sector together. During the drill, 5 time slots including just after the earthquake, 1 hour after the earthquake, 3 hours after the earthquake, 1 day (24 hours) after the earthquake and 3 days (72 hours) after the earthquake were discussed, and participant groups were provided with information about the assumptions of the drill and existing resources in the first stage. Then, for each time slot, the groups were provided with general information (information from the field) and objectives and they were asked to determine the potential hazards and actions needed to be taken. The follow-up of the changes in the actions by changing the information of the previous time slot in different time slots was also performed. A specific time was given to the groups to present a report of their works after the activity and the results were discussed together with the instructors after the presentation.

A short questionnaire was administered to the participants after the activity to get their general opinions about the drill and their knowledge and opinions about the tabletop drill related to industrial emergency management. Also, the participants were asked about their opinions in regard to the negative and positive aspects of the drill.

Data collection tool in the questionnaire was developed by the researchers by taking expert opinion. The responses to each question in the questionnaire were listed one below the other and examined by two different researchers and all of them were tried to be shown in the results.

### 3. FINDINGS

The first part of the questionnaire consists of general questions to determine whether they had participated in another drill before this one, if they had, what kind of drills they had participated in, and their views about those drills. The second part includes questions to determine the views and expectations about the drills mostly related to the industrial emergency management. The results related to the general information in the first part are indicated in Table 1.

**Table 1.** General information about participants

		Frequency	Percent (%)
Have you participated in a drill before?	Yes	18	100
	No	0	0
Do you think the drills were useful?	Yes	18	100
	No	0	0
Do you think the drills were necessary?	Yes	18	100
	No	0	0

It is seen that all the participants in the activity had participated in at least one drill before and believed the drills were useful and necessary. The results related to the types of drills they had participated before are given in Table 2.

**Table 2.** The types of drills participated before by participants

	Frequency	Percent (%)
Earthquake	10	55,6
Fire	17	94,4
Emergency	10	55,6
Desk	13	72,2

When the distribution of the drills the participants had participated before is considered, it is seen that the highest rate of participation includes fire drills with the rate of 94,4%, and the lowest rate of participation includes earthquake and emergency drills with the rate of 55,6%. The results show that the participants had participated in at least two drills before. When the institutions of the participants are considered according to the types of the drills, it is seen that those who had participated in all kinds of drills were from the private sector (8 participants, 57%), and that those who had participated in the fire, earthquake and emergency drills were from state institutions and organizations. The participants' voluntary participation in the study and their previous experience in many drills show that the study has been conducted with a group that is experienced about drills and has a high level of awareness.

The results related to the second part in which the participants were asked about their views with regard to the industrial emergency drill are presented in Table 3.

**Table 3.** Opinions about this industrial emergency drill

		Frequency	Percent (%)
Did you have knowledge about the content before you participated in the industrial emergencies drill?	Yes	10	55,6
	No	4	22,2
	Partly	4	22,2
Were your expectations about the drill met?	Yes	8	44,4
	No	1	5,6
	Partly	9	50

According to the results in Table 3, 50% of the participants had information about the content before they participated in the drill whereas 28.57% did not have any information. 21.43% participated in the drill being partly informed.

The participants' views about why their expectations about the drill were partly met or were not met at all were specified in the problems part of the questionnaire. The views about these problems are summarized below. In the presentation and assessment meeting carried out following the activity, they stated that being partly informed or not having information at all about the drill and not participating in a 5-stage tabletop drill restricted with such assumptions and resources before affected their expectations about the participation in the activity.

Table 4 shows the results related to the participants' reasons for participating in the drill.

**Table 4.** Reasons for participating in the drill

	Frequency	Percent (%)
As part of my job	12	66,7
Assignment	8	44,4
As it will be useful	13	72,2
Out of interest	5	27,8

Positive views of the participants about this drill can be summarized as follows:

- Meeting with various groups supported creative thinking through brainstorming, motivated the team members and enabled them to create more ideas in a short time.
- It developed quick and effective decision-making skill by means of communication and sharing,
- It developed a common attitude,
- It developed interdisciplinary cooperation,
- It allowed them to meet those who work for the institutions and organizations responsible for disaster and emergency management and to be aware of the works of the state institutions by means of information exchange.

The negative views of the participants about this drill are stated as follows:

- There was no enough time for preliminary preparation,
- There was a need to involve more participants from various institutions for a longer time period,
- There was a need for the concerned public authorities to participate in the activity to make it more real.

#### **4. RESULTS AND DISCUSSION**

Within the scope of the 5th International Earthquake Symposium Kocaeli 2015, all state institutions and organizations and industrial enterprises in Kocaeli were invited to the tabletop drill which was held in cooperation with the AKUT Training and Research Institute as the subject of this research, and a written notification was given about the general outlines of the drill. The works related to the emergency management needed to be checked in the center and at a local level under the roof of AFAD (Disaster and Emergency Management Presidency) since its foundation in our country in 2009 are, unfortunately, carried out independent/unaware of each other and a common language cannot be established. In addition, state institutions and organizations also do not conduct serious works in this sense. However, it is an inevitable fact for all the divisions of the state from educational institutions to health, from local administrations to the other state institutions to be aware of the hazards they are likely to face and be prepared for disaster and emergency situations. The general impression before and after the drill is that the works related to emergency management in Kocaeli, which is a heavily industrialized city, are taken more seriously in the private sector when compared to the other institutions. Private sector tries to conduct these works with their own means focusing on the hazards connected to their attributes within the legal limits and does not cooperate with state institutions on the issue. Determination of coordination problems by increasing the number of such tabletop drills and regular performance of close-to-real drills on a provincial level will enable the elimination of deficiencies and it will also allow everyone from individuals to society to be prepared for disasters.

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# Influential factors in political and civic participation of university students<sup>1</sup>

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## **Abstract**

In this study, a scale was developed according to the scale of Flanagan et al. (2007) and data were obtained from university students (n= 330). The empirical evidences on the identification of the youth participation were analyzed through Path Analysis in the Structural Equation Modeling and a model was suggested. This study suggests a model based on determination of factors influencing civic and political participation of university students. General findings pointed out that individuals' participation to family decisions during their earlier, life, parents' civic and political participation, participation experiences at school, political communication with teachers and friends, participation sensitive class activities, the perceived level of critics of political knowledge, levels of civic responsibility, sensitivity to own civic society and perceived understanding of civic and political issues, interest for politics and civic issues, level of general self efficacy. Individuals interest for politics and civic issues, general self efficacy, sensitivity for social problems and perceived political efficacy, influence their participation ideas and behaviors. In this content, opportunities and resources presented for youth are necessary for individual as well as societal development.

Keywords Political participation, civic participation, predictors of participation

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## **NOTE**

<sup>1</sup>*This article was presented at the 1st International Conference on Lifelong Education and Leadership, in Olomouc, Czech on October 29-31, 2015.*

## **1. INTRODUCTION**

The number of research on participation has increased recently. The reason for that increase can be attributed to the decrease in the voting rate of the young people living in Western democracies, (Frisco, 2004:662-663; Galston, 2004: 263-266) and their distrust in real politics and lack of interest in party politics (Kovacheva, 2014; Shell Jugendstudie, 2010). Several researches conducted in Turkey have also showed that the level of young people's participation is low as well (ANGIAD 2004; Esmer, 2011; Konda, 2014; Konrad Adeuner Vakfi, 1998; Zeylan, 2007). Low level of participation is an important problem for contemporary democracies. Young people are also considered to be a disadvantaged group by the United Nations and the need to secure their participation has been emphasized meticulously. Young people's having influence on decisions will positively affect the internalization level of social issues (Özer, 2011). Political and civic participation is considered as an important indicator of being a contemporary society as well as a field of individual development (Amnå, Ekström, Kerr, and Stattin, 2009). The term participation is used as the process of sharing decisions which affect one's life and the life of community in which one lives. Participation is the means by which a democracy is built and it is a standard against which democracies should be measured. Participation is also the fundamental right of citizenship (Hart, 1992).

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Kapani (2003) defines political participation as “a concept that determines the situations, attitudes and behaviors of the members of the society against the political system”. Participation includes a large spectrum of attitudes and behaviors from simple curiosity to intensive act. However, civic participation includes the tasks of citizens in solving and improving general social problems related to themselves, those around them, small and big communities in which they live and the country in general (Flanagan, 2004).

In the related literature, various factors have been claimed to be effective in political and civic participation. Some of them include family, school, citizenship attitudes, confidence in the system, individuals’ perception of political competence, belief about the changeability of the system, political knowledge level, ability to assess politics, tolerance level, group work and cooperation, respect for the laws, values, knowledge on political and economic citizenship, self-perception – self-acceptance level, problem solving skills, communication skills, trustworthiness of media, assessments of the elected, forms of alternative civic participation, perception of political efficacy (Chaffe and Kanihan, 1997; Flanagan, Syvertsen and Stout 2007; Mcleod, Sotirovic and Holbert, 1998; Meadovcroft, 1986; Münchmeier, 2000;).

The research about the nature of participation in Turkey is considerably inadequate. Therefore, it is becoming important to know about the factors affecting participation. This study aims to determine psychological, demographic and familial factors affecting the participation of university students in Turkey. This study is considered to be an authentic study that will contribute to the related literature since it examines the variables of participation collectively and analyzes this relationship using path analysis in structural equation model (SEM).

## **2. METHOD**

In this study, a descriptive survey research design was used to determine the precursors affecting political and civic participation of young people in Turkey.

The findings related to the determination of the factors affecting the participation of young people at universities by using path analysis in SEM. In this context, an alternative model and a basic model were identified. In the alternative models approach, the main purpose is to determine which of the related alternative models are supported by the data in explaining the relationships among the variables when a series of variables are taken into consideration (Jöreskog and Sörbom, 1993: Cited by Şimşek, 2007). Before the analysis to be carried out to see if these models were validated, measurement models which were identified in the models were tested.

## **3. FINDINGS**

### **Study Group**

For the data of this research, a study group attending universities in Ankara was used. The study group was determined by means of purposive sampling from university students in Ankara. 51.5% (170) of the study group were female and 48.5% (160) were male. The average age of the participants was 21.78 years (sd=1.55).

### **Data Collection Tools**

In the first stage of the study, measurement tools that were used in various researches related to the topic were investigated. When the related literature was taken into consideration, it was determined that there are scales that investigate factors independently. The measurement tool developed by Flanagan, Syvertsen and Stout (2007) was thought to be suitable for the purpose of the research since it includes more factors when compared to the other tools. This tool was decided to

be adapted because this scale (Civic Measurement Models) has 16 subscales and it is a tool that is aimed to determine the nature of the participation.

Firstly, Constance A. Flanagan was contacted and permission was obtained for the use of the scale. When the scale was carefully revised following the translation of the scale into Turkish, it was observed that the scale included some items which could be meaningful for American society but not for Turkey. It was decided to eliminate the cultural items in the scale by Flanagan and adapt the scale by writing new items specific to the Turkish culture. The scale developed by Flanagan includes 16 sets. There are various response categories in Likert-type scales. Based on the aforementioned scale, a new 200-item scale was developed. The process of scale adaptation started and it was sent to 6 academicians under the Departments of Measurement and Evaluation and Educational Psychology of the Faculty of Education of Ankara University for expert opinion. In the light of the expert opinions, 19 items were excluded from the scale and a 181-item scale was made ready to be administered.

Explanatory Factor Analysis (EFA) was used in order to determine the factor structure of the scale for each scale, and frequency and percentage analyses were performed to analyze the demographic features of the participants by using SPSS 15.00. The factor structure was tested with Confirmatory Factor Analysis (CFA) using LISREL. In addition, the factor structures were interpreted by conducting path analysis with the observed variables and by looking at fit indices. As a result of the analyses, a 145-item political and social participation scale was finalized to be used in this study (Akfirat and Çok, 2013).

Table 1 below indicates the information about the validity and reliability results of the scale that was developed.

**Table 1.** Reliability and Validity Data of the Subscales of Political and Social Participation Scale

Number of Sub Scale	Sub Scala	Item	Factors	$\alpha$	The total variance explained: %	item-test correlations	CFA						
							GFI	AGFI	CFI	RMR	RMSEA		
1	Involvement	4	Political Involvement	.85	50	.574	-	.99	.98	.99	.004	.034	
			Social Involvement	.83									.870
2	Involvement to the Decisions in Family	10	Decisions in Social Relationships	.85	52	.525	-	.94	.90	.91	.006	.070	
			Decisions in Daily Life	.79									.851
			Decisions for Future	.81									
3	Confidence	12	Confidence to the Political Foundations	.85	55	.563	-	.95	.92	.96	.030	.005	
			Confidence to the Non-Political Foundation	.56									.865
			Confidence to the Social Foundations	.54									
4	Civic Behaviors	12	Competence for Civic Action	.75	54	.634	-	.96	.94	.99	.020	.026	
			Political Voice	.66									.867
			Critical Consumer of Political Information	.76									

5	Assessments of Elected Officials and Government	13	Trustworthiness of Elected Officials	.79	52	.528 .816	-	.93	.89	.93	.060	.070
			Civic Accountability	.65								
			Unconditional Support for Government Policies	.64								
6	Involvement Expectation	7	Political Involvement Expectation	.82	53	.525 .844	-	.99	.99	.99	.016	.000
			Social Involvement Expectation	.60								
7	Endorsement of Special Interest Groups	10	Endorsement of Social Interest Groups	.75	47	.522 .791	-	.97	.95	.99	.020	.016
			Endorsement of Political Interest Groups	.75								
8	Political-Social Perception	8	Political Efficacy	.75	74	.732 .899	-	.98	.96	.99	.003	.020
			Trust to the Country	.87								
			Anger about Social Injustice	.75								
9	Types of Citizen	9	Justice Oriented Citizen	.67	58	.522 .843	-	.96	.93	.97	.025	.062
			Personally Responsible Citizen	.77								
10	Parents Civic Engagement	3	Parents Civic Engagement	.82	74	.829 .897	-	1.0	1.0	1.0	.000	.000
11	Political Conversations with Others	8	Communication with Parents about Politics	.81	73	.767 .896	-	.97	.92	.98	.062	.069
			Communication with Teachers about Politics	.73								
			Communication with Friends about Politics	.86								
12	Values	6	Helping Others and Protecting the Environment	.85	69	.517 .895	-	.99	.97	1.00	.021	.031
			Secure Employment	.85								
13	Personal Beliefs	5	Concern about the Future	.60	54	.686 .806	-	.99	.95	.99	.055	.072
			Social Trust	.52								
14	Media	15	Overall Media Consumption	.70	51	.571 .861	-	.90	.85	.86	.045	.080
			Usefulness of Mainstream Media Outlets	.79								
			Trustworthiness of Media	.81								
15	School Cclimate	18	Open Classroom Climate	.82	61	.600 .887	-	.93	.90	.97	.058	.039
			Student Ownership	.82								
			Social Analysis	.84								
			Classroom as a Caring Community	.85								
			Experience of participation in school	.83								
16	Personal Political Aspirations	6	Personal Political Aspirations	.85	69	.637 .932	-	.99	.96	1.00	.035	.050

**General Self-Efficacy Scale:** Another scale to be used in the research is the General Self-Efficacy Scale (GSES) which was developed by Matthias Jerusalem and Ralf Schwarzer in 1981. GSES evaluates the perceived self-efficacy in general terms (Scholz and Schwarzer, 2005). The scale which was developed in Germany was adapted to Turkish by Aypay (2007). GSES consists of 10 items on a 4-point Likert-type scale. This scale can be administered to those who are 12 or older. During the validity study of the scale by Aypay, a significant and positive relationship was found for the validity of similar scales between GSES scores and Problem Solving Subscale scores (PSS)

of Coping with Stress Scale ( $r=.40, p<.001$ ), and a significant and positive relationship was found for the validity of measure between GSES scores and the Rosenberg Self-Esteem Scale scores ( $r=.38, p<.001$ ). The alpha internal consistency coefficient computed for the reliability of the scale was found to be .83 for all ten items. The correlation coefficient computed for the test-retest reliability of the scale is ( $r=.80, p<.001$ ).

### Data Analysis

Statistical analyses of the data obtained from the research were performed by using SPSS 15.00 and LISREL software packages. An alternative model and a basic model were tested in the context of the variables affecting participation by using path analysis in the structural equation model (SEM) for data analysis. Frequency and percentage analysis was used to analyze demographic characteristics of the participants.

The model in the path analysis with latent variables consists of two sub-models, including measurement and structural model. It is stated that two different methods can be followed to construct such models (Şimşek, 2007). The first one includes testing of the model with a single-stage approach by analyzing the structural models and the measurement models together. The second one includes testing of the model with a two-stage method by analyzing the measurement models and the structural models separately. No matter which of the two methods is preferred, it is suggested that the measurement models should be tested and validated before testing the structural models (Chau, 1997; Giles, 2002). In this study, the two-stage method was adopted and the measurement models were tested accordingly.

### Findings of the Correlation Analysis

Correlations among the total scores of Family, School Climate Assessments, Citizenship Attitudes, Individual Characteristics and Participation of the university students were computed and the results are given in Table -2.

**Table 2.** Correlations among the total scores of Family, School Climate Assessments, Citizenship Attitudes, Individual Characteristics and Participation of the university students

	<b>Participation</b>	<b>Family</b>	<b>School Climate Assessments</b>	<b>Citizenship Attitudes</b>
<b>Family</b>	.40**			
<b>School Climate Assessments</b>	.41**	.27**		
<b>Citizenship Attitudes</b>	.28**	.28**	.28**	
<b>Individual Characteristics</b>	.42**	.26**	.30**	.48**

When the correlation results in Table 2 were considered, a significant and positive relationship was found between the total score of Individual Characteristics of the university youth and the total scores of Family ( $r=0.26; p<0.01$ ), School Climate Assessments ( $r=0.30; p<0.01$ ) and Citizenship Attitudes, and between the total scores of Participation and Family, School Climate Assessments, Citizenship Attitudes and Individual Characteristics. In this case, it can be said that family, school climate assessments and citizenship attitudes have an effect on Individual characteristics and these characteristics all have an effect on participation.

### Findings related to the Testing of Measurement Models

Analyses carried out to see whether the measurement models were confirmed are briefly described below. Totally seven measurement models were identified within the alternative and basic models. These measurement models include Family measurement model; School measurement model; Citizenship measurement model; Media measurement model; Confidence measurement model; Individual characteristics measurement model and Participation measurement model. Considering the analysis results in Table 3, it was observed that the ratio of  $\chi^2$  to the degree of freedom in the measurement models except for Media measurement models was below 3, the RMSEA value was below 0.08, the GFI, AGFI and CFI values were below 0.90, and all fit indices were at acceptable levels (Hair et al., 1998).

**Table 3.** Measurement Models

OBSERVED VARIABLES	LATENT VARIABLES
1. Decisions in Daily Life	FAMILY
2. Parents Civic Engagement	
3. Communication with Parents about Politics	
$\chi^2_{(0)}=0.00$ ( $\chi^2/sd=0.00$ ), RMSEA=0.00, GFI=1.00, AGFI=0.99, CFI=1.00	
1. Communication with Teachers about Politics	SCHOOL
2. Communication with Friends about Politics	
3. Classroom as a Caring Community	
4. Experience of participation in school	
$\chi^2_{(2)}=3.58$ ( $\chi^2/sd=1.79$ ), RMSEA=0.05, GFI=0.99, AGFI=0.97, CFI=0.98	
1. Critical Consumer of Political Information	CITIZENSHIP
2. Personally Responsible Citizen	
3. Justice Oriented Citizen	
4. Civic Accountability	
5. Helping Others and Protecting the Environment	
$\chi^2_{(5)}=15.30$ ( $\chi^2/sd=3.06$ ), RMSEA=0.079, GFI=0.98, AGFI=0.95, CFI=0.95	
1. Overall Media Consumption	MEDIA
2. Usefulness of Mainstream Media Outlets	
3. rustworthiness of Media	
t = - 0.03; p>0.05 (Ölçme modeli doğrulanmamıştır.)	
1. Confidence to the Political Foundations	CONFIDENCE
2. Confidence to the Non-Political Foundations	
3. Confidence to the Social Foundations	

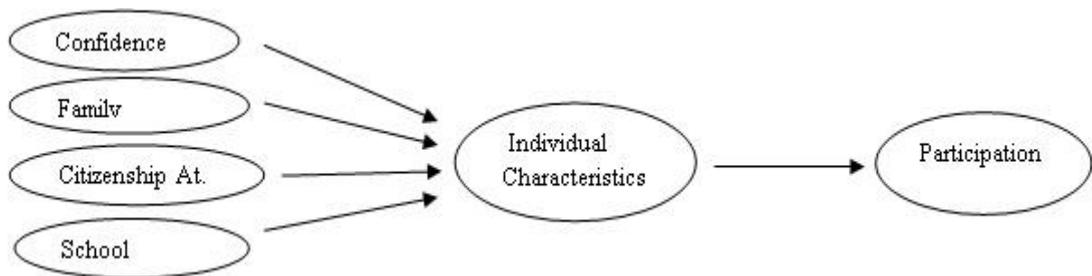
$\chi^2_{(0)}=0.00$ ( $\chi^2/sd=0.00$ ), RMSEA=0.00, GFI=1.00, AGFI=1.00, CFI=1.00	
1. Political Voice	INDIVIDUAL CHARACTERISTICS
2. Political Efficacy	
3. Anger about Social Injustice	
4. General Self-Efficacy	
$\chi^2_{(2)}=1.62$ ( $\chi^2/sd=0.81$ ), RMSEA=0.00, GFI=1.00, AGFI=0.99, CFI=1.00	
1. Political Involvement	PARTICIPATION
2. Social Involvement	
3. Political Involvement Expectation	
4. Social Involvement Expectation	
5. Personal Political Aspirations	
6. Alternative Ways of Expressing Political Voice	
$\chi^2_{(9)}=17.71$ ( $\chi^2/sd=1.97$ ), RMSEA=0.05, GFI=0.98, AGFI=0.96, CFI=0.97	

**Findings related to the Testing of Alternative models and Basic Model**

After testing whether the measurement model of each variable was validated by the data, structural models which showed the relationships between these variables were constructed.

**First Alternative Model**

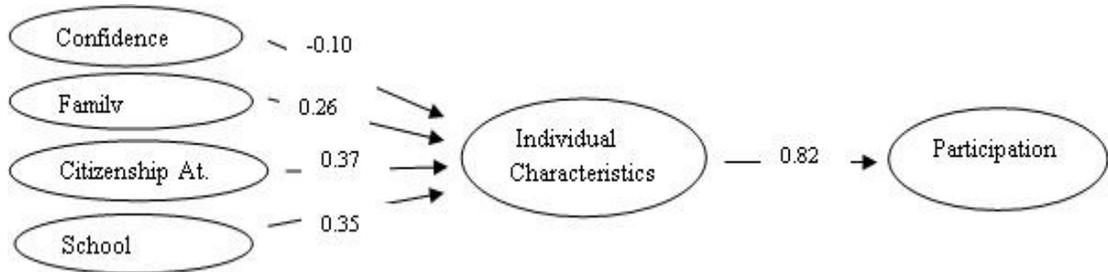
In the light of the findings in the related literature, an alternative model was constructed considering these variables as a whole, and the validity of this model was tested. In line with the information above, a model in which the variables including family, school climate assessments, media, level of confidence, citizenship attitudes and individual characteristics considered to be related to participation were discussed as a whole was identified as the first alternative structural model and its validity was tested. Figure 1 shows the relationships among the variables in the first alternative model whose validity will be tested.



**Figure 1.** Relationships among the Variables in the First Alternative Hypothesis Structural Model

### Findings related to the First Alternative Structural Model

Figure 2 shows the relationships among the Variables of the First Alternative Structural Model.



**Figure 2.** Relationships among the Variables of the First Alternative Structural Model

The fit indices related to the first alternative structural model in determining the factors affecting the participation of the university youth are shown in Table 4.

**Table 4.** Fit Indices of the First Alternative Structural Model

Relationships between variables	$\beta$	t	fit indices	
Family → Individual Characteristics	0.26	2.16	$\chi^2$	831.32
School Climate Assessments → Individual Characteristics	0.35	3.24	df	264
Citizenship Attitudes → Individual Characteristics	0.37	3.88	P	0.00
Confidence → Individual Characteristics	-0.10	-1.67	RMSEA	0.08
Individual Characteristics → Participation	0.82	5.40	GFI	0.83
			AGFI	0.79
			NFI	0.61
			NNFI	0.66
			CFI	0.70

When the fit indices related to the first alternative structural method in Table 4 were considered, it was seen that  $\chi^2(264) = 831.32$ ,  $\chi^2/sd = 3.14$ , RMSEA = 0.08, GFI = 0.83, AGFI = 0.79, NFI = 0.61, NNFI = 0.66, CFI = 0.70. When the results of the analysis were examined, the ratio of  $\chi^2$  to the degree of freedom was seen to be around 3. Şimşek (2007) stated that the ratio of  $\chi^2$  to the degree of freedom (df) being 2 or below meant that the model was a good one, and its being between two and five meant that the model had an acceptable goodness of fit. The RMSEA value was found to be 0.08. Kline (2005) stated that the RMSEA value showed a good goodness-of-fit up to 0.08 and that it could be accepted up to 0.10. The GFI, AGFI, NFI, NNFI and CFI values were observed to be below 0.90. In this case, when the fit indices of the model were taken into consideration, it was found out that the fit indices except for  $\chi^2/sd$  and the RMSEA value did not correspond to an acceptable fit.

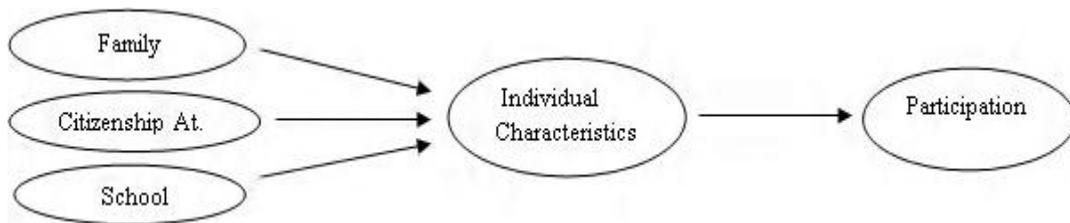
The  $\beta$  coefficients indicating the relationships between the constructs are as follows: Family and Individual Characteristics ( $\beta = 0.26$ ;  $t = 2.16$ ;  $p < 0.05$ ), School Climate Assessments and Individual

Characteristics ( $\beta = 0.35$ ;  $t = 3.24$ ;  $p < 0.05$ ), Citizenship Attitudes and Individual Characteristics ( $\beta = 0.37$ ;  $t = 3.88$ ;  $p < 0.05$ ), Confidence and Individual Characteristics ( $\beta = -0.10$ ;  $t = -1.67$ ;  $p > 0.05$ ), Individual Characteristics and Participation ( $\beta = 0.82$ ;  $t = 5.40$ ;  $p < 0.05$ ).

This model was not validated since the t value of the latent variables of Confidence and Individual Characteristics ( $t = -1.67 < 1.96$ ) was found insignificant and most fit indices did not correspond to an acceptable fit.

**Basic Model**

It was determined in the alternative model above that the sub-dimensions whose relationships with confidence (confidence in political institutions, confidence in non-political institutions, and confidence in social institutions) were tested did not provide a significant t value. Therefore, this variable was excluded from the basic model and the relationships of the variables of family, school climate assessments, citizenship and individual characteristics with participation were investigated. In the light of the information based on the related literature, a model was developed considering these 5 variables together and this model was tested for the university youth. Figure 3 shows the relationships among the variables in the basic structural model to be tested for validity.

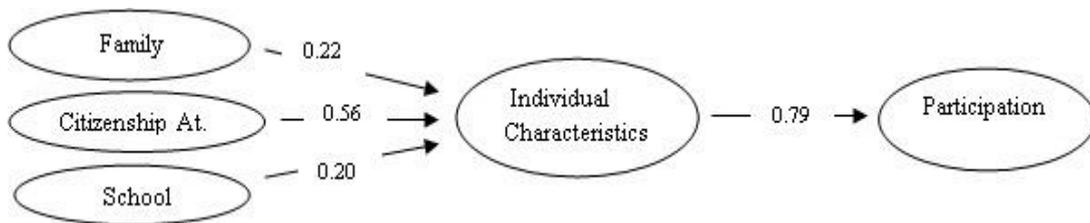


**Figure 3.** Relationships among the Variables in Basic Structural Hypothesis Model

As seen in Figure 3, five latent variables were identified in the basic model. These include Family, School Climate Assessments, Citizenship Attitudes, Individual Characteristics and Participation. In this model, Family, School Climate Assessments, Citizenship Attitudes and Individual Characteristics are independent external variables. Individual Characteristics is a dependent, internal variable predicted by the variables of Family, School Climate Assessments, and Citizenship Attitudes. Participation is a dependent internal variable predicted by Individual Characteristics.

**Findings related to the Basic Model**

Figure 4 shows the relationships among the variables related to the First Alternative Structural Model for the university youth.



**Figure 4.** Relationships among the Variables related to the Basic Model

The fit indices of the first alternative structural model in determining the factors affecting the university youth are indicated in Table 5.

**Table 5.** Fit Indices of the Basic Model

Relationships between variables	$\beta$	t	fit indices	
			$\chi^2$	491.44
Family → Individual Characteristics	0.22	1.99	df	195
School Climate Assessments → Individual Characteristics	0.20	2.01	P	0.00
Citizenship Attitudes → Individual Characteristics	0.56	5.31	RMSEA	0.068
Individual Characteristics → Participation	0.79	5.40	GFI	0.88
			AGFI	0.89
			NFI	0.83
			NNFI	0.82
			CFI	0.86

When the fit indices related to the basic model in Table 5 were considered, the following results were observed:  $\chi^2(195)= 491.44$ ,  $\chi^2/sd=2.52$ , RMSEA= 0.068, RMR=0.64, GFI= 0.88, AGFI=0.84, NFI=0.73, NNFI=0.78, CFI=0.81. When the results of the analysis were examined, the ratio of  $\chi^2$  to the degree of freedom was seen to be around 2.5. Şimşek (2007) stated that the ratio of  $\chi^2$  to the degree of freedom (df) being 2 or below meant that the model was a good one, and its being between two and five meant that the model had an acceptable goodness-of-fit. The RMSEA value was found to be 0.068. Kline (2005) stated that the RMSEA value showed a good goodness-of-fit up to 0.08 and that it could be accepted up to 0.10. It was seen that the GFI value was 0.88, the AGFI value was 0.89, the NFI and the NNFI values were 0.82 and 0.83, and the CFI value was 0.86. When the fit indices were taken into consideration, it was seen that most of the fit indices, particularly  $\chi^2/sd$ , corresponded to an acceptable fit.

The  $\beta$  coefficients indicating the relationships between the constructs are as follows: Family and Individual Characteristics ( $\beta = 0.22$ ;  $t = 1.99$ ,  $p < 0.05$ ), School Climate Assessments and Individual Characteristics ( $\beta = 0.20$ ;  $t = 2.01$ ;  $p < 0.05$ ), Citizenship Attitudes and Individual Characteristics ( $\beta = 0.56$ ;  $t = 5.31$ ;  $p < 0.05$ ), Confidence and Individual Characteristics ( $\beta = -0.10$ ;  $t = -1.67$ ;  $p > 0.05$ ), Individual Characteristics and Participation ( $\beta = 0.79$ ;  $t = 5.407$ ;  $p < 0.05$ ).

When the  $\beta$  coefficients that indicate the relationships between the constructs are considered, it is seen in Table 3 that  $\beta$  coefficients between Family and Individual Characteristics, School Climate Assessments and Individual Characteristics, Citizenship Attitudes and Individual Characteristics, and Individual Characteristics and Participation are significant. Family, School Climate Assessments and Citizenship Attitudes positively affect Individual Characteristics; and Individual Characteristics positively affect Participation. It was observed that t values obtained from the relationships between the latent variables were significant. In this context, it can be stated that the basic structural model identified for the university youth has been validated.

#### 4. RESULTS AND DISCUSSION

In this study, the factors affecting the participation of the university students were determined, and a structural model showing the relationship among the factors was proposed and evaluated. Firstly, measurement models identified within this model were tested to see if they fit the data. Analyses showed that all measurement models except for “Media” measurement model were validated. Then, the proposed first alternative structural model was tested. It was determined in the alternative model which was tested that the sub-dimensions whose relationships with confidence (confidence in political institutions, confidence in non-political institutions, and confidence in social institutions) were tested did not provide a significant t value. Therefore, this variable was excluded from the basic model and the relationships of the variables of family, school climate assessments, citizenship and individual characteristics with participation were investigated.

Youth researches generally focus on three basic forms of participation (Chisholm and Kovacheva, 2002. Cited by: Kovacheva, 2014): involvement in institutional politics (elections, campaigns and membership), protest activities (demonstrations and new social movements), civic engagement (associative life, community participation, voluntary work). Since there are factors affecting the core of this study, it will not be enough to discuss these forms of participation by only asking if they participate or not. Therefore, in order to determine the participation behaviors of the youth, it is necessary to ask if they have participated before, they will participate in the future and they have any personal political goals in the future (Erdoğan, 2014; Flanagan, 2007). In this study, the data for the variable of participation were obtained by asking young people about their political and civic participation levels, personal expectations for political and civic participation, and their ways of expressing personal political goals and views.

Individual characteristics considered as the second variable affecting participation in the literature include “expressing political voice, perception of political competence, anger about social injustice and general self-efficacy.”

The third variable affecting participation was considered as “family”. The data about this variable were obtained from the sub-dimensions of “involvement in daily life decisions in family, parents’ civic engagement, and communication with parents about politics”.

“School” which was considered to affect participation” was taken as the fourth variable. The data about this variable were obtained from the sub-dimensions of “communication with teachers about politics, communication with friends about politics, and participation experience in class and school as a caring community”.

Finally, “citizenship attitudes” were discussed as the fifth variable. The data about this variable were obtained from the sub-dimensions of “critical consumption of political knowledge, social responsibility, justice-oriented citizen, personally responsible citizen and helping others and protecting the environment.”

The initial finding about the structural model is that the variable “Family” has a moderate and positive effect on the variable “individual characteristics”. Family is the place where most of the political talks take place for children and young people at younger ages. Most of the young people agree with their families about their political orientations, particularly their political party preferences and level of political interest and activity (Geissler, 1996). Several findings show the effect of family on their children in terms of involvement in social issues Dunham and Bengston, 1992; Fatke and Schneider, 2005; Flanagan, Bowes, Jonsson, Csapo and Sheblanova, 1998; Flanagan, Tucker, 1999; Fletcher, Elder and Mekos, 2000; Hashway, 1998; Niemi and Junn, 2000; Ogris and Westphal, 2005). The Family variable taken into consideration in this study, that is, children’s involvement in decision-making in family (Fatke and Schneider, 2005), parents’ engagement (Wentzel and McNamara, 1999; Green, Gerber, and Nickerson, 2003; Yates and Youniss, 1998) and children’s communication with their parents about politics (Böhm-Kasper,

2006; Cicognani et al., 2012; McIntosh, Hart and Youniss, 2007) has a moderate and positive effect on individual characteristics affecting participation in line with the related literature.

The second finding about the model is that the variable “School” has a moderate and positive effect on the variable “Individual Characteristics”. It is emphasized by the researchers that lessons, teachers with democratic attitudes and school climate are important for the school to help students acquire democratic skills and values (Finkel and Ernst, 2005; McDevitt, et al., 2003; Syvertsen, Flanagan and Stout, 2007; Tourney-Purta et al., 2001). The impact of school about participation is constantly emphasized and the role of school in the political socialization particularly when the political system changes is remembered more. The political impact of the school does not have much effect on students in terms of lessons, but it has much more effect in terms of school climate (Slomczynski and Shabad, 1998). In the related literature, it is stated that open, democratic and participatory school climate is associated with participation (Campbell et al., 2006). A more participatory, interactive and less authoritarian school climate is associated with more democratic and tolerant political attitudes (Flanagan et al. 2007; Gniewosz et al., 2009; Torney-Purta et al., 2007). There is a positive relationship between discussion and expression of opinions on political issues at school and political knowledge, confidence, civic skills, political competence, tolerance, intention to engage in political participation and interest in political issues (Almond and Verba, 1963; Gibson and Levine, 2003).

The third finding about the model is that the variable “Citizenship attitudes” has a moderate and positive effect on the variable “Individual Characteristics”. The literature also supports this finding. It is emphasized that citizenship attitudes which include individuals’ competence to act as a citizen, critical consumption of political information, reliable assessment of elected officials, sense of social responsibility, and perception of justice in the relationships in society affect political and civic participation (Albanesi, Cicognani and Zani, 2007; Fatke and Schneider, 2005; Flanagan, 2004; Flanagan, Syvertsen and Stout, 2007). Regarding the participation of young people, it can be said that participation shows diversity and differences. Basically, the awareness and behavioral consciousness of the young people increase provided that the decisions are not made without their involvement and they organize the civic actions themselves (Checkoway and Schuster, 2003).

The final finding about this model is that the variable “Individual Characteristics” has a moderate and positive effect on the variable “Participation”. It is emphasized that individuals’ engagement in politics and making an effort on the topic, perception of political competence, perception of general self-efficacy and reaction to social injustice has also an effect on participation (Colby and Damon, 1999; Eisenberg, 2003; Flanagan and Faison, 2001; Hart et al., 1995; Scholz and Schwarzer, 2005; Serow and Dreyden, 1990; Volling, 2003). There are some indicators that express the social responsibilities of young people. These include the indicators such as voting and having information about the political process and understanding the process, thinking techniques, ability to use information technologies, participation in media, interaction and discussion skills, participation in voluntary activities (Schusler and Krasny, 2008). General self-efficacy is defined as the belief in one’s competence to cope with challenging and unusual situations he faces in his life (Scholz et al, 2002). Individuals with high level of participation also have high levels of self-efficacy (Cantor, 1990).

According to this model, it is assumed that the participation experiences and citizenship attitudes of young people in family and at school affect political and social individual characteristics and that this affects the participation behavior. The model was tested and validated in a group of university students. The fit indices of the basic structural model in this group were seen to correspond to an acceptable fit.

When the findings of the study are considered collectively, individuals’ involvement in the decisions made at home where they grow up and their parents’ engagement in politics and civic activities, participation experiences at school, their communication with teachers and friends about

politics, classroom activities involving participation, perception level of political knowledge in a critical manner, social responsibility levels, sensitivity to the social environment they live in, and perception of justice about social and political issues affect their interest in political and social issues, perception of self-efficacy, sensitivity to social issues and perception of political competence.

Individuals' interest in politics and social issues, perception of self-efficacy, sensitivity to social issues and perception of political competence affect thoughts and behaviors about participation. In this context, it is necessary to offer opportunities and resources to young people both for their individual development and the development of society.

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# School principals' transformational leadership behaviours and their effects on teacher commitment

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## **Abstract**

Transformational leadership has drawn much attention in the educational administration field. It has four basic areas in educational settings such as idealized influence, inspirational motivation, individualized consideration and intellectual stimulation. Research indicates that school principals' transformational leadership behaviours have positive and direct effects on teachers' performance and feeling commitment. Therefore, this qualitative study purposes to determine the teachers' views of their principals' transformational leadership behaviors and their influences on their feeling of commitment. The research employed a qualitative research design. The participants of the study were 40 teachers from 10 selected successful schools in Istanbul, Turkey. Results indicate that, in general, school principals' transformational leadership behaviors are positively related to teachers' commitment. It was also determined that while principals' inspirational motivation, intellectual stimulation and individualized consideration behaviors are positively related to teachers' commitment, idealized influence is not related to it. In can be recommended that school principals should perform transformational leadership behaviors to increase teachers' commitment.

Keywords: transformational leadership, school principals, teacher commitment

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## **1. INTRODUCTION**

Leaders have crucial roles in any organization in a developing and changing work life. They are supposed to adopt themselves and their organizations into the changing working conditions. For this reason, their characteristics, management styles and practices have drawn much attention in management literature. This attention has led many researchers to focus heavily on their behaviors and their management styles. In this respect, they described several leadership types. One of these leadership styles is transformational leadership which is the main concern of this research.

The transformational leader has been characterized as the one who articulates a vision of the future that can be shared with peers and subordinates, intellectually stimulates subordinates, and pays high attention to individual differences among people (Yammarino and Bass, 1990a). In this context, the basics of transformational leadership can differ. Firstly, they serve the needs of the followers. Secondly, they lead the followers with their charisma, provide trust, confidence, and finally, they stimulate their followers (Castanheira and Costa, 2011). McFarlin and Sweeney (1998) claim that successful administrators should be transformational leaders. Here, if leadership is considered as a process of interaction between leaders and followers, they must stimulate the followers (Bass, 1997b; Judge and Bono 2000; Gronn, 1995; Leithwood and Jantzi 2006; Yukl, 2005; Bass and Avolio, 1997; Bennis and Nanus, 1997).

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Regarding school setting, transformational leaders have some critical roles like building school vision, stimulating teachers, supporting them, becoming a model, developing academic standards, creating a productive school culture and providing teachers' participation. With these aspects, it is related to a school's climate, collective efforts, teacher efficacy, organizational commitment, organizational learning, teacher practices and outcomes (Bass, 1997b; Leithwood and Jantzi, 2006; Popper, Maysless and Castelnovo, 2000). Transformational leaders show four basic behavior patterns at schools like idealized influence, inspirational motivation, individualized consideration and intellectual stimulation behaviors. Here, while *idealized influence* indicates the followers' needs before their own needs, *inspirational motivation* means motivating and inspiring teachers. Also, *individualized consideration* represents their mentorship efforts and *intellectual stimulation* accounts to their efforts to stimulate teachers develop themselves. As to Czarnowsky (2008) and Macey and Schneider (2008) these components create performance beyond expectations if applied successfully.

Ross and Gray (2006) underline principals' positive effects on teachers' commitment, a mental contract regarding their attribution at schools. According to Wallace (1995) and Saks (2006) this mental contract has some characteristics like value commitment, effort commitment, and retention commitment. Walumbwa, Orwa, Wang and Lawler (2005) assert that commitment is influenced by the leaders' management style. Therefore, several studies have researched the relationship between transformational leadership behaviors and employee commitment (Barling, Weber and Kelloway, 1996; Bass, 1997b; Podsakoff, Mackenzie and Bommer, 1996; Koh, Steers and Terborg, 1995; Lowe, Kroeck and Sivasubramaniam, 1996; Leithwood and Jantzi, 2006; Moolenaar, Daly and Slegers, 2010; Marks and Printy, 2003; Osborn and Marion, 2009; Rafferty and Griffin, 2004; Shao and Webber, 2006; Jones, 2000; Wiza and Hlanganipai 2014). They remarked their positive contribution regarding creating and maintaining a positive school environment, teacher commitment and job satisfaction. Therefore, this qualitative study purposes to determine if there is a relationship between principals' transformational leadership behaviors and teachers' organizational commitment at some selected schools in Turkey. The findings can suggest some insights to the Turkish educational system.

## 2. METHOD

This study employed a qualitative research design, which is used to gain in-depth knowledge in a study (Denzin and Lincoln, 2005; Marshall and Rossman, 2006; Creswell, 2002). By using this research design and utilizing in-depth interviews, the study discovered behaviors, beliefs, and language among teachers in Turkey. Here, 40 teachers selected from 10 schools were interviewed in the 2014/2015 academic year in Istanbul, Turkey. They were chosen with the purposive sampling method.

The data were gathered by using the interviews both recorded and noted with the participants' permission. Each interview lasted nearly 40-45 minutes. The data were analyzed with "content analysis" technique. This type of analysis purposes to analyze similar data on a topic and comment on it (Mayring, 2000). In the data analysis process, the first step was the data organization procedures recommended by Bogdan and Biklen (1998). Here, the researcher revisited each interviewer and listened to each audiotape while reviewing the transcripts to ensure the accuracy of the data. Each participant's interview transcript was later analyzed according to the data analysis procedures described by Bogdan and Biklen (1998). In this respect, each participant's interview was coded separately as to teachers' views on their principals' transformational leadership behaviors. The teachers' opinions were coded as T1, T2, T3, and T4...

### 3. FINDINGS

This study purposed to determine the influences of school principals' transformational leadership behaviors on teachers' commitment. The findings have been presented below:

*Principals' Idealized Influence Behaviors and Their Effects on Teacher Commitment:* Idealized influence is defined as meeting the needs of others before their own personal needs, avoiding the use of power for personal gain, demonstrating high moral standards, and setting challenging goals for their followers. In this regard, principals are trusted role models for their followers, teachers at school. One teacher claims that,

*"Our school principal is a good leader. But his behaviors to motivate people really affect us negatively. Those who see him working have no chance but work, too. However, some of his behaviors sometimes make us feel bad at school. For this reason, although I appreciate his some behaviors, I do not want to stay here anymore (T 3) "*

Another teacher says that, *"Our principal is a young man, and he does not know how to behave sometimes. He is highly-motivated and tries to motivate us with his caring behaviors. But there is something wrong with his behaviors. He breaks one's heart easily, which makes me feel unhappy here (T 12) "*

Another teacher states that, *"My principal has a strong vision for our school and he is able to translate his vision to the teachers who work here. He draws a picture of the future when nobody ever thinks. But he has problems with his human relations (T 23) "*

A teacher says that, *"We have a newly-appointed principal. Indeed, he does not know what school administration is. His behaviors affect us in a bad way. I do not think he is sufficient to manage a school of 60 experienced teachers. He uses his legal power to influence us (T 22) "*

It is clear that school principals should be idealized leaders by demonstrating considerate behaviors to deal with the teachers' professional needs. However, it is stated that the teachers of this sample do not trust and believe in their principals in regards to their efforts to move their school forward (n=10). As can be understood from the teachers' statements, the principals of the sample do have some problems with the teachers (n=18). They are also claimed to be inexperienced especially in human relations (n=10).

*School Principals' Inspirational Motivation Behaviors:* When inspirational motivation is concerned, it is possible to say that it is to motivate and inspire those around them by showing enthusiasm and optimism, involving the teachers in envisioning attractive future states, communicating high expectations, and demonstrating commitment to school goals. It describes the principals who motivate the teachers to commit to the vision of the school. School principals with inspirational motivation urge collaborative team spirit to reach school aims. In this regard, a teacher remarked,

*"Our principal is young, and he has a PhD degree. Perhaps, this makes a difference. He sets high academic standards for both teachers and students. Therefore, we feel obliged to follow him. Whenever I see him, he is doing something academic and talking about educational issues by being a role model (T 5) "*

A teacher puts, *"Our principal is a kind person, and also a considerate man. He cares about our needs first. He always states that teachers are essential part for the school. He makes us feel that we are really important here. When a teacher needs anything, even a personal thing, he tries to meet it. This is important for me to stay at this school (T 7) "*

A teacher asserts that, *"The principal is an experienced one, and shares all his experience with the novice ones. He also reads a lot about educational journals, and*

*carries good articles to school. He respects new proposals as long as they are scientific and logical. This makes me feel that I am at the correct place (T 9)*".

As can be inferred from the teachers' evaluations, as transformational leaders, school principals are always in a continuous effort to encourage the teachers of this sample by helping them develop and maintain a collaborative, professional school culture; fostering professional development. They also try to help teachers solve their problems together more effectively. It is understood that the principals always set high academic standards and motivate people to realize these standards (n=13). As a part of their job, they are among the teachers and students (n=12). In other words, they are everywhere except for their sterilized rooms (n=10). They are also trying to build a collaborative teamwork among the teachers (n=5).

*School Principals' Individualized Consideration Behaviors:* In this context, individualized consideration means the principals' continuous effort to behave each teacher as a special person and act as a mentor who tries to develop his or her followers' professional potential. Principals with individual consideration encourage teachers to reach aims that help both the teachers and the school. In this regard, a teacher claimed,

*"My school principal is a good administrator. He balances academic issues and social issues at our school. He encourages us to do postgraduate studies. When a teacher who wants to do masters asks his permission, he congratulates him/her on their efforts and does his best for them. He also promotes these teachers to some positions at the school fairly (T 9)*".

A teacher puts, *"In my opinion, a principal is someone who can make a school a paradise or hell for teachers. I do not want to stay at this school anymore, because we have an unfair principal. I stayed at this school for 8 years, our former principal left the school. The school was a home for me for 8 years. He was a considerate man. But when the new principal came, he ruined everything with his unprofessional behaviors (T 19)*".

Another teacher claimed, *"I love my school because I feel committed to my school. When I go to school, I feel supported and valuable. We, teachers, are like family members. The principal never spends his time in his room. He comes into the teachers' room and talks to us during the brake times (T 16)*".

It is claimed that principals build good relationships with the teachers through "individualized consideration" behaviors by giving teachers personal attention, understanding their individual differences, and making them feel valuable at school. As can be understood from the teachers' evaluations above, the principals always have time to deal with academic issues and also talk to teachers (n=14). It is claimed that they do not stay in their rooms all the time and they are everywhere both in the classrooms and corridors (n=15). They also respect different opinions at school; therefore, teachers feel themselves valuable at school (n=8). However, some teachers assert that some principals may not behave fairly at school (n=2)

*School Principals' Intellectual Stimulation Behaviors:* Intellectual stimulation means the leader's continuous effort to motivate followers to be innovative and creative as well as to encourage followers to question assumptions and to reframe problems and approach them in new ways. Principals with intellectual stimulation promote critical thinking and problem solving to make school a better place. In this context, a teacher claimed,

*"I have worked with several principals so far, but some principals are better and more polite than the others. They make difference. My principal is a woman. She always encourages creativity, pursue new implementations, and adopt them to our teaching practices. She also supports our professional development by providing some opportunities (T 17).*"

Another teacher asserted, *“Our principal supports new challenges and provides different solutions to our daily problems. As long as you persuade him what you want to do, he is ready to be with us (T 11).”*

A teacher mentioned, *“I do not believe that he wants us to go ahead. He is obstinate and unprofessional from time to time. He does not want to make any changes at school and he wants to keep the school as a place which does not create any problem. He is sometimes old-fashioned (T 16).”*

A teacher revealed, *“Our principal is keen on new things. He always says that teachers should be learners all the time. He even learns new things from students (T 23).”*

As can be seen as transformational leaders, school principals motivate the teachers of this sample to perform better (n=10). This makes the teachers feel good and committed. A sense of belonging develops in such organizations. As can be understood, the principals of this sample behave as transformational leaders (n=14). It is also clear that the principals of this sample are open to new ideas and they are flexible enough to implement new ways in teaching (n=12).

#### **4. RESULTS AND DISCUSSION**

Evidence shows that there is a strong relationship between principals' transformational behaviors and teachers' commitment and also their better performance at schools. Therefore, this study researched teachers' opinions on principals' transformational behaviors and their effects on teachers' commitment, and some results were obtained.

A result indicated that although school principals' idealized behaviors such as displaying considerate behaviors prioritizing teachers' professional needs are of great importance, the teachers of this sample have negative opinions. They consider these behaviors at an undesired level. Teachers of this sample do not trust and believe in their principals regarding their efforts to move their school forward. As can also be understood, the principals of the sample are claimed to be inexperienced to manage human relations at school. Sometimes they have a tendency to use power to influence the teachers' behaviors and performance. They are also claimed not to be good and trusted role models for the teachers.

According to another result, principals try to build good relationships at school through “individualized consideration” behaviors by being considerate about personal attention, understanding the teachers' individual differences, and making them feel valuable. It can be inferred that the principals always have time to deal with academic issues as well as the teachers' personal problems. It is understood that they are everywhere both in the classrooms and corridors. They also respect different opinions; therefore, the teachers feel themselves valuable at school. This makes the teachers feel attached to their schools. The principals, as transformational leaders, motivate the teachers to perform better, which makes them feel committed. In short, the principals of this sample behave as transformational leaders and they are open to new ideas and they are flexible enough to respect different views.

A further result reveals that school principals are always in a consistent effort to support the teachers by helping them develop and maintain a collaborative, professional school culture and fostering their professional development. They also add that the principals try to help teachers solve their problems together more effectively. They are also trying to build a collaborative teamwork among the teachers as well as their students. It is seen that the principals always set high academic standards and motivate people to realize these standards. As a part of their profession, they are among the teachers and students all the time instead of staying in their rooms. In other words, they are everywhere except for their sterilized rooms. The teachers' opinions are usually positive in this

sense. They claim that the principals' transformational behaviors affect the teachers' commitment, which is considered to lead to the teachers' enchantment. This is probably because of school administrators' management approaches as a result of their education. In recent years, most school principals were relocated and young principals most of whom have post graduate degrees in educational administration. In this respect, it is considered that as young principals they are not approving classical management approach, and they may have a desire to share the management power with the others. This may also affect the teachers' organizational citizenship behaviors. Ünüvar (2006) evidenced such a significant relationship between organizational commitment and organizational citizenship behaviors.

The research results show that principals' transformational leadership behaviors lead to a high level of organizational commitment, which provides teachers' attachment. This might stem from the newly-appointed principals' management styles. As a requirement of the new law, while renewing principals' contracts, teachers' opinions are taken into consideration. Although their opinions are taken in a limited way, it is considered that this new situation may have affected the way the principals behave. It is also evaluated that young principals' democratic point of views lets teachers express themselves properly. Balay and İpek (2010) discovered that there is a moderate level organizational commitment among primary school teachers and low level commitment among secondary school teachers. Similarly, teachers' organizational commitment perceptions were found high in some studies (Boylu, Pelit and Güçer, 2007; Buluç, 2009; Erdem, 2010; Izgar, 2008; Karataş and Güleç, 2010; Korkmaz, 2011; Kurşunoğlu, Bakay and Tanrıöğen, 2010; Nartgün and Menep 2010; Nayir, 2013; Öksüz, 2012; Yörük and Sağban, 2012; Topaloğlu, Koç and Yavuz, 2008). In some studies it was found at moderate level (Akyol, Atan and Gökmen, 2012; Özgan, Külekçi and Özkan, 2012; Uygur and Yıldırım, 2011; Uyguç and Çımrın, 2004). Yıldız (2013) found high positive correlation with organizational opposition. On the contrary, Celep (2000) discovered low commitment. Similarly, Shaw and Reyes (1992) observed that primary school teachers were more committed to their schools than secondary school teachers. According to Dolu (2011) committed staff show greater effort and they seem happier while uncommitted ones show less effort and look unhappy.

Furthermore, it is claimed that without taking teachers into consideration at a school, the culture of any school is at stake. If the teachers feel unimportant at schools and if they are not happy in that organization, the future of the organization does not concern them. If they believe to be successful, they can put their ultimate efforts to make it a better place. Otherwise, even though a school is equipped with the best technology, it is the teachers who will move the school ahead. Therefore, although administrative tasks are important in the school management process, psychological aspects should not be ignored as they have indirect effects on teachers. According to Copland (2001) the leadership of these principals was not superhuman; rather, it grew from a strong and simple commitment to make schools work for their students and to build teachers' determination and capacity to pursue this collective goal.

It can be concluded that the teachers' perceptions about their principals' transformational leadership behaviors regarding their commitment are positive in general. They are proud of their school, which makes them feel attached to their schools. This may stem from the psychological needs that are met properly by their administrators. As known, people enter an organization to meet their personal needs. When their needs are met by the organization, they may feel committed. Similarly, Lynch (2013) reveals that people who feel connected are those that experience a sense of belonging, a sense of being part of a relationship with others.

Teachers' opinions about their school's values are the strongest predictor of their commitment. In general, it is clear that principals' transformational leadership behaviors have significant direct and indirect influences on teachers' commitment. For that reason, the way people are managed in their organizations has a major impact on their commitment and on organizational performance. The

recommendations reached through the results obtained in this study and implications for further research and practice are below:

- Such a study can be conducted with a survey method or mixed method to see if there is any difference about the effects of school principals on teachers' commitment.
- This study was conducted with a sample of selected schools and principals. A similar study can be conducted with a randomly chosen group of school and principals. By doing so, a difference can be researched.
- The principals of this sample can be grouped as mentor principals to share their practices with other school principals.

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# Rescuing the ghost from the machine: towards responsive education and beyond explanatory machinery systems

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## ABSTRACT

The significance of the “Bologna Turn” in European Higher Education, which supposedly refocused the process of teaching and learning and was expected to bring about a pedagogical reform, is discussed mainly by clarifying why it has not in fact realized the expected advances on performativity and standardization. We show how the “Bologna Process” falls into the mechanistic paradigm that Rancière (1987) acutely criticized and through which the educational intervening subjects are reduced to a functional dimension. We draw on Rancière’s criticism to make clear the dynamics of the “deranging machine”, while we call for Buber’s “pedagogy of encounter” as having the potential for opening a new space to escape from the current situation by a “pedagogy of an inspiring way of speaking”, as this may act as adequate conveyer for accomplishing the desired meaningful encounters. These issues lead us to consider why and how education requires a special “pedagogical tact”: the tact for understanding that education is an antinomical process that flows from, through and towards a meaningful dialogue, so that one can recognize that autonomy is constructed in relation to dependency, freedom in relation to compliance and care in relation to some amount of constraint.

Keywords: Bologna process, higher education, performativity, pedagogy of encounter, dialogism.

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## 1. THE LAND OF MILK AND HONEY: AN ANNOUNCED PEDAGOGICAL REVOLUTION

These times are fit for improving us only backwards, by disagreement more than by agreement, by difference more than by similarity (Montaigne, 1595/1958, p. 703).

The so called “Bologna Process” (BP), intended to develop an integrated European higher education area, explicitly refocused teaching and learning in students’ individual work and in student-centred methodologies. However, the apparent mismatches between effectively developed intentions and practices have lead many participants to suspect that, either there were some planning equivoques regarding the BP or worse, the stated purposes could in fact serve less clear options about what was really intended.

In order to critically clarify the above mentioned issue, we must start by considering the promised pedagogical reform on its own terms. Later on we will attempt to present a coherent proposal to the announced “pedagogical revolution”, at least with its stated intentions, which may be far from the promoted political measures and the practices really encouraged.

In 2007, the *London Communiqué*, undersigned by the Ministers responsible for Higher Education of the countries participating in the Bologna Process, noticed that there was an increasing awareness about the need for moving towards student-centred learning and away from a teacher driven provision. Two years later, the *Leuven Communiqué* (2009) stated that to face globalization and accelerated technological developments student-centred learning and mobility are crucial issues regarding the developing of competencies needed in a changing labour market and societies requiring active and responsible citizens. Moreover, the referred *Communiqué* explicitly reasserts that student-centred learning requires empowering individual learners, new approaches to teaching and learning, effective support and guidance structures and a curriculum focused more clearly on the learner in all three cycles. Curricular reform should thus be an on-going process leading to high quality, flexible and more individually tailored education paths.

The same issue was raised a year later in the *Budapest-Vienna Declaration* (2010), where the Ministers called upon all actors involved to facilitate an inspiring working and learning environment and to foster student-centred learning as a way of empowering the learner in all forms of education, thereby providing the best solution for sustainable and flexible learning paths.

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Insisting on the same direction, the *Bucharest Communiqué* (2012) came to reiterate the Ministers' commitment to promote student-centred learning in higher education, characterized by innovative methods of teaching that involve students as active participants in their own learning. The *Communiqué* also presents the Ministers' commitment to facilitate – together with institutions, students and staff – a supportive and inspiring working and learning environment (these words are to be marked as they will become useful later on), along with their determination to establish conditions that foster student-centred learning, innovative teaching methods and a supportive and inspiring working and learning environment.

Finally, very close to us, a report from the High Level Group on the Modernisation of Higher Education (2013), titled *Improving the quality of teaching and learning in Europe's higher education institutions*, came to stress the need for making available pedagogical training for higher education teachers. If such a disposition can be seen as the correspondent's concerns regarding teachers' pedagogical empowerment in order to ensure that innovative and student-centred learning processes actually came to be delivered by teachers, the least one can say is that the BP suffers from an inversion of priorities. Until 2012, the process simply relied on formal calls for pedagogical transformation, while mainly addressing other core issues that have led the agenda since the *Bologna Declaration* in 1999: 1) mobility of students, teachers and researchers; 2) easily readable and comparable degrees; 3) a system of credits; 4) the adoption of a European standard system for quality assurance.

The real issue here is that such a lag –between the formal call and the agenda really promoted–, seems to uncover the true motivation behind the Bologna Process: a bureaucratic standardization design to align higher education with “managerialistic” and economic purposes. To understand the real dynamics of this process, we must get back to the BP's initial motivation of tackling the “American research universities” challenge of supplying globalized markets demands, which means that European Higher Education came to address the Globalization Age within the frame of a neoliberal ideology (Cachapuz, 2009). Following the corporatist medieval *universitas* giving way to the Enlightenment's institution devoted to “universality”, it is now time for the Corporate University to rise, on the wings of efficacy and efficiency, over the former now supposedly anachronistic conceptions.

Another clue for getting to the BP's underlying motivations pertains to its development. Although the 1988 precursor, *Magna Charta Universitatum* was undersigned by Rectors, the following declarations and communiqués came to be undersigned by all Education Ministers, a fact that indicates the top-down model applied to the initiative. It should be noted that the BP has been, above all, focused in the Higher Education Institutions' (HEIs) systems convergence, something that should not be confused with the uniformity of such systems. As Cachapuz (2009) stresses, the Bologna Declaration is not a treaty, undersigned by countries obliged to transpose it to a juridical stance; it cannot be imposed, but should instead be constructed. Such construction is the responsibility of HEIs, although it is common to see that the governments of participant countries take the initiative of leading the process themselves. Furthermore, one should bear in mind that the BP seems to have forgotten the crucial issue of teacher education required for facing the new pedagogical framework. It is an explicitly recognized fact that to date, it has failed to address the substantive pedagogical changes regarding the required so-called student-centred teaching and learning methodologies.

On the one hand, it is now clear that the new pedagogical paradigm should be student-centred and not focused on subject structure or the teacher, thus breaking with the magisterial and transmissive tradition and thereby addressing new interdisciplinary curricular development that addresses student needs by applying innovative methodologies and by being open to the virtualization of the education process. However, the truth is that the implementation of these factors has not yet been achieved. Particularly, teachers' pedagogical training and the deployment of an academic culture congruent with the BPs' aims has had very late acknowledgement. Not only are we not working toward settlement of a new academic culture attuned to active learning methodologies, but we are relying on doubtful student autonomy and fetishist virtual didactic models that are laying siege to the traditional Socratic pedagogical approaches (Díaz, 2010, 2012c). This means the BP is not fostering the conditions for creating “a supportive and inspiring working and learning environment” (*Bucharest Communiqué*, 2012), or if it is, such concerns are only to be addressed after the “managerialistic” agenda.

The BP has nonetheless brought together European HEIs regarding some formal issues, such as degrees comparability and recognition, which induced a study cycles shrinkage that many interpret as having been driven by economic motivation. Additionally, the student-centred focus was also used to increase teachers' workloads, with no corresponding development of support conditions. If a new academic environment has settled, it is a bureaucratic, Tayloristic and a controlled one, underpinned by a reductive conception of education quality (Días, 2012a; 2012b). In this new environment, humanities have suffered a strong suppression, along with all those “useless” treasures that humans long for. Hence we are losing space for developing the magnificent human qualities that Morin (2003) described as the flowers of complexity: conscientiousness, the spirit and the soul.

More than an educationally stimulating environment, the BP has been assembling a huge machine refractory to spirituality, which appears to be unabsorbable by mainstream instrumental rationality and its maniacal “performative” approach. This has led us to wanting to contribute to the required new pedagogical environment, which is still lacking within the Bologna Process.

The BP's apparently paidocentric revolution was supposedly aimed at promoting an alternative to a somehow obsolete transmissive machinery in order to replace the dominant magisterial tradition with a student-centred approach. Instead, the BP is now very much falling into the explanation machine paradigm that Rancière (1987) has acutely criticized and through which the educational intervening subjects are reduced to a functional dimension. Anything beyond this dimension is obliterated; thus, spirit can only appear as a void spectrum, ignored by the machine that at the same time reacts ambiguously, as if haunted by any strange nature. We can find here a homology with the Cartesian dualistic relationship between body and soul – *res extensa* and *res cogitans* – in which spirit appears as something that does not belong to the bodily machine, for they entertain a merely transitory relationship, given their absolutely distinctive type of *res*, i.e., their ontological distinctiveness (Koestler, 1967). In fact, as Bates (2014) has shown, such an instrumental approach currently embodies the Strategic ideology –that was originated in business management theory and practice–, conceptualized within the Cartesian paradigm of rationality, order and logic, to which a “subject-object dualism creates a distinction between the detached, knowing subject and human or other resources to be calculated, manipulated and deployed for the aims of strategy” (Bates, 2014, p. 354). Thus an encounter with others as existential subjects is never possible: within the Cartesian world, the others –whether we refer to objects or human beings– always appear as objects to be measured, manipulated, used or improved. For the Strategy ideology, that focus on a calculative reasoning in search of efficiency-efficacy, through matching means to predetermined ends, we only have resources’ manipulation, where existences –spirits as ends in themselves, as Kant (2005) would say– can never appear as such. As neither the axiological and teleological issues can be really taken in consideration, while a reflexion on the deeper meaning of the relational issues of education process would have space to be undertaken. Everything out of the manipulative approach of measurable entities and processes are bound to disregard, trivialization and obliteration: they become as ghosts within a machine.

One should therefore ask whether –within the framework of the BP's pedagogical focus, as it has been developed so far–, it is possible to succeed freeing existences (the minds or thinking ghosts) from the machine or whether –in case the machine opens up to accept existences–, one may at least help the machine acknowledge their peculiar nature. Such an operation can only be attained if the machine opens itself to this subtle kind of nature and welcomes such fundamental difference into its realm, thereby overcoming substantial dualism. Only then will these learning spirits stop wandering the shadowy corridors of the machine –haunting it with their mere existence of substantially different realities–, thereby finally being rescued from a life of alienation. To do this, we need a new kind of university, a new institution that must be animated by a supportive and inspiring working and learning environment.

Ultimately, such an issue puts forward the problem of the inclusion of differences, that is, the inclusion of the difference of conditions that a subject has the potential for embodying. With regard to the subject (teacher/student), the machine commonly does not go beyond the recognition of an agent (a machine part), or at best, an actor's role (an operator of machines); it never acknowledges the possibility of an author of meanings (Pourtois & Desmet, 1997). The machine only accepts, at best, an adaptation that forces the subject into the operative context, where he/she becomes a functionary, i.e., he/she is converted into nothing more than a gear wheel in the system. It is this core tendency that destroys any space for the inclusion of differences such as interests, motivations, desires, skills, rhythms and dissident speeches, among other things. However, it must be emphasized that, regardless of management options, education should address a multidimensional purpose of qualification, socialization and subjectification – a domain that “has to do with the way in which children and young people come to exist as subjects of initiative and responsibility rather than as objects of the actions of others” (Biesta, 2015, p. 77). Meaning this that education ought to address the empowerment and emancipation of living minds.

However, there are now many reasons to believe that the Bologna Process does not represent a methodological turn for overcoming the mechanist paradigm; at the very least, it still lacks the essential conditions for doing so. The aftermath of its “great expectations” is now perceived as pedagogical disappointment, a shallow efficiency assessment, hollow standardization, increasing bureaucracy and above all, funding cuts. That is why we must look for a way to surpass its intrinsic obsession with “performativity”. This means we have to discover a path that opens up the possibility of recognition of the spirit by the machine. Could this be one of those “happy failures” Melville (2009) so well describes, by which we learn to be more concerned with the invention of happiness than anything else?

Our effort will now be readdressed to find a pedagogical framework focused on students' activity that the BP claimed for but did not prioritize, indicated but did not promote. Such an exploration may bring forth some clarification on the adequate processes to serve the declared intentions. Hence, following Biesta's (2015) critical approach, we will not draw on learning in an abstract sense, presupposing that the point of education is simply that students learn, thus forgetting that, more complexly, they should learn *something, for a reason and from someone*. Which means education needs to engage with questions of content, purpose and relationships. Right now we will focus in the dimension that refers to education's impact on the students as persons, i.e., pertaining to the domain of subjectification (Biesta, 2015), in which the forms of relationship and the allowed roles are

crucial. Although the above referred three domains of purpose cannot, and must not, really be separated, as one-sided conceptions can damage one or more of the other domains, we have a good reason to focus on the later: “the current emphasis on achievement in the domain of qualification where excessive pressure on students (and teachers, for that matter) to perform in that domain (and within that domain in a very small number of subjects) is beginning to have a negative impact in the domain of subjectification” (Biesta, 2015, p. 78). Hence to put some weight on the most neglected plate of the balance seems recommended.

## **2. TAKING EDUCATION OUT OF THE EXPLANATORY MACHINERY SYSTEM**

For rescuing the ghost from the machine, our first challenge is to take it out of the explanation machinery system deployed by the current performativity framework, which the BP helped to install, even when stating very good intentions. According to the provocative educational views of Jacques Rancière (1987), true empowering education is that which succeeds in freeing the spirits from the institutional circuits of the “explanatory machine”, the regime of explanations and re-explanations that continuously confirms ignorance and reinforces the assumption of cognitive inequality.

From the above mentioned approach follows that education does not imply a master that orally conveys knowledge, thereby leading the spirits through a progressive path of ascending from simple to complex elements, while avoiding errors and detours so that the appropriation of knowledge advances smoothly and the formation of intelligence and taste may be fully accomplished. Instead, one must aim at reversing the working logic of the “explanatory system”, the foundation of which lies in the constitution of inability, conceived from the standpoint of an educational ideology that establishes a divide between the savant and ignorant people, i.e., higher and lower intelligences. If one adopts such an assumption, then one accepts that the master is entitled to decide the absolute departure point from which he alone defines what must be learnt and supplies the criteria to assess the progress of learning and understanding. However, the principle of explanation becomes a principle of spiritual and cognitive destruction: the imperative of explaining and understanding is the origin of all evil – nor does Rousseau’s pedagogical cunning of careful presentation of obstacles to be surpassed by the autonomous learning mind escape this radical criticism. The more the master is a savant available for becoming, in good faith, a professional of explanation, the more destructive his/her actions will be.

On the contrary, if we let both characters, intervening in the educational process, face an unknown book, it establishes equality between those who learn by themselves and those who ignore what they teach; without any intermediary explanatory intelligence, the pupil only needs natural intelligence to understand what he wants to understand. All he/she has to do consist of producing, by themselves, a sequence of learning operations: they must observe, rehearse, store, link, prove, correct and even guess. On his side, the ignorant master sets a relationship between free wills, guiding the will of the pupils so that they decide freely to learn and by obeying no one but themselves, reaches intellectual emancipation or cognitive empowerment.

We thus see that within the framework of such a relationship, roles are transformed. The function of the master transmutes into a kind of care that requests focused attention and the stimulation of intelligence’s expression. That is why the master poses questions. He must ask in order to be instructed: he relates to the pupil as an equal man, not as a savant, because he acknowledges his ignorance. He does not validate ignorance but fosters research and focused attention. Such a process centres on self-directed attention instead of promoting a science that emphasizes the other’s inability. In so doing, intelligence focuses on itself to examine what it sees, what it considers to have seen; therefore, it requires first and foremost unconditioned attention to cognitive actions themselves. To such an extent, the pupil will learn without external explanations, just because he wants to, because he has accepted the essential tension created by his own desire or will to understand and because he has allowed the difficulties of his existential situation to provide him with learning goals. He must trust the efficacy of his own cognitive abilities and the motivational strength of his own commitment to develop them, which lays the foundations of human dignity.

In this new context, there will be no fundamental differences between learners’ cognitive abilities, whether memory, understanding or judgment. The crucial element would reside in the dynamics of attention focused on meaningful objects, attention that constitutes intelligence itself, relying on the energy of free will that animates it. Any intellectual difference will essentially be derived from the differential use of attentional resources. The quality of learning and of cognitive style will increase depending on their linkage to one’s uneasiness and one’s sensitivity to the surrounding circumstances and challenges. It hence follows that learning stems from individual motivations and needs, for otherwise attention remains inert. The differences observed in the outcomes proceed from attentional and motivational differences rather than from cognitive differences. The spirit fails and error emerges only when intelligence is affected by a certain kind or degree of distraction. Without focused attention, intelligence is paralyzed by passivity, contempt towards personal achievements is fostered and lack of audacity to embrace creative cognition spreads along with a submissive way of thinking. Erratic or regressive movements by one’s free will produce fundamental distraction, which blocks the search efforts feeding the learning process. The lack of attention signals an absence, a perversion or betrayal of one’s personal will and thereby amounts to a

self-infidelity or lying to oneself. For self-fidelity implies self-centring, which constitutes the very principle of veracity. Depending on the movements of the will that determine the intensity and direction of one's attention, meaningful connections are formed or, alternatively, vanish.

Such an educational perspective seems to anticipate an existentialist approach, as advocated for instance by Karl Jaspers, for whom the essential character of education aims at accomplishing the transformational encounter between a person and their own being or their own selfhood (Neves, 2004). The educator facilitates the access of such personalizing self-focus, in which the educand becomes autonomous and gains awareness of the determining force of "limiting situations" about which there is neither ultimate truth nor valid explanation. In this respect, educator and educand share the same existential condition and the same ground of experience. Indeed, when referring to the anthropological invariants, educator and educand appear on the same footing and establish a horizontal relationship: they are fellows on a joint journey at the existential level. For this reason, a return to the Socratic "Paideia" may be justified in some circumstances, given that it re-enacts the educational relationship in which the master must present himself as ignorant. For, regarding the enigma of existence or the inexhaustible and multifarious substance of truth, educator and educand share the same place in being: both are in search of meaning and truth, and neither may ever claim to have reached a final response. Thus, the educator is not in the position of explaining the unexplainable and given that he/she is as ignorant as the educand, his/her role consists of inviting the educand to join the venture of searching for truth and questioning the answers in a personal and free manner, without accepting the mediation of any so-called authority.

As existential pedagogy would later also maintain the principal resource of a form of that relies in truthful communication through which truthful existences, rooted in common human intelligences can meet, affirm and recognize each other, so that they apply themselves jointly to the ungraspable centre of truth, sharing their meaningful experiences of searching for truth without ever claiming to possess it. The aim of such an education would be to promote the engagement of free spirits in the asymptotic search for truth, thereby fostering the formation of ideas, opinions and joint intellectual ventures, being thus enriched by the non-coincidence of intelligences.

Such a scope appears to hold the following Montaigne's belief (1958/1595, p. 705): "we are born to inquire after truth." Yet at the same time, one must acknowledge that what is said of truth, whenever truthful words and attentive intuitions are animated by a powerful will to understand, allows one solely to attempt at translating truth (and "guessing" truth as it were) into the language and communicational movements of our existences. Rancière embraces the same standpoint when he states: "Thought does not say itself *in truth*, it expresses itself *in truthfulness*" (1987, p. 106). Indeed, for Rancière the "principle of truthfulness or veracity" that derives from the impossibility of self-ignorance lies "at the heart of the experience of emancipation" and constitutes the "moral foundation of the power of knowledge" (Rancière, 1987, p. 98).

Such an educational order, deeply embedded in the will to understand and to be understood, immediately opens up a passage to a "poietic" space, where existential subjectivities jointly engage in the infinite communicational process of expressing, guessing, translating and mutually rectifying truth, whose absolute possession is impossible. It amounts to maintaining, in Rancière's words, that "in the act of speech (*parole*), man does not convey knowledge, but he poetizes, translates and invites others to do the same" (1987, p. 110). In this respect, one must recognize that such a dialogic vein, which underscores the value of the joint venture of searching as the essence of the common human learning experience, points to a deeply educational attitude. As proposed by Orbe, Bondía & Sangrá (2006, p. 241), education supposes an "experience of openness", a "poetic and political incision", which introduces novelty from the perspective of a free relationship with the world. In this relationship, we construct ourselves as persons, because "poetics in education is the plot, the story and the narrative that help us invent ourselves" (Orbe, Bondía & Sangrá, 2006, p. 241).

Education, as conceived in the above mentioned approach, refuses any conciliation with the dictates of science and progressive improvement based on inequality; that is to say, the pedagogy institutionalized by the schooling explanatory machine seems to serve only to infantilize and diminish one's persona and mental activity. In addition, it also denies the principle of a confined, orthodox, pre-understanding, which imposes a rigid educational path to be followed by the pupil. In the realm of a "poietic" space, which should be opened up and enlarged, education must abandon the willing "to lead the educand's attention towards a correct direction, defined in advance, and convert itself into a process of shared attention" (Orbe, Bondía & Sangrá, 2006, p. 241-242). In so doing, one witnesses the meaningful and liberating emergence of an individual voice. Such an experience may not serve specializations, as Rancière (1987) remarks, but multiplies the power of intelligence; it does not form savants, but raises awareness of one's own intellectual powers.

Regarding the current deployment of the efficacy-efficiency paradigm, installed in higher education, we want now to claim that the dialogic educational insight should be, at least, complementary to others, namely instruction. In the next section, we will venture a way that seems to be congruent with the purposes of a process able to put the learner at the centre of the educational dynamics.

### 3. EDUCATION AS ENCOUNTER AND RESPONSIVE PRACTICE

Ranci re’s criticism allowed us to recognize the dynamics of the “deranging machine”, now, as we’ll see, “pedagogy of encounter” may open a new space to escape from it and, on its side, “pedagogy of an inspiring way of speaking” can offer the adequate conveyer to accomplish these meaningful encounters. If the realm of encounter provides a relational space able to encompass the triple dialectics of the agent/actor/author, in which the roles of actor and author are fully integrated, stimulating the flourishing of the subjective, creative, dimension of the person, that is, of the mind that inhabits the machine and rightfully exercises its proper condition, then one must find the discursive mode that can develop creativity and celebrate the valuable presence of alterity. Therefore, in order to escape the machine’s short circuit, one might refer to Buber’s pedagogy of encounter (McHenry, 1997) and attempt to accomplish the reincorporation of the subject in all its dimensions, following a kind of education that can and should be developed through an inspiring way of speaking, as proposed by Vansieleghem & Masschelein (2012). By understanding education as an invitation to speak, one invites those involved in pedagogical relationships to engage in an inspired and an inspiring way of speaking that specifically requires and affirms their full and personal presence.

Underlying such an approach, one finds the assumption that “in the beginning it is relation” (Buber, 2010, p. 18), meaning that humankind’s primordial attitude is being-between and being-with, translated into an existential and discursive experience deprived of transitive verbs. Being-between means a dialogical position, in which personhood emerges as an invitation to speak and speech invites embracing a relational mode of being. This dialogue differs sharply from the sort of communication in which there is exchange of information, explanation and demonstration, production of judgments and reasoning and arguments that pose and elucidate questions located in the broad logical flow of discussion, debate or negotiation, in accordance with technically controllable processes. Selfhood and alterity, “I” and “Thou”, are co-constructed in and by dialogical movement, for dialogue liberates a kind of speech that is “an abandoning or exposing of oneself” and therefore “less an activity than a passivity or passion, through which one becomes present in the present, a being with, which is also a kind of invitation” that always puts oneself at stake (Vansieleghem & Masschelein, 2012, p. 3). This is precisely an invitation to welcome one another’s presence, the movement of the primordial word I-Thou; an inspirational speaking that requires inspiration in order to take place and make present the missing and living alterity of the other.

Vansieleghem and Masschelein (2012, p. 87) distinguish this type of dialogue from common, prosaic, dialogues: “If it is common in academic parlance to speak of the ‘exposition’ of an argument or of someone’s views, the speaking we have in mind is an ‘ex-position’ – that is, a speaking that puts one *out of position*. And we can recall here the proximity of this thought to that of exposure and even *educere*, all involving a movement outside or beyond oneself.” This constitutes a *sui generis* form of dialogue that “exposes an invitation to speak, it being understood that an invitation to speak requires speaking as invitation: it requires the opening of a new dimension of thinking and acting” (Vansieleghem & Masschelein, 2012, p. 87). In such a way of speaking, the interlocutors expose themselves to whatever may happen and to being present; thus, the interlocutors become mutually present, not to claim the truth or validity of anything, but rather to affectively experience the process of close presence, of being-with, which entails the availability of engaging one’s own subjectivity and liberate it so that one is liberated from oneself and open to difference, to feeling and thinking otherwise. Here one is invited to live the passion of recognition and acceptance of whatever, whoever, is present, which goes far beyond any reflection on the chaining of arguments that compose sound reasoning.

Within an encounter, which the inspired and inspiring speaking invites to make happen, the words with their pre-established usages and meanings appear to be unable to be spoken, for the presence comes to speech with radical novelty. New words must be commonly coined to make the presence speak its own language. The free passion of being affected by alterity does not deploy any exercise of predications or judgments. Instead, it is the openness to being-present-with; it invites the emergence of presence and at the same time is presence revealing itself and giving presence to the other so that oneself and the other may emerge jointly from the mere world of things, the world of the explainable causal chain of beings, a world void of novel presences but full of past determining forces. The world of meaningful presence and life is both the condition and the creation of encounters. Insofar as human beings refer themselves to the world of things and confine themselves within its boundaries, they only inhabit the past and their moment is deprived of all present content. However, whenever one utters the word ‘You’, one is no longer relating to things determined by their past, but to creative presences; for you is always affecting and being affected by ‘me’, and thereby creates a world of relationships in which true speaking flows within the context of recognition and acceptance that exposes the interlocutors and puts them “out of position”, out of the roles and functions they represent, but mutilate their presence and prevent them from being or becoming all they can be and become.

According to this view, our existences are not conceivable as simply ‘givens’; instead, they must be assumed rather as tasks one is responsible for, that one must take care of. In a radical sense, selfhood is essentially the awareness of the permanent urgency of ‘care’, that is to say, care or concern for oneself, an idea that culturally

takes root in the ancient *cura sui* –poignantly analysed by Foucault (1984, 2001) –, which has resurfaced with Heidegger’s (1927/2008) *Sorge* located at the heart of *Dasein*. The speaking that addresses existence must welcome its ever surprising and creative movement, which invites a new language to take place, the language inspired by presence and inspiring that same presence, a revealing and liberating way of speaking-with that reinvents language itself and through which the novelty of meaning allows the expressive emergence of authenticity. One of the major paradoxes of the Bologna Process lies in its emphasizing the student’s autonomy while implementing standardized managerial procedures to such an extent that *cura sui* becomes a post-humanist manifestation of a governmentalized organization, an epiphenomenon of a political technology to produce and reproduce a historically determined pattern of competent citizenship (Fejes, 2008a, 2008b; Foucault, 2001).

Instead of a standardized set of performances for building and governing subjectivities, education is a unique dialogical event which, once addressed to free minds, will flow far beyond “governmentality”, and will be nourished by this inspired and inspiring way of speaking that invites and expands itself, producing communal and novel meaning that stems from the authenticity of co-existence and co-care in an open, unbounded, presence. Such a presence is not the object of explanations and judgments, but appears as a questioning, and for this reason may leave us speechless, mute and attentive to our existence, fascinated by our existence, and open to a new way of speaking; that is, speaking in its novelty, from which the inspired and inspiring speaking emerges. The critical liberation from all pre-conceived frameworks makes available recognition, commitment and acceptance, where the presence revealing itself and its way of speaking becomes an invitation to being. Such an “encounter” does not necessarily need to be translated into speaking; it can be expressed by the qualities of bodily posture and visual contact. Moreover, the encounter may experience difficulty in coming to language and therefore may appear to prefer the silence of listening. Being out of their secure positions, the interlocutors are convoked into an open environment in which they expose themselves. However, one must ask, is this mode of speaking really adequate for the liberation of the spirit from the machine? The answer may be found in a passage by Buber, in which he describes the “living speech” that plunges one into “the truth of relation” or which one encounters as being deeper and higher than “the spirit of knowledge and the spirit of art”:

Here, the *Thou* appeared to the man out of deeper mystery, addressed him even out of the darkness, and he responded with his life. Here the word has from time to time become life, and this life is *teaching*. This life may have fulfilled the law or broken it; both are continually necessary, that spirit may not die on earth. This life is presented, then, to those who come later, to teach them not what is and must be, but how life is lived in the spirit, face to face with the *Thou*. (Buber, 2010, p. 42)

This approach is all the more relevant and even more human and humanizing when it concerns those voices that are marginal to the dominating system, voices that speak the language of difference and minority. In a line that seems to be congruent with the relational emphasis, one may also refer to Jean-François Lyotard’s proposal (Dhillon & Standish, 2000), according to which one must bear witness of the differences between voices and find adequate languages to express them, suggesting that art and feeling might be the best means for opening up the human enigma between interlocutors. Not only does art seem to be the most adequate means for expressing that which is different, which cannot find any faithful vocabulary to express itself in the dominating language game, but it also through art that one awakens good consciousnesses from their insensibility towards the silenced cry of difference. In this regard, one requires a meticulous and patient work of “just education”; that is, education freed from the confines of performativity and responsive to the expressivity of polyphonic sensibilities.

To our minds and within the dialogical view of educational antinomies (Reis, 2014), the fact of acknowledging that education is accomplished through encounter does not entail the total negligence of instruction. Likewise, being an author cannot annihilate the actor and the agent; formation cannot deny the value of information; self-education cannot oppose hetero-education; development of rationality should not destroy the development of affectivity. However, it is the ability to articulate in renewed configurations those antinomian principles, embedded conflictively within the educational field and the concrete educational situation that can aptly justify the complex understanding of education as science, technique and art. The educational realm claims art from the highest level of the presence between minds; a kind of art requiring an unconditional acceptance and free gift of oneself through a way of speaking that is inspired by the presence, and which is inspirational to the quality of presence, thus inviting one to the authenticity of being in language. Even if one is chiefly concerned with the logic of explanation and planning, one cannot avoid asking for the quality that sustains this educational mode and which is sensitive to the antinomian nature of the project aiming at being *through* and *for* dialogue.

Here, as in many other aspects of education, there is the apparent paradox of accessing something from that which, conceptually, supposes its contrary. Namely, autonomy being constructed from dependency, freedom from respect for the norms, and dialogical attitudes from initial constraint, until the attentive listening to others and acceptance of their legitimacy. Pedagogical tact is, in our view, to know how to combine these apparent antinomies (we should not forget we are in the field of complexity), without thereby having to arrive at some intermediate fixed point, especially

because we must interpret at each moment what can foster the learner's personal development.  
(Asensio, 2004, p. 235)

This would be the case if we really want to get the Bologna Process, currently captured by the “performative” obsession, back on track with its underlying principles.

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# Use of mobile touch devices as part of lifelong learning with specific focus on tablets\*

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## Abstract

In recent years, mobile touch devices (touchscreen mobile devices) have been winning increasing recognition in the sphere of lifelong learning; they represent powerful tools for distributing educational content as well as being effective means for controlling knowledge and skills among students. As these portable touch devices become more and more affordable and their sales dominate the market for information and communication technologies, they also bring to the mass population several useful educational applications from various fields. Additionally, mobile educational applications provide interface with online environments based on LMS and MOOC. Parallel to this trend is the growing market for electronic textbooks – these are available to pupils and students as well as participants of lifelong learning programmes. It is heartening indeed to see that the introduction of mobile touch devices in education is supported by the state (ministries) in the form of heavy investments in this field.

This paper deals with the new trends concerning the use of tablets in lifelong learning. It describes the advantages as well as the limitations of using these devices, and also focuses on the experience with using tablets in conventional frontal teaching.

Key Words: tablets, mobile touch devices, education, e-learning, m-learning

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## 1. INTRODUCTION

Over the last years, mobile touch devices have found their application in both regular full-time education and lifelong learning. The term “mobile touch devices” pertains to a large number of technologies - smartphones, phablets, tablet PCs and also computer tablets that experienced a massive boom in recent years. The first version of the operating tablets were launched in 2010 (the 1st generation iPad from Apple) – however, they were quite expensive and not affordable for the general population (K. Kopecký & Hejsek, 2015). However, the ensuing five years saw the emergence of a specific market segment bringing affordable tablets and related software to the general population – cheap, reasonably fast, lightweight and user-friendly.

Tablets represent simple but very effective tools for interactive presentation of educational content; they also enable the user to control other technical means of teaching (interactive whiteboards, streaming devices, etc.) as well as the management of the so-called smart wearables and smart devices within the new term of Internet of Things (IoT) (Hart & Martinez, 2015; Paper & London, 2015; Vermesan & Friess, 2014).

In the field of e-learning and m-learning forms of education, tablets have an established use – as tools enabling access to educational content located outside the device itself - for example, in LMS or MOOC environments (K. Kopecký & Hejsek, 2015; Lavin, 2011; Paper, Hafriz, & Azhan, 2015), etc. Advancements in hardware performance (speed, capacity) and the development of mobile operating systems (Android, iOS, Windows Mobile or the current Windows 10) gave tablets the prestigious position of being independent platforms for presenting educational content through specialized applications, tools for fixing curriculum, tools for evaluation of the teaching process, tools for sharing educational content and also tools for collaborative forms of teaching.

In recent years, a lot of debate has focused on whether tablets are truly effective tools for managing and supporting teaching, and whether they really improve, accelerate and streamline the learning process. Many authors ((Cochrane, Ako, & Oldfield, 2013) point out that although mobile touch devices have become very popular, there are no studies that would show that these mobile devices influence the actual learning process really significantly. Therefore, it is preferable to perceive the introduction of tablets into education as a "catalyst for educational change" (Kukulska-Hulme, 2010) rather than a tool for increasing training productivity.

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More recent studies focused on the use of tablets by preschoolers (Khoo, Merry, & Macmillan, 2015) indicate that the tablets can very well support the learning process in children - for example, through applications aimed at exploration. Children particularly appreciate the interactive nature of these devices - the ability to control only by fingers, the possibility to zoom in and zoom out by pinching, taking pictures or recording a video, the ability to combine video and sound, etc. The authors also mention the advantages associated with handling a tablet in comparison to a conventional keyboard and mouse - tablets are suitable for left-handed as well as right-handed users, they cannot be simply broken (as a mouse and keyboard), etc. However, the biggest advantage by far is portability – it can be carried easily anywhere at any time.

Another study (Bebell & Pedulla, 2015) is trying to determine whether the use of tablets by children in nursery schools and pupils of the first degree affects the development of their skills in reading, writing, listening, maths, etc. A group of children using tablets showed short-term improvement of their skills in some areas, e.g. in writing; - in the long run, however, no significant improvement was observed.

## **2.METHODOLOGY**

In our analyses focused on mobile touch devices and their using in a process of education we used a combination of explorative methods and empiric verification. Our conclusion were formed on base of individual observation and testing of mixed group of tablet users (n=203, two groups, age 15-25). We also used a method of work with literature (systematic review).

## **3.RESULTS**

### **Competences of Actors of Lifelong Learning**

In the abstract of this paper, we have indicated that the mobile touch devices are more and more used in lifelong education, and not just in it. It can be logically assumed that this trend will continue. Actors of the education process, i.e. the educators and trainees, will thus be faced with increased requirements based on which they will be forced to expand the range of their existing competencies. These will depend on user diversity, i.e. the multiplatformity of the currently used mobile devices, where the said multiplatformity pertains to the contained hardware and software diversity.

The hardware competencies – that the actors of the education process (especially educators) will have to acquire – include normal operation of the equipment, the basic setup of a certain device, calibration of the workspace in interactive whiteboards (hereinafter referred to as IWs), connection and launching of the control computer or tablet, etc. Educators as well as trainees will be forced to handle the operation of specific accessories that can be purchased with the selected device; of course, they should also be able to effectively use it in education (Sztokowski, 2013).

Hardware competencies can also be divided into basic competencies and extension competencies.

Basic hardware competencies represent a set of skills and dispositions typical of the educator as well as the trainees (those being educated), related to the operation and use of technology in teaching. In this case, minimum intervention in the hardware of the selected device is required on the part of the educator and trainee since the device is configured for use right from start up.

Extension hardware competencies represent skills and dispositions that relate to the operation and use of additional expanding hardware, e.g. in the preparation of lessons and the teaching itself. In relation to mobile touch devices, additional hardware includes equipment such as a digital camera, digital microscope, scanner, visualizer and other, but also more complex and specialized accessories such as school experiment systems, e.g. (Vernier, 2015), Pasco (Pasco, 2015), NeuLog (NeuLog, 2015), etc.

An integral part of the hardware competencies is the offered software package (apps), which allows the actors in education to control the relevant programme attached to individual platforms of the respective mobile touch device for creating the learning content or education applications. Furthermore, these competencies encompass knowledge of the applications included in MS Office, Open Office, etc., as this knowledge represents an essential prerequisite for the preparation of the curriculum presented via tablets, IT, etc. They also include the ability to use the power of the Internet and education programmes, possibly programmes for editing audio/video files and pictures, which can be beneficial when creating source materials.

Software competencies can also be divided into basic competencies and extension competencies (Sztokowski, 2013). Basic software competencies include a set of professional dispositions and skills related to the use of certain programmes that are necessary for the implementation of teaching with the support of mobile touch devices or IT (Sztokowski, 2013). As the basis, we can therefore consider user skills in working with office applications that are contained in the office packages of the likes of MS Office, OpenOffice and other.

Extension software competencies are associated with the use of additional software or services such as cloud computing, essential for learning with the aid of mobile touch devices. This segment may include a large number

of educational applications, software for editing images and audio/video files, or specialized software important for controlling accessories of mobile touch devices, etc.

The aforementioned cloud computing is increasingly used not only in the corporate environment but especially in education supported by digital technology as such as it offers a range of services and applications stored on servers in the Internet environment, making it accessible to all actors of education from any place and at any time; the only precondition is access to the Internet. Here, outside office applications (e.g. in the form of Office 365, Google Apps and others), we can find many other options that can be successfully used in lifelong learning. Soon, education institutions will face increasing pressure for including cloud services in their education programmes.

For illustration purposes, we present data from the research conducted by the company Bitglass (Anderson, 2015), focused on the use of the two most widely spread cloud solutions in the form of Office 365 and Google Apps. A sample of about 120 thousand companies has shown that Office 365 is used by 25.2% and Google Apps by 22.8% of companies. Another interesting finding was that the companies with less than 500 employees use cloud email in 44% of cases, and companies having more than 1000 employees even in 57% of cases.

To cope with effective teaching with the help of mobile learning technologies, both of these competencies are essential. Hardware competence allows actors in education to control technology regarding mechanical aspects; software competence allows them to work with contentual and programming aspects that are important regarding the educational content itself.

This implicates that the quality of education supported by mobile learning technologies will particularly depend on the competencies of educators as well as trainees. In the case of educators, the quality of education will depend not only on their abilities, activity, attitude and further education, but also on competencies related to working with mobile learning technologies, because educators are those who prepare the materials for teaching with the help of mobile touch devices and who compile the learning scenarios. On the contrary, in the case of education supported by mobile education technology, the trainees should especially have the hardware and software competencies to be able to adequately respond to the digitally processed curriculum.

#### **4. RECOMMADATION**

##### **Ways of Using Mobile Touch Devices in Education**

Mobile touch devices can be used in education in several ways. The first and easiest option is to use the equipment for presenting the curriculum in the form of text, audio/video demonstrations, animations, visualizations, pupils' projects, digital learning materials, the so-called DUMy (DUMY.cz, 2015), etc.

Another option is to use touch devices to work with electronic textbooks. With the exception of presentation of the curriculum, electronic textbooks allow interaction in the form of active elements, e.g. hyperlinks, embedded in the presented content, which cannot be mediated by the actual (stationary) content without interactive elements.

A more sophisticated way of using mobile touch devices is the use of educational applications, i.e. usually highly specialized software performing didactic functions. Here, the already mentioned multiplatformity of touch devices primarily finds its utilization. Applications provided for devices with the Android operating system (hereinafter referred to as OS) are available and can be downloaded from the Google Play (Google Inc., 2015) server; applications for iOS and Windows are accessible for downloading from Apple Store (Apple Inc., 2015) and Windows Store (Microsoft, 2015) servers, respectively. In practice, there are many applications that work on all available operating systems for mobile phones, and which allow the user, for example, to share a common whiteboard, create common shared mental and conceptual maps, interact, test and fix the curriculum through different test systems, etc.

Another way is the previously mentioned possibility of using the tablets for linking with learning management systems (LMS, MOOC), download teaching materials or search, share and communicate information with the class via tablets in the Internet environment, etc.

Tablets can also be used as tools for the so-called augmented reality (Kamil Kopecký, 2013). Augmented reality allows the user to enter virtual elements into "ordinary reality" via a mobile touch device, such as texts, videos, 3D objects, etc. In practice, this can function as presented by the following example: we can download an electronic catalogue of goods from the Internet; when we direct the tablet to this catalogue, the screen displays a particular item from the catalogue in 3D form together with additional information; specialized applications then allow us to place the item in real space (e.g. the tablet screen presents the selected sofa from the catalogue in our room, etc.). Augmented reality is currently used by a large number of retailers for marketing purposes, e.g. by Ikea (Ikea, 2015). For instance, augmented reality can also be used in museums (we receive detailed information when pointing the tablet to an exhibit) as well as in the field of tourism (we receive interesting info or 3D model when pointing the tablet to a specific monument, etc.).

In conclusion, we present a narrowly specific way of using mobile touch devices associated with the use of special accessory equipment, particularly in the form of the above-mentioned experimental systems and related

software. Experimental systems specifically focus on education sub-fields. They are basically used in science-oriented disciplines - biology, physics and chemistry. Currently, we mostly encounter applications in English, which puts additional demands on the educators regarding their language skills. According to the above information, an adequate choice of educational applications can then be ranked among the software competencies of the educator.

## 5. CONCLUSION

### Limits of Mobile Educational Technologies

Educational technologies bring an undeniable element of innovation to education reality. In many cases, they can facilitate the work of educators as well as trainees; they are also referred to as an energizing and diversifying factor in education, etc. Users mainly appreciate their compactness, portability, simplicity and intuitive operation, the possibility of individualization of teaching, interactivity, attractiveness and loveliness. On the contrary, they criticize their rapid obsolescence, relatively demanding maintenance, demands for fast connectivity, unavailability for underprivileged people, etc.

Some experts, such as Martin J. Stránský (Union of Publishers, 2015a, 2015b), assistant clinical professor of neurology and head physician of the Yale School of Medicine, states that *"there is evidence that people reading information from the monitor remember about one-third less than when reading the same from paper. Paper is communicating with our emotions and naturally helps the brain learn better than a computer screen. A magazine can be touched, the information is separated by pages, so our brain is better able to organize the data and thus also remember. It is because the brain and body work jointly and together, not separately. Digital media offer only flat one-dimensional data from the monitor."*

The statement by Martina Celecká (Union of Publishers, 2015a, 2015b), a doctor specializing in psychiatry and child and adolescent psychiatry from the Thomayer Hospital, is also interesting: *"Despite various possibilities, reading a paper is the most appropriate way for beginner readers. Children reading a paper do not tire as quickly and easily adhere to the correct distance between the eyes and the text. Smaller children like beautiful pictures supplementing the text. They love to touch the book, view it repeatedly and want to figure out the story. This develops their imagination and fantasy."*

Questionable, however, is also the effectiveness of mobile technology in education. In the case of educational technology, this effectiveness is often overrated and overestimated. Moreover, according to Manfred Spitzer (Spitzer, 2012), a well-known neuroscientist, it has not been demonstrated that the use of technical learning resources lead to more effective learning.

To some extent, it is possible to agree with the above pros and cons of mobile learning technologies. However, it is important to reiterate that mobile technologies are already ubiquitous and will be with us more and more in the future, both in education and in everyday life. It would, therefore, be short-sighted not to include mobile technologies in the education process or, vice versa, to use them too much. Thus we tend to the winged saying "there is a limit to everything".

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# American schools in Turkey: Robert College

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## ABSTRACT

The main objective of this study is to introduce information about the American schools established for missionary in Turkey and the best-known of them Robert College. In line with this basic objective, in the study answers are searched for the following questions; 1- The emergence of American missionary, what is their purpose and effectiveness? 2- The establishment of American schools in Turkey and what are the features of them? 3- What are the characteristics of Robert College? In the study, descriptive method was used within the qualitative research methods. The results which are obtained in accordance with the data obtained from related literature pointing to research problems are: 1- The primary aim of US schools is to spread Protestantism and by giving an average Western education to train pioneers and leaders. These schools have arisen and have spread since the end of the 18th century. 2- These schools had influence on the political structure of the Ottoman Empire, on organizing of non-Muslims in the Ottoman society and on becoming conscious against the state. 3- Missionary schools for girls and boys are structured in all of the Ottoman country. Robert College, opened 4-16th September in 1863, was a school with students and instructors of all ethnic backgrounds, basically had departments consisting mainly language, commercial and engineering sciences, major part of the income of which is paid by the American organizations spreading Protestantism and main purpose of which is spreading Protestantism.

Key Words: American schools, Robert College, history of education, missionary, foreign schools.

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## 1. INTRODUCTION

Missionaries who began to operate in Ottoman lands from the 18th century the Ottoman Empire began to crumble, indirectly gave directions to the Ottoman Empire's political activities and had influence on the organization of non-Muslims in the Ottoman society. In missionary activities, American missionaries who started to show the presence after 1800s became more effective than other missionary groups in the Ottoman territory.

The primary purpose of the missionaries operating in the Ottoman territory was to spread Protestantism in the Ottoman Empire. The first missionary school was opened in 1834 in Istanbul. Later, targeting Armenians living in Anatolia, a missionary center was founded in 1835 Trabzon, in 1839 Erzurum, in 1848 Antep, in 1851 Sivas and in 1852 Merzifon. These are followed by American Protestant missionary centers founded in 1852 Adana and Ceyhan, in 1853 Diyarbakır, in 1854 Talas and Maraş, in 1855 Harput, in 1859 Tarsus (Ulusoy, 2005). In 1871, including Western Turkey, Central Turkey and East Turkey the number of schools providing priestly education in this three mission was 143. In addition to this, 125 boarding school for girls educated girls in Turkey. In 1893, there were a total of 392 Protestant and American schools in Ottoman Territory. These schools consist of American, British and Protestant Armenians schools. At first, while the courses of these schools consisted of just literacy and account, they have developed since the second half of the 19th century and have begun to host the secondary educational institutions. These educational institutions, additionally, grew their own teachers and clergy (Biçer, 2010). Although it is not possible to determine the number of American schools founded and directed by American missionaries, it was 161 in 1905 (Mutlu, 2005, 325).

America declaring its independence in 2<sup>nd</sup> of July 1776 (Wikipedi1, 2015), attached great importance to trade and especially has taken Near East Mediterranean to the center as one of the areas of activity. The emergence and spread of the American schools was begun in the late 18th century. The first American ship came to Izmir in 1797 and has been patronized by the British Consulate because there was no formal agreement between the United States and the Ottoman Empire (Açıkse, 2003, 29). With this process starting with the trade relations among America and Ottoman; people, mainly including traders, missionaries and people from many professional fields, began to come to Near East intensely in the first half of the 19th century. Among them, the lasting effects leavers were missionaries. American missionaries saw The Ottoman country as an irrefutable and exciting structure with 2 million-square-lands, a social structure which is multiracial and consisting Christians, Istanbul –

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one of the centers of the world-, within the cities which are sacred such as Jerusalem and Mecca and which are ancient such as Baghdad Cairo (Yazıcı, 2010). The main goal of American missionaries was to teach Bible, to strengthen and develop Christianity (Tozlu, 1991). In this context, the main objective of Robert College was to spread Protestantism, to tell religious teachings and to train good missionaries (AltındağHalaç, 2011).

Missionaries were aware that the most effective way to reach this goal was by education and schools. Because, education in Ottoman society was the foremost requirement for people from all religions, sects and nationalities. Especially in the early 19th century, Ottoman people greatly needed information, education and school. As well as this reality had been known by the Ottoman managers, it had been seen by administrators of various Ottoman nationalities, other missionary organizations and American missionaries (Tanyu, 1978). It is aimed in this study to introduce information about the features and the purposes of establishment of American schools established for missionary in Turkey and the best-known of them Robert College. In this context, answers were sought in this research for these questions: 1.The emergence of American missionary activity, what is the purpose and effectiveness? 2- What are the characteristics of American missionary schools? 3- Foundation of Robert College -one of the most effective one of these schools- ; what are the purposes, activities, religious education, conversion over time, training program, lecturers, student profile and present situation of it? In the research, descriptive method is used among research methods. It is thought that this study -against the intercultural interaction that is more effective in the global era and whereat the possibility of strong culture melting and dominating the other one- is important in the point of contribution of past experiences to the applications that we can use today.

## **2. EMERGENCE AND DEVELOPMENT OF AMERICAN SCHOOLS**

In 1886, there were over 80 missionary organizations in the world. 32 of these organizations were originated in the US, 24 were originated in UK and 25 were originated in Continental Europe. It is seen that as of 1909, the most effective missionary activities in Ottoman territory were done by American committee for foreign missions -ABCFM ((American Board of Commissioners Foreign Missions)- with 20 main centers, a total of 361 schools - 8 of which are colleges-, 20 861 students (Biçer, 2010). ABCFM organization started its first work on Ottoman territory in Izmir, 1820 where various nationalities trade in those years, which is connected to every corner of the state, where foreigners can acquire property and where foreigners can freely worship their own religion (Yazıcı, 2010). The organization started its Syria mission in Beirut in 1823 (Açıkses, 2003).

US-based missionary activities were conducted secretly until 1830 due to the absence of any agreement between the Ottomans and the US. With a commercial agreement signed in 1830 and the US representative which started on March 20, 1831, missionary activities in the Ottoman Empire gained a legal basis. In this respect, ABCFM elected William Goodell who was working at the Syrian mission to establish Istanbul mission. Thus, the first permanent mission was established in the Ottoman Empire and missionaries began to gather here (Şişman, 2006, 31-32).

A distinctive feature of American missionary is that American missionaries see other non-Muslim schools as their own schools in addition to American schools. They trained local officials who work in Muslim schools in American colleges, gave money and material aid to educational institutions and supported the activities of these schools (Mutlu, 2005, 325). American missionaries, besides the education business, worked in a large number hospitals ruled by missionary doctors. Including education and health, all staff member needs of this system were met by Beirut Syrian Protestant College, Harput Fırat College, Istanbul Robert College, Istanbul Girls College, Izmir International College, Merzifon Anatolia College, Antep College, Tarsus St. Paul's Institute, Maraş Central Turkey Girls College, Van American College (Biçer, 2010).

In essence, American missionaries opened schools providing modern education for girls and boys in every corner of the country, as they thought there was no modern education when they came to Turkey. In time, American missionary organizations -both with their own impressions and with the demands of the non-Muslims in their region- tended to open colleges that give higher levels of education (Açıkses, 2003). With higher education institutions called college, hundreds of primary and secondary schools showed activity in the control of Americans, therefore, in the control of missionaries. Approximately 30,000 girl and boy students received education in these schools until the First World War. In 1910, in Ottoman territory ABCFM-owned institutions which show missionary activities in various social areas such as health, education and the media are as follows: 9 colleges (One of them is the Syrian Protestant College), 4 seminars (theology) schools, 10 hospitals, 10 clinics, 8 vocational schools, 10 orphanages, 6 other schools and Redhouse Publishing with a wide range of broadcast capacity (Biçer, 2010).

### **General Characteristics of American Schools**

In American missionary literature, the purpose of educational institutions in the region of the mission is to give an average Western education to train pioneers and leaders. In the US, "colleges" are the schools which are at the top of the secondary schools that train university students. Therefore, these schools with missionary

purposes are considered as schools that provide education at the tertiary level. The oldest and best known of these schools are Robert College in Turkey, Izmir International College, Merzifon Anatolia College, Harput Firat College, Antep Central Turkey College, Tarsus St. Paul's Institute, Istanbul Girls' College and Central Turkey Girls College (Efeoğlu, 2007). The Ottoman state did not accept the American colleges as higher education institutions for a long time. But some of these schools were in college status with their departments like medicine, pharmacy, dentistry. Additionally, in contracts that provide the legal basis for these schools, US accepted these schools equivalent to colleges in their country (Kocabaşoğlu, 2000).

### **3. THE STRUCTURE OF THE ROBERT COLLEGE AND THE INTELLECTUAL FOUNDATIONS**

Robert College was founded by an American missionary, Cyrus Hamlin. Hamlin, who was thinking to open new American colleges to make more modern education with better conditions, went to England and America to provide the necessary finance. He was very well met there and gathered the necessary assistance. After these operations, the land, which was belonging to Ahmet Vefik Pasha and which has Bosphorus University on it now, was bought in order to establish the Robert College (AltındağHalaç, 2011). The College firstly began its education with four students in September 16, 1863 in the building which was used as a theology school by Hamlin. The official opening ceremony of the college was held in 1869 (Tozlu, 1991). Hamlin helped to give the name of Robert, the trader who was the biggest financier and supporter while opening it. Robert College is a school founded to provide training in "American style" within the Ottoman Empire (Wikipedi2). Robert College and its fellow-school American College for Girls are the first American schools established outside the boundaries of the United States of America.

The school was written with the name of Robert College in Bebek in a document which is supposed to belong to the dates 1914-1918. In the document, it was stated that it was a high school and there was a higher level (Büyükkarcı 2004). Education in the school began at five o'clock in the morning. English, Armenian, Mathematics, Chemistry, Nature, Philosophy, the Bible, Ethics and Science and Technology lessons were taught. The minister of education of that time liked the course curriculum offered at these schools and wanted the copies of the arithmetic notes to be taught in Turkish schools. Although the teaching language of college was English, around 15 old and modern languages teaching also were held in. In the College where initially mainly language and commercial science teaching was done, engineering education started after 1912 (AltındağHalaç, 2011).

In 1912, the name of Robert College was changed as "Robert Academy" and 4-year high school education period was reduced to 3 years like the schools in Turkey. Besides, with making new arrangements in programs; business administration school, science and foreign language school departments were created. The education level of the college was reduced to high school level with administrative arrangements made in 1930s. In 1958, it was allowed to establish Robert College Academy with the decision of Council of Ministers. In 1971, the campus of the school that gives higher education was taken over by the Turkish Government and current Bogazici University was established (PolatHaydaroğlu, 1990; Wikipedi2, 2015). In 1871, Robert College was united with the American College for Girls in Istanbul which has been ongoing since 1890 and as a mixed school, it continues to teach at the secondary level (Karakus, 2015). In subsequent years, from 8 colleges operating in Turkey, other colleges teaching in the tertiary level were closed, except for Robert College, American College for Girls in Istanbul, Tarsus American College (Topçu, 2007).

Robert College was established in a characteristic representing the American approach. A board of trustees was formed in New York for Robert College and in February 1864, articles of association of Robert College were prepared. In the regulations of the college which was not connected to a missionary organization, it was clearly indicated that "the college would be established and managed in accordance with the principles of the Bible" (Biçer, 2010). The largest portion of income of Robert College was provided by American organizations that spread Protestantism. There were also missionaries among teaching staff and administrators. Nevertheless, the college was not connected to any mission organization. In the college, there were departments mainly language, commercial science and engineering sciences. The students consisted of mostly Armenian, Bulgarian, Greek, Jewish and Turkish (Sezer, 1999, 65-66).

#### **Curriculum**

Robert College prepared a work program for four classes in the 1874-1875 academic year with adapting the program being implemented in New England College. In the program of years 1874-1875, willing students had the opportunity to work in different areas with elective courses. In 1880, in the preparatory classes of the college, English, Higher Arithmetic, Geography, Armenian, Bulgarian or Greek, French, German or Turkish and Art lessons were taught. In the 1<sup>st</sup> year, English, Robinson's Algebra I, II, III, Robinson's Trigonometry, Steele's Zoology, Atkinson's Physics, Ancient History, Latin grammar and reading, Armenian, Bulgarian or Greek, French, German or Turkish were taught. In the 2<sup>nd</sup> year, Shakespeare, Robinson Engineering and Navigation, Analytic Geometry, Psychology, Organic and Inorganic Chemistry, Modern History, French, German, Turkish or Arabic, Ancient Armenian, Greek or Slavic were taught. In the 3<sup>rd</sup> year, Talk Art, Logic and English

Literature, Civil Engineering, Analytical Chemistry, Mineralogy, Parliamentary Law, Political Economy, Basic Botany, Biology, Physical Geography, French, German, Turkish or Russian, Old Armenian, Greek or Slavic were taught. In the 4<sup>th</sup> year, subjects like Geology, Descriptive Astronomy, Psychology, Ethics, Philosophy of History, History of Civilization, International Law and Discourse were taught (Biçer, 2010).

Education program of the College was adapted to meet the needs of the country where it was located although it was like the ones in an American college. Each national group who continues to college, besides learning their own language and literature, also learns English French and German. Mathematics, Physics, Chemistry, Biology and Geology lessons constitute science lessons; History, Philosophy, Psychology, Ethics, Music and Art classes constitute the social sciences courses (Ulusoy, 2007).

In the Republican era, the school curriculum differentiated in line with changes in the student profile, especially in language lessons. Student mass, especially consisting of Muslims living in Turkey before the Republic, was replaced with a structure in which Turkish students were the majority with the Republican era. Lessons, in the field of language training which reached nearly 15 varieties in the first 40 years of the establishment of the college, only consisted of Turkish and English when it was 1950s and French and German lessons were also given as electives in the program (Biçer, 2010).

### **Student and Instructor Profile**

Robert College, mostly served to the ethnic groups living in the Ottoman Empire like Bulgarians, Armenians and Greeks. From 1863, the year that the College was opened, until 1906, in 43 years, 140 Turkish students enrolled in college, but only one Turkish student graduated from college. But in the future, Turkish students' demand to the college increased. For example, the distribution of the 185 students who graduated between the years 1915-1935 from the engineering department of Robert College which opened in 1912 are as follows: 46 Turks, 39 Armenian, 32 Greek, 7 Jews, 4 British, 1 American, 1 Swiss, 3 Albanians, 25 Russians, 2 French, 11 Greek, 10 Iraqis, 4 Bulgarian (Efeoğlu, 2007; Biçer, 2010). It was stated in the catalog of Robert College in 1963 that the college gave education to the students from 21 different backgrounds including Bulgarian, Armenian, Greek, American, English and Turkish. In the 1930s, Turkish students started to create the majority of the college (Biçer, 2010). In the 1966-1967 academic year, there was a total of 1245 registered students including 458 from academies, 787 from colleges. 156 of these students were female students. Ethnicity of these students were as follows: 1062 Turkish, 60 Jews, 46 Armenian, 30 Greek, 17 Americans, 8 Jordanians, 3 Iranians, 2 British, 2 Canadians, 2 Cyprians, 2 Polish, 1 Afghan, 1 Albanians, 1 Austrians, 1 Bulgarian, 1 Finn, 1 French 1 Italian, 1 Liberian, 1 Spanish, 1 Syrian, 1 Yugoslavia (HalaçAltındağ, 2011).

The teaching staff of the Robert College was also a multinational structure. For example, in 1872-1873 academic year, 15 instructors from 8 different nations taught in the College. In 1878, there were 5 professors, 3 American teachers, 1 French, 1 German, 1 Italian, 1 Greek, 1 Turkish, 1 Armenian lecturer, 1 music teacher and one principal secretary in the college. In 1902, Friedrich W. Kunick was brought to the head department of German and Tevfik Fikret was brought to the head department of Turkish. In subsequent years, some names like Rıza Tevfik Bölükbaşı, Behçet Kemal Çağlar, Şevket Dağ, Osman Ergin, Necip Fazıl Kısakürek, Hüseyin Pektaş, Mihri Pektaş, Süveyda Pektaş Soyak, Abdullah Kuran, Necmi Tanyolaç and Nurettin Topçu served. (Biçer, 2010; HalaçAltındağ, 2011).

### **Religious Education in the College**

The objectives of foreign schools established by the missionaries were to spread Christianity. However, these objectives were shaped in the framework of the country's political, cultural and economic situations. As in other foreign schools, textbooks and practices at Robert College were shaped accordingly. In the college regulations, statements like: "The College will be open to all religions. Will not choose any of the Christian denominations, will not weaken the historic Christian churches especially in east, but will target teaching the students to live the moral and the spiritual life, to believe in God as their primary objectives." were given place (Tozlu, 1991).

In the college regulations, it was stated that the college would be opened to everyone from all ethnicities and religions without belonging to any denomination or sect. It was stated in the regulation that the College would be established and would be managed in accordance with the principles of the Bible, which was published by American, British or foreign Bible association would be read at least once every day in every level of college education and there would be prayers. All faculty would be present in the ritual which was performed every Sunday, all students would participate in this ritual unless their excuses were approved of by the faculty and the teachers (Efeoğlu, 2007). Religious education in the college was as follows: A brief explanation of any issues from the Bible and the review was done in the prayer which was made at 8.15 in the morning with the presence of all students. This prayer was usually managed by the college principal. There, opening, prayer, song, and a short speech were done (Tozlu, 1991).

### Robert College at the Present Time

Today, Robert College, currently on a high school level education, united with American College for Girls in Istanbul and took the name of ‘‘Istanbul Private American Robert College’’ which was formed by the merger of these two schools (Büyükkarcı, 2004: 22). Students are accepted to college with a central high school entrance examination conducted by the Ministry of Education. These students are the students in a 0.2% success group. Education time of the College is 5 years. Average 20% of the students are boarders, 25% of the students are funded scholarships (Robert College, 2015). In the declaration of objectives of the Robert College, the primary objectives of the Robert College are stated as follows (Robert College, 2015):

‘‘... Robert College, since the day it was founded in 1863, aims to excellence in education in Turkey. Today, it aims to graduate young people who are determined, have the skills and understanding, who can function like citizens and leaders undertaking social and cultural roles in different areas in Turkey and at international level. For this purpose, it adopted an academic program that allows talented and motivated students to target a high academic level, to learn English and Turkish languages better. The goal of the program is to develop students’ clear, sincere and constructive desire and ability to communicate and to ensure adaptation of a wide international opinion...’’

The education in Robert College is done in two languages; English and Turkish. French and German courses are offered as electives. The school offers students an extracurricular activities program with about 90 student clubs. The units of the school like classroom, studio, office, media centers, dormitories and libraries are constantly renewed according to today's needs. At the school, there is a theater, sports and fitness room, jogging track, a football field and tennis courts. All the teachers and the staff are provided with continuous professional development opportunities (Robert College, 2015).

### 4. RESULTS, DISCUSSION AND RECOMMENDATIONS

Missionary activities in Ottoman territory have started and have been effective since 1800 with the dissolution period of Ottoman Empire. Missionaries both indirectly gave directions to the Ottoman Empire’s political activities and had influence on the organization and awakening of non-Muslims in the Ottoman society against the state. American schools, like other missionary schools, were opened in all regions of the Ottoman geography and showed effective activities. Robert College which started to operate in September 16, 1863 and which is one of the most effective of these schools is the first American college representing the American approach established in a foreign country. Language, commercial sciences and engineering sciences were main departments in the college, in whose regulation it was stated that ‘‘The College will be established and will be managed in accordance with the principles of the Bible’’. The students were mostly consisted of Armenian, Bulgarian, Greek, Jewish and Turkish. American schools which were built for missionary purpose were the preferred schools not only for non-Muslims but also for Muslims in terms of education quality in the Ottoman territory. In this context, Robert College, now in Turkey, is among the most preferred high schools and enters the first zone of 2%. In time, the majority of foreign and American schools in Turkey were closed. But Robert College, today, being incident to the Ministry of Education continues to exist as one of Turkey's most preferred high schools.

Based on research findings and for future research, the following suggestions could be made: 1- What are the positive / negative effects on Ottoman people’s structure and culture of American schools established in Ottoman territory? 2- Researches are carried out on the reasons for choosing these schools, experiences during the educational process and the individual and society-oriented reflections after graduation of Muslim students who came as students and graduated from these schools.

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# Understanding participation in early childhood education: Case study\*

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## ABSTRACT

Nowadays policymakers, educators, and others involved in children's education are seeking ways to provide quality education. Effective participation that attempts to improve preschool programs, provide family support and increase parent involvement is considered to be as one of the main quality indicators for early childhood education. However, parents and professionals do not always agree on what would be the best for the family and the child, and also legislation and regulations turn little attention to family participation, delivering responsibility to pedagogues, families and preschool institutions. Therefore the goal of the study was to investigate existing participation practice and reveal its promoting and hindering factors. In order to study family participation practice at the local level, a case study was performed and the following research questions were put forward: 1) how is the concept *family participation* understood and the existing situation in practice characterized, and 2) which stages of participation dominate in existing preschool practices. A qualitative research methodology, based on interpretive phenomenology approach, is used to address the topic. Participants (parents and preschool teachers) were selected using purposeful random sampling strategy, and the data collection techniques – a document analysis and a method of interview were used.

As the result of the study, a model for strengthening family participation has been developed that could be implemented in early childhood education practice in Latvia to extend family participation, thus promoting participation culture within preschool education institutions.

Keywords Family participation, participative practices, stages of participation

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## 1. INTRODUCTION

Quality education and its provision has been in the focus of discussions among policymakers, educators, and others involved in children's education. Since education is considered as a factor that influences and reflects the values of society, it is of great importance to recognize a set of common values that underpin the educational process.

One of the strategies to improve educational access and quality is to realize the significance and benefits of effective participation in education underlying one of the democratic principles that determines that in decision making process the interests of directly affected persons and groups have to be taken into consideration (Regner et al. 2009). Participation in general focuses on partnerships of educational institutions, families, and communities that attempt to improve preschool programs and climate, provide family services and support, thus increasing parents' skills and involvement, create a network within the community, and help pedagogues and teachers in their work (Everington 2005; Uemura 1999).

As there exist a variety of concepts that characterize participation, for example, taking part, collaboration, acting together, involvement, inclusion, decision making together and others, it is sufficient to clarify the theoretical foundations, in order to be aware and understand the essence of the concept *participation*.

In the process of participation at least two agents should be involved – one, who gives rights to others to participate, and other – who wants to participate (Regner et al. 2009). This process can be viewed as a continuing process with certain developmental stages (see Figure 1).

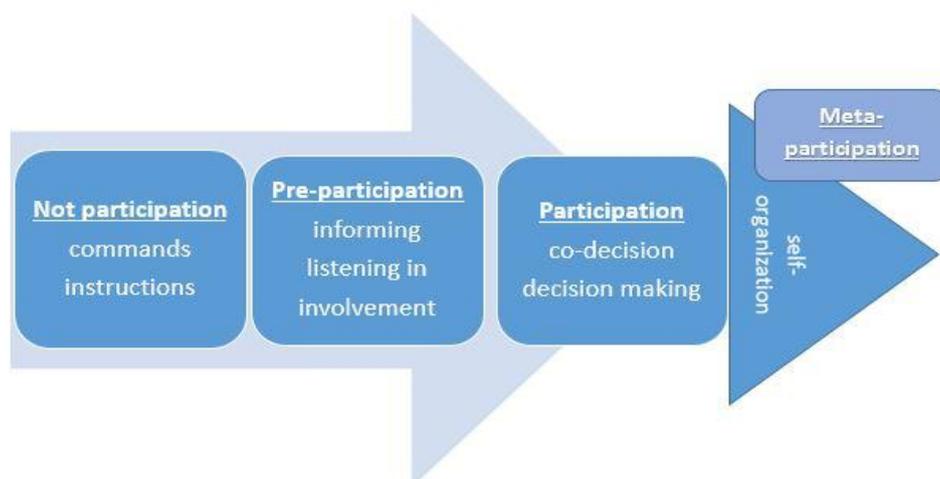
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**Figure 1.** Stages of Participation (adapted from Wright et al. 2008)



The figure reveals that participation begins with building partnerships based upon mutual respect, shared understanding and involvement in pre-participation stage, and is followed by cooperative decision making. Participation does not mean only instructions and informing that are often considered as participative activities by parents and pedagogues, but, in fact, they are the very first steps towards the border of non-participation and pre-participation.

Referring to Barbour (n.d.), there are several important steps to take, in order to ensure effective participation: 1) be aware of parents' feelings, concerns and make them feel valued, regardless of family configuration or background, 2) communicate with parents: one-way communication that is vital to keep parents informed, and two-way communication that builds understanding, trust and a sense of collaboration, 3) focus parents to work for the benefit of the child, and 4) encourage involvement and provide options by creating welcoming and inviting atmosphere to convey messages that parents are a vital part of the preschool community.

Every single step is cumulatively built on one another and mutually interrelated, and is one of the vital preconditions to ensure effective participation and build positive relationships, which quality can be characterized by:

- authenticity, where each partner is respectfully interested in the other, and purposefully builds and maintains trusting relationship;
- sustainability, when parents develop lasting relationships with families in their community and enrich their depth of knowledge, thus creating a social capital;
- intentionality, when teachers are thoughtful and purposeful in interactions and support parents with intended outcomes in mind;
- embedding, that means being visible, involved and having a strategic role in the life of the wider community (Duncan et al. 2010).

In this context family participation is considered to be as one of the main quality indicators for preschool education, where access, participation and family involvement in education are defined as the main keywords (Lindeboom and Buiskool 2013). Moreover, Desforges and Abourchaar (2003) point to parent participation as the main driving force towards pedagogical achievements, believing that parent involvement and participation influences educational process more than poverty, educational environment or peers. Their findings are supported by various studies that indicate increasing likelihood that children will experience success and grow up to be healthy individuals, if educators engage families and community partners in activities promoting children's intellectual and social development. Parental involvement significantly affects and favours minority children or children from risk families, fostering their educational achievements and reducing later drop-outs. Parental involvement contributes to parents' feelings of self-worth and competence, especially among low-income and minority populations. Another aspect of family participation is connected with parent effectiveness and benefits for parents themselves as persons – if involved at the preschool level, they are more likely to continue to be involved in other service institutions and thus act as mechanisms for social change. Therefore it is of great importance to enhance meaningful parent participation and take into account the voices of parents (Barbour n.d.; European Union 2009; Greenfeld et al. 2012; Lindeboom and Buiskool 2013).

Therefore, families play significant roles in educating and supporting their children and the quality of parenting is the most important factor in preparing children for a safe, healthy and productive future. In this

context it is important to proceed through five different levels of parent involvement that corresponds with the models developed by Barbour (n.d.) and Wright et al. (2008):

- 1) being informed,
- 2) taking part in activities,
- 3) participating in dialogue and exchange of views,
- 4) taking part in decision-making,
- 5) having responsibility to act (Mitchell 2010; Parent/Carer Participation Strategy 2010).

Family participation cannot be implemented without positive outcomes for children, whose development and wellbeing should be in focus in all participative activities. Participative learning in preschool promotes children's social competence development, such as confidence and skills to resolve conflicts. At the same time children learn to realise and present their desires and interests, as well as express honest and appropriate behaviour in diverse situations within a democratic society. In order to succeed, parent participation and forms of participation in compliance with the level of children's development is of utmost importance. Moreover, participative activities in preschool create added value to every child's development, improves his/her life environment, and result in gains for self-development of preschool teachers as well (Amstutz and Marty 2007; Regner et al. 2009).

In order to ensure effective participation that reaches its goals, there are several principles that have to be taken into consideration (Andrist 2007; Duncan et al. 2010):

- Adults accompany and support children in the process of skills development for participation.
- Participation creates two-way collaboration and communication without adult dominance. Children are not restricted in their life space, feelings, senses and world view, but adults are responsible for the process itself and its transparency.
- Participation must lead to a result – all decisions are implemented within a time period understandable by children that demands known and open options for children and confidence of participating parents.
- Participation is goal oriented and related to real life.

The implementation of these principles should permeate participative activities oriented towards both the child and preschool institution. The first one invests in children development, whereas the others puts emphasis on family collaboration with preschool services, thus providing quality of preschool education and benefits for children, parents, teachers, and program quality, at the same time raising children competence, parent effectiveness, and program enrichment (Barbour n.d.; Lindeboom and Buiskool 2013). According to Stauffer (2011), participation is possible both formally and non-formally, and there are several kinds of decision making opportunities present in preschool settings, where every child and his/her family has a possibility to co-participate in different levels: individually, as a member in a group and a preschool institution. For example, in group level non-formally it could be common planning of activities and resolution of conflicts, but formally - regular planning, choice of topic and reflection after play-activities.

However, parents and professionals do not always agree on what would be the best for the family and the child, and the concept of *family participation* can mean different things to different people. Although most preschool teachers value relationships with families, many preschool education institutions do not have well-organized programmes of family and community involvement.

Therefore the goal of the study was to investigate existing participation practices among preschool educators and families at local level, and reveal its promoting and hindering factors. The following research questions were put forward:

- 1) how is the concept *family participation* understood and the existing situation in practice characterized,
- 2) which stages of participation dominate in existing preschool practices.

## 2. METHOD

A case study was performed in order to study family participation practices at the local level. A qualitative research methodology, based on the social constructivist paradigm and interpretive phenomenology approach, is used to address the topic, in order to clarify the conditions leading to the understanding of lived experiences of families and professionals in the sphere of early childhood education.

The research sample comprised 22 respondents representing two regions of Latvia: 11 parents and 11 preschool teachers from state-funded early childhood education institutions. The respondents were selected using purposeful random sampling strategy and the data collection techniques – a document analysis and a method of interview were used.

The document analysis reveals the context of the study illustrated by good practice examples, thus giving insight into the existing situation. The conducted interviews present the opinions of the two groups of respondents: parents and preschool teachers. The data obtained from the interviews are analysed and interpreted according to the following categories:

- understanding of the concept *family participation*;
- forms and methods ensuring family participation;

- promoting and hindering factors that influence family participation.

Thus the interviews help to interpret the experiences in the process of interaction between families and preschool professionals and understand which stages of participation dominate in existing preschool practices.

### 3. FINDINGS AND DISCUSSION

In order to reveal the context of the study, the policies and documents concerning family participation and involvement in early childhood education were analysed, focusing on the aspects that may support or hinder family participation practices.

It is in the competence of Ministry of Education and Science to develop state guidelines for preschool education and patterns of preschool education programmes based on these guidelines (Noteikumi par valsts pirmsskolas izglītības vadlīnijām 2012). However, the regulations on the state preschool education guidelines do not mention the concept *participation*, rather emphasizing cooperation among children, pedagogues, and parents or their legal substitutes as one of the basic conditions for successful preschool education process. Although wholesome participation should occur at three levels – preschool institution, municipality and state, existing collaboration between preschool education institutions and families currently manifest itself mostly in parents' meetings, participation in activities and parents' donations to preschool institution (Skolu un pirmsskolu pašpārvalžu darbības izvērtējums 2012).

Despite the insufficient emphasis on family participation in legislation, there are examples of good practice found in Latvia, where a preschool institution is a place for families and pedagogues to work together and create a positive, supportive and enriched educational environment for children. Existing experiences show that parents are eager to participate actively in the administration of the preschool, Parent Board and be a part of the network within the community. Among the best practice examples there can be mentioned several parent associations, such as:

- Parent Association of Latvia, whose mission is to develop and strengthen potential of parents and their opportunities to collaborate in the sphere of education.
- Parent Forum of Latvia that works towards its goal to give voice to parents and suggest proposals to the Ministry of Education and Science, The Saeima and Cabinet of Ministers for strengthening the role of parents, advocating changes in the sphere of education and developing models of collaboration.
- Open Parents – an international organization that unites three Baltic associations of parents, whose activities are aimed towards enhancing collaboration with educational institutions for children and strengthening development of parent competence centres.

Summarizing the studies carried on in Latvia, it can be concluded that preschools offer different kinds of participative activities for parents, whose content, volume and frequency differ from institution to institution. However, the term *family participation* is more common in the context of inclusive education in Latvia and, moreover, the essence of participation - collaboration in decision making was mentioned just in individual cases.

The results of the interviews reveal awareness and understanding of the concept *family participation*. The respondents shared their opinion and characterized the concept as a mutual interaction that actively involves everybody - a child, family and teachers - towards reaching common goals and involvement in everyday life of the preschool group and the institution as well. Among the keywords that characterize participation a dialog, discussion, common goals, involvement into the processes, ability to compromise, interest, opinion, appropriate and responsible decision making, information exchange, everyday challenges and their resolutions and teamwork were mentioned. It is believed that participation is necessary to promote children's holistic development that is influenced by several factors: family, pedagogues, peers and society: *"...all agents have to be interested in participative activities to ensure the quality of child care and education, thus assisting to develop child's individual abilities and skills within supportive environment"*. However, there were cases when the respondents were not able to formulate their understanding of the concept, and emphasized mainly the aspects of cooperation.

Preschool teachers separated a term of pedagogical participation – that means mutual and creative activity of children, parents and pedagogues towards reaching common goals and the development of children's personality. In several cases particular emphasis was put on the quality of communication that underlie successful collaboration, for example: *"...the more qualitative is the contact among the persons involved, the better support is given to the child"*. The respondents share the belief that the overall goal of participation is to educate children, develop their personalities and ensure readiness for school education.

With regard to the practices that ensure family participation, participative activities that occur locally can be characterized as periodical (a separate event) and regular collaboration (organized within long term period). Although the respondents expressed theoretical awareness of the term *participation*, the examples and practices they shared are more tended towards cooperation aspects. Among the practices mentioned there are individual and group meetings of parents, general meetings for parents, whose children begin to attend preschool, involvement of parents in different activities organized for children and their family members, taking part at the

board of education, opening e-mail address for the group, creating information exchange folders, doing volunteer work, providing parent participation in the period of adaptation, information days and shadowing activities.

Both groups of respondents valued the cooperation practices with local partners, for example, children libraries, swimming pools, Children and Youth centres, schools, social services and others. In majority of cases the partner organizations are the ones, who initiate cooperation, although some early childhood education institutions also are active in establishing contacts. The initiative of parents is of great importance - in majority of cases they are the representatives of collaborating institutions. However, cooperation with families almost always occur upon the initiative of early childhood education institutions and their invitation.

Reflecting on promoting and hindering factors that influence family participation, responses from both groups of respondents are more contradictory. Preschool teachers are more oriented towards delivery of information, whereas parents wish more explanation and to be aware that their opinion is heard and taken into consideration. Consequently the participation itself is inhibited, as the parents, whose voice is not being heard start to avoid cooperation. Very common, but not dominant, is the opinion from preschool teachers that "*parents do not wish to participate in the dialog on their child's upbringing and education*". In their turn, there are parents, who are convinced that it is just enough to bring their child to preschool, and further it is the obligation of preschool teachers to prepare children for school.

Among the promoting aspects that have positive impact on family participation, the respondents mention listening in different views, feeling of being evaluated, raising dialog, constructive problem solving together. Moreover, not only common activities and awareness of each individual positively influence participation, but also the fact, whether parents are involved in the work of non-governmental organizations. There is a tendency that these parents are more powerful in decision making process and their views are more taken into consideration.

However, among the respondents of both groups there are several individuals, who are completely satisfied with existing situation.

One of the most frequently mentioned problems is parents' occupation and being overloaded at work that results in lack of free time that could be spent together with their child. Parents also would like to have more information about cultural activities for children, more activities available free of charge and creative workshops, in order to develop their children's knowledge, skills and abilities.

Preschool institutions and families have to think about the forms and possibilities of collaboration with community partners, as well as express more initiative in participative activities and match the time of activities with everyday routine at preschools. Moreover, parents should be willing to learn to understand the pedagogical process implemented at preschool institutions and raise their awareness of being responsible for the child's development.

#### 4. CONCLUSIONS

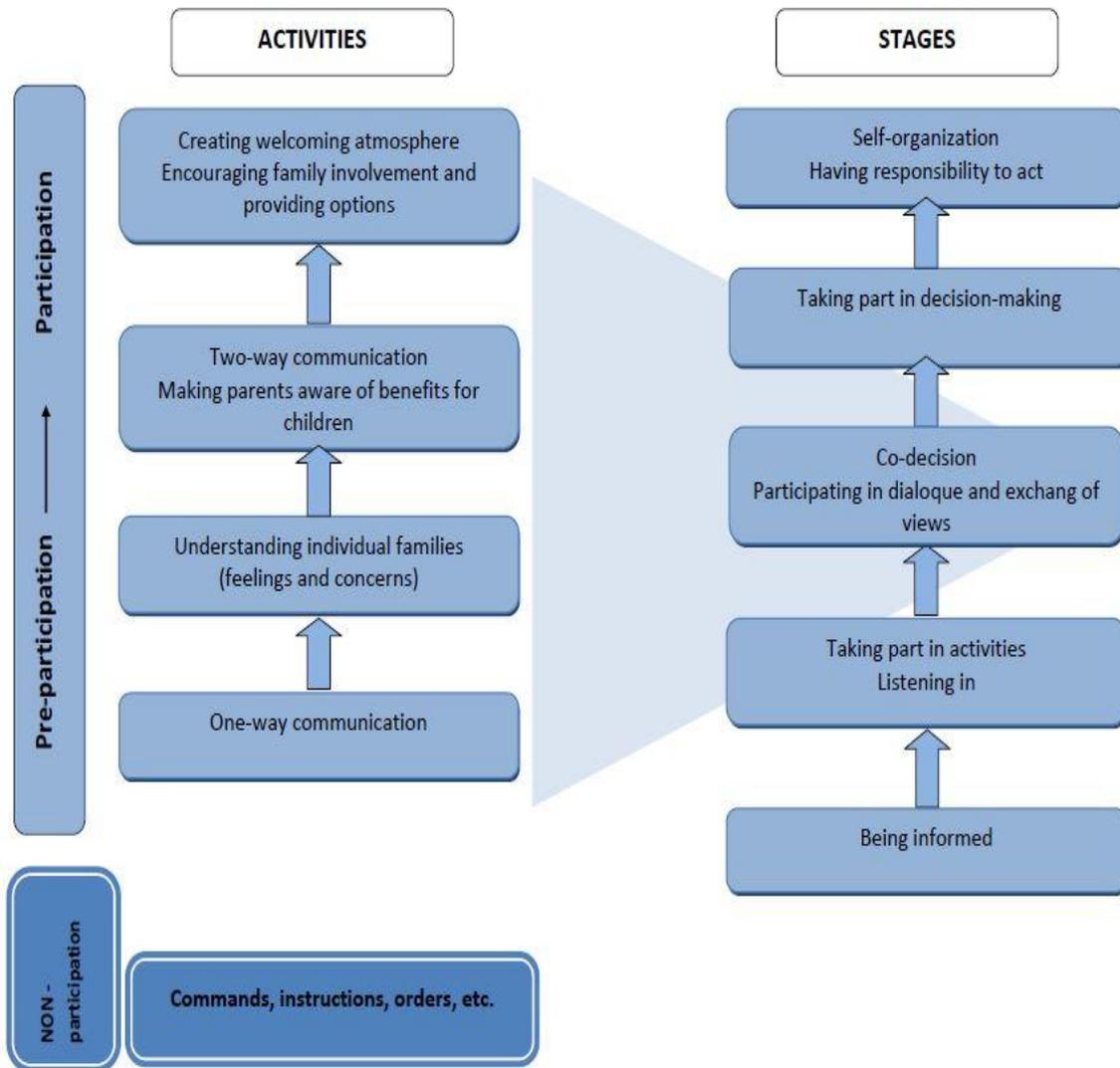
The analysis of the findings points to the importance of the issues connected with family participation and reveals several ways of involvement into productive and effective participative practices among educational institutions, families, and communities. However, analysing the data as well as deriving meaning from parents and preschool teachers' experiences, and matching them with the five different stages of family participation - 1) being informed, 2) taking part in activities, 3) participating in dialogue and exchange of views, 4) taking part in decision-making, and 5) having responsibility to act (Barbour n.d.; Mitchell 2010; Parent/Carer Participation Strategy 2010; Wright et al. 2008), it is evident that the first two stages dominate in existing preschool practices. Only the practices of several respondents certify that there are cases, when they take part in decision-making, exchange of views and have a sense of responsibility to act.

Actually there is a lack of unified understanding of the concept *participation*, rather more emphasis is put on *cooperation* aimed towards reaching particular goals. *Participation* seems to be something formal, unclear and vague, and often perceived as a synonym of *cooperation*, without any indications towards the meaningfulness and content of practices, and feeling of having responsibility to act. The findings have also pointed to the importance of positive relationships during participative activities and interrelations between social skills and the quality of participation.

Based on research findings, there can be separated several vital characteristics for the process of family participation, such as two-way communication, decision making competence, benefits for children, families, teachers and community that can be enhanced by building positive relationships and progressing towards the highest level of participation: self-organization and having responsibility to act. It is of great significance not only to increase participation, but to extend it, as well as turn greater attention to participation of different social groups. The priority should be to provide equal opportunities to all parents and their children, in order to enhance positive outcomes for children and build social capital among parents.

As the result of the study, a model has been developed by the authors that can be implemented in early childhood education in Latvia to extend family participation by the activities offered, thus promoting participation culture within preschool education institutions. The developed model is reflected in Figure 2.

**Figure 2** Model for strengthening family participation in early childhood education



The research findings have also raised the questions and actions for the future – to investigate the concept of participation and partnership, as well as interview preschool teachers, who work in private sector. Also the problematic of taking initiative and involvement of all participating agents could be of great importance and worth further studies.

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# Future teachers' reflection to understand their professional identity

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## ABSTRACT

The value of the reflection is to make future teachers more informed of what they have learned and to create the awareness about reflection in the sense that students are able to change their attitude, behaviour and actions, and finally understand their own professional identity.

The article deals with the problem of future teachers' resistance to reflection. There are several reasons, namely, uneasiness to reflect on situations that make oneself embarrassed and uncomfortable; crudity to accept and analyse one's feelings and previous learning experience that has been focused on the assessment given by other people only. Therefore it is problematic to carry out reflection on one's professional identity.

The research has been carried out as Phenomenology Study. The research sample was the practising teachers – master students of the Professional Master Study Programme „Teacher” study module “Education for Well-being and Cohesion” taking the course „Educators Professional Identity and Pedagogic Mastery”. Students' reflection skills have been developed by three reflection tools: MAX, Reflexive Practice Framework and analogies (metaphors) and evaluated in narrative essays.

By practising reflection-in-action and reflection-on-action according to reflection life cycles, future teachers should create their reflexive practice framework. The article analyses different reflection tools and samples of students' reflection experience.

Key Words: reflection-in-action, reflection-on-action, reflexive practice framework and tools, professional identity.

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## 1. INTRODUCTION

Human professional identity is shaped by a professional „I concept” (Schein, 1993; Garleja, 2006, 191; Пряжников, 1996; Пряжников, Пряжникова, 2001; Callanan, 2003; Зеер, 2006) unfolding in conscious personal abilities, skills and competences, personal motives, needs and objectives, as well as personal values, emotional experiences and feelings.

The professional „I concept” is about searching and finding the personal sense (Толочек, 2005; Могилёвкин, 2007), thus allowing to answer the questions of professional identity: ‘who I am’, ‘who I am not’, and ‘who I would like to be’ (Callanan, 2003). The understanding of one's professional identity can be ensured by reflection that makes a person more aware and informed of what has been mastered and creates understanding in the sense that a person is able to change their attitude, behaviour and performance in individual and professional contexts during one's life time (Cottrell, 2013).

Dewey (2012: 35) has indicated „We do not learn from experience ... we learn from the reflection on experience”. Reflection requires:

- 1) the ability to **describe the event** revealing how it happened and how things could be done differently for better outcome (Schon, 1983; Van Peet & Kroese, 2013);
- 2) the ability to **think over and describe the specific skills and activities** revealing how well you can do something now and what has to be done to improve the performance or how „to make a good one even better” (Callanan, 2003; de Bono, 2012);
- 3) the need to **understand and contemplate on a perfectly obtained / achieved result**; the desire to know what has been done to get this result (Van Peet & Kroese, 2013; Cottrell, 2013);
- 4) the ability to analyse performance and **identify the next action steps** to be able to repeat success (de Bono, 2012);
- 5) the ability to **verbalize the things** that have occurred (make internal external) and realize that contemplation and reflection are essential strategic tools (Cottrell, 2013; McMillan & Weyers, 2006).

Reflection is the key to learning and getting understanding of the experience. It is not easy to perform this activity. Therefore, there are mentors and coaches to provide the support for learning to reflect. It consists of: (1) **providing an understanding** of the value of reflection as a strategic instrument / tool, (2) **letting to know how** to use various reflection frameworks, (3) **giving an opportunity to work independently** with different

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reflection methods and frameworks. Reflection should start with simplified understanding of matters and proceed to the ability to apply different reflection methods (Boud et al., 1985).

Dewey (2012) describes two types of reflection. One that is active at a given time / at the time when action takes place – *occasional* and unintentional reflection. And reflection that occurs from the senses / feelings later, after action – *systemic* reflection. When there is no systemic reflection, there is no sense to learning and comprehension. The value of the reflection is to create awareness. Learning by memorizing and listing facts is not enough to change behaviour and attitude.

Schon (1983) relates reflection to its role in the functioning of organizations. He has created the term „reflective practitioner” and uses the terms „reflection-in-action” and „reflection-on-action” (Schon, 1983). This approach is similar to Dewey’s (2012) used terms „occasional reflection” (happens during the action) and „systemic reflection” (done after action and consciously structured).

According to Van Peet and Kroese (2013) *reflection-in-action* refers to thinking and adjusting what is done to succeed in a specific situation. “Being able to do this enables us to respond flexibly to a given situation and prevents us from sticking to rigid plans” (Van Peet and Kroese 2013: 259).

*Reflection-on-action* “refers to thinking about an event: what happened, how other people reacted, what the outcomes were and the interrelationship between certain actions that affected the outcome. This is what we commonly think reflection is when we are asked to do it” (Van Peet and Kroese 2013: 259), for instance, reflection on one’s teaching.

Both Dewey (2012) and Schon (1983) believed that the most important value of reflection is to make clear what has been learned and understood. In its turn, the fact that the organization itself can learn became the research field of Senge (1990). He uses the term „learning organization” that reflects the individual’s ability in the organization and points to what he (the individual) has learned and how he has worked with others to solve problems and achieve common organizational goals. Individuals’ reflections have got significant value for the organization (Senge, 1990).

In daily life people think about things in general or unconsciously. Reflection time is implicit. It has some value, but it is not a specifically structured process, with a specific goal. In its turn, when asked to reflect or critically evaluate something or on something in particular, people start doing that deliberately (explicitly).

When studying future teachers’ reflections on their professional identity, the following questions could be considered and answered:

- 1) what changes the future teachers’ experience, meaning of life and professional „I concept”?
- 2) what brings maximum benefit when professional identity is in harmony with personal identity?
- 3) how to use one’s experience for further successful self-determination and creative professional activity (Lāce, 2014, Miķelsone, Odiņa and Grigule, 2014) and how reflection strategies have been applied?

Researching future teachers’ understanding of their professional identity, it is essential to take into account the fact that they can demonstrate the behaviour resistant against the proposed reflection, for a number of reasons (Van Peet & Kroese, 2013):

- 1) they have to confront something they may feel uncomfortable with and going back to look at it is not always pleasant;
- 2) they are not sure how to analyse what has happened or what to do with the information they discover;
- 3) they are not ready to accept their feelings;
- 4) they have the experience that the performance analysis has been focused on the „objective” assessment given by other people; based on general predetermined criteria to be reached in the same way. Thus, feedback is more understandable than reflection on one’s activities;
- 5) they lack reliable team and peers, even if supposedly people learn for themselves, and must be able to be honest and open with themselves, must think what to do to have something in a different way. Reflection needs people one can trust.

There is no one particular technique to reflect, but if people are asked to reflect on something, most often a particular series of questions are being offered to respond to. Of course, there might be some specific frame to reflect, such as drawing a mind map, etc. But in every case, in order to reflect, it is important to know the purpose and focus of reflection, such as whether reflection is connected with personal development or if it is related to a specific learning activity, or research on understanding one’s professional identity.

## 2. METHOD

The research has been carried out as Phenomenology Study. The phenomenological approach is useful when a phenomenon of interest, in this case the role of reflection in understanding one’s professional identity, has not been much defined or conceptualised. The focus of inquiry is what people experience with regard to a phenomenon and how they interpret those experiences. The study attempts to understand people’s perceptions,

perspectives and understandings of a particular situation, individual experiences of future teachers' understanding of their professional identity. The research sample was the practising teachers – master students of the Professional Master Study Programme „Teacher” study module “Education for Well-being and Cohesion” taking the course „Educators Professional Identity and Pedagogic Mastery”.

The aim of phenomenological research was to aspire to pure self-expression, with non-interference from the researchers who sought to understand how practising teachers construct meaning. The data have been gathered by several reflection tools: MAX, Reflexive Practice Framework, analogies (metaphors), narrative essays where the first three has been used to learn reflection, to develop reflection skills and the last – narrative essays – to diagnose the application of reflection tools.

There were no ‘leading questions’ concerning the research phenomenon, but the participants were asked to reflect on their activities in accordance with the dynamics of reflection – to move from the simplified understanding of one’s performance towards the plan of how to change their behaviour, attitude and performance (Van Peet & Kroese, 2013; Gibbs, 1988).

They started with **MAX** (Motivation – Acquisition – Extension) which as a reflection tool has been used to complete unfinished sentences usually after a learning activity:

- 3 things I learnt/ heard for the first time/ understood
- 2 things I want to try/ most relevant to me/ I will use
- 1 thing I would like to examine in more detail/ I did not understand

Three things would characterize learners’ motivation, two things would provide the evidence of the acquisition and one thing would tell about learners’ readiness to extend the learned material, to apply in practice. Then 6 steps were proposed for a **Reflexive Practice Framework**: 1) description (describe what has happened, name), 2) feelings / mood (describe what you think), 3) analysis (analyse why things have happened exactly that way, how much they differ from initial expectations), 4) evaluation (identify what was good / bad in this experience), 5) conclusion (identify what you could do differently next time), 6) future plan (what I should do in this situation next time). According to these steps student teachers revealed their understanding of professional identity gradually.

**Analogies** (in this case **expressed by metaphors**) as a means of transferring information or meaning from a particular subject (the analogue or source) to another particular subject (the target) were used to underpin the cognitive function of conceptualizing — namely, generating or understanding concepts — by giving the concept a familiar and compact terminological framework. It was expected to get keywords of professional identity and find out teachers’ self-awareness of their professional identity. For this research the metaphor of the elephant was used as a tool to find out how teachers conceptualized the various elements used to construct professional identity.

Finally the teachers were asked to reflect on their professional identity using the keywords by their choice obtained through metaphor. The format of the reflection was **narrative essay**. On the whole 293 pages of narratives from 23 student teachers were received and analysed (compared to students’ previous reflection works: MAX, Reflexive Practice Frameworks and metaphors) by answering two questions:

1. what changes the future teachers’ experience, meaning of life and professional „I concept”?
2. what brings maximum benefit when professional identity is in harmony with personal identity?

A phenomenological study involved the four steps: bracketing (the isolation of the pure phenomenon versus what is already known of the phenomenon), intuiting (varying the data until common understanding emerges), analysing (open and selective coding, categorising and making sense of the essential meanings) and describing (defining the phenomenon).

To begin data gathering, core theoretical concept(s) were identified. Tentative linkages were developed between the theoretical core concepts and the data. Initially open coding was used, considering the data in minute detail while developing some initial categories. Later, there was a move to more selective coding – systematically coding with respect to a core concept.

In the framework of Phenomenological study, the experience of future teachers’ reflection on their professional sense of identity was clarified and whether reflection had caused any changes in their understanding of professional identity, as well as whether future teachers’ reflection activity could be characterized as a reflection-in-action or reflection-on-action.

### 3. FINDINGS

Analysing the future teachers’ reflections in the context of professional identity has allowed an identification of the dynamics of understanding identity – from the statement of simplest facts and account of actions till the skills to reflect on their actions and being able to describe the process of finding personally relevant points in professional work. However, the reflection itself has not always been understood in its true objective point of view – to change one’s behaviour and performance. Concerning the professional self-concept that is characterised by understanding one’s own personality, finding personally significant meaning in professional

activity and professional ambitions (Lāce, 2014; Miķelsone, Odiņa and Grigule, 2014), future teachers have described their personal effort, sense of purpose and a willingness to move forward. Identification with professionals and the sense of belonging to their profession have been mentioned „*After this year at the school I felt I profoundly belonged to this place and the team*” (R13).

Loyalty has been expressed to their chosen profession expanding to the affiliation to the city, county, community „*In order to look forward and further, it is essential to notice and appreciate what is just around the corner ... Starting work at school, I initiated co-operation between the school and the newspaper editor of the municipality*” (R1).

Reflecting on the understanding of their professional identity, the future teachers' ability to respond to the challenges of other people emerged, as well as an ability to accept or reject challenges. Teachers are confident about themselves and understand their strengths and weaknesses in both personal and professional fields.

Analysing the data on the harmony of professional identity (merging with personal identity) that includes **satisfaction** of the individual, **achievements** in life and general **success** (Lāce, 2014; Miķelsone, Odiņa and Grigule, 2014), reflections reveal a direct **link between the professional and personal aspects**. Future teachers admit that these two aspects cannot be separated, they complement and affect each other. This relates to the understanding of the person's professional and personal growth and development in the major spheres of life (work, family, leisure) (Sharf, 2006) throughout their lives, in “*life career*” (Patton, McMahon, 1997).

Reflections reveal future teachers' **doubts about the profession, teacher identity problems**, such as the teacher's identity in national context „*getting acquainted with some teachers from (named a specific country), I found some [not named] national professional identity feature, which we consider unethical and unscrupulous careerism, but for them it is a norm. ... I wonder if our country is experiencing challenges which are similar to the whole post-soviet space, then how the pedagogy tackles this*” (R19). Thus, teachers view their professional identity not only in the local context, but compare it wider.

Future teachers' reflections reveal that the chosen **profession has been inherited**. Parents and relatives have been or still are teachers. It has been stressed as an important factor in the choice of the path in life „*I have a pleasure to associate myself ... with my grandmother who has also graduated from the same faculty*” (R12).

There is no balance in **genders** among Latvian teachers. „*... I still cannot find my identity in this feminine teachers' community*” (R9).

Mostly women work in education. Reflections reveal male teachers' feelings entering this women society. „*I do not say that men's identity is so different, but there is some very important shift in the following aspects (justice, public attitude towards the profession, sense, initiative, responsibility, competitive salary, idealism, independence, courage, place for excellence, risk). By not finding these „own signs”, without being able to navigate the feminine emotionality, intuition, non-verbal relationships and other „esoteric signs”, men fail to belong to this feminine group. Not spending time on talks and thinking, they're looking for another professional identity*” (R9).

Overall **harmony of professional identity is associated with an intentional action**. „*At that moment the financial situation of my family could not allow me to stay without job. Therefore I took the dictionary and started to work in Latvian group. During night I learned dialogues which I would talk through the day. The speech of parents meeting I learned by heart and yet had to consider in advance what questions parents might ask in order to prepare the answers*” (R8).

The content of the professional identity has been described with words – initiative, intuition, flow. „*I like my intuition, during five years of work it has never deceived me. First years I worked only based on intuition, no one (I think administration) checked and tested me. A few years later, when I got acquainted with the methodology, didactics, I realized that these years I had intuitively worked correctly*” (R6).

„*A lot of things I cannot even explain, I just intuitively feel that it has to be done that way*” (R8).

„*I am a person with initiative, I make proposals. Sometimes maybe even too many and too much. It often happens like that – you propose it you do it. And then sometimes you are unhappy that you have invented extra work for yourself. However, I think with the lack of initiative, there will be no development, no progress. This also applies both to work and to family matters*” (R8).

Reflecting on their understanding of professional identity, future teachers recognize the role of mentor and adviser. „*Today I am grateful to these events in my life, as well as people who at that time have been by my side, helped, supported and encouraged. Thanks to them, today I am a professional in my field, I am confident in what I do, confident about what is good and right and gives the result*” (R8).

„*And almost everything I know about the work at school I have found out and learned directly from my mentor. And perhaps because of that the first year at school was a very steep climb up the hill*” (R13).

Reflecting on their professional identity future teachers mention an important feature – **emotional smartness**. According to Van Peet and Kroese (2013), emotional smartness is revealed in three aspects:

- 1) knowing yourself, means to be honest with yourself, giving the opportunity to reflect on your own strengths and weaknesses. Thus, to learn from one's experience;

- 2) choosing yourself, which means to manage your feelings, identify exactly what causes stress, realize why it is stressful. Figure out if you can manage it yourself or need help;
- 3) giving yourself, which means being aware of your colleagues you are working together and noticing their needs as well as our own (be empathetic).

Reflections reveal future teachers' metaphorical thinking describing their professional identity, linking it with *the flow*, with *the trip*. It conveys the teachers' ability to look at their chosen profession more widely, thus, in the explanation of professional identity in addition to the above-mentioned concepts such as intuition, initiative, there are also used terms – challenge, creativity. „...*I constantly defy myself not to follow the beaten path, but think of my own association / metaphor*” (R12).

Summarizing and analysing future teachers' reflections, such characterizing features of professional identity are present: (1) determination, (2) a sense of belonging to the profession and the school, (3) initiative, (4) intuition, (5) accepting advice, (6) self-confidence, (7) identification of gender role, (8) creativity, (9) challenge. Both kinds of reflection manifestations – reflection-in-action and reflection-on-action – have been observed. But evaluating the reflections according to their life cycle, it should be admitted that student teachers used the initial stages of reflection: describing what happened, describing what they thought, felt. This means that only the first two reflection life cycles have been used fully. Little is present of the analysis revealing why things have happened exactly that way and how they differed from the original expectations, as well as assessment that identifies what has been good or bad in the experience. Unfortunately reflections convey very little of the planning of what should be done in a similar situation next time.

Thus, the analysis of reflections showed that not all student teachers' reflection skills were fully developed. Student teachers could describe events revealing facts and content of the activity, but less or not at all could they demonstrate the skills to analyse how things could be done differently in order to reach a better outcome (Van Peet and Kroese 2013).

The need to know what and how it was done when such a result has been obtained is little reflected upon. It cannot be stated that the reflection has been completely used as a strategic tool (Cottrell 2013; McMillan & Weyers 2006). Thus, the data obtained confirm that future teachers require the support of mentor or coach mentor to perform reflection full range.

#### 4. RESULTS AND DISCUSSION

In the Phenomenological study the experience of 23 future teachers' reflection on their professional sense of identity was analysed. 15 out of 23 future teachers' reflection activity can be characterized as a reflection-in-action, only 4 would classify as reflection-on-action and 4 resembled some features of action analysis.

Beginning systemic acquisition of reflection, student teachers should evaluate their current feelings and attitudes.

During reflection future teachers express:

- 1) understanding of what has happened and where they are,
- 2) perception, or the ability to „see” what is going on,
- 3) ability to accept / recognize their feelings (how they feel).

Being able to perceive and reflect according to one's feelings depends on the person's emotional and social intelligence (Goulmens, 2001; Zohar and Marshall, 2005, Van Peet and Kroese 2013). Intellect alone does not provide all of the skills that enable one to be successful in everyday life. Future teachers' ability to reflect honestly and openly on their personal and professional progress reveal also their understanding of their professional identity. Therefore, developing emotional skills, student teachers develop their self-belief and self-esteem that give inner vision to the value of reflection.

Reflecting on their individual skills and knowledge, student teachers do not connect them with the common goals of organization, thus there is no understanding of professional identity in relation with „learning organization” (Senge, 1990). Goleman (2006) views it in connection with social intelligence and the ability to inspire and motivate others, as well as the ability to know how to interact more effectively with each other. It can be said that the relationship between social intelligence and reflection is evident answering the questions on:

- 1) self-belief and self-esteem,
- 2) the ability to use the language effectively,
- 3) understanding of social and organizational context,
- 4) confidence and being honest,
- 5) the quality of empathy, i.e., the ability to be „in contact” with people.

The identity also always tells the story of the relationship between the individual / s and the other / other people. Identity unites and divides. It is first of all personal – „what makes me me?” Callanan (2003) points out that in today's world the key to a successful career (teaching profession) is a clear professional **development of self-identity**.

The evaluation of the future teachers' reflection process indicates the trends that could be explored further:

1. the social responsibility for the consequences of their actions and the ability to build strategic thinking: do things and to think about consequences. Thinking about the consequences requires strategic thinking. However, strategic thinking can be developed by reflecting on one's activities and oneself. This is facilitated by „progress” rather than judgment (which is connected with the „acceptance”, „rejection”, „recognition”) according to an external criterion. Progress means movement: where one can get, moving away from this position. Thus, it is important to find the „value driving forward”, not just the ordinary judgment value in the process of reflection. This requires a change of attitude.
2. the change of attitude. Reflection promotes and forms a creative attitude in all areas of life and releases from the problem-solving manner which focuses only on the failures, faults and weaknesses. By limiting one's creative thinking and concentrating on problems people focus on their correction rather than on a new alternative search and innovation. Reflection is a good solution for searching for alternatives.
3. future teachers' accountability for study process, so they can evaluate their own progress and take responsibility for their studies (changing content and the roles of teacher / mentor – student).

In order to succeed in reflection and feel the benefit of it, it is necessary to change the thinking and attitude; understand and accept the reflection as a value, develop the skills to observe, describe and analyse events / activities, be able to improve current performance (alternative searches, make positive even more positive, etc.), clarify what has been learned, want / struggle to practise reflection and record one's achievements that would allow comparison of the dynamics of growth.

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# The use of foreign languages in connection with the change of employment in persons with acquired visual impairment

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## ABSTRACT

**Aim of the study:** A meaningful and suitable job is one of the most important criteria for a high level of the quality of life of people with severe visual impairment. A good job not only rises the level of self-confidence, but also helps people to widen their range of social interactions and master their skills and abilities. This research is focused on what difficulties and shortcomings these individuals perceive in learning foreign languages and whether they perceive foreign language as an important part of their job. **Methods:** Qualitative research methods were used in the survey. Data collection was conducted through interviews and studying of clients' documentation. The clients were working in the selected region and used the services of local Center for people with visual impairment. Interviewees were people of adult age who were forced to change their jobs, or even the qualification itself, due to the acquired disability. **The results:** The research results show that clients perceive the knowledge of a foreign language as an important part of quality of life and would like to make use of foreign languages at their workplace. But this is often hindered by the lack of appropriate teaching materials and courses, and in some cases by the low intrinsic motivation of these people.

Keywords: visual impairment; blind; employment; foreign languages

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## 1. INTRODUCTION

Currently, teaching foreign languages is a very modern trend. Today, language skills and knowledge are fundamental aspects that should be developed by all citizens of the European Union throughout their whole lives. Communication in foreign languages and the ability to understand brings more opportunities to meet other people and to find out about various cultures and nations, greater mobility across the EU member countries, but more importantly, better chances on the European labour market, which is currently focused on knowledge and performance.

Adults with severe visual impairment wish to study languages just as the members of the intact population do. Knowledge of a foreign language can help not only reduce the information deficit as a result of visual impairment, but also find a better job or attract new customers and partners. However, these persons do not often have the opportunity to participate in usual language courses held by language agencies, because especially blind persons cannot work with printed material as other participants, and therefore cannot develop their language competences in an appropriate manner. The following text outlines the basic problems encountered by persons with severe visual impairment in learning a foreign language. These issues are addressed mainly in terms of the use of foreign languages in the work of these persons and in terms of a personal approach to foreign language learning.

### 1.1 Teaching foreign languages to persons with visual impairment

While young people with visual impairment learn foreign languages as a part of their school duties, visually impaired adults have a different motivation that makes them learn a foreign language. This motivation can be divided into two large groups: professional motivation and personal motivation. Professional motivation includes:

- Getting a new job;
- Better choice of employment as a result of a higher qualification;
- Building a career: improvement of language skills is required by the employer;
- Effective communication: fluent communication with foreign colleagues and clients – by telephone or in written;
- Customer service: professions traditionally accessible to persons with visual impairment (call centre employees, massage therapists, dispatchers, workers in the field of physiotherapy or tourism), gradually expand and the employees are required to know a foreign language should they effectively provide services to their customers. As a result, language learning can help get this type of employment. (Good practice for improving language learning for visually impaired adults, 2010)

The following belongs to personal motivation for studying foreign languages:

- Memory training and willingness to improve language skills even without a specific objective;

- Learning about cultures in other countries;
- Contacts with foreigners
- Access to foreign websites and media
- More travel opportunities: increased communication skills provides a sense of greater independence;
- Participation in various international meetings, camps, etc.;
- Ability to help children with homework. (Good practice for improving language learning for visually impaired adults, 2010)

Even though the motivation of a person with vision impairment might be really high, as is clear from the text above, teaching foreign languages places considerable demands on the teacher. The most common difficulties include insufficient knowledge of the visual impairment and its consequences, lack of suitable teaching materials, compensatory aids and technologies, and especially incorrect teaching methods that do not lead to effective memorizing and acquiring of the content of curriculum (Ludíková, 2011).

Individual components of a language have certain specifics in the area of teaching foreign languages to visually impaired persons. As stated by Hamadová (in Vítková, M., 2004), in the area of vocabulary there might be problems with verbalisms, in terms of pronunciation, especially in English, a frequent issue is word homophony, as a result of which two words can be easily confused; therefore, it is necessary to pay due attention to spelling. Aiazzi (Teaching English to Blind and Visually Impaired Pupils [online], 2008) emphasises an important aspect of egocentrism of persons with visual impairment, who often interrupt the teacher's presentation at inappropriate moments to make sure that they work correctly and to draw attention to themselves and their knowledge, which often significantly affects the teaching process and places great demands on the teachers. It is therefore necessary for the teacher to develop new concepts in foreign language teaching using the most appropriate methods that affect the participants in a positive way and leave a deep memory trace, which can be later used by the students.

### **1.2 Employment opportunities of a person with visual impairment**

In the modern society, work plays an important role in a person's life, and is a source of not only finance but also a certain social role and the corresponding social status. Work also helps individuals with acquired visual impairment regain their standard of living, which could have been considerably decreased as a result of the impairment (Ludíková, 2006). As stated by Seifert (in Procházková, 2009), for an impaired individual, employment represents social and economic autonomy, status of an independent, working and employed person, gaining social contacts outside the family, and last but not least a sense of own existence and stimulation of personal development. For individuals with acquired visual impairment, the issue of reintegration into the society is particularly important and employment is one of the means of achieving this reintegration (cf. Ludíková, 2014).

At present, the issue of employment of persons with visual impairment is not sufficiently addressed in the Czech Republic, yet there is a body of statistical data we can rely on. In his study, Novák (2014) states that of all persons with visual impairment in the Czech Republic, only 10% are employed, including those working in retirement. About 5% of the total number are unemployed and 69% are retired. Although the paper does not specify exact numbers of persons regarding their age and severity of impairment, the tables indicate that the largest proportion of persons with visual impairment is in the 45+ category and increases with age. The World report on Ageing and Health (WHO, 2015) states that in 2050 two-thirds of the population of European countries will be retired. Therefore, the issue that arises is one concerning economic stability and employment of the intact population as well as persons with health disability.

Recently in the Czech Republic a number of projects were carried out that focused on employment and retraining of persons with visual impairment. It is interesting to note that in 2001, a research study by the GfK agency indicated that most of the 1000 respondents believe that the state should support organizations dealing with the issue of employment of persons with visual impairment. Currently, however, there are very few projects aimed at improving the quality of language education for persons with visual impairment. As is clear from the text above, language education directly affects the employability of these persons on the labour market. In order to get a deeper insight into the issue of foreign languages and their association with employment, we asked several persons with severe visual impairment how important foreign languages are in their work and what difficulties they encounter in learning a foreign language.

## **2.METHODOLOGY**

Data collection, coding, analysis, and evaluation were performed in a qualitative manner. As stated by Chráska (2007) and Hendl (2005), qualitative research focuses on in-depth study of individual cases by means of observation and questioning in natural conditions of the social environment. A typical feature of this type of research is that the topic and research questions are defined at the beginning. These questions can be changed or modified in the course of the research; qualitative research is a very flexible type of research. During the

investigation stage, new hypotheses and decisions emerge and the researcher constantly searches for and analyses information and draws deductive as well as inductive conclusions. Data analysis and collection is performed at the same time, after data collection and analysis it is possible to return to the field; these cycles allow necessary reviews of these conclusions. Qualitative research is therefore difficult to replicate, on the other hand, an in-depth description of the phenomenon investigated can be obtained.

The disadvantage of qualitative research is that the results obtained cannot be generalized to larger groups; data collection and analysis are very time consuming. High demands are also placed on the ability of the researcher (interviewer); there is a greater risk of affecting the results by the interviewer (Hendl, 2005).

Data collection in the present research was performed by means of a semi-structured interview and study of documents. During the research we addressed five respondents who were forced to change their jobs as a result of their severe visual impairment. All respondents are in the category of 41-60 years of age, the degree of their visual impairment is in the category of "severe visual impairment" or "blindness" (WHO, 2015). Due to our long-term cooperation with one of the centres of Tyflocentrum and long-term work with the clients it was possible to ask personal questions and to use the results of long-term communication. The focus of interest included the key areas derived from the questions – visual impairment, employment, language skills, language teaching. The data were handled by means of qualitative data sorting, comparison, data systematization, first order reduction, and coding. The prevailing approach was a descriptive analysis (development of clusters and patterns, comparison, searching for associations).

### 3.RESULTS

Respondent number 1 graduated from secondary school with a focus on agricultural machinery. In the area of agricultural production he worked for ten years, during which he changed several jobs. Before his impairment occurred, he worked as a driving school instructor for ten years. Currently, his impairment is stabilized and the man is involved in social life, both in terms of occupation and interpersonal relationships. His job consists of two activities – massaging services and work in social services.

Respondent number 2 is a qualified mason, and interrupted his professional career only once when he provided help as a volunteer to individuals with mental disability in Great Britain. Currently he is self-employed in the area of massaging.

Respondent number 3 graduated from a technical university, where he focused on electric machinery and instruments. He worked in this area until the occurrence of the impairment and changed several jobs. When the impairment and his mental condition were stabilized, he tried to return to the last job, but without success. Currently, the man transcribes audio media to text files, but only as a part-time employee.

First, we asked the respondents whether they can read and write the Braille, and whether they read, either in the tactile form, or by listening to recordings. While two respondents learn the Braille and do not use it for reading or in the household, respondent number three actively uses the Braille: *"It took me over a year to read and write. I can write something, although with some mistakes, and I can also read what I write. But reading by touch, that's like a puzzle for me, very slow.... But I use it for legends, I use the Dymo pliers. I find it pretty good, I use it."* All three respondents read, but only through listening to recordings or reading out. *"Reading was the greatest motivation for me to start doing something. So at the moment all books that I'm interested in and that are not in [online] libraries, I copy, edit and read them. I have my own system of doing this, I have them in the computer, telephone, when I travel."* – respondent number 1.

Knowledge of a foreign language was confirmed by all three respondents. The languages included English, German and Russian, which the respondents learned during their studies. Two of the three respondents currently study a foreign language – in both cases they try to brush up their English. Respondent number 3 also used foreign languages in his job until the occurrence of the impairment: *"I try to brush up my English when I have time. In that job that I had for years we used the basic languages – English, Russian and German."* All respondents agree that studying a foreign language is also important after the occurrence of the impairment. Respondent number 1 joined this idea of employment: *"The knowledge and study of a foreign language is always important. And I think that for any job this is always an advantage because you cannot do without a foreign language. The world is interconnected, and there are more and more people who speak foreign languages. So there's basically nothing else you can do."*

To the question whether they could use foreign languages in their current jobs, all three respondents gave an affirmative answer, but for various reasons. *"I can access new materials and new things much quicker, before they are translated into our language. And some literature is not translated at all. This is a great advantage in what I do."* – respondent number 1. *"For me a foreign language is important, I have to communicate in English when foreigners come for a massage."* – respondent number 2. *"Of course I could use foreign languages, but at the moment it is not required. For example in the last order we rewrote memories, which contained some German words. I'm sure I could also use English."* – respondent number 3.

In terms of teaching and learning foreign languages, two of the three respondents agree that currently there is a lack of qualified courses and materials available to persons with visual impairment. The greatest difficulties

were associated with memorizing words. Respondent number 1 states: "Fortunately, as I was able to see in the past, I can imagine the letter. So when I learn a foreign language, I actually have to transform it into letters. Analyse each word letter after letter and imagine it. Only then I can deal with pronunciation. This is why I miss sight – I would always make a picture in my mind and it was there [in the head]." "If you enrol in a regular [language] course, you have a problem with materials. They mostly include printed material, but that's for healthy people without a visual handicap. Maybe there's something in the capital city, but not here." The respondents also had a problem with the study of pronunciation, as programmes designed for reading out were not able to deal with the transcription of individual words. One of the respondents had neither extrinsic nor intrinsic motivation, as already mentioned in the previous paragraph: "I could use languages [at work] but it is not required. I get down to that sometimes, but not often, there's no time." – respondent number 3.

#### 4. CONCLUSION

The objective of the paper was to provide an insight into the complex phenomenon of study and use of foreign languages by persons with severe visual impairment in the area of employment. Partial results of the research indicate that the respondents perceive the knowledge of a foreign language as an important part of the quality of life of a modern man, and often use foreign languages in their jobs. Deeper knowledge and greater use of a foreign language are often prevented by the lack of appropriate teaching materials and courses adapted for persons with severe visual impairment. Another factor that negatively affects the study of languages is a low degree of intrinsic as well as extrinsic motivation of these persons.

Therefore, rather than clear answers the research raises further questions that will have to be answered in the context of future research activities. To what extent does extrinsic motivation (required by the employer) affect the willingness to study a foreign language? Is this motivation stronger than intrinsic (personal) motivation? While the motivation of the first two respondents is rather intrinsic, the third respondent lacks both types of motivation; in spite of that he believes that studying foreign languages is important. Is it possible, through appropriate foreign language teaching to persons with severe visual impairment, increase the level of employment of these persons? This topic offers a wide range of issues that we will continue to investigate.

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# Furutorp (Sweden) goes digital Teachers' perceptions of continuing professional development (CPD).

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## Abstract

This study takes its departure from on-going debate about teachers' (collective) 'continuing professional development' (CPD). The overall aim is to highlight the active teachers' perceptions on developing a self-understanding of their complex role in daily practice by using digital tools. The following research questions guided the study: How can teachers make schools more relevant and engaging? How can students' achievement increase? In what way can teachers provide high-quality education for all students? Three perspectives will be guiding the study: ICT, learning and special education. The participants in the study are 21 staff members in preschool and primary and recreation centre with whom we conducted structured individual interviews and focus group discussions. Field notes were also taken during the interview and discussion sessions. The findings reveal the importance the teachers' deeper understanding of students' mastering creativity, critical thinking, communication and collaboration. Furthermore, the most powerful thing teachers have to do is to design engaging, meaningful, and authentic work and technology-enhanced learning experiences. In order to improve learning in a digital world the teachers have to be engaged and supported by professional learning opportunities to continually improve and strengthen their digital competencies and their teaching practices. The theoretical standpoint is the norm model as an analytical tool to understand the teachers' perceptions. The concept of norm is a collective term for the factors and structures that are regarded as normal balance between the aspects of value/will, system conditions/possibilities and cognition/knowledge.

Keywords: Continuing professional development, digital tools, the norm model

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## 1.INTRODUCTION

Furutorp (Sweden) goes digital – Teachers' Perceptions of Continuing Professional Development (CPD). CPD in this study is defined as all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school, which constitute, through these, to the quality of education in the classroom (Day, 1999).

This study takes its departure from on-going debate about teachers' (collective) 'continuing professional development' (CPD). There has been a considerable emphasis placed on CPD for teachers and trainers to support them in using technology (Heinrich, 2012; Henderson & Yeow, 2012). The project 'Furutorp goes digital' highlights teachers' perceptions of using digital tools to learn, to create, and to solve problems in their daily practices.

### Background

Education is a fundamental element of change and the teachers play a crucial role in implementing the necessary knowledge and values into the learners and thus making them participating in the development process. CPD is widely acknowledged to be of great importance in the life of schools, contributing to professional and personal development for staff and to improvement in teaching and learning. International studies (European Commission, 2008; OECD, 2005; Eurydice, 2009) on teachers and their continuing professional development show that the form, content and context conditions of CPD is focusing on fostering educational performance and effectiveness but relatively loosely linked with school practices in the area of instruction, evaluation and feedback, and school leadership. According to Desimone (2009) professional development involves activities such as regular in-service training, workshops, local and national conferences and college courses. What is important for today's policymakers, principals and educators is to realize the transformation of schools with regards to using digital tools and the role of technology making schools more effective and engaging. Digital tools will serve as a means, not as an end.

### Aim

The overall aim is to highlight the active teachers' perceptions on developing self-understanding of the complex role in daily practice by using digital tools.

## Research question

- How can teachers make schools more relevant and engaging?
- How can students' achievement increase?
- In what way can teachers provide high-quality education for all students?

Three perspectives will be guiding the study: Information and Communication Technology (ICT), learning and special education.

## Previous research

ICT is an important area within the school and is connected to the mission of teaching: to train/educate for a future society: All involved in creating good learning environments for all students are responsible for attaining the mission. With digitalization and ICT a greater desire, motivation and willingness to learn can be created (Alberta, 2011) and this will contribute to the students' overall development.

According to Livingstone (2012), technologies have transformed society from top to bottom, and particularly in terms of education and what the public expects education systems to deliver. Technology has made it possible to view the world through a digital lens, and teachers can access this knowledge at will via interactive smartboards (touchboards) or students' laptops and touchpads/i-pads. The research on i-pad use and adoption overwhelmingly reports that tablet devices like these have a positive impact on students' engagement with learning. In a study by Karsenti and Fievez (2013) they highlight the benefits of using iPad: information access, portability, creativity, higher student motivation, and possibility to work on one's own space. Furthermore, the result from the study (ibid) also show that the collaboration both among students and with the teacher increased, and the improvement of the quality of the presentations (teacher and student) are remarkable.

Heinrich (2012) and Henderson and Yeow (2012) identify the importance of teacher training as a necessary support for effective integration of digital tools in classrooms and different aspects are discussed such as technical, pedagogic, social and economic. Furthermore, in getting teachers started using digital tools some form of initial familiarization with the tools is essential (Heinrich, 2012) and can be described in different phases: **a**) initial familiarization with the tablet device (I-pad) or smart-board **b**) identifying, installing and using appropriate and relevant applications that support teaching and learning **c**) identifying applications that support personalized and/or collaborative learning, including those that can cater learners with additional needs **d**) creating, uploading and sharing teaching resources (for students and colleagues).

An increasing number of research studies indicates that teachers have not integrated ICT in the curriculum in a way that leads to significant changes in the classroom practice (Burden, Hopkins, Male, Martin & Trala, 2012) despite increased access and improved technical artefacts. An overarching aspect for not implementing ICT is related to the teachers' personal attitudes towards ICT (ibid). Teachers who regard ICT as a learning tool have confidence in the technology and trust students to be capable of working independently, have more inclination to use laptops (ibid)

Tallvid (2015) discusses teachers' reluctance to the pedagogical use of ICT in the classroom and the main findings from this study are the teachers' lack of technical competence both concerning how to handle different types of digital teaching material and the lack of competence if technical problems should occur, insufficient teaching material, and lack of time; time for planning was insufficient.

A successful school improvement with focus on ICT requires on-going technical training, discussions about pedagogical issues and content (Tallvid, 2015), in order to integrate ICT in teachers' daily practices.

Furthermore, in promoting improvement in schools the following strategies have been found to be effective (Hopkins, Ainscow & West, 1994):

- \* concrete, teacher-specific and extended training
- \* classroom assistance from local staff
- \* teacher observation of similar projects in other classrooms, schools and districts
- \* regular project meetings focusing on practical issues
- \* teacher participation in project decisions
- \* local development of project materials
- \* principals' participation in training

This highlights the key role of the relationship between policy implementation and school improvement programs in determining teacher quality and student achievement.

According to Stringfield, Winfield, Millsap, Puma, Gamse & Randall (1994) there are different conditions that underpin the work of successful schools, such as many staff development opportunities for teachers to learn together for the whole school to improve, good leadership, the coordination of activities in order to keep people involved: communication within the school is an important aspect of coordination, together with the informal interactions between teachers, and finally the recognition of enquiry and reflection as important for school improvement

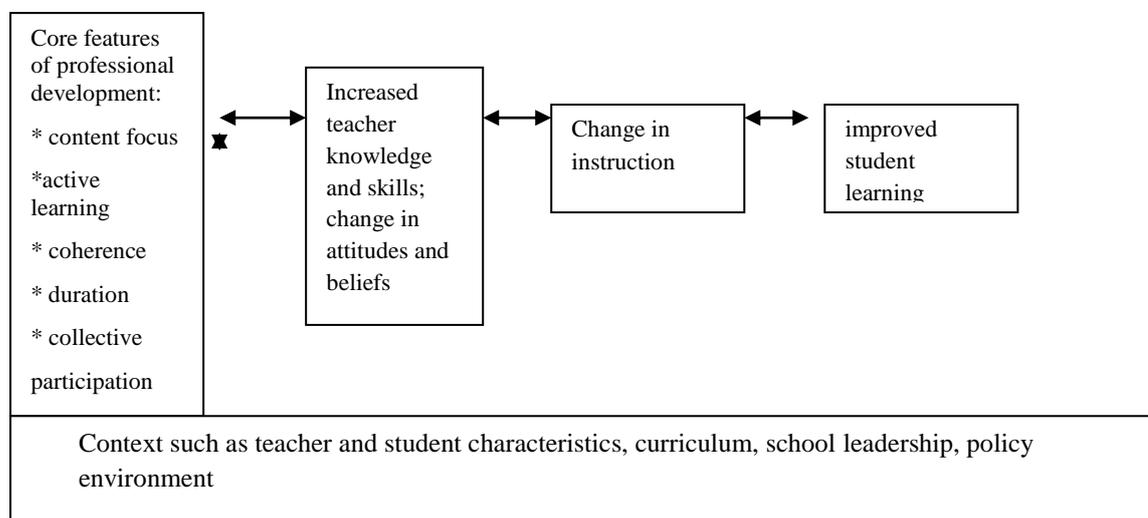
### Teachers' continuous professional development

The conceptualization of teacher learning and development is discussed by Shulman and Shulman (2004), and includes the key element of vision, motivation, understanding, practice, reflection and community, where teacher learning/development is seen as a process of active individual construction.

CPD is dynamic, ongoing, continuous, and set in teachers' daily lives, embedded in the classroom context, directly related to the work of teaching, can take form of co-teaching, reflecting on actual lessons or group discussions, and constructed through experience and practice (Webster-Wright, 2009). Another kind of professional development is involvement in a development or improvement process (Guskey, 2000). Researchers (Birman, Desimone, Porter & Garet, 2000; Boyle, Lamprianou & Boyle, 2005; Desimone, 2009) emphasize the importance of the collective participation of teachers, coming from the same department, grade or subject is more likely to be coherent with their experiences, and affording opportunities for active learning, and contributing to a shared professional culture. Hence, the development of a common understanding of instructional goals, methods, problems and solutions. These are key factors that seem to inspire teachers to improve their classroom practices.

According to Cohen and Hill (2000) CPD should therefore be collaborative and over time, include time for practice, coaching, and follow-up, be grounded in students' curriculum, and be job-embedded and connected to several elements of instruction.

Desimone (2009) has developed a model for studying the effects of professional development on teachers and students. In figure 1 below, the model is illustrated.

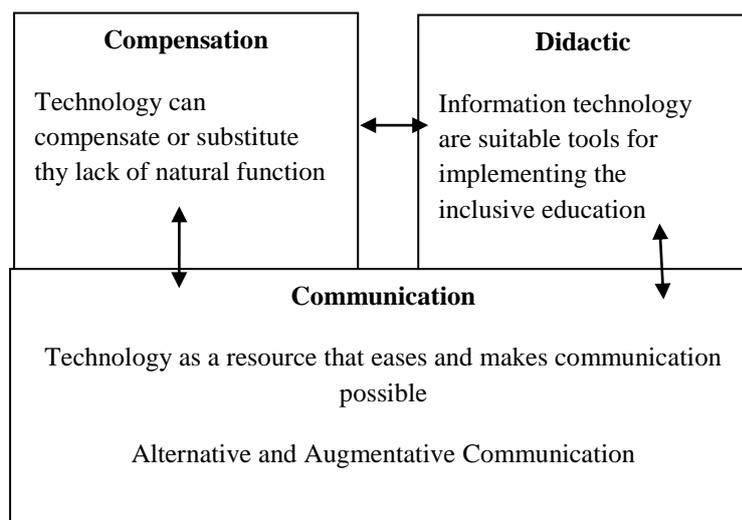


**Figure 1.** The effects of professional development (Desimone, 2009, p 185).

The model represents interactive relationships between the critical features of professional development, teacher knowledge and beliefs, classroom practice, and student outcomes. The contextual aspects are also important in describing the effects of CPD.

### ICT and special education

ICTs offer a great potential to support lifelong learning for all groups of students, including students in need of special support (UNESCO, 2006). However, the educational needs of people with disabilities are vastly diverse. On one hand, they must, as their peers, get knowledge and skills required in the society in which they live (UNESCO, 2006). On the other hand, they have (by definition) additional demands (often referred as special educational needs) caused by functional limitations which affects learners' ability to access standard educational methods of instruction, therefore, prevents educational progress (ibid). In this context, ICT application is very important as it plays an essential role in providing high quality education for students with disabilities. ICTs are extremely diverse and varied, and may be grouped in the following categories, illustrated in figure 2 below:



**Figure 2.** The process of ICTs in special education

ICTs allow students in need of special support to take active part in the process of interaction and communication and will become a valuable resource for inclusion (UNESCO, 2006).

It is important to realize that ICTs alone cannot solve all problems. The teachers need to develop innovative teaching methods or to change and adopt the existing approaches to accommodate new concepts of special education and modern technology. ICTs will contribute will thus contribute in creating good learning environments for all.

### **Significance of the study**

Conducting a study of this nature is very important and the findings may contribute knowledge on the continuing professional development (CPD) needs of teachers in moving towards new roles and tasks associated to digital tools in schools. Furthermore, the study will illuminate the nature of the obstacles and possibilities for teachers' CPD. Finally, this study contributes towards the understanding of support in educational change.

### **Theoretical standpoint**

#### *The Norm model*

The norm model may be used as an analytical tool to understand a particular taken action. The concept of 'norm' is a collective term for the factors and structures that are normalizing, and are therefore regarded as normal. The norm model (Hydén & Wickenberg, 2008) studies actions in order to find norms and what controls people's actions. Norm theory is based on systems theory, where the parts of a system are related to each other and influence each other, while all the parts depend on the whole. A norm comprises factors and structures that jointly shape the patterns of behavior and thought; structures are normalized and consequently are seen as normal. A norm analysis examines the values, knowledge systems and conditions that form patterns and work together as integrated action instructions - norms.

Hydén and Wickenberg (2008) assume that people's norms have three conditions. These cannot exist without each other. In figure 3 the three conditions are described.

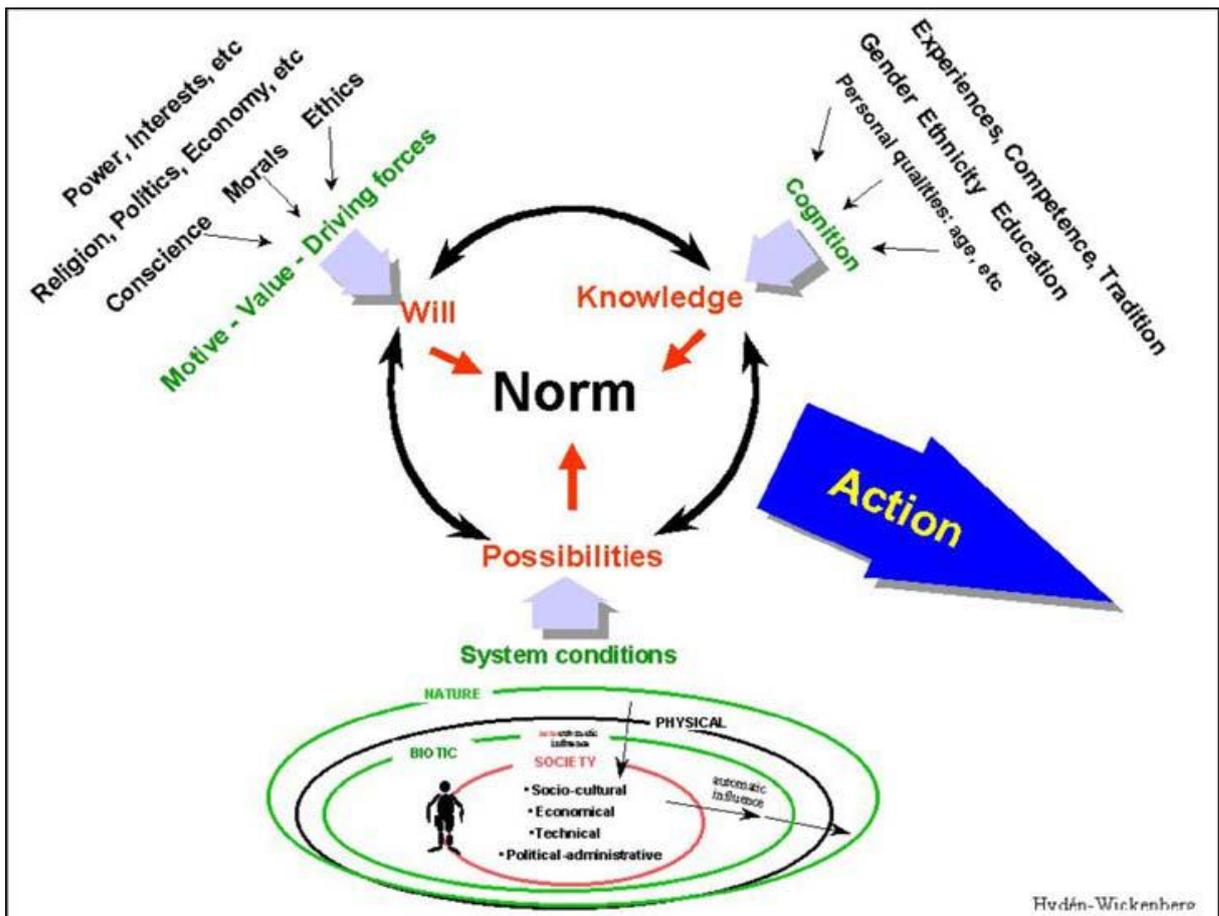


Figure 3. The norm model (Hydén & Wickenberg, 2008, s 48)

## 2.METHODOLOGY

### Action research

The whole study is inspired by the concept of action research which is a process in which teachers examine their own educational practice systematically and carefully, using the techniques of research (Denscombe, 2010). Furthermore, action research allows the teachers to try out different ways of doing things in their classrooms and to find something that really works for the teachers and the students (ibid).

Three main perspectives have guided the data collection: Information and Communication Technology (ICT), learning and special education.

### \* Population

The participants are 21 staff members (all) in pre-school and primary school and recreation centre at Furutorpskolan, Vinslöv, Sweden.

### \* Research instrument

#### Focus groups

One data collection method used in the study was focus groups, because focus groups can reveal a wealth of detailed information and deep insight and creates an accepting environment that puts participants at ease allowing them to thoughtfully answer questions in their own words and add meaning to their answers (Kreuger, 1994).

### \* Interviews

Data was collected through a semi-structured group interview process, audio-recorded and was moderated by two researchers.

The interview questions were open-ended and covered the following areas: implementation -general experiences, classroom situation (teachers' role, student learning), lesson planning/design, perception of knowledge, opinions concerning the in- service training.

In the analysis of interview data, a pattern coding process was used (Bryman, 2012; Kvale & Brinkman, 2009). The recordings were transcribed and analyzed. The transcripts were studied in detail to identify joint patterns, and key words and sentences were marked and put together into categories (ibid.).

#### \* Ethics

Throughout the study, the research ethical rules (Swedish Research Council, 2002) have been considered: **Information:** the participants were informed about the aim of the research. Furthermore, the role they play in the project and the conditions for their participation, which was voluntary and they had the right to discontinue their participation.

**Consent:** participants in a study have the right to decide whether or not to take part.

**Confidentiality:** details about everyone taking part in a study have been treated with the greatest confidentiality possible and personal data has been stored safely.

**Using the Data:** information gathered about individuals has only been used for research purposes.

### 3.FINDINGS

The overall aim of the study is to highlight the active teachers' perceptions on developing a self-understanding of their complex role in daily practice by using digital tools.

Three research questions were raised and the analysis was based on these research questions, and the data presentation is organized according to the specific questions.

The example comments indicate that teachers are reflecting both on their own professional development and the role of digital tools and the role and impact on their teaching.

**Research Question One:** How can teachers make schools more relevant and engaging?

**Research Question Two:** How can students' achievement increase?

**Research Question Three:** In what ways can teachers provide high-quality education for all students?

#### **The study context, Furutorpskolan**

Furutorpskolan is a primary school in a village called Vinslöv in Sweden. There are 150 students in the age span 6-12 years, divided into 7 classes. Each class has a classroom teacher, and in addition there is one special education teacher and a few subject teachers, in all 21 staff members.

The three-year-project started in 2012 and the final conference/workshop was held in June in 2015. The project was funded by grants from the Marcus and Amalia Wallenbergs Memorial Fund. This made it possible for the principal to come up with a clear vision of the teachers' continuing professional development (CPD), which included activities such as:

- Lectures on how to create good learning environments, special education, ICT
- Specific courses in how to use the new tools
- Follow-up meetings for reflections
- Study circles on how to use the tools
- Workshops with experts in digital tools
- Field visits relevant schools/institutions using digital tools
- Team development
- Individual classroom work, interaction students-teachers, teachers –teachers

Furthermore, the following assistive teaching tools were purchased:

- An individual Ipad for each staff member
- Ipads for the students (the students worked in pairs)
- Interactive boards in each classroom

The above activities were carried out in co-operation with staff from Kristianstad University, Lund University, different agencies in ICT. All activities were discussed and resolved by a steering committee, under the leadership of the principal.

#### **Teachers' perceptions on developing a self-understanding of their complex role in daily practice by using digital tools.**

All the teachers express a satisfaction of discovering their professional development since the project started. However, the participants have different views of what kind of knowledge their participation in project would lead on to. Some state that they see the project as a possibility for deepening their knowledge in a subject area, and is regarded as a means for further professional training, while others stress the positive influence of the project in general and specifically on the possibilities of reflection together with colleagues which has been enhanced by appropriate use of interactive technologies.

Furthermore, all the teachers agree that motivation increases and they feel greater confidence in working collectively with digital tools, and to acquire pedagogical tools, and to produce their own knowledge, learning in an everyday context.

**Research Question One:** How can teachers make schools more relevant and engaging?

All teachers have experience of working with digital tools and give many examples of how they can be used in order to make schools more engaging and with the tools available the possibilities to develop the skills are striking, thanks to the project "Furutorp goes digital".

The possibility for the teachers to participate in the project has meant a lot for their professional development and their attitudes towards the meaning of good teaching have changed. All the teachers are aware of the importance of designing engaging, meaningful, and authentic work and technology-enhanced learning experiences. Thanks to improved learning in the digital world the teachers demonstrate a deeper understanding of the importance of being able to create sustainable teaching practices. Furthermore, the teachers are aware of the many benefits - for both students and teachers - of learning in relevant and engaging contexts, using technology in appropriate and innovative ways. ". According to the teachers the benefits of using iPads are enhanced learning, collaboration, visualization, motivation, and communication. In summary, teachers are very positive about the value of the digital tools and articulate many of the benefits, not only for learning but for themselves.

*It has made me think differently about how I deliver my lessons*

*The children are more focused*

*I think it excites them more so they are more engaged*

*Students engage in the material more and can work independently more effectively*

All the teachers highlight the role of the principal and the administrative support.

*Good leadership is a necessary condition for creating schools more relevant and engaging.*

**Research Question Two:** How can students' achievement increase?

The teachers are aware of that more time is needed in order to be able to confirm that quality has improved due to the digital tools, and this is because of insufficient of assessment data available. However, the majority of the teachers believe that the technology has a role to play in education insofar as it can make a meaningful contribution to provide instruction, socialize, and provide qualification, and thus the teachers firmly stress that iPad has enormous educational potential.

There is a clear consensus among the teachers that collaborative learning entails more than just working next to each other or even helping one other. The digital tools have created many possibilities in truly collaborative work which enhances student learning by modeling authentic work and increasing students' achievement.

The teachers appear to recognize the value of different Apps in their teaching and due to the fact that the device is always available, it becomes present and can be used at will. Nevertheless, the teachers express a need for ongoing professional development and sharing of best practice. The iPad has impacted on the way the teachers now teach in order to increase students' achievement and some of them consider more student centered approach, more group work activities and more student activities. Another possible way of increased achievement is expressed in this way:

*The instant access to new information means that students can gain information from a variety of resources not just a textbook or worksheet*

*I just use another tool. My teaching approach has not changed but clearly using the Ipads is new*

**Research Question Three:** In what ways can teachers provide high-quality education for all students?

The teachers are aware of the complexity to provide high-quality education for all students and many basic components are mentioned: learners, environments, content, processes, and outcomes. One appropriate way to meet a variety of individual learners' needs can be via iPad and smartboard. This will lead to the possibilities of enhancing the need for more relevant education for all.

According to the teachers, digital tools can contribute to improve learning environments: usability, accessibility and flexibility. However, integration of the mentioned tools must be carefully elaborated: content, methods of content delivery and methods for teaching and learning, and methods for students' progress assessment. Furthermore, the teachers stress the importance of considering what the application of digital tools requires, and mention continual upgrade of their own competence, but also the possibility to get access to more expert knowledge, guidance, and professional advice to provide individual education.

In order to be able to include all students in an active part in the learning process most of the teachers agree to the compensatory role of digital tools, which allow for compensation of mental, sensory, and physical activity limitations. The tools will help students to overcome the barriers to learning, and thus help students to develop effective learning strategies.

The teachers are very much aware of the conditions of quality education and discuss different processes of economic, scientific, technological, and cultural development where digital tools play only a partial role.

*Electronic textbooks can be tailored to the individual student, so that iPads open the doors to an individualized curriculum.*

*iPads allow more independent learning from students.*

*Enabling students to immediately see the results of learning.*

A quotation from one of the teachers will summarize the overall consideration of providing high-quality education for all by using digital tools:

*The ideas are there and while some of us are still at the stage of doing traditional things more easily, many of us are potentially agents of change.*

The main complaints about using digital tools are related to occasional poor network and to blocking of internet sites. This is an obstacle in creating good learning environments for all students.

#### 4. RESULTS AND DISCUSSION

The overall aim of the study was to highlight the active teachers' perceptions on developing a self-understanding of their complex role in daily practice by using digital tools.

The project "Furutorp goes digital" made it possible for the teachers' continuing professional development (CPD) and the conditions for improving their classroom practices were offered such as in-service-training, time for meetings and coaching and follow up, and collective participation of teachers. This is emphasized by Birman et al., (2000); Boyle et al., (2005) and they highlight the importance of the development of a common understanding of instructional goals, methods, problems and solutions.

The results from this study have shown that investment in high quality professional learning opportunities to support teachers in designing meaningful, highly engaging learning experiences for students do pay off. When analyzing the results using the Norm-model (Hydén & Wickenberg, 2008) it became obvious that the teachers are motivated and due to their continuing professional development they have gained new knowledge using interactive tools. Furthermore, they are aware of all the new possibilities in improving their teaching. The contextual conditions are also essential in studying the effects of professional development (Desimone, 2009) and according to the teachers a strong leadership is one of the most important key factors in a successful continuing professional development. Together with the staff members the principal at Furutorp developed a clear vision for ICT and CPD focused on pedagogy and teacher development. It is the principal's main role to create a culture of norms that stimulates and inspires teachers to a higher level of engagement and willingness to develop their skills and their profession.

Furthermore, the overall objectives and a coherent strategy were thus in place. This is essential in order to be able to avoid operational problems of time and funding. Therefore, leadership, like clear goals and objectives is crucial to the success or failure of CPD. Hence, this study has shown and it goes without saying that the impact of CPD programs ought to be evaluated within the conceptual framework, opportunity to learn features etc, in accordance with the presented research (Desimone, 2009). Another very important factor in the success of the project was the teachers' on-going training development and this is something that Tallvid (2015) emphasized in his study.

The research question one was formulated to find out *how the teachers, with the new knowledge, could make Furutorp school more relevant and engaging*. All the teachers expressed an awareness of the importance of designing engaging, meaningful, and authentic work and technology-enhanced learning experiences. The teachers also realized the benefits of using iPads the way they contribute to enhancing learning, collaboration, visualization, motivation, and communication. This is also in accordance with results reported in different research projects (Alberta, 2012; Karsenti & Fievez, 2013) where the benefits such as information access, creativity, higher student motivation, and collaboration are highlighted. Collaboration is promoted by digital tools since they stimulate face-to-face social interaction between children and in the project "Furutorp goes digital" the students often worked two and two and this was a contributing factor in creating collaboration. However, the iPads were either used individually or in groups depending on what was being taught and the expected learning outcomes. Use of iPads often resulted in students spending more time and effort on their work and of course, this will contribute to a higher level of engagement.

The outcome of research question two *How can students' achievement increase?* revealed that even if it is too early to say something about if iPads are a contributing factor in enhanced student achievement, they clearly expressed that technology has a role to play in education insofar it can make a meaningful contribution to better results in general. With the teachers' increased knowledge and skills and changing attitudes and beliefs they have, to certain extent, changed their instructions and this has led to improved learning. This is what Desimone (2009) discusses the effects of professional development. Obviously, digital tools alone cannot alone contribute

to the students' achievement of the goals; the teacher need to develop innovative teaching methods and among other things accommodate modern technology.

The third research question dealt with: *In what ways can teachers provide high-quality education for all students?*

This study has shown that digital tools have the potential to motivate both students and teachers and are beneficial to both learning and teaching. However, the tools have to be carefully elaborated: content, methods of content delivery and methods for teaching and learning, and methods for students' progress assessment. Furthermore, the teachers agreed to the fact that digital tools have a compensatory role, which will help students to overcome the barriers to learning, and thus help students to develop effective learning strategies. These aspects are also highlighted by UNESCO (2006) where the process of ICTs in special education are discussed including compensation, didactic, and communication. ICTs allow students in need of special support to take active part in the interaction and communication and will become a valuable resource for inclusion (ibid.).

## 5. CONCLUSION

The project proved to be extremely successful. While the technology has been an integral part of the success, a key factor has been the principal's capability to create a culture of norms that stimulates and inspires teachers to a higher level of engagement and willingness to develop their skills and their profession. The quality of the ongoing management is striking and the principles of sound management of school improvement and development principles have been applied.

Teachers interviewed found that the used digital tools have features and a design to make it a very useful tool for education. The size and the portability of the Ipad allow it to be easily moved around the classroom. The tools can be used to support engagement and collaboration.

There has been a significant and very positive impact on learning and teaching which, in time, should be reflected in achievement, thanks to both pedagogical changes and new ways of learning due to access to information and learning tools.

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# Validity and reliability study of technological pedagogical content knowledge self-efficacy scale based on international educational technology standards (TPACK-ISTE)<sup>1, 2</sup>

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**ABSTRACT** The aim of this study is to develop technological pedagogical content knowledge (TPACK) self-efficacy scale based on international educational technology standards which are defined by International Standards for Technology in Education for teachers (ISTE-2008). Study groups of the research consist of senior prospective teachers studying at a faculty of education of a state university in Turkey in the fall semester of 2014-2015 academic year. The research was conducted four different groups such as Exploratory Factor Analysis (EFA, n=424), Confirmatory Factor Analysis (CFA, n=341), concurrent validity (n=93) and test-retest (n=85). To prove the relation of ISTE Standards the datum of same CFA group (n=341) is used. To define the EFA, principal components and varimax rotation methods used and a scale consisting of 27 items, six factors, explaining 62.65% of total variance, having factor loadings between .53-.89, corrected total item correlation above .30 has emerged. The CFAs (first and second order, n=341) were statistically significant and showed acceptable and good fit. To confirm the scale was based on ISTE standards, another CFA was applied within the same CFA group and four factored ISTE standards showed acceptable fit model. The concurrent validity of the scale showed positive, high level significant correlation ( $r=.78$ ;  $p<.01$ ). Internal consistency for Cronbach Alpha value for overall is .92 and the overall McDonald's Omega coefficient score is .96. The correlation coefficient scores of test-retest was .85 for overall scale. As a result, the developed scale (TPACK-ISTE) can be said to be a valid and reliable instrument.

**KEYWORDS** Technological Pedagogical Content Knowledge, International Society for Technology in Education Standards for Teachers, Scale Development, Self-Efficacy

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## 1. INTRODUCTION

On account of the fact that digital learners demand digital teaching, competent teachers who are adequate enough to meet the requirements of the learners of 21<sup>st</sup> century should be trained to international standards (Skoretz & Cottle, 2011; Özcan, 2013). It is an important step for the modern transformation of the education system to deal with effective technology integration models in the classroom and to configure the curriculum accordingly by considering the international standards in gaining proficiency in educational technology. Thus, it will provide a positive contribution to the teacher training policies to appropriately customize the standards set by international size to some cultural context.

Technological Pedagogical Content Knowledge (TPACK) framework has played an important role in rethinking current teacher education and technology practices both in Turkey and around the world (Baran & Canbazoglu Bilici, 2015). ISTE standards for teachers are crucial to define teachers' competencies in point of effective technology use in teaching as well. Therefore, to define teachers' technology integration competencies, taking TPACK framework basic and ISTE standards and performance indicators context into account to set forth a self-efficacy scale will contribute to the educational technology researches. Although ISTE standards for teachers and TPACK present different headings in terms of qualifications which teachers should have in effective integration of technology in education, the main objective of these two teacher competencies of the framework are the must have the qualifications of the 21<sup>st</sup> century. To examine these competencies by integrating, there is a need for a scale that can put forth the self-efficacy of teachers in a scientific model based on the standards.

The aim of this study is to develop technological pedagogical content knowledge (TPACK) self-efficacy scale based on international educational technology standards which are defined by the International Standards for Technology in Education for teachers (ISTE-2008).

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<sup>1</sup> This article was presented at the 1st International Conference on Lifelong Education and Leadership, in Olomouc, Czech on October 29-31, 2015.

<sup>2</sup> This research is based upon ongoing dissertation titled "Analyzing Technological Pedagogical Content Knowledge Self-Efficacy of Prospective Teachers in the Context of International Education Technology Standards (ISTE-T 2008)" which is supervised by Asst. Prof. Dr. Taha Yazar in Dicle University Institute of Educational Sciences, Turkey.

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## 2. THEORETICAL FRAMEWORK

There are many frameworks which study the needs of the 21<sup>st</sup> century competencies (Voogt and Roblin, 2010; Voogt and Roblin, 2012). Educational Technology Standards (NETS): newly named as the International Society for Technology in Education Standards – ISTE Standards) are among these frameworks. ISTE, which play a vital role in regard to provide a framework of information technology literacy (Mısırlı & Akbulut, 2013), have presented standards determining how ICT using should be at international level. ISTE standards are a set of standards which are competent at learning, teaching and use of technology in education and identifying the best practices (ISTE, 2014). According to the educational technology standards for teachers and prospective teachers which proposed by International Society for Technology in Education in 2008, teachers should be able to;

1. Facilitate and inspire student learning and creativity
2. Design and develop digital age learning experiences and assessments
3. Model digital age work and learning
4. Promote and model digital citizenship and responsibility
5. Engage in professional growth and leadership

These standards can be taken as 21<sup>st</sup> teacher competencies (ISTE, 2014).

When reviewing ISTE standards 2008 developed for teachers, it is underlined that teachers and prospective teachers to integrate technologies into education, especially the content knowledge, pedagogical knowledge, and technology. TPACK as one of the technology integration models in education has raised an important perspective about above-mentioned subject to the literature (Kabakçı Yurdakul, Odabaşı, Kılıçler, Çoklar, Birinci & Kurt, 2014).

Koehler and Mishra defined the knowledge construct of how technology, pedagogy, and content interact with each other within effective use of educational technologies in teacher's subject areas (Harris, Mishra & Koehler, 2007; Koehler & Mishra, 2009) and they developed TPACK through a series of experimental designs (Abbitt, 2011). In this model, technology knowledge refers to use of computer, internet, projector and widely used modern technologies such as video, blackboards and books; pedagogical knowledge refers to the practices, processes, strategies, processes and methods of teaching and learning; content knowledge refers to teachers' knowledge about the subject matter to be learned or taught. Within the interaction of these bodies of knowledge, technological content knowledge, pedagogical content knowledge and technological pedagogical knowledge have emerged. Thereafter, TPACK has been reached with the joint interaction of these three fundamental body of knowledge (Koehler and Mishra, 2008; Koehler & Mishra, 2009).

Pedagogical content knowledge (PCK) requires the application of specific subject areas of teaching knowledge and is similar to Shulman's (1986) model. PCK involves basic teaching, learning, curriculum, assessment procedure and expresses the relations between curriculum, assessment and pedagogy with and supportive learning environment. TCK is an understanding of the manner in which technology and content influence and constrain one another. Teachers have to understand which technology is best appropriate way for which types of subject areas and how the use of technology in education should be given for content. TPK is an understanding of how teaching and learning can change when particular technologies are used in particular ways. This includes knowing the pedagogical affordances and constraints of a range of technological tools as they relate to disciplinarily and developmentally appropriate pedagogical designs and strategies. (Koehler & Mishra, 2009; Harris, Mishra & Koehler, 2007).

## 3. METHOD

### Study groups

Study groups of the research consist of senior prospective teachers studying at a faculty of education of a state university in Turkey in the fall semester of 2014-2015 academic year. Data was collected from 440 prospective teachers for Exploratory Factor Analysis (EFA) and from 358 prospective teachers for Confirmatory Factor Analysis (CFA). 16 observations out of EFA and 10 out of CFA were excluded from the analysis due to multiple answers to the same item or many unanswered items. Furthermore, seven observations which did not meet the assumptions of CFA were left out of the survey. The data of four groups of prospective teachers, including 424 for EFA, 341 for CFA, 93 for concurrent validity and 85 for test-retest reliability were studied within the research. In order to reveal the relation between the developed scale and context of ISTE teacher standards another CFA was administered with the same 341 prospective teachers.

In the research, the majority of the participants in the study groups were females (EFA=59. 7; CFA=58. 4). The study groups which involve 15 different departments are Elementary Mathematics, Science Education, Preschool Education, Social Studies, Elementary Teacher Education, Physics, Chemistry, Biology, Secondary Mathematics, English, Turkish, Turkish Language and Literature, History, Geography, and Philosophy.

According to the variety of groups EFA has 14 and CFA has 9 different groups in respect to departments. It can be noted that group distribution did not show significant differences in this context of data and providing diversity with a surplus of group within EFA and CFA is positive in terms of representing the teachers.

## **Process**

Based on the purpose of the scale, initially the related literature reviewed and a large item pool generated by regarding to TPACK's knowledge constructs and ISTE standards for teachers and performance indicators of these standards were taken into account. Some items were eliminated based on lack of clarity, questionable relevance or undesirable similarity to other items. The next step in the process was asking a group of people who are experts in the content area to review the item pool. This review serves multiple purposes related to maximizing the content validity of the scale (DeVellis, 2003). The scale, which was designed in accordance with expert opinions, was graded as a five point likert type; Strongly Disagree (1), Disagree (2), Mildly Agree (3), Agree (4) and Strongly Agree (5). The construct validity, internal consistency, test-retest reliability and item analysis were statistically calculated. The scale was administered to 93 prospective teachers to determine the concurrent validity of scale with "Technological Pedagogical Content Knowledge Scale" which was adapted to Turkish by Öztürk and Horzum (2011). The scale was administered to 85 teachers at two separate occasions of three weeks to identify the reliability of the test-retest.

EFA, concurrent validity, reliability studies and item analyses were performed by using PASW Statistics (formerly SPSS) 18 Software package. LISREL 8.54 Software package was used to calculate CFA.

## **4. FINDINGS**

### **Findings Regarding Validity**

#### **4.1.1. Content Validity**

Primarily scale development researches related to TPACK were reviewed to specify the extent to define set of items that will reflect TPACK-ISTE self-efficacy content domain (Çoklar & Odabaşı, 2009; Kabakçı Yurdakul et al., 2012; Timur and Taşar, 2011; Chai, Koh & Tsai, 2010; Canbazoglu Bilici, 2012; Öztürk and Horzum, 2011). Next, an item pool containing 70 declarative sentences was designed by the researcher by taking into consideration of the studies of Morphew (2012) and Cennamo, Ross and Ertmer (2010) representing ISTE-T (2008) standards and performance indicators. Eight items were eliminated from the item pool based on lack of clarity, questionable relevance or undesirable similarity to other items. Initial item pool with a total of 62 items were presented to 13 experts in the content area to determine the content validity. Croker and Algina (1986) claimed that the most commonly used method is to consult on the expert views in the process of determining the content validity (as cited in: Kan, 2007) and it is important to understand the content consistency among the expert views (Yurdugül, 2005). While many indexes are developed to define the content validity, Lawshe's (1975) content validity ratio (CVR) technic is a common one which is calculated by quantifying subject matter experts' responses in the way that "Essential, Useful but not essential or Not necessary" (Lawshe, 1975; Yurdugül, 2005; Kan, 2007). The minimum value of the CVR is 0.54 for 13 experts at a .05 level of significance (Lawshe, 1975).

A total of 13 items were eliminated after domain experts assessed the 62 items related to TPACK. The whole content validity indexes of the 49 items and seven sub dimensions of the initial scale are respectively as follows; TB=0. 85, PB=0. 83, AB=0. 81, PAB=0. 72, TAB=0. 77, TPB=0. 79, TPACK=0. 82. The entire content validity indexes of the seven sub dimensions of TPACK are above the minimum value of the content validity ratio. Based on the advice of some experts, two Content Knowledge items and a Technological Content Knowledge item were included in the remaining 49 items which were considered by experts of the area to determine the content validity of the scale of development. After all, initial scale with a total of 52 items was designed.

#### **4.1.2. Construct Validity**

##### **Exploratory Factor Analysis**

Sample size is one of the important factor in the reliability of factor analysis (Field, 2009). Kass and Tinsley recommended having between 5 and 10 participants per variable up to a total of 300 (as cited in Field, 2009). In this study, the data were collected from 445 people for exploratory factor analysis, but 21 questionnaires has been excluded from the study because of the loss of data or inappropriate answers. To determine its construct validity, the appropriateness of factor analysis for the items of the scale with 52 items which are answered by 424 people is primarily analyzed with Kaiser-Meyer-Olkin (KMO) and Bartlett tests. The KMO value calculated for the sample suitability is .91. This value is greater than .60 which is the lowest value for factor analysis which was recommended by Pallant (2007), Tabachnick and Fidell (2007). In addition, Chi-square value ( $\chi^2 = 4707.088$ ,  $Sd = 351$ ,  $p < .00$ ) which was obtained with Bartlett test was found significant. Both KMO and Bartlett tests' results demonstrate that the data is appropriate for factor analysis.

After the data set is determined to be appropriate for the factor analysis, as a result of AFA which was done by using principal component analysis and varimax rotation, 25 of the 52 items has been extracted since their factor load values are lower than .30 and their factor load differentiation is lower than .1 remaining in two factors

after 5 times evaluation process. As a result of varimax rotation and the extraction of the items, a scale which is six factor and has 27 items has been obtained. It has been observed that 27 items are gathered under six factors which explains 62.65% of the total variance. The factors consisting of the items grouped under the same factor has been determined as following: a) TK: Technological Knowledge b) PK: Pedagogical Knowledge c) CK: Content Knowledge d) PCK: Pedagogical Content Knowledge e) TPK: Technological Pedagogical Knowledge f) TPACK: Technological Pedagogical Content Knowledge.

**Table 1.** Factors, item statements, factor loads, item total correlation and explained variance\*

Factors	Statements	Factor Load	Corrected Item Total Correlation	Explained Variance %
TK	M01 I can learn technology easily.	.73	.39	4.30
	M02 I'm aware of the responsibilities of the ethical use of technology.	.72	.37	
	M03 I can solve potential technological problems.	.64	.42	
	M04 I keep abreast of all the technological developments.	.63	.43	
PK	M07 I can utilize various teaching methods and techniques effectively in the classroom setting.	.64	.57	6.99
	M08 I can design learning environments in order to support students' cooperative learning skills.	.80	.63	
	M09 I can design learning environments in order to promote students' creative thinking skills.	.82	.55	
	M10 I can benefit from a variety of teaching strategies which meet diverse learning needs of students.	.68	.53	
CK	M15 I have enough knowledge about my subject area.	.88	.45	5.69
	M16 I can easily answer the questions about my subject area my students may ask.	.89	.44	
	M17 I can associate my subject area with other disciplines when the content is related to it.	.69	.52	
PCK	M22 I can develop measurement tools that determine what level of the objectives took place.	.58	.44	8.26
	M23 I can design various teaching activities in order to improve students' creative thinking about my subject area.	.53	.56	
	M24 I can design learning environments for students to learn my subject area more easily.	.68	.53	
	M25 I can associate the issues regarding my subject area with the daily life.	.62	.42	
	M26 I can utilize appropriate measurement and evaluation techniques to determine the misconceptions among students.	.54	.55	
	M27 I can exchange information with my students' parents in order to monitor and evaluate their learning progress.	.66	.40	
TPK	M28 I can choose the appropriate technology/technologies for teaching process.	.56	.65	3.72
	M29 I can arrange in accordance with the use of technology the environment in which teaching-learning process would take place.	.77	.61	
	M30 I can utilize digital tools and resources effectively in the teaching-learning process.	.66	.62	
TPACK	M39 I consider my students' individual differences when choosing the technologies I would utilize in my courses.	.61	.49	33.69
	M42 I can benefit from information and communication technologies to improve my knowledge of the subject area.	.61	.65	
	M44 I can prepare any content related to my subject area by utilizing technology.	.73	.63	
	M45 I can benefit from technology when developing teaching materials related to my subject area.	.71	.61	
	M48 I can design learning activities by integrating my subject area with digital tools and resources in order to facilitate learning.	.65	.61	
	M49 I can guide students to reach the accurate information by directing them to the appropriate digital sources in the teaching-learning process.	.73	.59	
	M50 I consider the course content, teaching-learning strategies and the combined use of appropriate technology resources when planning my lessons.	.77	.61	
<i>Explained Total Variance</i>				62.65

\* The explanation of items in English are for information purpose, the instrument is in Turkish form and the language validity should be proved for further researches.

TPACK-ISTE self-efficacy scale didn't present all of seven dimensions of TPACK and the dimension of technological content knowledge (TCK) was not included in TPACK. Although the model converged in EFA revealed six factored structure except from TCK, the 42, 44, 45 numbered items which are included in TCK transferred to the last TPACK factor. Seeing that the responses of these items are given by prospective teachers, it has been observed that this dimension was not distinguished from the basic dimension of technological pedagogical content knowledge. Yet, on account of the fact that the scale is based on ISTE standards for teachers, the TCK may be differentiated from the TPACK's body of knowledge. In addition, the item 39 discussed in technological pedagogical knowledge has been evaluated in TPACK dimension. When the factor loads reviewed, the lowest factor load was determined as .53 while the highest factor load was .89. This indicates that the factor load values of the items in EFA were high. The item-total correlation of TPACK scale which was corrected for item discrimination has been calculated. In the calculation of the item-total correlation, the Pearson product-moment correlation coefficient was utilized. According to the table, the corrected item-total correlations are ranged from .37 to .65, and above .30.

### **Confirmatory Factor Analysis**

In order to determine whether the factor structure found in EFA was verified or not, Confirmatory Factor Analysis (CFA) process was performed. In literature, since it is recommended that data be collected from different groups for the verification of the factor structure which emerged, confirmatory factor analysis was carried out with another study group. (Worthington and Whittaker, 2006; Huck, 2012; Field, 2009).

The appropriateness of factor analysis for the items of the scale with 27 items is analyzed with Kaiser-Meyer-Olkin (KMO) and Bartlett tests. The KMO value calculated for the sample adequacy is .91. This value is greater than .60 which is the lowest value for factor analysis which was recommended by Pallant (2007), Tabachnick and Fidell (2007). In addition, Chi-square value ( $\chi^2 = 4707.088$ ,  $Sd=350$ ,  $p<.00$ ) which was obtained with Bartlett test was found meaningful. There is no missing data in the study.

For univariate skewness and kurtosis indicators, the absolute values are interpreted and skewness and kurtosis are examined (Klein, 1998: as cited in Haşlamam, 2011). Skewness and kurtosis values of the variables in the study were examined, and were found to be within the normal range of values. To decide whether the data has multivariate normal distribution or not, multivariate kurtosis (also known as Mardia coefficient) and the critical ratio values are analyzed (Bayram, 2013). In the study, whether the data consisting of 27 items are normally distributed or not was examined with kurtosis value (Relative Multivariate Kurtosis), and the value of 1264 was found. The fact that the multivariate normal distribution kurtosis value is  $<2$  indicates that there is the normal distribution (Kline, 1998: as cited in Haşlamam, 2011).

For six predictive variables, Mahalanobis distance values that are greater than 22.46, Cook values that are greater than .02 and Leverage values that are greater than .05 were examined. Additionally, Cook and Mahalanobis, Mahalanobis and STDDFFIT, and Covratio and standardized residuals were examined. Accordingly, 2, 54, 57, 60, 85, 153 and 326 numbered observations are omitted.

The absence of high correlation coefficient between the variables that predict the CFA is required. Therefore, Tolerance values should not be close to zero or less than .10, on the other hand all VIF values given in the same table (Variance Inflation Factor) must be less than 10 (Akbulut, 2010). In this study, it was observed that the lowest Tolerance value is .446, and the highest VIF value is 2.242. In the results of the analysis, it was found that the CFA assumptions were met. In the analysis of the data set, 7 observations were extracted from the data set, and 341 observations were utilized so as to perform confirmatory factor analysis.

### **Implementation of the Confirmatory Factor Analysis**

In the result of the first order confirmatory factor analysis, the proposed modification indexes were analyzed, and it was found that the meanings of the items "M15 and M16" and "M44 and M45," explained by the same factor are close to each other, and it was analyzed by running the program again after the necessary modifications were done. The fit indexes obtained from CFA were analyzed, and Chi-square value ( $X^2 = 659.05$ ,  $n=341$ ,  $sd= 311$ ,  $p= 0.00$ ) was found significant. Fit index values have been found as RMSEA= .057, RMR= .08, SRMR= .093, NFI= .94, NNFI= .96 CFI= .96, GFI= .88; AGFI=.85. When GFI and AGFI indices are 0.95 and over, it indicates a very good fit. According to Anderson and Gerbing (1984), Cole (1987), Marsh, Balla and McDonald (1988), it is also acceptable for the model when GFI value is 0.85 and AGFI value is over 0.80 (as cited in: Büyüköztürk, Akgün, Özkahveci and Demirel, 2004). The factor load values ranged from .37 to .76.

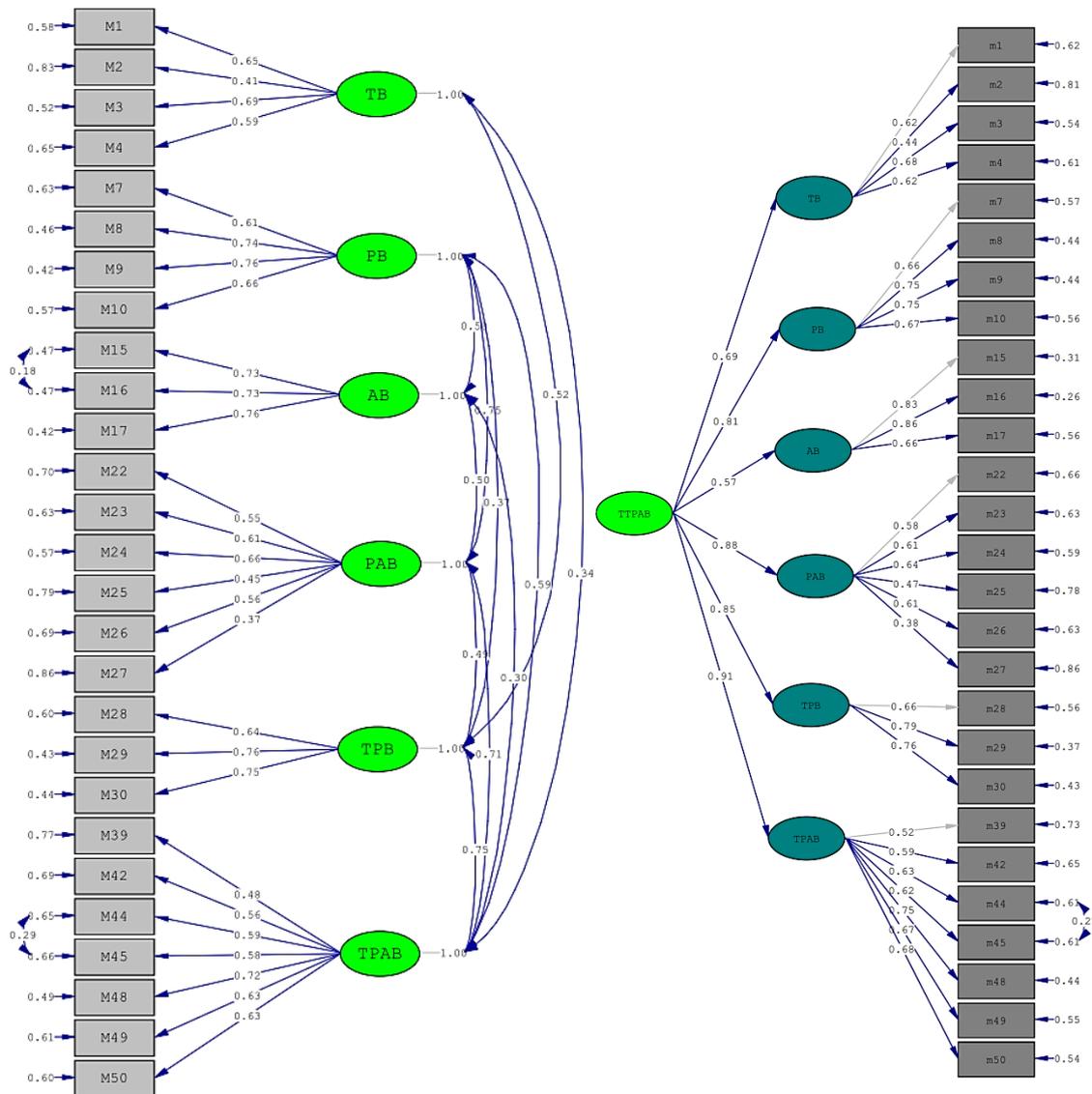
Considering the modification indexes which were added at the first order CFA which were tested with 6 latent and 27 observed variables, as a result of testing second order CFA model, Chi-square value was found significant, and it was concluded that fit index values were acceptable and showed good fit ( $X^2 = 637.80$ ,  $n=341$ ,  $sd=317$   $p<.000$ , RMSEA=.054, SRMR= 0.053, NFI= .94, NNFI= .97, CFI= .97, GFI= .88; AGFI=.86).

**Table 2.** Fit values for the proposed model

Values	Good Fit Values	Acceptable Fit Values	TPACK -ISTE 1 <sup>st</sup> order CFA	TPACK -ISTE 2 <sup>nd</sup> order CFA
X <sup>2</sup> /df	.00 < X <sup>2</sup> /df ≤ 2	2 ≤ X <sup>2</sup> /df ≤ 3	2.119	2.011
RMSEA	.00 < RMSEA ≤ .05	.00 ≤ RMSEA < .10	.057	.054
RMR	.00 < RMR ≤ .05	.05 ≤ RMR ≤ .08	.08	.034
SRMR	.00 < SRMR ≤ .05	.00 ≤ SRMR ≤ .10	.093	.053
NFI	.95 ≤ NFI ≤ 1.00	.90 ≤ NFI ≤ .95	.94	.94
NNFI	.97 ≤ NNFI ≤ 1.00	.95 ≤ NNFI ≤ .97	.96	.97
CFI	.95 < CFI < 1.00	.95 < CFI < 1.00	.96	.97
GFI	.95 < GFI < 1.00	.90 < GFI < .95	.88	.88
AGFI	.90 ≤ AGFI ≤ 1.00	.85 ≤ AGFI ≤ .90	.85	.86

\* 1<sup>st</sup> order CFA:  $\chi^2 = 1781.64$ ;  $df = 729$ ; for RMSEA %90 Confidence Interval = (.050, .56)

The factor loads of first order and second order CFAs for the model are presented in Figure 1.



**Figure 1.** The six-factored structure founded with first order and second order CFAs for TPACK-ISTE self-efficacy scale

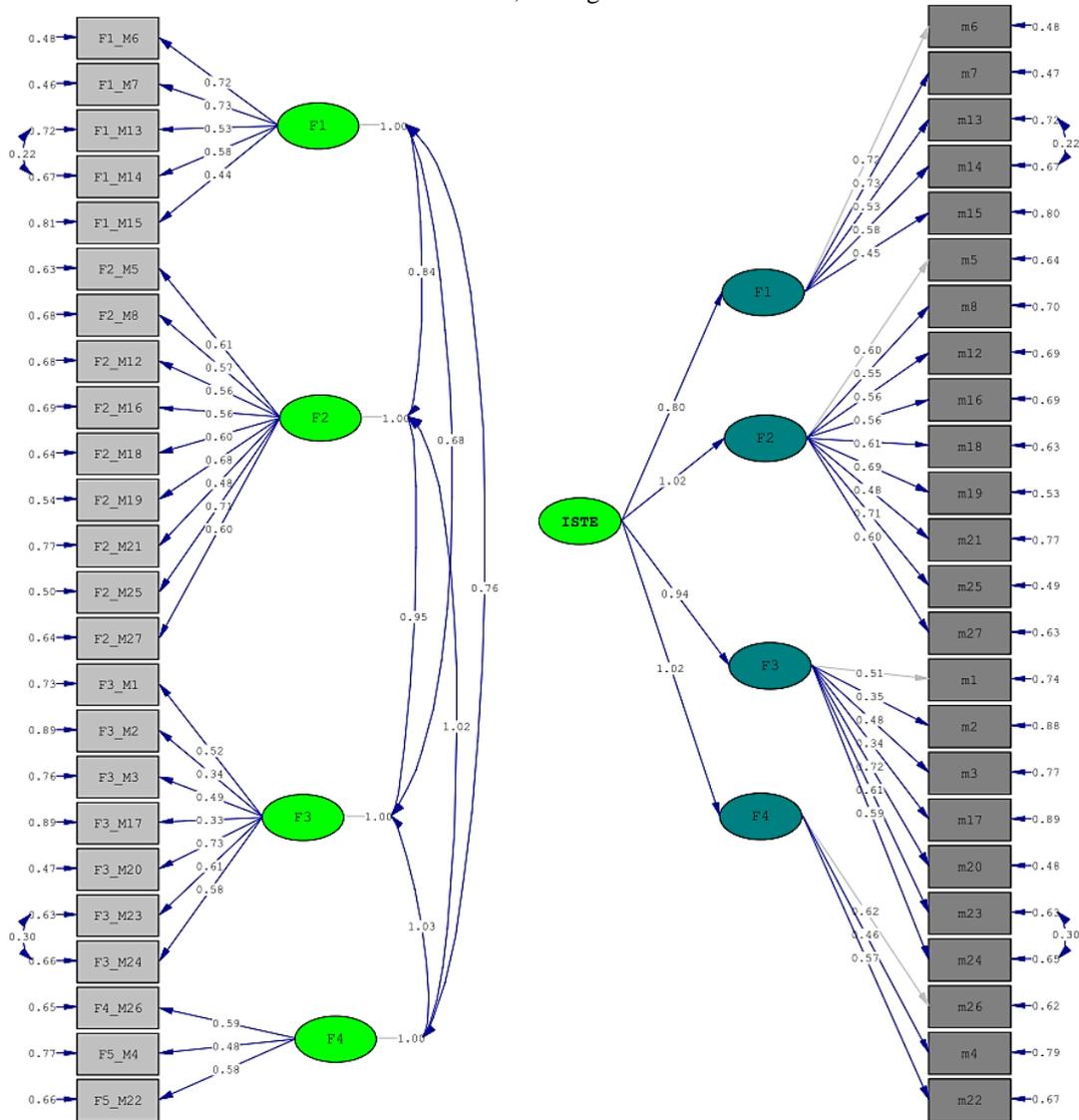
**Table 3.**  $\lambda_x$ , standardized error, t value and  $R^2$  values

Second order variable	First order latent variables	$\lambda_x$	$\delta$ (Standardized Error)	t value	$R^2$
TTPAB	TB	.69	.52	8.48	.48
	PB	.81	.35	10.74	.65
	AB	.57	.67	9.31	.33
	PAB	.88	.23	9.96	.77
	TPB	.85	.28	11.22	.72
	TPAB	.91	.19	9.24	.81

The factor loads between TPACK-ISTE structure which is a single basic structure and the latent variables in the model, t values, errors, and the description rates of the second order variable in the first order latent variables ( $R^2$ ) are given in the table above. Accordingly, TPACK (0.81) and PCK (0.77) have the most impact on the TPACK-ISTE self-efficacy which is the basic structure, whereas CK (.33) and TK (.48) have the least impact.

**The evidences of that TPACK is handled in the context of ISTE Standards**

To determine whether the TPACK scale which has been developed during this study was based on ISTE teacher standards or not, CFA was re-applied with the items related to ISTE teacher standards. According to the analysis carried out with CFA group composed of 341 people, after the necessary modifications, the fit indexes of the model were analyzed, and Chi-square value ( $X^2= 716.02$ ,  $n=341$ ,  $sd= 244$ ,  $p= 0.00$ ) was found significant. Fit index values have been found as  $X^2/df=2.93$ ,  $RMSEA=.075$ ,  $RMR=.04$ ,  $SRMR=.062$ ,  $NFI=.93$ ,  $NNFI=.94$ ,  $CFI=.95$ ,  $IFI=.95$ ,  $GFI=.85$ . According to these values, the four-dimensional structure of ISTE has been confirmed. While the lowest factor load value is .33, the highest one is .73.



**Figure 2.** First and Second Order CFAs which show that TPACK is based on ISTE Teacher Standards

Considering the modification indexes which were added at the first order CFA which were tested with 4 latent and 24 observed variables, as a result of testing second order CFA model, Chi-square value was found significant, and it was concluded that fit index values were acceptable and in a good fit ( $X^2= 739.837$ ,  $n=341$ ,  $sd=246$   $p<.000$ ,  $X^2/df=3.007$ ,  $RMSEA=.077$ ,  $SRMR= 0.062$ ,  $NFI= .92$ ,  $CFI= .95$ ,  $IFI=.95$ ,  $GFI=.85$ ).

When the relation between the items included in TPAB-ISTE Self-Efficacy scale and ISTE and TPACK dimensions is analyzed, 24 items of the scale which has 27 items can be observed that they are associated with ISTE standards. Table 4 shows relationship of TPACK constructs and ISTE standards in point of item numbers.

**Table 4.** The relationships and numbers of TPACK items and ISTE Standards\*

	F1	F2	F3	F4	F5	Total
TB	0	0	3	0	1	4
PB	2	2	0	0	0	4
AB	0	0	0	0	0	0
PAB	3	2	1	0	0	6
TPB	0	2	1	0	0	3
TPAB	1	2	2	1	1	7
Total	6	8	7	1	2	24

\* F1. Facilitate and inspire student learning and creativity F2. Design and develop digital age learning experiences and assessments F3. Model digital age work and learning F4. Promote and model digital citizenship and responsibility F5. Engage in professional growth and leadership

When the factors of the items of the scale are analyzed, it can be observed that there is not any item which is associated with ISTE in terms of Content Knowledge factor. In addition, it has been found two of the items on the scale are in accordance with F5 dimension “Engage in professional growth and leadership”, and one of the items are in accordance with F4 dimension “Promote and model digital citizenship and responsibility”. TPACK-ISTE scale has mostly the items of F2 dimension “Design and develop digital age learning experiences and assessments”. When the scale is evaluated in the context of ISTE teacher standards, it can be observed that most of the items are associated with F1, F2 and F3 dimensions. When the density of the items in the scale is evaluated, it can be observed that PCK, TPK and TPACK are more associated with the density. In this study, four of ISTE standards has demonstrated acceptable fit in the CFA.

#### 4.1.3. Concurrent Validity

5-point Likert type “Technological Pedagogical Content Knowledge Scale” (TPACK) having 47 items which was developed by Schmidt et al. (2009), and adapted to Turkish by Öztürk and Horzum (2011) was used in order to show the concurrent validity of TPACK Self-Efficacy scale. For the entire TPACK scale, which was adapted by Öztürk and Horzum (2011), Cronbach alpha value was .96. Cronbach alpha coefficients for the subscales have these reliability values: TK: .95; CK: .95; PK: .97; PCK: .97; TCK: .93; TPK: .89 TPACK: .94.

The TPACK scale adapted by Öztürk and Horzum, and TPACK-ISTE self-efficacy scales in this study were applied to 93 prospective teachers, and correlation coefficients calculated between the scores of both scales has been found as .78 ( $p <.01$ ). A high, positive and significant relationship between TPACK scale and TPACK-ISTE self-efficacy scale has been determined. Accordingly, TPACK-ISTE self-efficacy scale can be said to provide concurrent validity.

#### Reliability Studies

Internal consistency and test-retest reliability coefficients were used to determine the reliability of the scale. To test the consistency of the items of the scale both Cronbach Alpha and McDonald (Omega) coefficients were calculated.

**Table 5.** Cronbach Alpha and McDonald Omega Internal consistency scores

Factors	Number of Items	Cronbach $\alpha$	McDonald $\omega$
1	4	.71	.71
2	4	.83	.83
3	3	.85	.80
4	6	.79	.77
5	3	.81	.79
6	7	.88	.86
Total	27	.92	.96

Cronbach Alpha value for overall scale is .92, for TK=.71; PK=.83; CK=.85; PCK=.79; TPK=.81 and TPACK=.88. McDonald (Omega) coefficients is .96 for overall scale, for TK=.71; PK=.83; CK=.80; PCK=.77; TPK=.79 and TPACK=.86.

In addition to the internal consistency the test-retest reliability was calculated by using the Pearson's Product Moment Correlation Coefficient. The participants of test-retest reliability are consisted of 85 senior class pre-service teachers. The interval of the tests was three weeks. This analysis revealed a highly positive relationship between the two applications for the total TPACK-ISTE scale. ( $r = .85$ ;  $p < .05$ ). The test-retest reliability scores which indicate .70 or above correlation in a scale shows acceptable reliability (Nunnally & Bernstein, 1994; Pallant, 2007; Büyüköztürk, 2011; Fraenkel, Wallen & Hyun, 2012).

## 5. CONCLUSIONS

Configuring curriculum and instruction utilizing educational technology and improving teachers' competencies in this direction is of great importance in increasingly digitalized world. Especially technology integration researches about using technology effectively in education based on valid and reliable theories and models will provide important guidance in terms of educational technology.

Although TPACK self efficacy skills based on ISTE standards for teachers and performance indicators (2008) reveal specific dimensions; a crucial factor influencing new teachers' adoption of technology is the quantity and quality of pre-service technology experiences included in their teacher education programmes (Tondeur, van Braak, Sang, Voogt, Fisser & Ottenbreit-Leftwich, 2012: 134) and the preservice teachers' educational technology competencies are related to their use of technology in education in future (Karataş, 2014; 50).

In this research, a scale of which theoretical framework depends on TPACK and based on ISTE's standards for teachers is developed. Although the theoretical framework of TPACK is formed of seven sub factors, the developed scale in this research consists six factors of TPACK excluding Technological Content Knowledge. However, when the sixth body of knowledge TPACK is investigated the TCK items are integrated to this factor. Regarding this issue, firstly it can be referred that the pre-service teachers take the TCK items and TPACK items related. Secondly, this result can be because of the TPACK's items are based on ISTE teacher standards.

Consequently, TPACK-ISTE self-efficacy scale is a valid and reliable scale which reveals theoretically and statistically significant results in both EFA and CFA values and can be used to measure pre-service teachers' TPACK self-efficacy based on ISTE standards for teachers.

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# Military concept development and military lifelong education

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## ABSTRACT

The aim of this article is to present outcomes of defense research project “OPERKON – Operating Concepts of the Armed Forces of the Czech Republic in Joint Operations” and national approaches to lifelong education in the area of military concept development on The University of Defence. Military concepts development seems to be a crucial point for development, building (defense planning) and the future use of the Armed Forces. Principal problem is that some NATO member states do not have a national approach and national documents as framework for process of concepts development, applied methods for experimentation and determination of individual responsibility (for validation and certification). This leads to opinions disunity and often "disorientation" among both individual developers and users of military concepts. Hypothesis: Knowledge of the military concepts development process is one of the key points to strategic decision-making of senior officers. Within the project there were used methods of comparative analyses and syntheses of NATO and EU countries documents. Analyses of lessons learned and panel expert's method was used with participations and contributions of foreign military concepts developers. For the proposal parts of project were used forecasting methods. The first part of the paper describes types and development of military concepts and subsequently the author explains the reasons for the new subject for lifelong education implementation. The education in the sphere of military concept development takes form of block of lessons within senior officer's career courses. The students are first introduced to theoretical approaches and then they design the practical examples for constructing selected concepts which afterwards discussed at the seminars. The article underlines the importance of education knowledge of for officers in the higher officer ranks. The objective of the project was to develop a methodology of the military concepts development.

Key words *Concept development, military career education, operation*

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## 1. INTRODUCTION

Concept Development & Experimentation (hereinafter CD&E) is considered as one of the tools of the transformation not only of the NATO Member States armed forces, but also of the Alliance as a whole. CD&E is, used primarily as a tool to support the decision-making process and to its objectification. Set process CD&E allows you to capture innovative plans and the examination of the potentially possible transformation solutions. Through CD&E Process we can develop conceptual agility to the effective develops capabilities that ensure usability, deployability, sustainability and interoperability of forces in operations.

In according to consumer audit knowledge of military concepts development seems to be a crucial point for development, building (defense planning) and the future use of the Armed Forces. Principal problem is that some NATO member states do not have a national approach and national documents as framework for process of concepts development, applied methods for experimentation and determination of individual responsibility (for validation and certification). This leads to opinions disunity and often "disorientation" among both individual developers and users of military concepts.

On the basis of analysis, next following hypothesis was established: Knowledge of the military concepts development process is one of the key points to strategic decision-making of senior officers.

General introduction to the issue of CD & E, knowledge and appropriate use of this tool is the future challenge for all conceptual workers, officers in the higher ranks, including officers. At present (as research result) it is an integral part of their lifelong learning at the University of Defence.

## 2. METHOD

Within the project there were used methods of comparative analyses and syntheses of NATO and EU countries documents and the practice of making military concepts with focus to analyses of operational concepts of foreign partners. Project takes into account the anticipated development of security and operational environment and the likely demands on the ability of the armed forces in relation to the security and defense. Analyses of lessons learned and panel expert's method was used with participations and contributions of foreign military concepts developers. For the proposal parts of project were used forecasting methods.

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### 3. FINDINGS

In the general understanding military concepts generally describe the methods, means and plans how they will be used in military capabilities in order to achieve the goal or intention. The scope of the concepts referred to in this description may be different (extensive or brief), by describing the activities of military forces in the most general terms and at the highest strategic level (the concept of using the armed forces as a whole) to the specification of the activities of a particular technological system, or the use of specific military units (The concept of the combat weapon system). In connection with the concepts typology is necessary to emphasize the importance of the term "military" concept as the highest level of generality.

These types of concept are processed mainly in the defense sector and are an expression of a vision to:

- how to use the armed forces,
- organization of armed forces personnel composition, equipment and accessories,
- structure and internal processes,
- providing the operational functions and
- methods of construction, development and training of the armed forces.

In according to the research the most used is the classification of military concepts by purpose. In unity with the approved project outputs, a certified "Methodology of operational concepts development," it is recommended that the military concept divided into four main areas, namely:

- Institutional concepts that describe the organization and event. if necessary. material and technical equipment of the military institution, its direction and development;
- Operating concept, describing the way how the formations, units or armed forces as a whole employed;
- Functional concepts that describe the activities of the various military functions or subfunkci (fire, force protection, etc.).
- Functional (integrating) concepts that describe activities that support through the functions other activities (digitization, robotics, NEC etc.).

Institutional concepts provide a description of the higher level features and the functioning of military institution or institutions.

Operating concept is, in the broader sense, an expression of an opinion about the method of employment of troops. It means how the military forces will be employed in operations. In literature we may find terms "Operational Concept" or "Operating Concept"; both with the same contextual meaning. These type of concepts describe how commanders, applying military science and military art, can use the defined capabilities to achieve the set of military goals (TRADOC, s. 28). These concepts describe how commanders, applying military science and military art, can use the defined capabilities to achieve the set of military goals.

Functional concepts describe the performance (execution, demonstration) of a specialized military area (such as logistics, fire support, manoeuvre, force protection etc.) in a broader operational context. The concepts presented in the Joint Vision 2020 may serve as an example of future functional concepts – dominant maneuver, precision engagement, focused logistics and full dimensional protection.

**Enabling** (sometimes also called **integrating**) **concepts** describe how the individual (specific) task or procedure should be carried out by applying a particular capability, such as a specific technology, training or educational program, organization or equipment. The concept describing the use of technology for UAV (RPA VECTOR) may be used as an example. The enabling concepts, as far as the terminology is concerned, are the most specific ones out of all military concepts. The level of the conveyed information should be sufficient for the direct specification of military requirements (for modernization, equipment, armament...).

There is question: when to start writing or developing of new concept? According to Schmitt (2002) there are only two reasons to start new concept development:

- a) either there is a requirement to find a solution to a new military problem or
- b) there is a requirement to find a solution to an existing problem.

Woods and Christoffersen (2002) have identified two main activities in operational development that are relevant for this method description. The first case involves finding a better solution to an existing problem than the currently applied solution. A better solution may have emerged as a result of a new development in technology, organisation, tactics or some other area. It may also be necessary to develop a new solution because the operational environment, task, or other circumstances have changed to such a degree that the current solution is no longer sufficient. This type of development is centred on practical, action-focused research, development and design and is called incremental innovation or pioneering innovation.

The principles of operating concepts development do not significantly differ from the generally applicable principles of project planning and management in other scientific disciplines or areas of social development. The operating concept development is a complex process, based on the dialectic harmony of their purpose, context and principles of development, systemic structure and content structure.

The preparation and reviews of operating concepts represent a complex process for their authors:

- Authors of operating concepts often do not get the comprehensive understanding of the problem until they find a possible solution;
- Only with difficulties may the authors detect the point in time when the concept development should be stopped as it has reached a deadlock, or the problem has ceased to be relevant;
- Ideas and visions in the concept proposals are never correct or wrong, they may only be better or worse;
- A concept will never offer a final number of possible solutions and a final number of acceptable alternatives.

As mentioned above, the operating concept development is subject to project management theory. Operating concept project management covers the management system and processes of the operating concept development and operating concept processing project management. Specific operating concept projects should be complemented or accompanied with experimental verification of conclusions and recommendations given in the concepts.

The operating concept development itself represents a well-thought-out cyclical and gradual process, with the aim to optimize the efforts of evaluation, writing and review of the operating concepts. It consists in mutual overlapping of the individual three-year-period activities, based on the structured and logical concept development procedure.

The process should prevent the occurrence of conflicts in the preparation efforts, enable implementation of results obtained through the evaluation of the individual concepts and, simultaneously, allow the participation of various stakeholders in their development.

The actual rhythm of the development may be affected by various important factors or events, such as changes in national governments, new strategic concepts, continuous process of defense planning, scenario development, changes in strategic visions and policies, or outcomes of the negotiations between the DoD agencies that participate in the concept development or have a significant influence on the process.

#### **4. RESULTS AND DISCUSSION**

The Czech Republic Armed Forces do not currently have a capstone operating concept, which would address the use of the armed forces for the 2018-2028 period. The individual sections of the Ministry of Defense and the General Staff (or operational levels) prepare the lower level concepts (functional, integrating or enabling). However, a unifying armed forces concept for future operations (2018-2028) is missing; this concept would represent the unifying (capstone) document as well as the document applicable in the process of defense planning for future operating capabilities development. Especially under the defense and security cost cutting initiatives, not only in the Czech Republic, but also in most of NATO and EU member states, the process and systemic approach to the transformation of the armed forces present the only solution. The majority of NATO member states that plan the establishment and development of their armed forces using capability-based planning are currently in the process of developing or updating their operating concepts, including the capstone concepts as well as the functional or integrating ones. Therefore, in the Czech Republic the preparation of the capstone concept for future joint operations of the armed forces represents absolutely vital factor for their continued transformation and fulfillment of their mission.

The main findings and general recommendations arising from the foregoing may be fully applied to the development of the “Operating Concept of the Armed Forces in Future Operations” as general rule. These findings and recommendations include:

- Framework for the development of an operating concept may be seen in the certified Operating or Military Concept Development Procedures, which is to determine the hierarchy, purpose and basic form of these documents;
- The superior operating concept must become an integral part of the strategic documents;
- The superior operating concept must comply with the “capstone concept” requirements and its general nature needs to be respected;
- The superior operating concept must be updated on a regular basis, unless external conditions change to the point requiring the concept to be reviewed.

White Book on Defence 2011, in its part Preparation of Personnel, said: “The system of individual personnel preparation is based on a complex of lifelong education that is composed of accredited education and professional training; the latter is implemented through the system of career and specialised courses”. University of Defence, as the successor of the Military Academy in Brno, has a long tradition in professional preparation of military personnel. Today, the lifelong education has two parts – first part aiming to obtain a master's degree from university faculty and second part is career courses for officers. The University of Defence is providing career preparation of the officers in two types of courses. These two courses, Senior Officers' Course and General Staff Officers' Course, are constantly undergoing the revisions and updates to satisfy the needs of the Czech Armed Forces.

Under the new master's degree programme, students gain knowledge in the field of military strategy and the operational art. The students gain this knowledge through both theoretical and practical way (laboratory and field exercises). This is a newly conceived subject War study I and War study II. In the context of these subjects is under way in abbreviated form issue foundations of military concepts. Attention here is focused mainly on the basic introduction to the theory of the military concepts. Subsequently, students analyse the historical examples (for example Air Land Battle Concept) clarified the coherence and the impact of concepts on the development and build up of the armed forces. Students in this area take important context and the starting points for systemic development of the armed forces.

Education in the field of concept development and experimentations processes taking place in the context of career courses for Higher Officers Course (HOC) and for General Staff Course (GSC). This is the responsibility of the Centre for Security and military-strategic studies of The University of Defence Brno.

The issue is profess within the scope of subjects „Strategic Management and Defense Planning“ for GSC and withi subject „Theory of Management and Concept Development“. Time scheduled for profess and seminars is in both cases 26 hours. Students are in this issue familiar with the theory of military concepts and with national and Alliance approaches to concepts creation, verification and subsequent use.

At the end of the subject is planed a seminar with aim to verify and consolidate the knowledge obtained during lessons. Students are presenting their own opinien and reflection related to requirements for the development of military concepts. Based on an analysis of available studies and conceptual documents students characterize and explain the meaning and mission of military concepts and ways of their production within the The Czech Armed Forces.

The military concepts development and their subsequent validation is a tool for transformation of the armed forces. The military concepts are one of the critical inputs for the process of the Alliance's defence planning (all alliance) and therefore also of the Czech Republic. High quality processed and regularly updated concepts of the use of force are a necessary starting point for development of other types of military concepts (especially the institutional and functional).

The system approach to military professionals' education, especially senior officers in concepts development and experimentation becomes a necessity at the present time. In the context of career courses (GSC and HOC) participants are familiarized with this issue and so created the basic preconditions for the creation of conceptual documents in defense of the educated professionals.

The researches from the defence project OPERKON that solved issue of military concepts dealt with proposed methodology of operational concepts and designed possible draft of use of the armed forces in future operations. Its possible starting point and the first step in a systematic approach to military concepts and generally to fulfill the gap within the defense planning process.

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# Communication disorder in people with sensory disabilities

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## ABSTRACT

Communication disorder in individuals with sensory disabilities has a significant influence on the development of the individual and their communication and can significantly affect their quality of life, especially its psychosocial dimension. The article presents the results of empirical research, which are embedded in a broader theoretical framework symptomatic speech disorders in people with sensory disabilities. Gained from qualitative and quantitative data emerged several aspects which in our conditions determine care for individuals with sensory disabilities from the perspective of speech therapists. Of the sub-analysis techniques of qualitative data we applied the method of clustering, also was used simple enumeration, which uses quantitative indicators. Featured identified semantic categories are complemented by quantitative data illustrate the quantitative phase of the research. Contribution is primarily focused on the presentation of the results of a qualitative survey.

**KEYWORDS** Communication, visual impairment, hearing impairment, speech therapy, symptomatic speech disorders

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## 1. INTRODUCTION

The area of communication skills for people with sensory disabilities is defined by reference framework symptomatic speech disorders, which are defined as impaired communication ability to accompany another dominating involvement (in this case, visual or hearing impairment). Educational process of individuals with visual impairment differs significantly from education of the intact students due to differences in perception (Ludikova and Finkova 2012). Most frequent symptomatic speech disorders of children with visual impairments represents speech articulation disorder - dyslalia. That in clients with visual impairment occurs as a result absentee visual cues and lack of options imitation at an early age. A typical symptom dyslalia with the clientele is a violation of differentiation bilabial interdental sounds and pronunciation of "t, d, and n". Especially in children with congenital blindness may show other types of communication skills, such as stuttering, cluttering, rhinolalia or voice disorders. A typical symptomatic speech disorder among blind children is verbalism: blind people use words that accurately understand their meaning. Verbalism phenomenon is not immutable, while special teaching methods can influence it may result in a substantial reduction in verbalism. Due to limitations or loss of visual perception is for clients with visual impairments emphasized the importance of tactile speech therapy aids such as embossed display, three-dimensional models, emphasizing letters of support through tactile etc. Perceptual experience stress in their research eg. Chauvey et al. (2012). Texts to practice, it is necessary to modify the form of relief (Braille) or enlarged black print with matching sizes, which can be roughly determined on the basis of visual acuity at near. On various aspects of the development of e-accessibility of public administration web portals for people with visual impairments point out Regec (2014). Verbalism was ever assessed differently. Illyés (1978) states, that the basis for verbalism people with blindness is a disturbance of the balance between development experience and language development. Special education teachers in the 19th and 20th centuries disproportionately overestimated the impact of verbalism, to the extent that it sought to create a special language for people with blindness (Lechta 2008). The actual debates on the issue verbalism for persons with visual disabilities are offered confrontation with the views of diverting from conception verbalism as the main problem of the target group. Study Rosel et al. (2005) shows that there is no statistically significant difference in the incidence in a group of blind people and sighted people. For people with visual impairments is required to accept slower pace of work and fatigue quicker. Sak-Wernick (2014) also points to co-verbal disturbed behaviour, which often does not match the communication situation (may even interfere with it), is typical indifferent, stiff, aloof facial expression. These aspects are the logical consequence of the lack of visual feedback. For these characteristics suggests a need for speech therapy intervention with the active participation of the family (particularly mothers) - this knowledge is declared in many specialized works (eg. Pijnacker et al. 2012; Rowland 1984; Sapp 2001; Chen 1996; Landolfi et al. 2011).

When evaluating impaired communication skills of children with hearing impairment is taken into account a priori age at which the hearing impairment has occurred, then called. Psycholinguistic talent, degree and type of hearing impairment, and other related disabilities, and last but not least, the age at which began to offer special education intervention. Potmesil et al. (2014) illustrate the difficulties and challenges faced by them in interacting with peers, and identify effective interventions that promote their social interaction in inclusive education. We consider it necessary to stress that the communication disorder cannot be considered the presence of interference between the communication intention if the recipient or broadcaster information not use the same code or common language (Lechta 2008). For individuals with hearing loss is spoken speech impaired especially

at the stage of articulation, especially in sibilant, vibrant, affricate, pre-alveolar sounds (in Czech: “č, ď, ň”) and difficult phonetic connection. Typical is the power of voice insufficiency leading to quiet speech with vague and incomprehensible (Souralova 2005). In qualitative terms, under construction concepts for children with hearing impairment on a basis other than children with hearing - is generally characterized by protracted course. Initially, this category of children understand the concepts very general, broad, vague or very narrowly. Gradually refines the meaning of terms (in relation to the development of vocabulary and language experience greater). Deaf refers vaguely abstract concepts, leading to a tendency to understand the meaning of words clearly. To a small extent they are used generic words which are being replaced by concrete terms. Jussen (in Lechta 2008) states that deaf children often know only one main meaning of the word and idea of this importance is inaccurate. In the area of vocabulary achieve better results by Krahulcova (2003), children who underwent early diagnosis and launched a quality rehab program. When evaluating morphological and syntactic language level, we can talk to deaf people notice the excessive growth of nouns, verbs and frequent skipping small frequency of use of adverbs. Deaf children are often unaware of the importance of morphological constituents - cannot distinguish between parts of speech, there is also incorrect understanding and forming sentences. The syntactic level is characterized by the accumulation of simple words; it is also typical of the frequent use of superfluous words.

## **2. METHODOLOGY**

Despite the fact, that impaired communication ability in people with sensory disabilities is not the dominant issue, it can significantly affect the quality of life of individuals, especially its psychosocial dimension. Character and specific features of symptomatic speech disorders in people with sensory impairment were illustrated in the theoretical section of Article. The main aim of the present paper is to present a relatively comprehensive picture of the problems of symptomatic speech disorders in people with sensory impairment, with particular emphasis on the point of view alone speech therapists working in special education practice at various departmental level. The level of opinions was evaluated regardless of departmental affiliation, or heterogeneity in this regard was a welcomed variable. The research sample consisted of clinical speech therapists and speech therapists from the Ministry of Education, Youth and Sports and Labour and Social Affairs. The structure of the research group for quantitative and qualitative design is presented in Table 1 and Table 2.

Based on the mixed research design we try to illustrate the attitudes, experiences and needs of professionals who carry out speech therapy intervention for selected target groups. A partial aim of survey was the exploration of the current state from the perspective of speech therapists and identification of specific and potentially problematic aspects. In the context of the main objective of the research we have identified several research theses which accompanied the conception of qualitatively and quantitatively oriented research. Due to the amount of the research group for which is characterized by insufficient saturation of research for statistical data analysis, we used the quantitative data as marginal information to support statements arising from the qualitative analysis.

### **Research thesis:**

1. What is the experience of speech therapists perspective with problems of symptomatic speech disorders in people with sensory impairment?
2. What are the current needs of speech therapists with problems of symptomatic speech disorders in people with sensory impairment?
3. What characteristics have attitudes of speech therapist on the issue of symptomatic speech disorders in people with sensory impairment?

### **Partial research premises:**

1. What experiences have speech therapists with clients with sensory disabilities with symptomatic speech disorders?
2. Are speech therapists adequately competent to handle of symptomatic speech disorders in people with sensory impairment?
3. Do speech therapists have enough information and scientific literature dealing with of symptomatic speech disorders in people with sensory impairment? They have opportunities for further education and know about them?
4. Is this area characterized by interdisciplinary or transdisciplinary cooperation? Have the speech therapists information about possibilities of cooperation with colleagues?
5. Which problems and challenges speech therapists frequently solve in context with symptomatic speech disorders in people with sensory impairment? What are the problems most often solves?
6. Which aspects of symptomatic speech disorders in people with sensory impairment from the perspective of speech therapists are the most common and most pressing?

7. Is this issue from the perspective of speech therapists essential and should be of interest and further education?
8. How to speech therapists evaluate options for working with clients with sensory impairment?
9. Are symptomatic speech disorders in people with sensory impairment for speech therapists particular challenge?
10. It should be symptomatic speech disorders in people with sensory impairment within the competence of other experts and institutions from the perspective of speech therapists?

Presented survey is designed on a platform of mixed methods design combining qualitative and quantitative research. As noted Miovisky (2006), various authors in the past have attempted to describe the main differences between the two approaches. Cermak (in Miovisky 2006) notes that both studies can be seen as the relationship between figure and background - so that could be a figure there must be a background and just relationship between qualitative and quantitative approach is significant that the lack of or inadequate suppression of one there is a loss of sharpness of the other. We therefore believe that it is appropriate to combine our research.

In this paper we will be presented primarily qualitative data that are necessary for our pivotal character, quantitative data are marginal in nature and will serve to complement and illustrate. Qualitative data allow us to perform a primary probe the intentions of the issue; we strive for a deeper insight into the current state. In this context, we do not seek to generalize the results to the entire population, speech therapists, but rather a description of the specific aspects and open space for applied research. Qualitative research mostly stresses that the results should be conceived locally in a certain context, the same is true for us realized investigations.

Following the principle of hermeneutical spiral was in the process data management (i.e. the process of interaction between data acquisition, data reduction, data capture and extrapolation of the conclusions) cyclically. In this concept is the realization of research closely linked with data management and process analysis and interpretation of findings.

An integral part of data management is the phase of systematization of data. Based on the expertise we have used the technique summarizing protocol with emphasis on the qualitative content analysis techniques. The basic idea is to unify the level of generality of the information and the increasing proportion of abstraction (Hendl 2008). Was applied several techniques for reducing - the deletion of repetitive statements, generalizations testimony, the construction of several specific statements into a single global integration of certain content testimony to another global unit, the selection leaving crucial testimony and bindings allow link content-related statements from different "locations" interview (Hendl 2008). Within the framework of data management, we tried to use the full range of these methods. The next step was content analysis based on the identification of key categories and subcategories and representative description of the statements of the respondents. On qualitative analysis can be viewed differently. In keeping with selected problems we prefer descriptive approach to the analysis, which is based on the assumption that the processes of systematization, classification and description are themselves the analytical procedure and deeper analysis beyond these processes it is highly speculative. The basic elements of the strategy applied to the evaluation of qualitative data, thematic analysis and the search for links between phenomena.

We triangulated method questionnaire and semi-structured interview, which provided us with sufficient potential for deeper exploration of specific aspects of the chosen topic.

The research sample was selected based on a criteria selection of appropriate participants, key parameter was the action of the respondents / participants in speech therapy practice across departments. The following tables illustrate the fundamental characteristics of the research sample of respondents in the quantitative phase of research and participants in the qualitative part of the research. Data for talks in table 1, data on questionnaires presented in table 2. In connection with the distribution of questionnaires were addressed key organizations for speech therapists in the country. At the same time, we used the features of the snowball method, when respondents chain on the basis of the transmission of the questionnaire to other interested colleagues.

### **3. RESULTS AND DISCUSSION**

In the intentions of the first set research thesis - What is the experience of speech therapists with problems symptomatic speech disorders in people with sensory disabilities? - was identified several key variables determining the selected area of interest. A key category has become experience, respectively speech therapists inexperience with the clientele. Highlighted the questions were real practical experience in comparison with some awareness of the issue of symptomatic speech disorders among clients with visual and hearing impairments. This is associated with a higher rate of knowledge and experience with clients with hearing impairments. Universal term in this context is still limited speech development; it is point of view of speech therapists that are closely tied to their practical experience. For clients with visual impairments have been highlighted categories of verbalism and co-verbal and disturbed behaviour. For both categories of sensory impairment was a common need for individualization and was especially emphasized the social dimension of disability in combination with symptomatic speech disorders, which can be quite stigmatizing.

Building on the experience of speech therapists we also examine their needs in keeping with this issue (What are the current needs of speech therapists with area of symptomatic speech disorders in people with sensory disabilities?). There were accentuated especially information resources in connection with amount of the acquired knowledge during studies, and also the orientation of available resources and the literature, or the lack thereof. In the context of general awareness about symptomatic speech disorders in people with sensory impairment, as well as practical experience, has been identified considerable disparity between hearing and visual impairments. From the perspective of speech therapists is the issue of hearing impairment better known and in practice more frequent occurrence. In the context of this research thesis were also discussed opportunities for further education, emphasized the need for a team approach and the availability of specialized equipment.

At a higher level of generality we are interested in attitudinal component of speech therapists for the symptomatic speech disorder in people with sensory impairment as one of the potential area of interest and activity within the practice (Which characteristic have attitude of speech therapists on the issue of symptomatic speech disorders in people with sensory impairment?). In intentions of this area of research were identified relatively heterogeneous and highly individual semantic categories. Nevertheless, the general attitude of speech therapists appeared aspects such as the need for further education, support from experienced colleagues, own initiative and lifelong learning, but also subjective perception of competence in the field, the fear of nescience or practical application of theoretical knowledge. Significant was the tendency to delegate this clientele to more experienced colleagues, which in some cases was associated with an explicit lack of interest in working with these clients. Speech therapists majority position on the issue of symptomatic speech disorders among clients with sensory disabilities is a positive and responsible. In the Figure 1, graphically comprehensible scheme you may notice determinative variables in field of symptomatic speech disorders (SSD) from the perspective of speech therapists.

Given the character of collected qualitative data we cannot generalize our findings, however, this probe gave us insight into the entry selected problematic area and its features from the perspective of the specialists in speech therapy.

#### 4. CONCLUSION

Symptomatic speech disorders represent a diverse speech therapy category, a category that may significantly affect the quality of life of individuals, especially its psychosocial dimension. As such, it should be of interest not only of the speech therapist, as well as other experts with an emphasis on an interdisciplinary approach. The issue of symptomatic speech disorders in people with sensory impairment currently stands at the edge of the interest of experts in theory, and also from the perspective of speech therapy practice. The situation is equally problematic, its specific features and key characteristics were outlined above. We are interested in what attitudes to this issue have speech therapists in practice, what are their experiences and needs.

During research we did not pursue about generalizations and drawing generally valid conclusions, our intention was primary qualitative probe into a relatively overlooked area. By combination of qualitative and quantitative design we have attempted to capture the complex spectrum of opinions speech therapist in special education practice.

#### ACKNOWLEDGEMENTS

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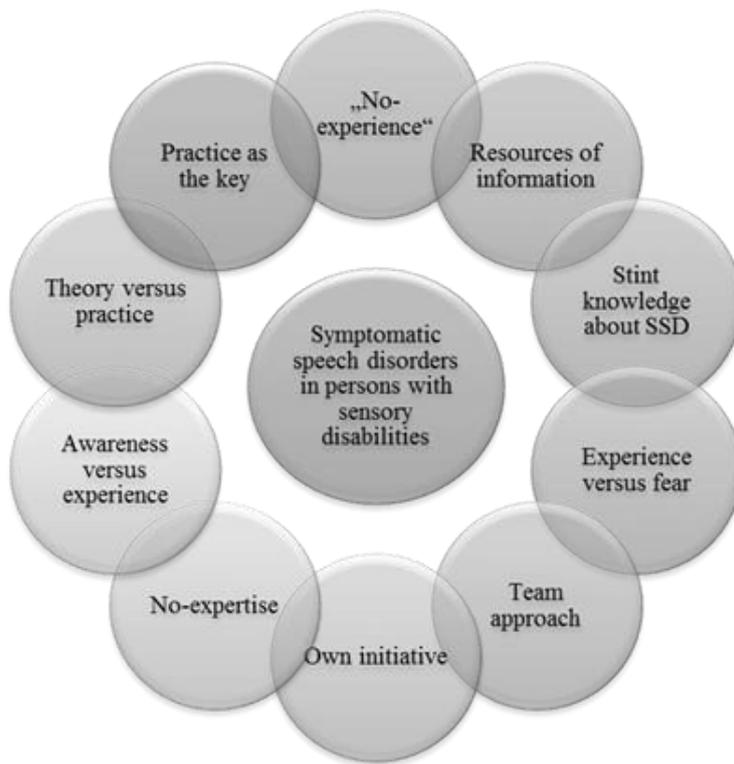
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**Table 1 - Summary data for interviews**

<b>Research sample - the number of interviews</b>	9
<b>Structure of the sample by gender</b>	Only female (100 %)
<b>The average length of practice</b>	16,6 years
<b>Departmental affiliation</b>	Department of MLSA (Ministry of Labour and Social Affairs): 5 respondents Department of MEYS (Ministry of Education, Youth and Sports): 4 respondents

**Table 2 - Summary data for questionnaires**

	<b>Survey respondents</b>	
<b>Number of respondents</b>	76	
<b>The structure of gender (%)</b>	98.7% of women	
<b>The length of practice</b>	Less than 5 years	23 (30, 3 %)
	5 – 10 years	25 (32, 9 %)
	10 – 20 years	17 (22, 4 %)
	more than 20 years	11 (14, 5 %)
<b>Departmental scope</b>	A clinical speech pathologist	34 (44, 7 %)
	A speech therapist at the Ministry of Education, Youth and Sports	19 (25 %)
	A speech therapist in the Ministry of Labour and Social Affairs	2 (2, 6 %)
	A speech therapist in the Department of Health (without certification).	21 (27, 6 %)



**Figure 1** - Determinative variables in field of SSD from the perspective of speech therapists

# Educational premises of puberty at primary school

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## Abstract

Puberty is normal expression of human development. We could qualify the puberty as a major hormonal process of physical changes in the context of significantly changing the psyche and with awareness of our own personality. Puberty is the phase in which it completes achieve fertility. All children need to be adequately prepared in time for this life stage and it has to be in all changes, relationships and connections that relate to this stage. Being prepared and ready in time for puberty also means that children have to acquire the necessary knowledge about it before its onset. There are varieties of alternative education about puberty. School education in preparation for puberty should not remain single. The coexistence of families, schools and other relevant sources as educators of children is meaningful connections for education. Risk of communication and education about puberty is a particular taboo issue, the inability to adequately communicate with adult children, lack of knowledge. Among eliminate the risk of professionalism among teachers, parents, co-operation and communication between the school, families and other relevant sources.

Keywords: Puberty, education, school, family, communication, risk, elimination of risk, research.

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## 1. INTRODUCTION

School education in the area of preparation for puberty is currently part of complex education at Czech schools. In the Czech school education, the issue of puberty is defined both in the concept and the content in the curricular documents on the state level (the so-called Framework Educational Programme for Primary Education). The school level in the curricular system is represented by school educational programmes (SEPs). Education at individual primary schools follows them. The issue of puberty at primary school is part of health education (Rašková 2013a, 2013b, 2014). The aims of health education including the issue of puberty at primary schools are achieved through all school subjects.

School education should meet the condition that all children need an adequate and timely preparation for their puberty, as all the changes, relations and connection which are linked with this stage of life. The timely preparation for puberty means that a child has the necessary knowledge before it launches, i.e. during pre-puberty when the child is a primary school pupil (i.e. in the first half of primary school).

Generally, the issue of puberty is commonly challenged by both parents and the public, their reasoning being that it is redundant and ineffective at school. The issue of puberty should be dealt with in the family; however, it is uncertain that, unless made a taboo, the pupil will gain subjectively and socially desirable knowledge, opinions and behavior in the widest area of sexual behavior. Children come in contact with the topic in other spheres of their lives (e.g. through media, especially television, radio, internet as well as billboards, books and magazines). These sources often provide the child with a range of visual and textual information without explanations of relations and connections. It is needless to stress what role parents as well as everyone who participates in the upbringing should play. School puberty education should guarantee the requirement of expertise regarding the specific pedagogic-psychological divergence of pupils (Langmeier, Krejčířová, 2006, Vágnerová, 2000 etc.) and the necessity to respect the humanising criteria and ethical principles.

The criterion of expertise in school education is ensured by a professional teacher (Štěřbová, Rašková, 2014). The professional preparation of the teacher is related to their expertise (the knowledge and the didactic applicability) and the personal attitude. The knowledge of puberty and its didactic applications may be achieved through study and teaching experience. The personal attitude is not a result of learning; it is influenced by life experience of the teacher and their upbringing. The risks are related to communication as well as certain topics of puberty with children, the family, the colleagues, etc. (Provázková Stolinská, Rašková, 2015). It is possible to appeal to support changes in the personality attitude with respect to the necessity to educate and bring up children. Why is school education for puberty its vital parts?

### **Puberty**

Puberty is a stage where the reproduction ability is achieved and it follows pre-puberty. Puberty may be denoted a fundamental hormonal process of physical changes connected with significant changes to the psyche, namely with realisation of one's own personality (Langmeier and Krejčířová, 2006, Vágnerová, 2000 etc.). Puberty is not special; it is a standard stage of human development. It is the life stage of a number of changes which influence the concerned individual and their entire surroundings. The pubescent child's role is very

difficult as their body, psyche, and perception of the world and themselves changes. Everybody must cope somehow with the above and many other changes. Therefore it is no surprise that this period is tempestuous and full of conflict for many.

The issue of puberty relates to the period known as pubescence and as adolescence in the wider context. The mentioned terms are defined differently in psychology. Generally speaking, adolescence is a widely defined period of life. On the one hand, this period is limited by the so-called first signs of sexual maturation including the physical growth; on the other hand it is limited by reaching the ability to reproduce, i.e. the full sexual maturity and completed physical growth. However, adolescence cannot be viewed only from the biological point of view; there are also the psychological changes occurring simultaneously with the biological ones. Parallel to the biological and psychological changes, social changes and the new social classification also occur. All the changes occurring during adolescence are called puberty changes (Vágnerová, 2000).

The changes occurring during puberty are not only physical but also psychological, as accompaniment to the realisation of own personality. Puberty is the stage of seeking and creating one's own identity. A significant feature is an ideal which an individual has created and which they often imitate, as well as the profession whose choice and study is the individual's aim. One of the manifestations of psychological changes in puberty is the rejection of subordination which changes the social role of an individual and manifests itself in the form of attacks against authorities, including parents and teachers. The relationship to the school and teacher also changes; the teacher is no longer seen as an automatic authority - only if the teacher impresses the pupils somehow. Generally speaking, adolescents want to participate in decision-making of matters which they are involved in and they begin to criticize their parents and other adults (Langmeier, Krejčířová, 2006).

An adolescent's free time has a growing importance. They desire to spend time among their peers; a peer group serves as a support. Emotional attachments – love and romance - are further formed. Some people are motivated to create art in puberty (e.g. painting, writing, composing, etc.), to read complex literature, to be interested in attractive sports, mystery, romance, wild life and other activities.

Pubescent children are often emotionally unstable in puberty, their reactions may seem inadequate. Their self-assessment also changes; they are usually touchy and more vulnerable. Psychologists (Langmeier and Krejčířová, 2006, Vágnerová, 2000 etc.) claim that the emotional imbalance is primarily hormonal and secondarily caused by changes in psyche and interpersonal relations. Psychologists further point out the fact that the way of thinking also changes in puberty. Adolescents start hypothesizing, i.e. they think on the level of formal logical operations (or mere possibilities) and this change manifests in the whole attitude to the world as well as to themselves. Therefore they tend to consider their ideas to be extraordinary.

### ***Puberty education***

Puberty education should occur on three levels (Rašková, 2008 etc.). The cognitive level represents the level of enlightenment (i.e. the rational line in the form of the most essential information, knowledge, skills and habits). The emotional and relational level represents the level of resistance (i.e. the social line in the form of relationships, experience, models, social learning through imitation). The level of skills, habits and manners represents the level of relationships (i.e. the line of emotional relationships in the form of quality emotional background and relationships among people). The individual levels are interconnected, they cannot exist in isolation nor can one of them be left out. Emotional relationships of a child are the base of their behavioral models and these models are then the pillar of enlightenment. It is evident that the creation of all the levels is shared by many components: the family, the school, the environment – the world around the child, etc.

The issue of puberty covers a wide area of human life and determines the current and the future life. Pupils should be aware of being responsible for their behavior, they should be able to identify imminent danger, and they should acquire the ways of safe behavior in different situations. Pupils should acquire basic knowledge of puberty and other knowledge, for example of the individual parts of the human body including reproductive organs, anatomy-physiological and psycho-social aspects of human sexuality, etc. as well as create ethical attitude to sexuality and be able to avoid hazardous forms of sexual behavior. Most information is general (e.g. puberty, physical appearance, a person's development, reproductive organs, assertive behavior, etc.) and represents an inseparable part of general knowledge. The knowledge from sexual education contributes to the integrity of the development of personality. The knowledge (Janík, 2005) represents a complex of knowledge acquired in the process of learning and expresses a certain level of awareness of pupils. Pupils are not only entitled to information of puberty, it also becomes a source of prevention from possible risks.

The child, the school and the family should communicate also in the area of puberty. To approach school communication, we follow the significance of direct communication among people (i.e. especially among teachers, pupils, parents, the public). Communication occurs between the above-mentioned participants from the view of communication characteristics (interpersonal communication). The school communication is influenced and frequently limited by a number of circumstances. Research shows that the main participant who directs the school communication is the teacher. The teacher mostly determines the aim and time of the communication activity. In the context of the requirements of the current curricular reform, it is possible to evaluate the

development in the area of communication between the teacher and the pupil with respect to the fact that the pupils also has a sufficient space to express his/her own requirement and provides feedback to the teacher's reaction (Stolinská, 2013 or 2009). This manifestation can be seen as a prerequisite to acceptance of the partner status of both main participants of the educational process and thus intervene against the obstacles in communication in the specific issue of puberty.

The most common risks in puberty education may be professional ignorance (Rašková 2008; Rašková, Zouharová, 2015), negative personal attitude effected by personal experience (Štěrbová, Rašková, 2014), inappropriate or absent communication (Štěrbová, Rašková, 2014; Rašková, Zouharová, 2015). The listed risks must be eliminated in the long run. We appeal to a quality preparation of a primary school teacher with respect to school education. The teacher's preparedness to puberty education belongs to professional competencies and therefore the teacher must dispose of the required knowledge, understand the issue, know the teaching strategies and methods to mediate the curriculum, and further develop both professionally and personally. Part of the professional preparedness is the ability to communicate adequately with the family as well as the wide public. It is necessary to inform parents and the whole wide public, to cooperate with other relevant resources to break the taboo issue.

### ***Puberty - research***

This text is part of a project of a university grant competition called Puberty – part of sexual education in the systems of the Czech and the Chinese schools. The project is currently being dealt with in the Czech Republic within the grant competition at the Faculty of Education, Palacký University Olomouc (IGA\_PdF\_2015\_007, Project Manager Doc. PaedDr. Miluše Rašková, Ph.D.).

## **2. AIMS AND METHODS OF RESEARCH PROJECT**

In accordance with the project aims, the main focus is on:

- Discovering in what way the issue of puberty is included in the current curricular documents of primary school education;
- Discovering the cognitive and informative level of knowledge of puberty of primary school pupils using testing;
- Discovering the mutual communication about puberty between primary school pupils, their teachers and the family using interviewing.

The discovery of how puberty is included in the current curricular documents of primary education will show the relevancy of the topic in education. The discovery of cognitive and informative level of knowledge of puberty of primary school pupils will provide results of awareness. The discovery of who and how communicates with pupils about puberty will reflect the mutual communication of the participants.

The project team consists of academic workers of the Faculty of Education, Palacký University, Olomouc (3), students of the PhD programme Pedagogy (1) and Education (1 Chinese student) and students of the Master study programme Teacher training for primary schools (2).

We present gradually the results of individual stages of the research through publications (e.g. Rašková, Provázková Stolinská, 2015; Provázková Stolinská, Rašková, 2015; Rašková, Zouharová, 2015).

## **3. RESULTS OF THE RESEARCH PROJECT**

The results of empirical research are continuously processed and will be published gradually. This paper is focused on the reflection of the implementation phase of the research (presented in Rašková, Provázková Stolinská, 2015), resulting in:

- creation of a research tool for data acquisition - didactical test and a questionnaire for students,
- termination of collecting data through the research tools.

For this reason, results do not include, because the process isn't finished.

## **4. CONCLUSION AND DISCUSSION**

Puberty is a significant element of sexual education, an important part of a complex education of a child in the 21<sup>st</sup> century (International Planned Parenthood Federation; Rašková 2013a, 2013b, 2014; WHO: Standards for Sexuality Education in Europe, 2010). It should be interdisciplinary in school education. It should be designed as part of development of positive human emotions and interpersonal relations. A pubescent child has a very difficult role as their bodies, psyche, and perception of the world and themselves changes. A person has to cope with all that as well as many other changes. Thus it is not surprising that the period is tempestuous and full of conflict for many. Every person is original, has his own behavioral patterns and manners. Therefore puberty demonstrates differently with each individual, and in different time. It is very difficult then to discover make

general assumptions. However, it is necessary to bear in mind that timely and adequate preparedness of children for puberty may become an important positive factor in their lives. The right step is to prevent ignorance, myths, rumors and stereotypes and thus to understand the difficult life stage. Teaching of puberty during puberty is too late – that is our opinion and the opinion of many anonymous respondents from our research.

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# Examination of the perceptions of teacher candidates on the concept of counseling through metaphor analysis method<sup>1</sup>

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## ABSTRACT

The purpose of this study is to investigate the perceptions of teacher candidates studying pedagogical formation on the concept of psychological counseling and guidance through metaphor analysis method. In the analysis of the obtained data and the problem of the study, the descriptive method used in metaphor studies was adopted.

The study was conducted with 354 pedagogical formation students attending pedagogical formation courses at Kocaeli University in the academic year of 2014-2015 and taking a counseling course and not taking a counseling course. The metaphors were analyzed and interpreted in five stages. (a) Naming (coding) Stage, (b) Elimination and Treatment Stage, (c) Compilation and Category Development Stage, (d) Providing Reliability and Validity Stage and (e) Transferring Data into Computer Environment Stage. In the compilation and category development stage, the metaphors the teacher candidates produced were evaluated in terms of their common features and 7 different conceptual categories were formed taking the alphabetical list created for 68 metaphors into account. These categories were named as guiding, therapeutic, relaxing, professionalism, problem solving, self-knowledge and requirement. Examining the findings, it was determined that the teacher candidates perceived the concept of psychological counseling and guidance as “guiding” according to gender and whether they took the counseling course or not.

Keywords Guidance, psychological counseling, metaphor, teacher candidate.

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## NOTE

<sup>1</sup>This article was presented at the 1st International Conference on Lifelong Education and Leadership, in Olomouc, Czech on October 29-31, 2015.

## 1.INTRODUCTION

Starting year of Psychological Counseling and Guidance services in our country is considered as 1954. However the training of experts in the field and their starting to work throughout the country have started to be materialized in much more recent years. Implementation of psychological counseling and guidance services in the education system has been realized on the basis of different perceptions. Today, developmental PCG programs are implemented in our schools. It is necessary for the psychological counselors in schools to have professional competence, to be in cooperation with the administrators, the teachers and the families and to take their support for the preparation, implementation and evaluation of the developmental PCG program successfully Yüksel-Şahin, F. (2008).

Psychological Counseling and Guidance is defined as a service field which provides individuals with the necessary factual information for the solution of their personal problems and necessary opportunities to be aware of their various traits and helps self-realization and find the most suitable option using this information (Kuzgun, 1986). Different definitions are also available. When the definitions of counseling are examined, it is seen that the purposes of counseling services are generally defined as the systematic and professional psychological service process intended at individuals' self-knowledge and knowing their environment, making the choices required in their self-development in the most efficient way, solving their problems, adapting to the environment in a healthy way and therefore realizing themselves (Kuzgun, 1986, Tan, 1992; Yeşilyaprak, 2001). The realization of these objectives is possible with the cooperation of the triad of school, parents and individual. The perspectives of the teachers and the administrators at school constitute an important criterion for the effective realization of school counseling studies. Besides, it is also important that counselors fulfil their responsibilities carefully. The tasks expected from a counselor are stated in the MONE (The Ministry of National Education) Guidance and Psychological Counseling Regulation (MONE, 2001).

Various decisions were made on the pedagogical formation education for the graduates of the Faculty of Science and Literature between the years of 2010-2013. Examining these decisions, teacher training by giving pedagogical training to the Faculty of Science and Literature graduates aims primarily at specialization in the field followed by professional specialization by dealing with how to teach the field information when evaluated in terms of approaches (Yıldırım, Vural, 2014). The candidates majoring in different faculties are trained on how

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to teach field information in Education Faculties. One of the courses based on teaching knowledge is counseling course. The subjects that it is necessary for teacher candidates to understand the counseling field and for all the units at school to be in cooperation for the development of the students and each teacher has counseling-based duties are emphasized in the context of this course. The counseling course is placed in the group of elective 2 in the decree of CoHE (the Council of Higher Education) dated 20 February 2014 numbered 9. The counseling course, which is placed in the elective courses category in the formation group although it is a compulsory course in education faculties, is not studied by many candidates planning to be a teacher by taking *pedagogical* formation. This situation might give rise to the thought that the issue of developing a collective consciousness for the psychological counseling and guidance field, which has not been fully understood in terms of its duties and responsibilities, will continue for a while.

Examining the studies carried out on how counselors are perceived and what their roles, duties and responsibilities are, it is seen that mostly the opinions of administrators, teachers and students were received. In a number of studies on this issue (Aluede and Egbochuku, 2009, Çetinkaya, 2014, Polat, 2007; Poyraz, 2007) in terms of the roles, duties and responsibilities expected from the counselors, the counselors were found to be expected to help the educational, personal-social and professional development of students.

A metaphor is a means of perception (Arnett, 1999). Lakoff and Johnson (2005) emphasized that an important part of our system was structured by metaphoric relations and stated that the essence of a metaphor was understanding and experiencing one kind of thing (phenomenon, concept, object, etc.) in terms of another (Cited in Cerit, 2008). In the educational context, metaphors play a vital role in the conceptualization and reflection of the nature of education and learning and are increasingly used to make connections between personal beliefs and educational theories (Leavy, McSorley and Bote, 2007, p.1220). Therefore, they are useful means in the performance of planning and analysis processes in education and examination of the thoughts of teachers on learning and teaching throughly (Martinez et al., 2001, p. 966) . (Cited in Konaklı, Göğüş, 2013).

Considering that counseling studies started in our country in 1953-1954, it is observed that the concepts of “counselor / psychological counselor” are still not perceived on the expected basis in the field of application although today, nearly 60 years later, guidance and psychological counseling field is considered as an integral part of the education. This study was conducted to investigate how guidance and psychological counseling was perceived by the teacher candidates who took a counseling course and those who did not in the pedagogical formation programs.

#### Aims

The purpose of this study was determined as the examination of the perceptions of the students who received pedagogical formation education on the concept of psychological counseling and guidance through metaphor analysis. In the study, answers to the following questions were searched for in line with this main objective:

- 1 What are the metaphors the students receiving pedagogical formation education developed for the concept of counselor (psychological counselor)?
2. Under which conceptual categories can these metaphors be grouped in terms of their common features?

## 2. METHOD

The research was basically conducted within the framework of phenomenological design of qualitative research. In the study conducted in screening model, purposive maximum variety sampling was used in the determination of the participants. In this study, what kind of similarities and differences the teacher candidates who attended the counseling course and those who did not in the pedagogical formation education process showed was tried to be revealed in the determination of the perception of psychological counseling and guidance.

As Yıldırım & Şimşek (20011) mentioned, phenomenological design focuses on phenomena which we are aware of but do not have a perspective of in debt and in detail. We can encounter these phenomena in several ways in our daily lives; however this acquaintance does not mean that we understand these phenomena exactly. Phenomenology can be used in the research of such phenomena. In the scope of this study, perceptions of students receiving pedagogical formation education on the phenomenon of psychological counseling and guidance were tried to be searched.

The study group of the research consists of students receiving pedagogical formation education at Kocaeli University in the academic year of 2014-2015.

40 students taking the course and 304 teacher candidates not taking the course out of 354 teacher candidates from different branches, receiving pedagogical formation education at the Education Faculty of Kocaeli University and participating in the study voluntarily from the classes taking the counseling course and those not taking it were included in the scope of the study.

The distribution of the participant teacher candidates according to their branches is as follows: in the group taking the course; 4 from the School of Physical Education and Sports, 1 from the Faculty of Communication, 9

from Mathematics branch, 14 from Health branch and 12 from Turkish Language and Literature department. In the group not taking the course; 3 from Family and Consumer Sciences, 44 from the School of Physical Education and Sports, 2 from Biology, 5 from Physics, 35 from Mathematics branches, 2 from the Faculty of Communication, 5 from English Language and Literature, 30 from Business- Accounting- Finance, 2 from Chemistry, 105 from Health Services, 66 from Turkish Language and Literature and 5 from unspecified branches. The information related to the study group is given in Table 1.

**Table 1.** Distribution of the participants according to their gender and whether they take the course or not

	Those taking the counseling course	Those not taking the counseling course	Not specified
Female	27	231	4
Male	12	69	6
Not specified	1	4	
Total	40	304	10

According to the data in Table 1, a total of 354 people participated in the study.

### Data Collection Tool

Studies where metaphors were used as a tool to prepare the data collection tool and reveal the perceptions of the participants (Camadan and Kahveci, 2013.) were examined. In these studies, the participants were asked to complete the expressions such as “PCG is like ... because ...” or “PCG is similar to ... because ...”. After examining the studies, the participants were given an empty sheet which reads “PCG is like ... because ...” and asked to complete it. The written forms including the metaphors specified by the participants were considered as a research tool.

### Data Collection

The necessary permissions for the performance of the application were taken from the Deanship of the Education Faculty. Considering that the counseling course is given in the first term of pedagogical formation education; the teacher candidates were given 20 minutes after being informed about the purpose of the study and the forms completed by the participants were collected by the researcher in the second term. They were told that they would be informed about the results of the research. Gender, branch and age information was obtained in the forms. They were informed that they did not need to give personal information such as name and surname and explained that the obtained data would not be used for a different purpose and would be kept confidential. The study was based on voluntariness.

### Data Analysis and Interpretation

In the analysis of the obtained data, the descriptive method used in metaphor studies was adopted. The metaphors the teacher candidates from different branches receiving pedagogical formation education developed on the concept of guidance and psychological counseling were analyzed and interpreted in five stages. The stages are (a) Naming (coding) Stage, (b) Elimination and Treatment Stage, (c) Compilation and Category Development Stage, (d) Providing Reliability and Validity Stage and (e) Transferring Data into Computer Environment Stage.

#### 1. Naming Stage

The metaphors the teacher candidates produced were turned into a temporary list in alphabetical order. Whether the developed metaphors expressed clearly or not was examined. After this process, the metaphors the teacher candidates specified were coded (parent, life, map, etc.). The sheets where no metaphors were expressed were determined.

#### 2. Elimination and Treatment Stage

Each metaphor was disintegrated through the Content Analysis technique and they were analyzed in terms of their similarities or common features with the other metaphors. In this analysis process, (a) the subject of the metaphor, (b) the source of the metaphor and (c) the relationship between the subject and the source of the metaphor were analyzed. Some of the participants could not produce valid metaphors. The sheets, where no justification was given, which did not contribute to understand PCG or were included in more than one category were not evaluated. A total of 8 sheets were not included in the scope of the study. The number of valid metaphors was 90.

#### 3. Compilation and Category Development Stage

At this stage, the metaphors produced by the teacher candidates were evaluated in terms of their common features. During this procedure, 7 different conceptual categories were formed taking particularly the alphabetical list of the 90 metaphors in consideration. These categories were named as guiding, therapeutic, relaxing, professionalism, problem solving, self-knowledge and requirement.

4. Providing Reliability and Validity Stage According to Saban (2009), there are two important processes to provide validity in metaphor studies, which are 1- detailed explanation of the data analysis process, 2- use of the metaphors written by the participants as a main data source in processing and interpretation of the findings.

Expert opinion was taken in order to test whether the metaphors grouped under 7 conceptual categories represented a conceptual category or not. To that end, an academician working in the Department of PCG of the Education Faculty of Kocaeli University was given two lists. The first list was the alphabetical list and the second one was the list including the names and features of the 7 conceptual categories (guiding, therapeutic, relaxing, requiring professionalism, problem solving, self-knowledge and requirement). The expert was asked to match the metaphors given in the first list with the categories in the second list. Then, comparisons were made and after determining the items agreed and disagreed on, the reliability was computed using the reliability formula of Miles and Hiberman (1994) (Reliability = agreement (259) / agreement (259) + disagreement (15) ) The reliability was calculated as 0.95.

#### 4.RESULTS

354 people participated in the study. The opinions of 20 people were not included in the scope of the study. The number of the candidates taking the counseling course was 36, the number of those not taking the course was 289 and the number of those who did not state whether they were taking the course or not was 9. The findings were examined over 334 metaphors in total in 7 categories. The features of each category were explained being supported with the metaphors produced by the participants.

The teacher candidates taking pedagogical formation education explained their perspectives of psychological counseling and guidance with 259 different metaphors. These metaphors and their frequencies are as follows; tree (2), family (6), wisdom (2), shopping (1), mother's milk (1), key (1), medicine (16), friend (11), like love (1), moonlight (1), light (10), mirror (1), book (2), sun (2), guidance (39), support (9), journey to the inner world (10), compulsory (5), empty signboard (2), lifeguard (6), professional (5), sea (5), dervish (1), nature (1), doctorate (4), binoculars (1), education (6), bread (2), home (1), mirror of the future (1), route (3), shadow (2), our root which we cannot see (1), confession (1), sun (1), map (2), hospital (1), air (3), life (13), peace (2), need (4), first aid (5), pearl (1), human (1), jockey (1), mutual trust (1), self-communication (4), exploration (1), guide (10), life coach (6), food (2), pole star (2), guiding (12), orientation (6), relief of mind (1), time (1), helper (10).

These metaphors stated by the teacher candidates were grouped under 90 metaphors in terms of the subject, the source and the relationship of the subject and the source. As a result of the analysis of these metaphors, 7 conceptual categories were determined.

**Table 2:** Conceptual categorical metaphor table for the candidates who took counseling course and those who did not

Category	Those taking the course (f)	%	Those not taking the course (f)	%
Guiding	14	39	117	40.48
Therapeutic	2	5.5	18	6.22
Relaxing	3	8.3	26	0.69
Professionalism	3	5.5	29	10.03
Problem solving	5	13.8	43	14.87
Self-knowledge	3	8.3	23	7.95
Requirement	6	16.6	33	11.41
Total	36		289	

In Table 2, the metaphors gathered under 7 categories are listed. In the sequence of the metaphors in terms of the group taking the counseling course and the group not taking it, the category of guiding ranks first. In the group taking the course, the metaphor perceived as requirement was stated in the second rank, problem solving in the third, self-knowledge in the fourth, relaxing in the fifth, therapeutic in the sixth and professionalism in the seventh rank. In the group not taking the course, problem solving category ranked second. The metaphors perceived as requirement was stated in the third rank, professionalism in the fourth, self-knowledge in the fifth, therapeutic in the sixth and relaxing in the seventh rank.

**Table 3:** Conceptual categorical metaphor table according to gender for the candidates who took the counseling course and those who did not

Metaphor	Female (f)	%	Male (f)	%
Guiding	103	40.87	30	38.96
Therapeutic	16	6.34	5	6.49
Relaxing	26	10.31	3	3.89
Professionalism	25	9.92	8	10.38
Problem Solving	32	12.69	17	22.07
Self-knowledge	20	7.93	5	6.49
Requirement	30	11.90	9	11.68
Total	36		289	

Examining the metaphor categories according to gender in Table 2, guiding is the category perceived as the first by both females and males. Females ranked the perception of relaxing for the psychological counseling and guidance second, whereas males placed the perception of problem solving in the second rank. The other categories can be said to take place in similar sequences.

**Table 4:** Conceptual categories by gender and the status of taking the counseling course

Category	Gender	Those taking the course	Those not taking the course	Metaphor	Person F(%)
Guiding	Female	14	89	Guide (25), compass (12), basis (15), traffic sign (11), light (9), stars, pilot, rasp	41 (12.27)
	Male	1	25		
Therapeutic	Female	1	15	Medicine (14), hospital (1), health (2)	21 (6.28)
	Male	1	3		
Relaxing	Female	3	23	Sea (5), friendship (2), peace (2), relief (5)	29 (8.68)
	Male	-	3		
Professionalism	Female	-	23	Therapy(9), doctorate (4), first aid (5), psychologist (2)	34 (10.17)
	Male	2	6		
Problem Solving	Female	3	28	Lifeguard (4), life coach (5), rescuer, jeweller, talking about your problems	49 (14,67)
	Male	2	15		
Self-knowledge	Female	1	20	Mirror (5), exploration (3), matryoshka doll, key, space trip	26 (7.78)
	Male	2	3		
Requirement	Female	4	26	Water (14), life (9), need (3), food	40 (11.97)
	Male	2	6		
Total		321	36		285

1-The category of guiding is represented by 130 people (38.92%) and 31 metaphors. In the group taking the course, the expression of “traffic sign” and in the group not taking the course the expression of “guide” were frequently used.

*“Guidance and psychological counseling is like a guide because it does not help an individual directly, it lends assistance.” (Taking the course, F)*

*“Guidance and psychological counseling is like a compass because it takes everybody disoriented where they want to go.” (Not taking the course, M)*

*“Guidance and psychological counseling is like stars because it accompanies people in the dark and lights their way.” (Not taking the course, Turkish Language and Literature, F)*

2- The category of therapeutic is represented by 20 people (5.98%) and 4 metaphors. The group taking the course and the one who did not frequently used the expression of “medicine”.

*“Guidance and psychological counseling is similar to medicine because it relaxes people.” (Not taking the course, F)*

*“Guidance and psychological counseling is the remedy of hard times because it facilitates the life and help to change.” (Not taking the course, F)*

3-The category of relaxing is represented by 29 people (8.68%) and 4 metaphors. In the group of those taking the course, the expressions of “a close friend”, “nature” and “relief” were frequently used, whereas the expressions of “sea” and “relief” were frequently used in the group of those not taking the course.

*"Guidance and psychological counseling is similar to sea because it provides deep rest." (Not taking the course, F)*

*"Guidance and psychological counseling is similar to peace because it provides relaxation in people in routine problems, it is a service that should be taken by everybody." (Not taking the course, F)*

*"Guidance and psychological counseling is similar to relief because people relax when they share their thoughts." (Not taking the course, F)*

4-The category of professionalism is represented by 34 people (10.17%) and 7 metaphors. In the group of those taking the course, the expression of "first aid" was frequently used, whereas the expressions of "psychologist" and "therapy" were frequently used in the group of those not taking the course.

*"Guidance and psychological counseling is a professional help because psychological support is important for behavior." (Not taking the course, F)*

*"Guidance and psychological counseling is like a therapy because it relaxes people." (Taking the course, M)*

5-The category of problem solving is represented by 49 people (14.67%) and 22 metaphors. In the group of those taking the course, the expression of "problem finder and solver" was frequently used, whereas the expressions of "life coach" and "lifeguard" were frequently used in the group of those not taking the course.

*"Guidance and psychological counseling is like a lifeguard because it helps people a lot in hard times." (Not taking the course, F)*

*"Guidance and psychological counseling is a problem finder and solver because it is only sought when there is a problem." (Not taking the course, F)*

6-The category of self-knowledge is represented by 26 people (7.78%) and 14 metaphors. In the group of those taking the course, the expression of "self-healing" was frequently used, whereas the expression of "mirror" was frequently used in the group of those not taking the course.

*"Guidance and psychological counseling is like a mirror because we see what we want." (Not taking the course, F)*

*"Guidance and psychological counseling is like a matryoshka doll because the conversation gets deeper as it progresses." (Not taking the course, F)*

7-The category of requirement is represented by 40 people (11.97%) and 10 metaphors. The expression of "water" was frequently used both in the group of those taking the course and in the group of those not taking the course.

*"Guidance and psychological counseling is like water because it has no end, it is fluent like water." (Taking the course, M)*

*"Guidance and psychological counseling is like life because it is where we resort to at certain stages of life." (Not taking the course, F)*

#### **4. DISCUSSION AND CONCUSSION**

Guidance and Psychological Counseling is a field which started to be recognized and became widespread in our country as of 1954. Numerous studies have been carried out to determine the perception of psychological counseling and guidance. In the studies on the perception of administrators and teachers, it was determined that there was no significant difference (Camadan, Kahveci 2013, Gündüz, İnandı, Tunç 2014). In a study measuring the perceptions of students (Yüksel Şahin, 2008), students listed the PCG services from the most utilized to the least as follows: consultation, placement, follow-up, public and family relations, orientation, research and evaluation, information collection and dissemination, individual recognition and psychological counseling services.

There being positive perceptions of guidance and psychological counseling in this study may suggest that the counseling services being carried out are effective. It is thought that taking a 2-hour counseling course for 14 weeks may fall short in creating significant changes in the perceptions of the teacher candidates in the pedagogical formation process; however it may help them to have a broader idea about the field of guidance and psychological counseling.

In this study, the metaphors were grouped in 7 categories specified as guiding, therapeutic, relaxing, requiring professionalism, problem solving, self-knowledge and requirement. Similarly, in a study measuring the perceptions of counselors on counseling (Altun, Camadan 2012), it was stated that regarding the meanings of the metaphors in the categories formed on the basis of the expressions of the participants which were Guiding, Ensuring Realization, Improving, Important, Unconditional Acceptor, Problem Solver, Relaxing, Moderator, Leader and Information source, these expressions could fit for the purposes of counseling services. In the study examining the roles of the school counselors according to the perceptions of teachers, Wilgus and Shelley (1988) stated that teachers gave priority to individual and group consultation. Ginter, Scalise, and Presse (1990) reported that teachers expect the supporter, facilitator and advisor roles of school counselors with priority (Cited in Akgün 2010).

Examining the metaphors developed by the teacher candidates, the expressions for positive aspects were found to be intense. The number of metaphors about its being unrelated and unnecessary is quite low (2.5%). When the metaphors grouped in 7 categories are examined, a result consistent with the insight “counseling is a guide for an individual in the process of choosing the right options for himself”, which includes the definition and purpose of counseling, was obtained. The participant teacher candidates frequently (45.8%) used the metaphor of “guide”. This metaphor is also consistent with basic counseling principles of making free choices and respect for the individual.

The category of therapeutic may suggest that guidance and psychological counseling has a healing power and creates a more clinic-based perception.

The metaphors in the category of relaxing show that the field of guidance and psychological counseling is a perception which is compatible with security and privacy policies. It can be said that especially the perceptions of female candidates are in this direction.

The category of professionalism is compatible with the statement that it is a systematic and professional assistance highlighted in the definition of guidance and psychological counseling. The teacher candidates can be said to acquire the insight that the field requires expertise.

The metaphors expressed in the category of problem solving show that there is an expectation from the field of psychological counseling and guidance for being a remedy. The fact that in our education system, the students who have problems at school are sent to the counseling service and immediate behavioral changes are expected as if the counselors had a “magic wand” can be interpreted as the teacher candidates expect the counselors to produce a solution when a problem occurs.

The category of self-knowledge can be explained with the awareness of the process of “self-realization of the individual” which is the ultimate purpose of counseling. It can be explained with a positive perception on the realization of self-knowledge of the individual and the aspects of the individual which he cannot recognize through psychological counseling and guidance.

The category of requirement may lead to the conclusion that the teacher candidates have the insight that every person can need the field of psychological counseling and guidance. It is consistent with the insight that counseling service is open to everybody and can be needed by everybody.

Considering the numerical ratio of the metaphors the teacher candidates specified for the field of psychological counseling and guidance, it can be said that there is no differentiation by gender. This finding is similar to the findings of Yüksel- Şahin (2008), Poyraz (2007). When analyzed in terms of categories, it was found out that females mostly perceived the field as “relaxing”, whereas males perceived it as “problem solving”. This finding may suggest that female candidates tend to perceive psychological counselors as trustworthy, accepting and respecting the individual, whereas male candidates tend to perceive them as rather professional and guiding.

The findings show that there is perception that it is a field which can be required by everybody without gender differences in the category of requirement. The occurrence of this perception is consistent with the current developmental counseling insight. Also, it is an important insight for people working in the field of psychological counseling and guidance in terms of the effective and efficient performance of their profession.

The success of counseling services is a stage that can be achieved with the coordinated work of all the school staff. In this respect, efficient explanation of the field to the teacher candidates trying to make educational progress in a 8-10-month period without studying in education faculties is thought to contribute the counseling based studies to be more effective.

Consequently, an analysis was made using metaphors in order to determine how the concept of psychological counseling and guidance was perceived by the teacher candidates and it was found out that the metaphors preferred by the participants mostly had positive meanings.

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# Investigation of the opinions of secondary education administrators regarding school council implementations<sup>1</sup>

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## ABSTRACT

Investigation on the viewpoints of secondary-education administrators about school council implementations. The aim of this study is to find out the school administrators appointed in secondary education institutions about school council implementations and to develop suggestions for the school, council to function more properly. The study was carried out with 234 administrators appointed in secondary and high schools in Bahcelievler District of Istanbul in 2014-2015 academic year. Quantitative and Qualitative research methods were used for this study. In order to collect the quantitative data, "School Council Implementation Scale Composed of 36 questions was developed and used. Quantitative data was analysed by using t-test and ANOVA techniques. Qualitative data, however, was evaluated by means of content analysis. At the end of the study, the points of "School Council Implementation Scale" were investigated and no significant difference was found among gender, appointment, seniority, administrator seniority and education levels. Most of the participants pointed out that they agreed the statement of "School Council and Administrator may learn new ideas from students." According to most of the participants, since the administrators, parents and students do not have sufficient information about the school council, problems may sometimes arise during the implementation. As there are sometimes problems during the process of school council implementations, it may be helpful if administrators, students and parents are informed, enabled to participate in decisions and be effective in the process of decision-making.

Keywords Democracy, administrator, participation.

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## 1. INTRODUCTION

'Democracy Education and School Councils Project' started to be implemented with a protocol signed between the Ministry of Education and Turkish Grand National Assembly Chairmanship on 13th January, 2004. The project which was implemented in 300 pilot schools during the 2003-2004 academic year has been implemented around Turkey since the 2004-2005 academic year. School Councils Project aims to create a democracy culture at school and to organise the process based upon the corporation between schools, families, several non-governmental organisations and TGNA (Turkish Grand National Assembly) in order to develop this culture. As Ozturk and so on (2009) pointed out; young people are going to learn the difference between the republic and democracy that Ataturk entrusted to Turkish Youth and those other systems of government and they are going to learn democracy principles and the democracy itself by experiencing it.

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Educational institutions not only provide in-class education but also enable individuals to learn democracy and express themselves by means of student councils or other groups at the same time. In this atmosphere, students get a chance to express themselves as strong participants. For example, schools in Russia teach students the importance of voting; however, they dampen students' enthusiasm about voting or taking place in other political actions at times. It is seen that in some countries such as Finland, Denmark and Slovenia students learn very little regarding voting but nonetheless they are relatively more inclined to voting (Turney-Purta, Barber, 2005; Turney-Purta, Barber, and so on, 2001).

13 children foundations and 4911 youth foundations are active in Turkey at the moment and there are also implementations such as children's rights committees, town councils, children councils and School Councils in order to enable children to participate in decision-making process and to gain respect to their opinions in every field they live (MFSP, 2012). Democratic lifestyle is the political form of life which gives the greatest freedom to most individuals, recognises and protects the biggest variety possible (Touraine, 2011). Democracy is a governing and living style. Although there are some mechanisms for children to be able to use their participating rights, it is not always possible for children to participate in decisions at school.

Turkey has not been able to produce a strategy to use youngsters' and children's participating rights until the very recent past. The first strategy document that put forward the necessity to put the child's participating right into practice is the Ministry of Education's 2013-2017 strategy and action plan that was published in December, 2013 (Beyazova and so on, 2015). According to literature investigations, school managements in secondary education institutions and secondary schools with a second-stage primary education in Turkey have not shown sufficient interest to school councils project; they have just carried out bureaucratic paperwork and left school councils unfunctional because of their stationery logic during the first implementation.

One of the most important reasons why national education has not been able to develop in Turkey for years is the centralised management perception. Against this situation that has become chronic by years, central management does not reflect the school workers' viewpoints to the decision-making process. It is crucial to develop an autonomous democratic educational institution that will enable the ones who work at schools to take place in decision-making and students to express themselves.

Gauchet, (2013) emphasizes the importance that all the rights of the individual in society should be protected and the society should provide the individual with the autonomy to use these rights. Grioux (2007) points out that education should be considered as a democratic force because higher education means more than a chance of investment or consumption of citizens; learning means more than preparing for a job and democracy means more than making a product choice.

Yilmaz, (2013) points out that the fact that educational organisations are set up, defined with legal documents and public schools are established, organised and run by the state in Turkish education system hinders school managers from getting into any organisational action. For this reason, the values of this manager perception that has formed in Turkey are passive, riskless, uncompetitive, fatalistic and unsure of those who are not within the immediate environment; work is considered as a compulsory task and no long-term planning can ever be made. Uygur (2013) points out those educators will not be able to solve the present problem with the equipment they have because the education they received hinders them from getting out of the status quo.

Can (2002) emphasizes the requirement that education managers who place the individual upon the center with a conscious of change and improvement should be expected first of all to make teachers and other workers like the education, enable them to work in a motivated mood, infuse the school values into them and prepare the conditions for the integration with the school.

In order to experience the democracy in society, democratic values should be adopted by all individuals. By this way, individuals who have a democratic consciousness can express themselves in life.

The aim of this research is to define the viewpoints of school managers appointed in secondary education institutions regarding School Council Implementations and develop suggestions for School Councils to function more properly.

## 2.METHOD

The research was carried out with 234 school managers appointed in secondary and high schools in Bahçelievler District of Istanbul during the 2014-2015 academic years. Quantitative and qualitative research methods were used throughout the research.

In order to collect the quantitative data, 'School Council Implementation Scale' that was composed of 36 questions was developed and applied. Quantitative data were analysed by using t test and ANOVA techniques. During the qualitative part of the research, the participants were asked 2 open-ended questions and the obtained content was evaluated by means of content analysis.

General Scanning model was used for the quantitative part of the research. According to Karasar (1984), scanning method is the research approach model which does not describe a situation as it is but aims to define it. The complexity of the research problem requires to go beyond the answer that will be given with only numbers as far as quantitative meaning is concerned or words as far as qualitative meaning is concerned (Cresswell, Clark, 2014). According to Cresswell (2014), mixed method involves collecting data with a mixture of quantitative and qualitative approaches during several phases of the researches and also philosophical hypothesis that guide the analysis process. Mixed method is the use of quantitative and qualitative data together and enables the research problem to be understood much better than any other method that is used all by itself.

The reason why both quantitative and qualitative data are collected will enable the problem to be understood in a much better way. Quantitative and qualitative data can be collected in a sequential or synchronical way or in both ways in a nested pattern. In this pattern, a data type is embedded in another data type (Cresswell, Clark, 2014).

Validity and reliability studies were carried out while 'School Council Implementation Scale' was being developed. Validity states how well a measurement tool (or test) measures an aspect that it claims to measure without mixing it with other aspects. In order to provide a measurement tool with validity, a) content (scope validity), b) implementation (criteria validity), c) form validity techniques can be used (Cronbach, 1960; Aiken, 1979; Karasar, 1986; Tekin, 1987).

In order to determine if the items in the 'School Council Implementation Scale' were appropriate for the aim of the implementation or not, item analysis process was applied. In order to determine if the whole scale was significant or not, Item Total (Rit) and Item Remainder (Rir) techniques were used. 36 items out of 38 in the scale were tested. According to item analysis results, 36 items that take place in the whole scale (on condition that they were over 0.40 in the item total) were found significant at a level of 0.01. In this context, the scale which had firstly been prepared as 38 items was reduced to 36 items.

Divided test analysis and invariance against time methods were used in order to carry out the reliability analysis of 'School Council Implementation Scale'. Reliability is the state that the results of a measurement tool show a similar consistency among independent measurements provided that the same process was followed (Aiken, 1979; Karasar, 1986).

'School Council Implementation Scale' was applied to the same two groups for two months during the determination of invariance against time. When the data of the both groups were investigated, it was seen that there was a significant and high relationship between them ( $r=0,81$ ;

$p < 0,01$ ). Moreover, at the end of the t test that was applied, no difference was found between the two implementations ( $t = 1,06$ ). In this context, when the obtained data was investigated, it was concluded that 'School Council Implementation Scale' was unvariable, ie. constant against time. Inner reliability index values of the 'School Council Implementation Scale' were calculated by means of divided test technique. Various techniques such as Spearman Brown; Horst; Rulon; Cronbach a can be used in order to calculate the inner consistency index (Cronbach, 1960; Aiken, 1979). The Cronbach a value of the 'School Council Implementation Scale' was found 0,86.

For the qualitative part of the research, however, the viewpoints of the participants were collected by means of the two open-ended questions that took place in the last part of the 'School Council Implementation Scale'. The obtained data were coded by being divided into lower themes and evaluated by means of content analysis.

The obtained data were organised according to their similarities and differences; the statements that remain aside the field or that are too trivial were sorted out by presuming that they had made a contribution. A head piece was determined according to the theme features and the viewpoints were collected under this theme. Great care was taken for the themes that were formed from the collected data to mean the same, to be expressive and to form an entirety within themselves.

A pilot implementation was carried out for developing the open-ended questions and expert opinion was taken. The school managers who answered the open-ended questions were coded as K1, K2,...

The open-ended questions that take place in the scale form and were asked to the school managers are as follows:

1. What can be done in order to form democratic school cultures at schools?
2. What can be done for the School Councils to be more effective at schools?

### **3. FINDINGS**

#### ***Quantitative Research Findings***

17,9% of the participants are female and 82,1% of them are male. 35,5% of the participants work as school managers, 9,8% as assistant principals and 54,7% as deputy managers. When the professional seniority of the participants was investigated, 5,1% have 1-5 years, 11,5% have 6-10 years, 22,6% have 11-15 years, 24,8% have 16-20 years and 35,9% have 21 years of work experience. When the administrative seniority of the participants was investigated, however, 43,6% have 1-5 years, 18,8% have 6-10 years, 12,4% have 11-15 years, 10,3% have 16-20 years and 15% have 21 and over 21 years of work seniority. 2,4% of the participants have associate degree, 71,4% have bachelor's degree and 25,2% have post graduate degree.

A great majority of the participants (173 people) think that School Councils Project forms a settled democracy culture. School managers think that school councils should be supported with democratic attitudes and developed in order to create a democratic school culture. According to the research facts, a great majority of the school managers (175 people) pointed out that certain problems arose during the implementation as the managers, parents and students did not have sufficient information about the school council.

Almost all the school managers (201 people) think that a regulation on education is required in order to inform the school managers, teachers, parents and students for the school councils to function effectively. School managers pointed out that shareholders did not have sufficient information about school councils. School managers expressed that students should be supported to receive democracy education by making legal regulations. They emphasized the importance of the requirement that implementations such as reducing the load of students' lessons, regulating the

work hours of school managers, providing physical opportunities and giving economical support should be defined and provided with legal insurance.

According to the research findings, school managers pointed out that School Councils were important for creating a democracy culture and gaining democratic values, and they supported school council implementations.

A great majority of the participants (192 people) pointed out that school council election process was carried out successfully (obeying the rules of introducing the candidates and prohibitions regarding propaganda). A great majority of the school managers (216 people) think that managers or teachers did not apply pressure on the students during the School Council elections.

A great majority of school managers (201 people) think that school councils provide the individual with the value of respect and tolerance towards differences. Moreover, school managers (208 people) think that school councils contribute to gaining democratic consciousness.

A great majority of the participants (214 people) believe that managers can gain new ideas from students through school councils. According to a majority of school managers (201 people) school councils increase the harmony and success at school by making it easy for the students to obey the school rules. A great majority of school managers (195 people) believe that a reconciliation culture may be developed through school councils.

According to the majority of the school managers, school councils help increase the academic success of the students as they function as a tool for them to recognise their self-esteem. 212 of the school managers supported the statement of 'Students should be given more responsibilities for the school councils to be more successful'. The statement of 'The efficiency of the school councils should be increased by means of various social and cultural activities' was also accepted greatly by the school managers (212 people). Moreover, a great majority of the same managers (198 people) think that school councils should have a budget. However, it is seen that the majority of the same school managers (204 people) opposed to the idea that if the school councils' authorisations are increased, the institutional establishment at school will develop.

According to the research facts, while school managers are describing themselves, most of them (137 people) do not think they are authoritative, however, they admit that they have a bureaucratic nature (139 people).

### ***Qualitative Research Findings***

According to the content analysis results of the qualitative research findings, the viewpoints of school managers regarding forming a democratic school culture at school were investigated in six sub-categories. The viewpoints of some participants (6 people) who pointed out that school councils which will make a significant contribution to democratic school culture should be supported and developed are as follows:

Students might be made more active in management. Their demands might be taken on the point of decision-making (K12).

The election process should be more democratic while forming the school council and participating in management should be activated (K20).

All the students of the school should participate in the election and the candidates should be allowed to introduce themselves sufficiently (K90).

The viewpoints of some participants (8 people) who pointed out that school councils should be established on a healthy basis, shareholders should be trained well and education studies should be increased (8 people), are as follows:

Teachers, parents and students should be made conscious about school councils. A suitable lesson hour should be spared for the implementations (K19).

Students should be enabled to join the management on points that interest them, take place in non-governmental institutions and public services fields (K177, K209).

The viewpoints of some of the participants (5 people) who pointed out that school managers should give a right of speech and an opportunity to shareholders, are as follows:

School culture might be developed in a tolerant atmosphere by protecting every individual's right with the corporation of parents, school and teachers (K13).

Students and parents should be given surveys while making decisions on some subjects and decisions should be made in accordance with the survey results (K66).

The viewpoints of some of the participants (4 people) who support the requirement that school councils should be supported with financial opportunities, are as follows:

A school culture should be formed by, first of all, lowering the school sizes and class sizes and then the authority should be supplied.

Projects should be developed, financial resources for these projects should be spared, the teachers and students who carry out the projects should be rewarded (K75).

The viewpoints of some of the participants (4 people) who support the requirement that a new syllabus and a new school management perception should be developed for the school councils to be more efficient, are as follows:

K169- Schools should be independent, the planning of the schools should be made independently according to the environment and conditions.

K175- The head of the school council might join the management and teachers's assembly with the title of observer. He/she might take over some of the authorisations of the authorities of the discipline committee and the honour (rewarding) committee.

K204- Education; rather than teaching, should be given importance.

When the answers of the participants who answered the question of "What should be done for the school councils to be more effective?" were investigated, the following suggestions came out:

Study fields and implementation samples should be developed for the school councils (10 people), legal regulations should be made for the school councils (7 people), school managers should support the studies by corporating with shareholders (6 people), trainings should be held for managers, teachers, students and parents (4 people).

#### **4. RESULTS AND DISCUSSION**

The contribution of science to human life cannot be denied. The most basic way for science to develop is education. The public fields where scientific thinking style should be represented in the best way are democratic implementations in educational institutions.

If higher education bears an anxiety of challenge in the new millenium, universities and colleges should protect this inheritance and define themselves as the fields of critical learning and actively participating in civilian life (Giroux, 2007).

According to the research findings, it can be said that democracy is a result based upon education when the relation between democracy and education is looked upon in the education and teaching activities at schools, with the effect of in-class arguments and student councils, students' critical thinking skills should be developed and they should be enabled to gain the values, attitudes and behaviours that democratic life requires (Sisman, 2010).

According to Whitty, Wisby (2007)'s research findings, there are school councils in the schools in England and Wales, and the teachers and students consider the school council implementations positively. According to Dogan (2008)'s research findings, the managers and teachers appointed in the town of Ankara have positive attitudes towards Democracy Education and School Councils Project; yet they pointed out that various problems were experienced during the implementation of the Project and they stated that the Project should be developed.

It is seen that a great majority of the participants agree with the statement of ‘School Councils Project should form a settled democracy culture’. Democracy is considered to be the most appropriate government style for human nature. The basic reason for this is that it is the type of government where man’s basic rights such as equality and freedom that he has by birth are applied in the best way. The implementation of such a government style depends on forming democracy culture.

The fact that democracy culture becomes real through School Councils Project is considered as a positive result.

According to Metin (2006)’s research findings, School Councils Project makes positive contributions in respect to form a democratic atmosphere between school managers, teachers and students, and helps especially the students to develop proper attitudes to the values of democracy. In the research findings of Yilmaz and Yildirim (2009), according to the viewpoints of teachers and students in the research facts, School Councils Project is fairly effective in forming the democracy culture and enabling individuals to gain the basic values of democracy. Sayin (2010)’s research findings also confirm that School Councils Project makes significant contributions to forming school culture. According to Celiktas (2013)’s research findings, students think that Democracy Education and School Councils Project contributes to the skills of discussion and bringing in reconciliation culture by forming a settled culture at school. This result bears a parallelism with the manager viewpoints that came out during the research.

The fact that ‘Democracy Education and School Councils Project’ (DVIHE) which is supported technically by European Council and financially by European Union was put into practice by the Ministry of Education’s Board of Education and Discipline in 2011 can be seen as a significant development.

According to the research findings, a great majority of the participants pointed out that they ‘mostly’ approve of the statement of ‘Problems arise during the implementation as the managers, parents and students do not have sufficient information about the School Council’. If the school councils are functional, it will contribute greatly to the development of democracy within school and in society. The fact that participation is provided in every aspect in democratic system and that the drawbacks arising in implementation are defined and that problems are solved contributes greatly to the development of democratic implementations in society. According to Dolaman (2015)’s research findings, while parents participate actively in school management process; they are limited by school managers; on the situations where they can participate in management process, however, they seem in a passive situation and they do not have administrative consciousness on the point of contribution to the school, and the reason for this situation is such factors as environmental effects, social construction, culture, education and economical state.

In order for the society to really benefit from young people’s contribution; all young people should be presented with the required tools and opportunities that will enable them to use their participation rights. Especially, the participation of the young people who are financially limited can be considered as an indicator of healthy democracies and societies (Croft, 2008). Ozcan (2010)’s research findings show that teachers’ eagerness to join in education and teaching process is high whereas their eagerness to join in the decisions regarding the school management is low; students, however, are eager to join in administrative decisions about themselves and to use their rights.

According to the research findings, half of the school managers approve of the statement of ‘Trainings should be held in order to inform the school managers, teachers, parents and students for the School Councils to work efficiently’. It is crucial that the implementation process is known by school managers, teachers, parents and students for the School Councils Project to function healthily.

There might be an uncertainty that stems from the prejudices about the school councils. In the research carried out by Guclu (2015), it is seen that school managers remain limited with the

subjects only about the school while they are informing the ones around them about the order-making laws and the scope and method of this informing remains limited with the parent and the inner school. What is expected from educational administrators is, however, to inform the relevant people about any rule or implementation that regulate the school and the function of its environment. According to Uyanik Ceylan (2009)'s research findings, students do not have sufficient information about school councils.

According to Metin (2006)'s research findings, participants think that no sufficient information is given regarding the school councils. According to Sayin (2010)'s research findings, also, it is seen that school managers and teachers are not given sufficient training about school councils and cannot reach sufficient information resources. These facts also support the research results.

According to Dolaman (2015)'s research findings, although school managers have positive attitudes, it is seen that they do not allow parents much to join the school management in practice, and school managers should make the parents conscious and give them more opportunities to join the management. Sayin (2010)'s research findings also support the conclusion that the sufficient budget and physical conditions for school councils are not supplied and significant effort is required on this subject.

According to the research findings, school managers pointed out that they 'totally' and 'mostly' approve of the statement of 'School Council provides democracy consciousnesses. Democracy recognises each individual as a value and works for the development of this value. Democracy should be handled as not only a type of government but also a lifestyle. In this context, the fact that School Council Implementations bring in a democracy consciousness at school and in the whole society is considered very important. According to Genc and Guner (2012)'s research findings, Democracy Education and School Councils Project was evaluated positively by school managers, teachers and students and it was stated that it should continue. According to Guven, Cam and Sever (2013)'s research findings, managers and teachers pointed out that Democracy Education and School Councils Project is successful at forming school atmosphere, defining democratic values and implementing them.

According to Lunenburg and Ornstein (2013), schools might contribute to the qualitative development by respecting students' differences, bringing in strong values, meeting the expectations and presenting different education approaches.

According to the majority of the school managers that took place in the research, school councils help increase the success and harmony within the school by making it easy for the students to obey the school rules. It has been seen throughout history that some of the laws which had been made throughout nondemocratic ways were more liberal than those made throughout democratic ways. However, the reason why these laws are not perpetual stems from the method they had been made by. It is thought that the students who make their own laws themselves are more compatible. One of the most negative results of not obeying school rules might come out as an increase in violence at school. Dolaman (2015)' research facts reveal that parents' participation in school management process is crucial for the school-student-parent corporation to be more proper and parents contribute to the school's success by joining in the school management process with their positive attitudes.

According to Kemahlioglu and Keyman (2013)'s research findings, participants marked the democracy scoring in Turkey as 5.03 out of 10. This result indicates that Turkey is at a point between democracy and authoritarian system. Moreover, the fact that the higher the participants' education levels are, the lower are the democracy points shows that democratic rules and implementations in Turkey should increase and on this point school council implementations are crucial.

According to the research findings, the participants pointed out that they generally approve of the statement of 'Expressing different ideas thanks to the school councils might increase attendance to the lesson'. Moreover, according to the school managers who participated in the research, school

council implementations contribute greatly to the development of reconciliation culture in society. According to Alptekin (2014)'s research findings, teachers support students' participation in management and at the same time, they pointed out that there is a need for managers who have perceived the idea that democracy is not 'idleness or disorder' during the process of forming democratic culture.

## 5. RECOMMENDATIONS

It can be beneficial if seminars about school councils are held for teachers, managers and parents; the participation in school councils is increased in order to form democracy culture and the concept of democracy is treated functionally in some lessons. It is necessary to make the school councils efficient during the school management's decision-making process. Attaching importance to democracy education at schools might also be beneficial.

### NOTE

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## Inclusive education in the conditions of Czech schools

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### ABSTRACT

The area of inclusive education is one of the key areas of education policy in the Czech Republic. Faculty of Education of Palacký University in Olomouc is trying to flexibly respond to the needs of educational practice and think of inclusive education for several years to the research areas of the faculty. In this paper the authors introduce about problematical areas that could have significantly affect to the quality of the process of inclusion in routine practice at primary school. In the paper the authors are based on research conducted in the years 2013 – 2015. Respondents were teachers and parents of elementary school children and as major actors of the educational process. The present study introduces selected results of the research implemented in the Czech Republic. The purpose of the research was to discover and describe current condition of inclusive education from the viewpoints of the major actors of the educational process, i.e. teachers and parents of elementary school pupils of the Olomouc region. Regarding the specifics of the required information we prepared questionnaires for the teachers and for the parents in correspondence with the purpose of the inquiry, with subsequent test run for verification of appropriateness of the individual item formulations. Each of the questionnaires included 22 items with dichotomy as well as scale answer variants, including the open question variant. The questionnaires were filled out by the selected research subjects in anonymity. The analysis shows the positive attitude of parents and teachers to implement inclusive education. Worrysome is the current level of teacher's readiness to manage this process. It shows the need to promote inclusive education not only by the undergraduate training of teachers, but also in further education is necessary to focus on the systematic development of teacher's competence for inclusive education.

**Key Words** Inclusive form of education, special educational needs, individual integration

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### 1. INTRODUCTION

Inclusive education is one of the priority areas in the Czech Republic aimed at assurance of equal access to education to all pupils under the Czech school conditions. The process is to create positive assumptions for education of all pupils through introduction of support measures with respect for educational needs of every pupil. These assumptions should enable education of pupils with special needs within the mainstream educational process.

Inclusive education is a process with a number of determinants concerning not only the educational process actors but also the society as a whole.

*Action Plan for Inclusive Education in the Czech Republic in the Period 2016-2020* finds the basis of the inclusive approach in high quality of education allowing not only equal access to education but also just and adequate support considering different needs of individual pupils in the area of education for appropriate utilisation of their full learning potential.

Crucial roles are performed by:

- Timely and effective support for comprehensive development of every child by the family, the teacher and other experts and the surrounding society, at the beginning of the child's school attendance as well as in all situations when the child, or the pupil needs increased support,
- Development of every pupil's potential, professional support, positive approach of the pupil to education and positive climate in the class and at school,
- High-standard teaching, approach of the school headmaster and understanding of the school owner,
- High standard of teachers' work as one of the major aspects affecting the pupils' results and determining quality of the educational system as a whole,
- Support by the system of school psychologists' advisory offices based on professional quality of the support providers (Action Plan for Inclusive Education in the Period 2016-2020)

As shown by the above, this process is substantially supported by the teachers and the parents. For qualified performance of the profession the teacher needs the necessary professional competences including work with a heterogeneous group of pupils, i.e. *inclusive pedagogical competences*. These competences are formed in the course of the teacher's professional career, affected by quality of preparatory and further education of the teacher, experience gained in the area of inclusive education, effect of the professional environment, reflexion on the educational reality and self-reflexion (Hájková, V., Strnadová, I., 2010).

Cooperation between the school and the family on partnership basis is another important factor of inclusive education. As follows from interviews with teachers, the cooperation between the school and the family is not

always on the necessary level. Teachers are critical about insufficient interest on the part of the parents in what happens at school. A variety of reasons of this situation must be taken into consideration, including insufficient empathy of the teachers, negative experience of the parents related to the school, mistrust etc. On the other hand excessive workload of the parents may also be one of the reasons. However, if inclusive education is to be successful close cooperation of all stakeholders is inevitable.

By the research done by our team we tried to disclose and analyse current spectrum of opinions of teachers and parents of elementary school pupils on inclusive education. The collected data are expected to help us discover potential problems or barriers that may be eliminated through preparatory and further education of teachers.

### **Research Team**

Since 2014 the Pedagogical Faculty of Palacký University in Olomouc has organised international research on inclusion. The research team includes experts from the Department of Primary and Pre-Primary Pedagogy, the Institute of Special Pedagogy Studies and the Department of Psychology and Pathologic Psychology. The team cooperates with Prešov (Slovakia), Koper (Slovenia) and Czestochowa (Poland) universities.

### **Research Study: Purpose, Method, Research Population**

The present study introduces selected results of the research implemented in the Czech Republic. The purpose of the research was to discover and describe current condition of inclusive education from the viewpoints of the major actors of the educational process, i.e. teachers and parents of elementary school pupils of the Olomouc region.

Regarding the specifics of the required information we prepared questionnaires for the teachers and for the parents in correspondence with the purpose of the inquiry, with subsequent test run for verification of appropriateness of the individual item formulations. Each of the questionnaires included 22 items with dichotomy as well as scale answer variants, including the open question variant. The questionnaires were filled out by the selected research subjects in anonymity.

## **2. RESEARCH POPULATION**

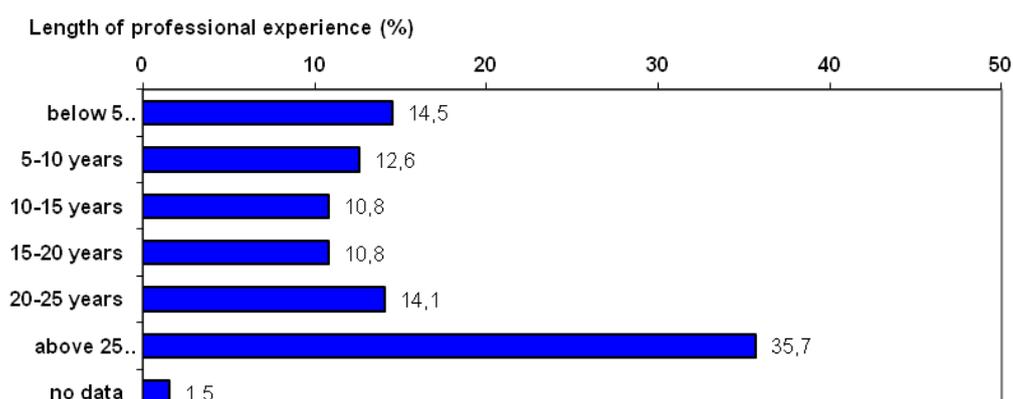
**Table 1:** Research Subjects - Teachers

TEACHERS								
Total	Gender		Type of education				Experience in inclusion	
	Females	Males	For lower elementary school	For higher elementary school	Special pedagogy	Other	Yes	No
261	92 %	8 %	42.8 %	35.5 %	11.5 %	9.7 %		
100 %	100 %		100 %				100 %	

*\*Graduates from university courses for teachers of grades 1 – 4 of elementary school, grades 5 – 9 of elementary school, and special pedagogy courses.*

For the purpose of statistical processing we classified the research population on the basis of the length of professional experience. Thus we obtained two equal groups (48.7 % of the respondents – professional experience below 20 years, and 49.8 % with professional experience above 20 years; 1.5 % of the respondents did not provide any information about the length of their professional experience).

**Diagram 1:** Professional experience of the teachers forming the research population (in %)



**Table 2:** Research Subjects - Parents

PARENTS								
Total	Gender		Education				Experience in inclusion	
900	Females	Males	Elementary	Secondary	Higher	University	Yes	No
	79 %	21 %	3.7	50.8	8.7	36.8	27 %	73 %
100 %	100 %		100 %				100 %	

*\*Parents with elementary, secondary, higher professional and university education.*

For the reason of the scope of the research this thesis only presents selected areas characterising the existing situation. The basis of the characterisation is represented by personal experience of the respondents with inclusion and their opinions on the benefits of inclusion.

### 3. INCLUSIVE EDUCATION AS VIEWED BY TEACHERS

The most important knowledge obtained by the study was information on how inclusive education was viewed by the research subjects, with several different aspects. The teachers could always select their answers from a scale with answer types like *absolutely yes, mostly yes, sometimes yes - sometimes no, mostly not and certainly not*.

Answers of the inquired teacher population related to their assessment of the **benefits of the inclusive form of education for pupils with special learning needs** (hereinafter SLN) are documented by the below diagram 2.

**Diagram 2:** Scale of evaluation of benefits of inclusion for pupils with special learning needs (SLN)

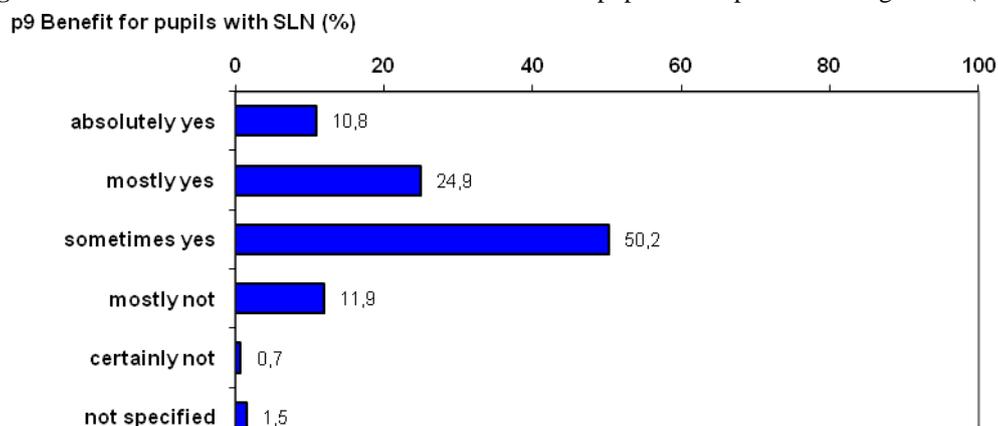
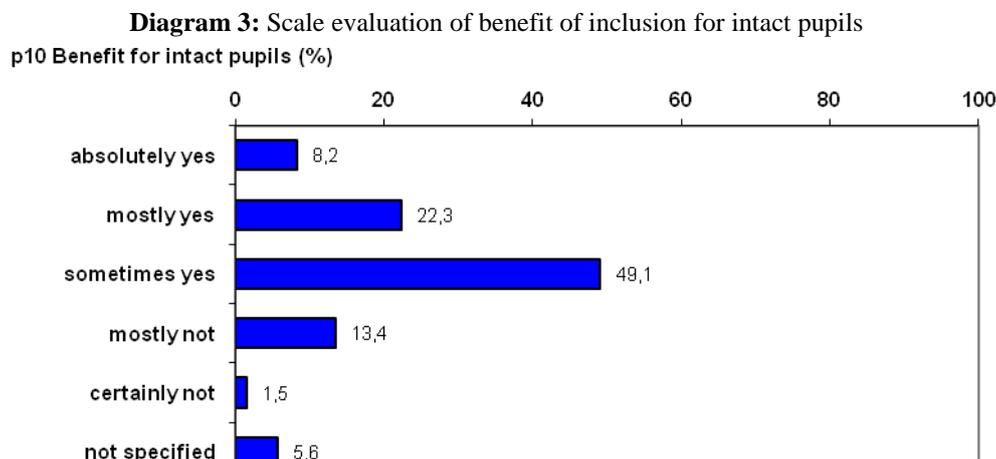


Diagram 2 clearly shows that half of the research population (50.2 %) chose the middle, not clean-cut answer “*sometimes yes, sometimes no*“, while the other half split up to a bigger group expressing a positive opinion and a smaller group with negative approach to inclusion.

Similarly teachers’ opinion on inclusive education with regard to its **benefit for healthy pupils** was analysed. The obtained data are shown in diagram 3.



The structure of responses is very similar to the benefit for pupils with SLN. Nearly half of the respondents (49.1 %) again chose the non clean-cut middle answer “*sometimes yes, sometimes no*“.

Opinions on the benefit of inclusive education for SLN pupils are shown in tables 3a and 3b.

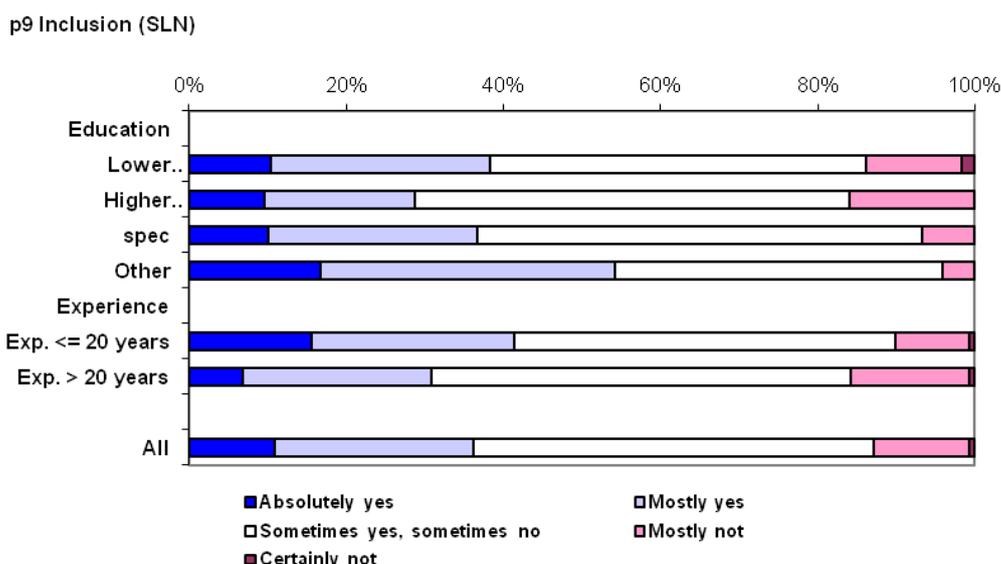
**Table 3a**

		p9inkl_SVP					Total
		1	2	3	4	5	
p2pract.20	Count	20	33	62	12	1	128
	% within p2pract.20	15.6%	25.8%	48.4%	9.4%	0.8%	100,0%
	% within p9inkl_SVP	69.0%	50.8%	46.6%	37.5%	50.0%	49,0%
	Adjusted Residual	<b>2.3</b>	.3	-.8	-1.4	.0	
	Count	9	32	71	20	1	133
	% within p2pract.20	6.8%	24.1%	53.4%	15.0%	0.8%	100,0%
> 20	% within p9inkl_SVP	31.0%	49.2%	53.4%	62.5%	50.0%	51,0%
	Adjusted Residual	<b>-2.3</b>	-.3	.8	1.4	.0	
	Count	29	65	133	32	2	261
Total	% within p2pract.20	11,1%	24,9%	51,0%	12,3%	0,8%	100,0%
	% within v9inkl_SVP	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

**Table 3b**

		p9inkl_SVP					Total
		1	2	3	4	5	
1.st.	Count	12	32	55	14	2	115
	% within p3spec.	10.4%	27.8%	47.8%	12.2%	1.7%	100,0%
	% within p9inkl_SVP	42.9%	47.8%	41.0%	43.8%	100,0%	43,7%
2.st.	Count	9	18	52	15	0	94
	% within p3spec.	9.6%	19.1%	55.3%	16.0%	0.0%	100,0%
	% within p9inkl_SVP	32.1%	26.9%	38.8%	46.9%	0.0%	35,7%
p3spec.	Count	3	8	17	2	0	30
	% within p3spec.	10.0%	26.7%	56.7%	6.7%	0.0%	100,0%
	% within p9inkl_SVP	10.7%	11.9%	12.7%	6.2%	0.0%	11,4%
spec	Count	4	9	10	1	0	24
	% within p3spec.	16.7%	37.5%	41.7%	4.2%	0.0%	100,0%
	% within p9inkl_SVP	14.3%	13.4%	7.5%	3.1%	0.0%	9,1%
Other	Count	28	67	134	32	2	263
	% within v3spec.	10,6%	25,5%	51,0%	12,2%	0,8%	100,0%
Total	% within p9inkl_SVP	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

**Diagram 4**



Tables 3a, 3b, as well as diagram 4, show certain hesitation of Czech teachers about assessment of benefit of inclusion. There is a high proportion of the medium – neutral – variant answers (*sometimes yes, sometimes no*). The illustrative diagram related to the tables clearly shows higher optimism of younger teachers with less than 20 years of experience. Looking at diagram 4 the “other” specialisations are most positive about inclusion. Taking the aspect of statistical significance (see tables 3a, 3b) you can see that the difference in the teachers’ opinions based on the length of their professional experience is really statistically significant.

In other words, teachers with longer experience are more critical in their approach to inclusive education of pupils with special learning needs (SLN) than teachers with less than 20 years of experience. The effect of the teacher specialisation was not statistically significant in this respect. A similar situation was observed in the context of the item where the respondents – teachers – were asked about the benefit of inclusion for intact pupils. A summary of significance in the replies of the respondents from the teacher population obtained by comparison of the length of practical experience and specialisation of the teachers is shown by the following tables 4a and 4b.

**Table 4a:** Summary of probabilities (statistical significance, tests Mann-Whitney, Kruskal\_Wallis,  $\chi^2$ ) in relation to the length of professional experience and specialisation of the teachers

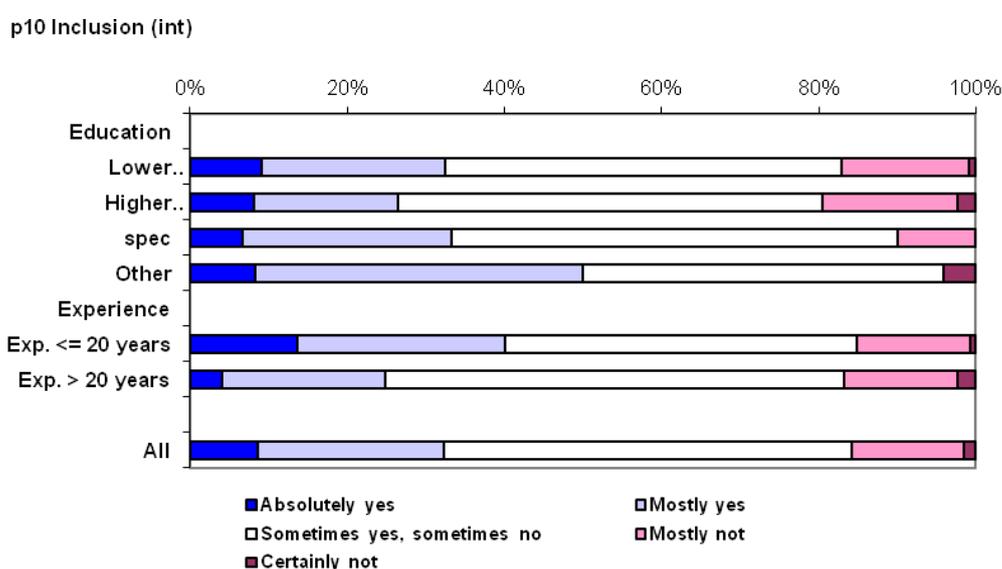
Questionnaire items	Exp. 20	Spec.
Benefit of inclusion for SLN pupils	<b>0.025</b>	0.102
Benefit of inclusion for intact pupils	<b>0.018</b>	0.143
Cooperation with SLN pupils (impaired vision)	0.801	<b>0.025</b>
Cooperation with SLN pupils (impaired hearing)	0.772	<b>0.008</b>
Readiness for work with SLN pupils	0.641	0.902
Attitude related to inclusion of a pupil with impaired hearing into normal class	0.470	<b>0.001</b>
Attitude related to inclusion of a pupil with impaired vision into normal class	0.724	<b>0.031</b>
Experience in work with SLN children	0.593	<b>0.000 *</b>
SLN-related courses and other education in the past two years	0.077	<b>0.001 *</b>
The teacher is at school for SLN pupils	0.148	0.083
School attended by SLN pupils	0.784	0.388

\* Statistically significant difference only between “lower elementary” and “spec” teacher specialisation (in favour of “spec”)

**Table 4b:** Summary of probabilities

Specialisation (in pairs)		Cooperation with SLN pupil (vision)	Cooperation with SLN pupil (hearing)	Inclusion of pupil with impaired hearing	Inclusion of pupil with impaired vision
3 lower el.:	4 higher el.	0.788	0.398	0.586	0.351
3 lower el.:	5 spec	<b>0.007</b>	<b>0.003</b>	<b>0.001</b>	<b>0.01</b>
3 lower el.:	6 other	0.204	<b>0.036</b>	<b>0.032</b>	0.417
4 higher el.:	5 spec	<b>0.012</b>	<b>0.016</b>	<b>0.001</b>	<b>0.009</b>
4 higher el.:	6 other	0.165	0.105	<b>0.038</b>	0.255
5 spec :	6 other	0.733	0.774	0.249	0.152

**Diagram 5**



The tables are followed with clear graphic representation of selected items. Diagram 5 illustrates opinions of teachers based on their specialisation and length of professional experience and concerning benefit of inclusion for intact pupils. The specialisation did not cause any significant difference in answers, while the length of professional experience did. Older teachers with over 20 years of professional experience were again more critical in their opinions on inclusion, which is also documented by the following tables 4a and 4b., informing in more detail that the significance of the differences in the teachers' opinions was most clearly manifested in the "absolutely yes" and "sometimes yes, sometimes no" answers, the latter prevailing in older teachers at the expense of the more positive answers ("absolutely yes", "mostly yes"). Younger teachers appeared to be more optimistic in their opinions on the benefit of inclusion for intact pupils. Considering the fact that a different data classification with the break point of 15 years of professional experience (or any shorter variant) showed no statistically significant differences one can deduce that the length of professional experience exerts continuously increasing impact with 20 years representing kind of relevant turning point.

#### 4. INCLUSIVE EDUCATION AS VIEWED BY PARENTS

In the context of investigation of the overall opinion of parents concerning **inclusion of a handicapped child into normal school** the parents could express their opinions through a scale of answers with five alternatives (*absolutely yes, mostly yes, sometimes yes – sometimes no, mostly not, certainly not*). Most parents expressed their opinion through the first three variants, i.e. 93 % of the respondents from the parent group were more or less positive about the possibility of inclusion of a handicapped child into normal class. However, if you exclude from the assessment of inclusive education the medium, or neutral variant "*sometimes yes, sometimes no*", then the purely positive approach expressed by the first two categories of answers, i.e. "*absolutely yes*" and "*mostly yes*" was recorded for 45.8 % of the parents, i.e. less than one half of the respondent population.

Detailed analysis of the arguments for inclusive form of education mentioned by the parents showed that a high number of the responding parents (296 respondents, i.e. one third of the sample) stated no arguments or answered that they did not know. The second and the third most numerous group of parents (both including 244 respondents – 27.1 %) mentioned either benefit of this form of education both for the handicapped and for the intact children or just benefit for the handicapped pupils. Benefit for intact children was mentioned by 101 parents (11.2 %). Negative arguments (such as delayed education of intact children, feeling of inferiority of the handicapped child among healthy children, missing conditions for this type of education at schools, lack of finance etc.) were only mentioned by 15 parents (1.7 %), which may be considered a very positive fact.

When analysing the item asking about the feeling of the parents about **inclusion of a pupil with some kind of handicap into the class with their own child** we came across the positive fact that most parents (70.3 %) did *not see any problem* in this and another 24.7 % answered that they *rather would not mind*. A negative attitude (*I would probably mind that, I would certainly mind that*) was only expressed by a negligible number of parents. Analysis of data obtained in relation to this item strongly supports the previously mentioned inclusion of the middle, neutral variant of “*sometimes yes, sometimes no*” to the positive side of the overall opinion on inclusion. Potential **use the inclusive form of education for their own handicapped child** (if they had one) was welcomed by most parents (81.4 %). Just 94 parents (10.4 %) would not use this option, and 8.1 % of the parents of our research population did not answer this question.

The obtained data were analysed and related to the effect of *gender and education of the parents, existence of a handicapped person in the family of the respondent and experience in inclusion*. Adequate statistical methods showed the following significant relations.

### Opinion of Parents on Inclusion of Handicapped Child into Normal School

**Table 5:** Opinion of parents on inclusion of a handicapped child into normal school (by gender)

		r6inclusion					Total	
		1	2	3	4	5		
Gender	F	Count	93	218	355	23	17	706
		% within v1gender	13.2%	30.9%	50.3%	3.3%	2.4%	100,0%
		% within v6incl.	76.2%	75.4%	83.5%	65.7%	77.3%	79,1%
		Adjusted Residual	-.8	-1.8	<b>3.1</b>	<b>-2.0</b>	-.2	
		Count	29	71	70	12	5	187
		M	% within v1gender	15.5%	38.0%	37.4%	6.4%	2.7%
		% within v6incl.	23.8%	24.6%	16.5%	34.3%	22.7%	20,9%
		Adjusted Residual	.8	1.8	<b>-3.1</b>	<b>2.0</b>	.2	
Total		Count	122	289	425	35	22	893
		% within v1gender	13,7%	32.4%	47.6%	3.9%	2.5%	100.0%
		% within v6incl.	100%	100%	100%	100%	100%	100%

Most parents from our sample were positive about inclusion, as shown by the table. Female respondents were more cautious and rather chose the neutral variant.

We also found out significantly stronger critical approach of males in comparison to female respondents in evaluation in categories 3 and 4, i.e. *sometimes yes, sometimes no* and *mostly not*, but this partial difference was not significantly manifested in the positive assessment, more important for us (i.e. categories 1,2, or *absolutely yes* and *mostly yes*), where the opinions of male and female respondents were the same. Therefore the effect of gender on the opinion on inclusion of a handicapped child into normal school was only manifested partly in our respondent population.

Negative opinion was only expressed by a negligible number of respondents.

### Opinion of Parents on Inclusion of Handicapped Child into Normal School (by Education)

**Table 6:** Opinion of parents on inclusion of a handicapped child into normal school (by education)

		r6inclusion					Total		
		1	2	3	4	5			
Edu	SŠ	Count	61	141	220	17	14	453	
		% within edu2	13.5%	31.1%	48.6%	3.8%	3.1%	100,0%	
		% within r6inclusion	58.1%	55.5%	58.2%	58.6%	77.8%	57,8%	
		VŠ	Count	44	113	158	12	4	331
		% within edu2	13.3%	34.1%	47.7%	3.6%	1.2%	100,0%	
		% within r6inclusion	41.9%	44.5%	41.8%	41.4%	22.2%	42,2%	
Total		Count	105	254	378	29	18	784	
		% within edu2	13,4%	32.4%	48.2%	3.7%	2.3%	100.0%	
		% within r6inclusion	100,0%	100.0%	100.0%	100.0%	100.0%	100.0%	

The biggest groups were represented by parents with secondary (SŠ) and university (VŠ) education (regardless the gender). The trend towards positive approach to inclusive education prevailed again, especially if the neutral answers are added to the clearly positive ones. Statistically significant differences in favour of parents with university education were only partial.

Our research shows a certain relation to the effect of experience of the respondents or their children with inclusion of a handicapped child into normal school. Personal experience of the respondents or their children with inclusion of a handicapped child into normal school performed a positive role in formation of their opinions on inclusion.

## 5. DISCUSSION

As already mentioned at the beginning of this thesis teacher performs one of the most important and non-substitutable roles in the educational process. Every teacher possesses professional knowledge and skills, but an important aspect is what he or she thinks about his or her professional knowledge and experience, how he or she perceives oneself, what he or she thinks he or she can manage and what not. The Canadian psychologist Bandura (1997) uses the term “self-efficacy“ for this complex feature, meaning subjective idea of own ability to control the progress of things the given person is in. Professional fitness in relation to the teacher personality can be assessed from the general point of view, i.e. fitness for the teacher profession as such, or from the specific angle, i.e. fitness for teaching a certain type of subject. Experience shows that even experienced teachers sometimes find themselves in situations for which they lack a tested approach, or reaction, i.e. in situations for which the teacher can see his or her skills as insufficient for mastering the situation.

How do teachers improve their competences today? What attention is paid to them? Here there are big reserves, from our point of view. Are teachers today sufficiently equipped for work with pupils with special learning needs? As shown by the abovementioned results of our research, current teachers are not sufficiently equipped for teaching pupils with special learning needs. In this light the major number (50.2 %) of neutral answers (“sometimes yes – sometimes no”) related to the benefit of inclusion for pupils with special learning needs (SLN) into normal school and the 49.1 % of equally neutral answers related to the benefit of inclusion for intact pupils is not surprising. The obtained data rather show that teachers lack sufficient knowledge in the area of inclusive education and are therefore considerably uncertain on this ground.

The questionnaire-based survey among the parent population in sum brought positive results. Most parents perceived this form of education positively. What may therefore be assumed is that the influence of parents on their children’s opinions is favourable for inclusive education. Prevalence of positive attitudes of parents of our sample can be seen more in the social dimension, i.e. in perception of the benefit of inclusion for both types of pupils, the handicapped and the intact, in the social context.

As already mentioned in the introduction, the family may significantly contribute to the positive approach to inclusive education and its support. Family is the place where opinions and attitudes and abilities of the pupils to accept schoolmates with different capabilities and all sorts of handicaps form and develop. Uncertainty and insufficient preparation of teachers can hinder development in this area and negatively affect the positive approach of the families to inclusive education.

## 6. CONCLUSION

The information presented in this contribution and obtained from the implemented study focused on the current opinions of ordinary school teachers and parents concerning inclusive education lead to consideration about what can be done to foster a positive change in this area? We believe that educators in charge of preparation of current and future teachers face an important task to improve professional preparation of teachers for inclusive education and in the context of further education to provide teachers with systematic education in this area.

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# Lifelong education: The effect of informal education on income

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## ABSTRACT

Formal education is an expected predictor for economic achievements. In the context of lifelong learning, we also consider informal education as a predictor for economic achievements. We distinguish between formal education (finalizing an educational level which is certified at national level by the responsible institutions, i.e. schools, colleges, and universities) and informal education, which is considered as a compound of the number of contexts perceived of learning from in the past year, contexts to occur spontaneously at any given time (before, during, and after formal education), in a wide variety of forms (e.g. professional training within or outside a company, training organized by NGOs, training on foreign languages, peer communications, discussions with family members, friends, or other people, online information, etc.). We argue that both formal and informal types of training mean that individuals are actively involved in personal lifelong education, which in turn have an impact on their economic situation, independently of their country. Does this assumption hold for the countries included in our study? Is there one pattern resulted from analyzing the effects of formal, informal, and the interaction between formal and informal education on income, controlling for age and gender? If not, what are the observed patterns and what similarities arise? Eurobarometer surveys dedicated one of their studies (ZA3903, 59.0) to the topic of lifelong learning in 2003. They provide data for 18 European territorial units: France, Belgium, The Netherlands, Germany (West), Italy, Luxembourg, Denmark, Ireland, United Kingdom, Greece, Spain, Portugal, Germany (East), Norway, Finland, Sweden, Austria, and Iceland. This particular survey is cross-sectional, with individuals as units of analysis, questioning both attitudes and behaviors on the topic of lifelong education. We test our hypotheses using a structural equation models comparison between countries. Our paper aims at exploring patterns of social stratification bringing to the literature a comparison between the importance of formal and informal education with respect to individual achievements, thus considering lifelong education as compound of these two types of education.

Key words Lifelong education, formal education, informal education, economic achievements, income, structural equation modeling, comparison between European countries.

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## 1. INTRODUCTION

If we were to consider that lifelong learning is continuous throughout life, to what extent different types of education influence individuals' economic achievements is a question of interest for our research. Does training both in-school and out of it influence individuals' income, do they have similar patterns in different countries, and are their net effects independent of their interacted effect? If individuals are involved in both *spending time as much as possible in formal education* (i.e. formal educational system, independently of education attained within their country of origin or abroad) and in *as many as possible informal situations of training* (i.e. any other source of information which is considered by the individual, subjectively, as a learning source; we will return with our reflections on this definition), we argue that the independent effects and the effect of the interaction between them (i.e. individuals investing in both formal and informal education) on economic achievements are positive, and that their interaction effect is higher than the effects of these two variables measuring education taken separately. Our research falls between the social and economic inequalities literature (Grünberg, 2011; Tufiş, 2010, 2011, 2012; Vlăsceanu & Hâncean, 2014) and informal education literature (Hager & Halliday, 2009; La Belle, 1982; Strauss, 1984).

We pay a special attention to the effect of informal education on income, which is less discussed in the literature dedicated to demonstrate the positive effect of education on income. Strauss (1984, p. 195) distinguishes between formal education, which is represented by how the industrialized West is being educated and informal education, which is identified as the one that takes place in the context. In the first chapter of "Recovering informal learning", Hager and Halliday (2009) explain that there are different views on conceptualizing formal and informal education, stating that the views vary from authors who distinguish between formal, non-formal education by considering if the process is intentional or not (Hodkinson and Hodkinson 2004 apud Hager and Halliday 2009; Strauss 1984), while Stern and Sommerlad (1999 apud Hager and Halliday 2009) consider that the variation of processes from formal to informal is a continuum scale, while La Belle (1982) discourages the use of distinctive categories, as a learning experience is a complex process. By referring to

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learning, Hager and Halliday (2009, p. 29) state that formal is the process where there is “a specified curriculum, “designated teacher” and learning is “assessed and certified”. They also underline the importance of categorization (e.g. formal/informal) in order to be able to understand the phenomenon. With this purpose in mind, in our article we distinguish between formal and informal education. Taking into consideration the approaches of European Union and OECD to focus on training or practical work experiences in order to enhance individual's opportunities to be active on the labor market (Heyes, 2012), our study focuses on the impact of both formal and informal education on income.

When correlated with education and first full time job, age can be an important predictor. Blau, Duncan, and Tyree (1967, p. 392) analyze data showing that higher occupational status can be attained by men who rather enter employment after graduating, at the correspondent age for finishing higher levels of education. Important to take into consideration is the fact that life decisions have no particular order and that in reality, all combinations are possible (combination between finishing formal education, moving out from the parental household, employment, and “contracting” the first marriage – seen as “crucial steps” in the transition to adulthood at the beginning of second half of the XX<sup>th</sup> century [Blau et al. 1967, p. 393]).

The equation proposed by the authors (1967, p. 393) is that father's education and occupational status are associated with respondents educational attainment, which in turn is associated with the status of the respondent's first job, the last variable in the causal chain being the respondent's occupation in 1962, influenced by all the variables in the model, except father's education (mostly an empirical decision). The two researchers take into consideration that there might be other factors that could influence the relations proposed by them, or that one of the variables arranged before could influence later other variables as well. It is argued with the data from 1962 that the occupation of the respondent's father and his education are correlated between them, and both have an influence on respondent's level of education and respondent's first job, and consequently, respondent's job in 1962 is the variable in the authors' causal chain. It is empirically demonstrated that education and occupational achievement are positively correlated, with education having an impact on further employment opportunities (ibid. p. 400).

Tufiş (2010, p. 333) analyzes the effect of social origins, looking at parents' education and occupation, on respondent's education, occupation, and, bringing into the causal chain the variable income as the final variable for measuring economic achievement, thus building on the model developed by Blau et al. (1967) on data from Czech Republic, Poland, Hungary, Romania and U.S.A. The author illustrates that for the analysis of stratification, education is increasing in importance, while having a significant effect in the post-communist countries when compared with the U.S.A. (ibid. p. 349).

Bozick, Alexandre, Entwisle, Dauber, and Kerr (2010) attempt to identify the predictors of college participation studied in the United States of America. The researchers have used longitudinal data in order to test the pattern of expectations to attend college over time and the heterogeneity of signals youth received over time regarding their academic possibilities (ibid. p. 2046). They tested for the relationship of educational expectations of youth regarding attending university, influenced by parental support and formal education feedback, on the educational attainment (ibid. p. 2028). By testing the Wisconsin model, Bozick et al. (2010, pp. 2047-2048) showed that expectations are created at different ages and that over time there is variation in youths' expectations towards school attendance, while the trend is to separate from the expectation to attend college. It was also confirmed that respondents who scored higher on their socio-economic status (measured by the authors by desires expressed by family members and life conditions) were more likely to attend universities. One of the study's conclusions is that youngsters respond to family and school feedback and they integrate it in their decision to attend university.

In the latest edition of the Global Dialogue, Kašparová (2015, p. 31) explains different perspectives on homeschooling in Czech Republic. The various types, starting from spontaneous learning and ending with completing the approved curricula rigorously, in our framework of thoughts, homeschooling would be represented by the interaction between formal education, since they are supposed to pass regular exams, and informal education, since the freedom in choosing the pieces of information is much broader. Homeschooling is permitted only through grades one to five and then the pupil who was homeschooled enters regular programme. Illustrating the current situation with respect to the possibility of choosing homeschooling, we find out that parents and children are dealing with a will to choose this type of education which is dependent on their socio-economic status. There seems to be an option only for those who can afford it. Although the homeschool programme receives an increased number of registrations, the percent of those who are homeschooled from the total school-age children is less than one.

Through *formal education*, we name the forms of education organized by state or private institutions that are subject to formal regulations, in line with Vlăsceanu and Hâncean (2014, p. 361), and follow the regular path of scores achievement, that permit one to move from a level to another. The years of formal education refer to the number of years the respondent is enrolled in public or private school regulated at national level by formal rules. By *informal education* we refer here to all activities that are not performed in schools, kindergartens, universities, high-schools during regular ministry-approved curricula at national level, such as trainings at the

work place or trainings on the job, volunteering activities, workshops, arts/sports-related hobbies, professional trainings, watching tutorials, reading materials and mass-media consumption, travelling, discussions, symposiums, etc. and thus the differences between informal education and informal training in terms of distinctive meanings.

We argue that both formal and informal types of training mean that individuals are actively involved in personal lifelong education, which in turn have an impact on their economic situation, independently of their country. If this assumption does not hold, at least we expect to find similarities with respect of the patterns of countries. We base our theoretical grouping on the typologies resulted from the review done in the area of social policy by Preda (2002, pp. 43-51). He, in line with several authors, illustrates the Nordic and Latin countries (in line with Liebfried [1993]) being similar, Austria, France, Germany and Italy (in line with Esping – Anderson [1990]) creating another grouping, as well as Belgium, The Netherlands and Denmark (in line with Therborn [apud Pierson (1991)]).

A report published for our data, written by the European Centre for the Development of Vocational Training (2003, pp. 13-16) show evidence that respondents consider informal types of education as important, in terms of the distribution of situations in which they considered that have learned in the past year. They also take a look at gender differences with respect to each item perceived as learning experience and find that there are small differences between men and women. These are arguments in favour of our paper, to examine and develop the concepts, especially from a social stratification explanatory perspective.

## 2. METHOD

The data used in this study is provided by the European Commission (2012), via Gesis Zcat data archive, and it is called Eurobarometer 59.0, ZA3903, gathered in 2003. It is cross-sectional, with individuals as units of analysis, covering the topic of lifelong education and providing information on the individuals' economic situation, their years of formal education attained, gender, and age, these being the variables of interest for our analysis. Given the missing of our dependent variable from the study ZA4410, 63.3, from 2005, the first dataset we wanted to use, we changed the dataset with that from the study ZA3903, 59.0, from 2003. If any of our readers is interested in further investigating the variables regarding lifelong learning, they can be found in both Eurobarometer studies cited above.

Harmonized across countries income is the dependent variable. It was provided in the dataset and it is coded as following: 1 for “lowest income quartile”, 2 for “next to lowest income quartile”, 3 for “next to highest income quartile”, and 4 for “highest income quartile” (Christensen & Soufflot de Magny, 2012, p. 553). For further research, a dependent variable measured in a metric fashion or usage of a different analytical technique (see Vasile [2014]) might result a better option for testing our hypotheses. Considering its harmonized version in quartiles, we consider it to be an acceptable variable given comparison reasons. Income distributions across countries are not normal, except Norway, Finland, Austria, Portugal and Iceland (see Table 2).

Education is measured using a variable targeting the age when the respondent finished the formal education. With respect to informal training, we created a variable to measure the number of contexts in which they believe to have learned from in the past year. To be in accordance with our definitions, we created a summative index with all the available items (please see Table 1). We choose a summative approach because we want to incorporate all the items we consider as being part of our theoretical assumption, i.e. each situation out of a formal school environment, being it a simple discussion with a friend or training within a company, perceived and valued by respondents to be of learning, add to their informal education. Given the wide range of possible situations, we expect to find subtypes of informal education, but their exploration is not included in the current work.

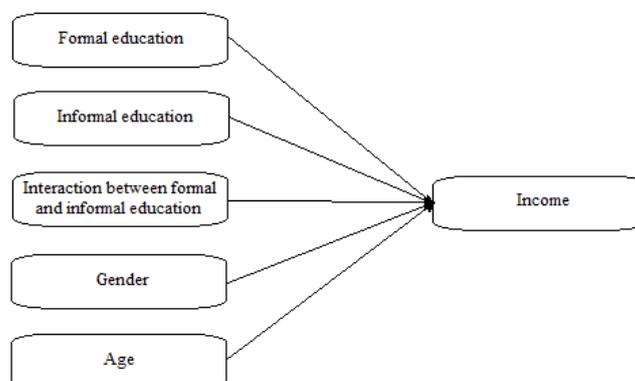
**Table 1.** Items for the index of informal education, extracted from the English version of the questionnaire (European Opinion Research Group, 2003, p. 6).

“Attending training courses/sessions in your workplace”	“Being at home (watching TV, doing housework, hobbies, looking after the family, etc.)”
“Attending training courses/sessions elsewhere”	“Getting together with other people (other people’s homes, pubs, etc.)”
“Working (learning on the job)”	“Using local libraries, learning resource centers, arts workshops nearby”
“At the workplace (talking to colleagues during breaks, reading newspapers, etc.)”	“Leisure activities”
“Involvement in social or political work (trade union, political party, church or charity work, others associations, etc.)”	“A period of voluntary, social or military service”

The interaction variable between education and informal training was computed by multiplying the two variables. Gender was recoded as to have the value 1 for females and value 0 for men. We used the variable age created by the authors of the dataset in its 4 point version: 15 – 24 years (code 1), 25 – 39 years (code 2), 40 – 54 years (code 3), and 55 + years (code 4).

The multivariate analyses implied comparisons between countries within a structural equation modeling framework. With respect to handling missing data, the full information maximum likelihood approach was used. The model is simple (please take a look at Figure 1), capturing mainly the effect of informal training on income, net of the other effects in the model. Given the structure of the model, neither goodness of fit tests, nor weighing, can be provided.

**Figure 1.** Conceptual diagram



### 3. FINDINGS

Descriptive statistics (in Table 2) show evidence of differences between countries with respect to income distributions, either being right skewed (e.g. France, Germany East and West), left skewed (e.g. Belgium), having a more normal distribution (e.g. Norway, Finland, Austria), or less normal distribution (e.g. The Netherlands, Denmark, Luxembourg).

With respect to the years of finishing formal education, the highest means are in Norway, Sweden and Iceland, and the smallest mean is the one of Portugal, whereas the most homogenous country is the United Kingdom. Informal education, across all countries, has means in the interval 3 to 5, with standard deviations pretty close to the mean. All countries have a standard deviation of 2, except Greece with 1.

Most of our samples are composed of a balanced ratio between men and women, except three countries where we identify a greater proportion of women (Finland, the United Kingdom, and Austria). The distribution of age is closer to a Gaussian normal distribution in France, Ireland, Luxembourg, and Iceland.

Given these descriptive statistics, we notice differences between countries in terms of distributions and basic statistics which can compose types of countries in terms of social and economic inequalities if we were to consider only the variables included in our model.

**Table 2.** Descriptive statistics

	<i>France</i> (N=1039)	<i>Belgium</i> (N=1073)	<i>The Netherlands</i> (N=1002)	<i>Germany (West)</i> (N=1062)	<i>Germany (East)</i> (N=1109)	<i>Denmark</i> (N=1000)	<i>Ireland</i> (N=1007)	<i>Greece</i> (N=1001)	<i>Luxembourg</i> (N=615)
<b>Income</b>									
1. 1 <sup>st</sup> quartile (%)	36	23	38	31	32	23	34	24	19
2. 2 <sup>nd</sup> quartile (%)	31	23	24	26	31	24	39	28	18
3. 3 <sup>rd</sup> quartile (%)	13	24	17	25	20	18	19	24	32
4. 4 <sup>th</sup> quartile (%)	19	29	20	16	16	34	7	22	29
(N)	754	540	659	833	846	910	373	583	351
<b>Formal education</b>									
Mean	18	18	18	17	18	22	17	17	18
SD	3	3	3	3	4	5	3	4	3
Min	9	9	11	13	13	13	11	7	9
Max	37	39	39	35	39	39	39	38	31
(N)	950	987	900	1002	1045	885	874	899	554
<b>Informal education</b>									
Mean	3	3	4	3	3	4	3	3	4
SD	2	2	2	2	2	2	2	1	2
Min	0	0	0	0	0	0	0	0	0
Max	10	10	10	9	10	10	10	10	10
(N)	1030	1036	1000	1026	1062	991	994	995	605
<b>Interaction between formal and informal education</b>									
Mean	75	67	79	64	71	103	67	58	77
SD	48	53	51	45	46	65	47	46	50
Min	0	0	0	0	0	0	0	0	0
Max	243	380	390	272	266	390	280	245	248
(N)	944	954	901	967	1000	879	870	894	879
<b>Gender</b>									
0. Male (%)	49	47	48	47	47	47	49	50	48
1. Female (%)	50	52	52	53	52	52	50	50	51
(N)	1039	1073	1002	1062	1109	1000	1007	1001	615
<b>Age</b>									
1. 15-24 years (%)	15	13	16	10	14	10	20	17	13
2. 25-39 years (%)	31	28	29	26	21	26	30	27	27
3. 40-54 years (%)	27	27	27	25	28	24	24	22	31
4. 55+ years (%)	25	30	27	37	35	38	24	33	28
(N)	1039	1073	1002	1062	1109	1000	1007	1001	615

	<i>Italy</i> (N=1006)	<i>Norway</i> (N=1009)	<i>Finland</i> (N=1018)	<i>Sweden</i> (N=1000)	<i>Austria</i> (N=1022)	<i>Spain</i> (N=1000)	<i>Portugal</i> (N=1000)	<i>United Kingdom</i> (N=1416)	<i>Iceland</i> (N=626)
<b>Income</b>									
1. 1 <sup>st</sup> quartile (%)	32	22	13	21	21	17	30	21	18
2. 2 <sup>nd</sup> quartile (%)	22	37	27	25	23	22	36	38	35
3. 3 <sup>rd</sup> quartile (%)	27	28	30	20	31	23	23	15	30
4. 4 <sup>th</sup> quartile (%)	18	11	27	33	23	37	10	25	16
(N)	516	788	937	878	723	677	679	834	400
<b>Formal education</b>									
Mean	17	21	19	21	17	16	14	16	21
SD	4	5	5	6	3	4	3	2	6
Min	8	15	10	12	14	7	7	9	12
Max	33	39	39	39	35	39	30	39	38
(N)	878	39	868	863	951	835	839	1291	552
<b>Informal education</b>									
Mean	3	4	4	5	3	3	3	3	5
SD	2	2	2	2	2	2	2	2	2
Min	0	0	0	0	0	0	0	0	0
Max	10	10	10	10	10	10	9	10	10
(N)	997	994	1012	994	983	988	992	1392	622
<b>Interaction between formal and informal education</b>									
Mean	65	91	95	112	58	61	46	62	117
SD	48	65	57	61	48	47	42	44	67
Min	0	0	0	0	0	0	0	0	0
Max	248	360	380	315	280	234	261	270	360
(N)	872	889	864	857	920	838	869	1271	548
<b>Gender</b>									
0. Male (%)	47	50	41	45	43	48	45	40	49
1. Female (%)	52	49	58	54	56	51	54	59	50
(N)	1006	1009	1018	1000	1022	1000	1000	1416	626
<b>Age</b>									
1. 15-24 years (%)	14	14	18	15	12	20	18	16	18
2. 25-39 years (%)	26	28	23	27	28	29	24	31	27
3. 40-54 years (%)	22	23	23	22	29	18	22	25	29
4. 55+ years (%)	36	33	35	34	29	31	33	26	24
(N)	1006	1009	1018	1000	1022	1000	1000	1416	626

Notes: We reported here the round part of means, standard deviations (SD) and percentages.

**Multivariate statistics**

After testing the effect of informal education on income, controlling for age at finishing formal education, the interaction between formal and informal education, gender and age, we found that our data shows evidence of its importance in almost three quarters of the countries included in our study (Table 3).

**Table 3.** Unstandardized (standardized in parentheses) coefficients and their corresponding level of significance for each country. Dependent variable for all the models: household income in quartiles (harmonized)

	<i>France</i>	<i>Belgium</i>	<i>The Netherlands</i>	<i>Germany (West)</i>	<i>Germany (East)</i>	<i>Luxembourg</i>
Formal education	<b>0.105</b> *** ( <b>0.359</b> )	<b>0.105</b> *** ( <b>0.353</b> )	<b>0.098</b> *** ( <b>0.319</b> )	<b>0.108</b> *** ( <b>0.365</b> )	-0.016 (-0.070)	<b>0.118</b> *** ( <b>0.421</b> )
Informal education	0.139 (0.264)	<b>0.207</b> * ( <b>0.429</b> )	<b>0.152</b> + ( <b>0.310</b> )	<b>0.262</b> ** ( <b>0.519</b> )	-0.110 (-0.219)	0.040 (0.080)
Interaction between formal and informal education	-0.005 (-0.215)	-0.005 (-0.246)	-0.004 (-0.185)	<b>-0.011</b> * ( <b>0.444</b> )	<b>0.013</b> *** ( <b>0.578</b> )	0.000 (-0.012)
Gender	-0.089 (-0.040)	-0.049 (-0.022)	-0.120 (-0.052)	<b>-0.191</b> ** ( <b>-0.089</b> )	<b>-0.130</b> + ( <b>-0.061</b> )	-0.089 (-0.041)
Age	<b>0.086</b> * ( <b>0.079</b> )	-0.072 (-0.066)	<b>0.085</b> * ( <b>0.077</b> )	-0.017 (-0.016)	<b>0.153</b> *** ( <b>0.152</b> )	<b>-0.089</b> + ( <b>-0.083</b> )
R <sup>2</sup>	0.104	0.197	0.110	0.112	0.132	0.215
	<i>Denmark</i>	<i>Ireland</i>	<i>United Kingdom</i>	<i>Greece</i>	<i>Spain</i>	<i>Portugal</i>
Formal education	<b>0.068</b> *** ( <b>0.324</b> )	<b>0.163</b> *** ( <b>0.536</b> )	<b>0.149</b> *** ( <b>0.383</b> )	<b>0.109</b> *** ( <b>0.504</b> )	<b>0.058</b> *** ( <b>0.227</b> )	<b>0.070</b> *** ( <b>0.274</b> )
Informal education	<b>0.261</b> *** ( <b>0.524</b> )	<b>0.386</b> *** ( <b>0.974</b> )	<b>0.407</b> *** ( <b>0.875</b> )	<b>0.235</b> ** ( <b>0.434</b> )	<b>0.145</b> + ( <b>0.275</b> )	<b>0.154</b> * ( <b>0.342</b> )
Interaction between formal and informal education	<b>-0.006</b> * ( <b>-0.340</b> )	<b>-0.017</b> ** ( <b>-0.892</b> )	<b>-0.016</b> ** ( <b>-0.667</b> )	<b>-0.009</b> * ( <b>-0.403</b> )	-0.003 (-0.104)	-0.005 (-0.208)
Gender	<b>-0.141</b> + ( <b>-0.060</b> )	0.055 (0.030)	<b>-0.128</b> + ( <b>-0.058</b> )	-0.005 (-0.002)	-0.056 (-0.025)	-0.067 (-0.035)
Age	-0.043 (-0.037)	-0.031 (-0.036)	0.044 (0.042)	<b>-0.078</b> + ( <b>-0.079</b> )	<b>-0.186</b> *** ( <b>-0.187</b> )	<b>-0.203</b> *** ( <b>-0.234</b> )
R <sup>2</sup>	0.140	0.210	0.163	0.223	0.198	0.253
	<i>Italy</i>	<i>Norway</i>	<i>Finland</i>	<i>Sweden</i>	<i>Austria</i>	<i>Iceland</i>
Formal education	<b>0.104</b> *** ( <b>0.463</b> )	<b>0.027</b> * ( <b>0.163</b> )	<b>0.064</b> *** ( <b>0.336</b> )	<b>0.037</b> * ( <b>0.201</b> )	<b>0.119</b> *** ( <b>0.371</b> )	<b>0.048</b> ** ( <b>0.303</b> )
Informal education	<b>0.172</b> * ( <b>0.319</b> )	0.088 (0.227)	<b>0.148</b> * ( <b>0.320</b> )	<b>0.178</b> * ( <b>0.318</b> )	<b>0.275</b> ** ( <b>0.627</b> )	0.088 (0.198)
Interaction between formal and informal education	-0.006 (-0.274)	-0.001 (-0.037)	<b>-0.005</b> + ( <b>-0.258</b> )	-0.002 (-0.106)	<b>-0.013</b> ** ( <b>-0.608</b> )	0.001 (0.035)
Gender	-0.015 (-0.007)	<b>-0.185</b> ** ( <b>-0.098</b> )	<b>-0.231</b> *** ( <b>-0.112</b> )	<b>-0.160</b> * ( <b>-0.069</b> )	-0.085 (-0.040)	<b>-0.317</b> *** ( <b>-0.162</b> )
Age	-0.030 (-0.030)	<b>-0.122</b> *** ( <b>-0.138</b> )	0.041 (0.045)	<b>0.110</b> ** ( <b>0.104</b> )	-0.076 (-0.073)	<b>-0.223</b> *** ( <b>-0.240</b> )
R <sup>2</sup>	0.190	0.115	0.086	0.090	0.092	0.267

Notes: \*\*\* p<0.001; \*\* p<0.01; \* p<0.05, + p < 0.1. Statistically significant coefficients in bold.

#### 4. RESULTS AND DISCUSSION

The effect of informal education on income, controlling for all the other variables included in the model, is not similar across countries. While some have a positive effect, others have a negative effect. Their magnitude is also different. On the other hand, the results show a positive and statistically significant effect of formal education on economic achievements (except for East Germany), meaning that a higher investment in years of education is observable in their income. Stratification patterns are modeled by formal education, but also some of them seem different when modeled controlling for informal education. There can be seen different patterns of stratification given by the combination of the types of education:

Type 1. The **net effects of formal and formal education** on income are positive and statistically significant (The Netherlands, Belgium, Spain, Portugal, Sweden, and Italy);

Type 2. **Only the net effect of formal education** has a positive and significant effect on income (France, Luxembourg, Norway, and Iceland);

Type 3. **The interaction between formal and informal education** has *small and negative effects* on economic achievement (West Germany, Denmark, Ireland, United Kingdom, Greece, Finland, and Austria);

Type 4. **None of the net effects of educational types** is important for economic achievements, but **only the presence of both of them impacts positively their earnings** (East Germany).

Given the results, our report illustrates the expected positive effect of formal education on earnings, in line with the theoretical framework. With respect to the exploring hypothesis of the effect of informal training on income, we found different patterns across the European regions, including when investigating the joint effect for formal and informal education, partially different from what we expected in terms of groups of countries.

These patterns can show maps of stratification or classifications of countries which might bring valuable information for example for cases as the one pictured by Kašparová (2015).

Gender and age, the identities included in our study, have different patterns also. There are countries where both gender and age have negative and statistically significant coefficients (in Norway and Iceland; men, on average, have higher economic achievements than women, and the higher the respondents' age, the lower their income, net of all the other predictors). Belgium, Ireland, Italy and Austria do not reveal significant differences between men and women, or between young people and elderly with respect to their economic achievements, net of all the other effects. In Sweden and East Germany we found that the age has a positive and statistically significant impact on income. Please see Table 3 for more details.

The negative effect of the interaction between formal and informal education on income is different from what we expected to find and it might be because positive effects are to be seen in a later stage of life, after the respondent has accumulated more experience on the job (age might play an important role), thus a suggestion for future studies would be to run analyses also on age groups to inquire the patterns for each stage in life having relevance to age, also taking into consideration the respondents' last job experience, measured in years since he/she was hired. Another explanation for this negative effect would be that, at the moment of inquiry, the respondents were rather in occupations where the payment is not directly correlated to their years of schooling, like it might be in the case of resident doctors in Romania. Despite the fact that a surgeon studies for at least six years in university, in the first months of employment in a public institution, one is paid the minimum income. This might be a relevant difference between those occupations in which people are prone to positive attitudes towards new piece of information and lifelong learning, being it less or more formal. In this line, a theoretical contribution to discuss education in comparison with learning might be welcomed.

The coefficient of determination is not higher than 0.267 (in Iceland), while the smallest value is in Finland (0.086). In consequence, the variation explained in income, given the small number of predictors, is acceptable, especially because we do not include (due data availability) other relevant predictors such as parents' social status (education, income, and occupation) and other variables measuring informal education.

Future studies should also reflect on issues of theoretical and methodological meaning of informal education. A higher age at finishing one's education may not mean that they attained a higher educational level in terms of prestige and knowledge accumulated, but it also may mean that they interrupted schooling at an early age and they came back to school after some time. In this new interpretation, we would need to control also for the highest educational level attained, as to take it into account. Another consideration for further research would be to discuss and analyze if income has an impact on informal education. Moreover, parents' social status should also be included in the model tested on other data (suggestions made by prof. Marian Vasile, personal communication, October 20, 2015), as other authors, in line with Paula Tufiş (2010, 2012), did. With respect to future analytical approaches, usage of weighting variables, testing for goodness of fit, measurement invariance and empirical subtypes of informal education should be considered. We suggest that variables measuring informal education should also be included in models describing patterns of stratification in different countries. Given the data we have found until now, we consider that there is a need to include questions regarding informal education in more studies, especially longitudinal ones in order to investigate the eventual changes.

Our paper mainly looks at how individuals' investment in education (being it in valuing each situation from which they can learn or spending more time and effort in school) is illustrated in their current economic situation. Even though we expect to find a greater effect of both informal and formal education on income than their effects taken independently net of the other variables included in the model and of the country analysed, our data shows four types of countries based on the recurrence of results.

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# The comparison of the ideological foundations of Turkish and Kazakhstan history education<sup>1</sup>

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## ABSTRACT

History science is one of the most important means of culture transfer and inculcating a national identity. It is a known fact that each nation legitimates and sustains its presence through legends, saga or books and documents. At this point what we call as national history, history of science, becomes one of the means of imparting national identity. In this study it is aimed to compare the ideological foundations of history curriculum of Turkish Republic and Kazakhstan Republic in the process of constituting a new nation after the independence with the new ideologies they have adopted. The research is a qualitative one in which historical method is used. The data has been obtained via document analysis through the history curriculum of Turkish and Kazakhstan primary and secondary education institutions, regulations on the subject and books and articles. According to the data obtained in the study tables have been formed and the similar and different aspects of the two countries have been presented by making the comparison of the two countries’ ideologies and curriculums. According to the findings of the study; it has been seen that both countries have been in the process of becoming a nation state in the first twenty years of their independence and both have made arrangements by releasing a series of regulations and laws. In both Turkey and Kazakhstan a process of national history writing has been started and in line with the collected data, history education curriculum has been developed and the books have been rewritten. Moreover it has been seen that history course is one of the most important means of constituting a national identity in both of the countries

Keywords Ideology, history education, history education in Kazakhstan, history education in Turkey.

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## NOTE

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## 1. INTRODUCTION

### *State, Ideology and Education*

One of the tools used to maintain the existence of a state is the administrative ideologies adopted by the state. By inculcating these ideologies in the individuals making up the state, the existence of the state is attempted to be maintained. Educational systems are constructed with this purpose in mind; thus, these ideologies are attempted to be imparted to the citizens of the state by means of compulsory education to the highest possible extent. According to Çetin (2001), the state makes use of the tools of ideology and education to make its existence and the principles through which it has gained legitimacy permanent. By means of ideology, political power imposes its own principles on the society.

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When the relevant literature is examined, it is seen that there are many different definitions proposed for ideology. According to Oskay (1952), ideology is viewed to be a homogenous and a quite solid structure made up of hegemonic ideals that usually justify a certain societal order and generate erroneous consciousness. According to Uras (2004), ideology instills dominant values in individuals and thus makes them compatible with the system in which they are living or enables them to construct new compatible living systems. In this way, ideology serves the function of helping people to accept the world they are living in as it is (cited: Akın, Arslan, 2014).

One of the most important objectives of education is to socialize the individual by educating him/her. The individual is socialized in line with the ideology of the state and the values of the society. Through the political and social institutions it possesses, the state educates the individual in line with its ideologies and values. In this respect, the state explains the citizen profile it wants in its basic education regulations for the schools assigned to be responsible for the task of education.

While educational institutions are feeding ideology by reproducing it on the one hand, they make important contributions to the legitimization of the ideology by disseminating it across the different segments of the society and handing it down to the future generations. Accordingly, establishment and dissemination of the modern education system in Turkey became both one of the main goals of Kemalist reforms and insurance of the other reforms in a way because the survival of the other reforms depended on the presence of generations having adopted them and eager to protect them. Kemalist ideology was shaped around a set of integrated policies believed to hold together the basic components of Turkey having just completed its War of Independence. The ultimate goal of these policies was the creation of an integrated society, state and nation (Herper, 2015).

The state uses ideology in educational institutions as an establishing, protective and regulatory body within societal culture, symbols, concepts, language and daily life. In order to make its citizens to embrace its ideology, the state is involved in the development of teacher training programs, in setting the objectives of education programs, in the preparation of textbooks, in the formation of educational settings and in the celebration of festivals etc. The state codes the whole society in line with its own ideological principles through its educational institutions and disseminates symbols, signs and the language stemming from its ideological forms. The second tool used by the state for ideological structuring is textbooks used at schools. In fact, all courses are full of objectives and activities constructed in such a way as to lead individuals to develop behaviors and to socialize in a consistent manner with the general objectives of the state developed according to its political philosophy (Çetin, 2001, Akın, Arslan, 2014).

History science is one of the most important means of culture transfer and imparting a national identity. Each nation relies on legends, myths, documents and books to legitimize its history and maintain its existence. At that point, the history science called national history has become one of the tools of imparting the national identity.

The conception of history is one of the cornerstones on which the basic policy of the state is built on. Formation of the general outlines and principles of the history of a country is an important indicator of with which identity and culture the nation will live and which policies it will adopt in the future (Hakim, 2009; 51). During this process that can be called identity transfer the main conveyor of the formal ideology is history education. As known, there are two main approaches to history education that are traditional and academic approaches. The focus of the first approach that is also called “out-of-discipline objectives” of history education is citizenship education and identity transfer. Here, the purpose is to educate citizens on the basis of societal and cultural values inherited from the past. Thus, the identity of the society is transferred to the individual to create a sense of belongingness. The second approach aims to impart scientific viewpoints and higher level thinking skills to students (Yıldırım, 2014; 64).

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The basic components of history education are the development of history curriculums and training of history teachers. In close connection with the history conception and definition adopted by history programs, the objectives, content, methods and techniques and approaches to teaching instruments of history education are shaped (Safran, 2002; 1662).

The purpose of the current study is to compare the new ideologies adopted by the Turkish Republic and Kazakh Republic during the process of building a new nation after their independence and ideological foundations of their history programs.

## **2. METHOD**

As the purpose of the current study was to investigate the ideological foundations of the general objectives of the history curriculums of two different countries, it used a qualitative research method. In the study, as a data collection technique, document analysis technique was used. Document analysis technique involves the examination of the written materials related to the topic under investigation. In educational research, textbooks, curriculums and various correspondences are usually used as data sources (Yıldırım & Şimşek, 2008). In the analysis of the collected data, content analysis technique was employed. Content analysis technique systematically separates and gradually analyses the research data. The dimensions of the analysis are determined in advance by classifying the material into different categories (Mayring, 2011).

## **3.FINDINGS**

### **History Education in Turkey**

Since its foundation in 1923, the Turkish Republic has aimed to be one of the contemporary civilizations and constructed the structure of the new state in this direction. The state was established on democratic and secular foundations and science, having been neglected by the Ottoman State for the last 200 years, was taken as the main guide. Many reforms were carried out in the fields of language, history, education and culture to achieve this goal. On 3 March 1924, The Law of Unification of Education was passed in TBMM (National Assembly) and thus the conception of national and scientific education was incorporated into educational programs so that the basic philosophy of the nation could be reflected.

The dominant educational ideology in Turkey was shaped in 1920s during the reconstruction of the new Turkish nation state. This ideology resulted in the reforms carried out in the fields of education and culture on the basis of social, cultural and ideological reasons rather than pedagogical reasons because of the strong influence of nationalism and adaptation of the institutions, values and mind sets of western nations. The founders of the new state, particularly Mustafa Kemal Atatürk and İsmet İnönü, played an important role in the determination of the principles showing the route of education. Just as the founders' imagination of nationalism conditioned the new education system, this education system reinforced the dominance of nationalism in Turkey (Kaplan,2013, Herper, 2015).

Prior to the Republic, the conception of Muslim ummah history and dynasty history based on Ottoman history was dominant and in this conception of history, Seljukians, and principalities emerging as a result of the collapse of Seljuk State were mentioned briefly due to their connection to Ottoman history and the main focus in history education was on Ottoman history. However, this is a deficient conception in terms of both researching and teaching Turkish history (Öztaş, 2009).

During this process, one of the important steps towards the establishment of the Republic was to change the conception of history inherited from the Ottoman State. The Turkish history widely neglected by the Ottoman State was started to be studied. Following the foundation of the Republic, efforts for nationalizing the education were made and institutions of formal and universal education were established to educate every citizen regardless of their age.

Following the foundation of the Republic, important reforms were made in the field of history education and instruction as well as in every field of education. After the declaration of the Republic, TTK (Turkish Historical Society) and TDK (Turkish Language Association) were established. The common objective of both of these institutions was the formation of the unity in culture and race. In order to give a new direction to the conception of history, Atatürk convened 1st Congress of History in 1932 and called for the inculcation of Turkish identity to the society and establishment of a new conception of the state around this national identity. An important role was

assigned to history in the development of a national identity and citizenship consciousness and this role shaped history education. Writing history in the new Turkish state was considered to be a national task by republican cadre and history education was adjusted to the ideology of the Republic (Güler,2013).

In Atatürk era, this effort for nationalization found reflections in educational programs particularly in history education. Atatürk attached great importance to arousal and maintenance of the consciousness of national history because he believed that history could play an important role in the promotion of national consciousness. Thus, the conception of national history laid the foundation for the philosophy of history education (Aslan,2004;84-85, Öztaş, 2009;100-101). First changes in elementary, secondary and high school history curriculums after the declaration of the Republic were made in 1924. While great importance was attached to Islam and Ottoman history in the former history curriculums, more time and space were devoted to general Turkish history in the new program. By presenting the Four Caliphs Era under the heading of “Republic in Islam”, the new program attempted to create a connection between the new regime and the essence of Islam. The general Turkish history was presented under the following headings in the new program: Turkish history prior to Islam, acceptance of Islam by Turks and spread of Islam in Anatolia Seljuk State, Anatolian principalities, the Ottoman era and the Republic era (Aslan,2004;85, Öztaş, 2009;100-101).

It is clear that during the Atatürk era, there was a direct connection between the conception of history on the basis of Turkish history and the process of construction a new nation. The history textbooks of the period were prepared with the main emphasis on the Turkish identity to contribute to the transition from the structure of a religious community to the structure of a nation state (cited: Şimşek, 2013).

Within this process, in line with the new conception of national state emerging in the Turkish Republic, some precautions were taken to generate new values and impart them to citizens. These precautions were mostly related to keeping the national elements at the forefront and inculcation of a national identity in the society.

Atatürk aimed to create a new conception of nation and state; thus, he carried out many reforms to construct the new Turkish state to gather the citizens of the state around the ideal of becoming a nation rather than a religious community. For this purpose, the reforms of the Turkish revolution and the new regime were attempted to be imparted to the citizens of the state by means of national history courses. In this respect, the main objective of the Course of History of Reforms was to introduce and impart the new values and ideology to the citizens, to hand them down to future generations and to encourage the adoption of the conception of the new state constructed on the basis of these new values (Bolat M,2012; 252-253).

In the State of Turkish Republic grounded on the idea of a single nation, light was shed on the long history of Anatolia by means of the research conducted in the field of history and this research led to the emergence of a national culture. In 1933, the Course of the Revolution History was made required in higher education and this was an indication that Atatürk wanted to use the effect of education on society for the revolution to take root (Bolat M,2012; 255). Since the Ottoman era, a balance was sought between political history and history of civilization in history curriculums. With Atatürk’s sensitivity towards Turks’ contribution to world civilization, more emphasis was put on history of civilization in history curriculums and instead of European-centered history of civilization model, Turkish-centered history of civilization model was proposed. Thus, the role of Turks in the world history was revealed. This also affected history education programs. The programs were revised in such a way as to contribute to the integration with Turkic world (Safran, 2002; 1665-1666).

The new history conception is explained under the title of “Historical Viewpoint of Revolutionary Turk”: “The historical viewpoint of new Turkey takes the appearance of Turkish nation in the stage

of history as its starting point and the role played by this great nation in the history of civilization as its destination. Our new perception of history leads us to core sources of our nation and shows us its place in the world history. It presents mutual interactions of Turkish history and history of humanity in a unity. Ottoman history, Islam history etc. are just phases of Turkish history. It teaches us history as it actually is, not depicted by some European sources. The most important quality of the new Turkish history is its being scientific. This new perception not only sheds light on past but also on future of Turkish nation. That is, Turkish nation is the inheritor of a period of history and culture lasting for thousands of years (Şıvgın, 2009; 43-44).

The textbooks prepared since the foundation of the Republic involve discourses aiming to contribute to the formation of the awareness of nation state. There are many common features of the textbooks prepared in this period: Less emphasis was put on Ottoman and Islam history, the roots of the nation were extended to Central Asia, anthropologic and linguistic approaches were taken as points of reference, strong emphasis was put on Turkish origin, the effect of French resources while preparing the textbooks was reduced and our own resources were used to explain our history, history was reconstructed on the basis of nationalism, textual maps were drawn and efforts were put forth to associate the heroes and events in the Republic era with heroes and events in Turkish history prior to Ottoman State etc. (Safran, 2008; 16-17).

The purpose of these works done to create a new culture accelerated with the writing of the Turkish History Thesis was to inculcate the consciousness of being a nation within the context of abstract, Asian-originated Turkism. In this period, it was observed that research drawing the attention to the role of Turks in history was encouraged and the viewpoint that Turks opened and closed ages was supported. In this period, educating and schooling were used as ideological tools to create individuals eligible for the new Republic. For the changes realized through the reforms to be adopted by the public, considerable time was devoted to the preparation of elementary, secondary and high school textbooks. Thus, it can be argued that in general an education based on the ideal of generating a modern “nation” and in particular an education based on the ideal of “Turkism” was planned to be offered (Alaslan, Şimşek, Çamdeviren, 2012; 197-199). History course program was first added with extra topics with Democrat Party’s coming to power in 1950 such as Democrat Party’s coming to power and Election of Celal Bayar as the president. The reason for such interventions in the history education program is that the Institute of Turkish History established in 1942 was under the control of the Ministry of National Education up to 1981. Thus, the policies of the institute were mostly determined by the political power. Following the 1960 military coup, some changes were made on the content of the Course of the History of Revolution and 27 May Revolution was also added to the content of the course. The military leaders of the period tried to manipulate the content of the course to legitimize their coup on the eye of the public. During this period, severe student riots were observed and they led to ideological polarization and all these developments made us believe that not enough importance was attached to this course at that time. As a result of this, more importance was attached to the Course of the History of Revolution after 1971 military memorandum; yet, the efforts were not adequate. The course was renamed as “Turkish History of Revolution” by the Institute of the History of Turkish Revolution. Following 12 September 1980 military coup, new changes were made on the course and internal and external sources of threat were also added to the curriculum and new textbooks were written in this line (Bolat M, 2012; 251-252).

There are many incidences in which history course has been exploited for purposes outside the discipline. And one of them is to enhance citizenship education and consciousness. Assignment of some other responsibilities to history education may result in an evaluation of past historical events in a manner devoid of historical perspective. However, it is a fact that history education should serve some social purposes. Any history education needs to inculcate historical sensitivity, sense of scientific approach, skill of working like a historian, awareness of chronology and information

about the concepts of change and continuity in students. In addition to these, history education should serve the function of a tool for students to socialize and participate in the activities of a democratic and free society as a citizen. In Turkey, this course has been viewed as a means of socialization and citizenship education. The content of the course was attempted to be developed considering the new conception of history emerging with the foundation of the Republic and within the framework of the new order (Aslan,2004;97-98).

### **History Education in Kazakhstan**

Before the independence, the education system of Kazakhstan was under the influence of the Soviet Union. During the communist era, education was exploited as an institution of political socialization. The saying attributed to Lenin: “There is no information without teaching and communism cannot exist without information.” and “Study! Study! Study!” shows how education was used to promote communism. As of October 1917, educational institutions were regarded to be a tool exploited for the construction of a communist society by the Soviet state and as in all the other Soviet republics, this education system was imposed to Kazakh nation. Communist education is a model developed to shape the materialistic world view of students. It systematically prepares students for communism and makes their capacities useful for the society. The school is the best tool for the generation of a communist society. In schools, generations that would establish communist states were educated (Shorish,1991).

In general, though there were some serious shortcomings in 1920s, a great deal of research was conducted on how to teach the course of social sciences. A new era in history education was initiated by teaching history as a separate course and new textbooks were written in this line. However, the authors of these books devoted more time and place to patterns of social life than the history of the nation. No course whose all content was about history was thought at schools. Only when some decisions about elementary and secondary education programs were made in 5 September 1930 was it accepted that courses need their own curriculums particularly the history course (Curasova, 2012).

During the Soviet Union era, there was no national process of history education in Kazakh schools and the history courses had be offered as they were determined by the Russian Federation. In 1992, Kazakh Grand Assembly passed a law “About Education”. This law passed after having gained the independence laid the foundation for the revision of Kazakh history education with nationalistic sentiments (Curasova, 2012). The Kazakh national history was not penned realistically during the Soviet Union era. Only after the independence, historians started to write a new national history (Ensenov, 2013).

In 1990, the Soviet Union Republics started to proclaim their independence and this led to disintegration of the Soviet Union. Kazakhstan proclaimed its sovereignty on 25 October 1990 and gained its independence on 16 December 1991 (Baycaun, 2002;72). After gaining their independence, these nations weakly and defectively designed by USSR (Union of Soviet Socialist Republics), also had to face the problems and weaknesses in their national structures. They were confronted with the process of organizing the nation with a real national consciousness within a spirit of brotherhood and solidarity. During this process of becoming a nation, the main problem was to reduce the influence of Russian culture while maintaining the relationships with Russia. At the same time, they tried very hard to define the national identity on the basis of citizenship so that problems that could stem from differences could be eliminated. Furthermore, there were some other problems stemming from the fact that these efforts coincided with the international developments brought about by globalization. That is, while national identities and nation-state structures were being disputed in Europe, it seemed to be quite difficult to be successful in attempts to create nation states in the geography of Central Asia (Kurubaş, 2006;113). With the attainment of independence,

Kazakhstan tried to distance itself from the educational practices of the communist era and started to new period of building the Kazakh national identity and nationalizing the education.

As known, prior to the independence, Kazakh history used to be penned and taught on the basis of the Marxist and Leninist policies to create the “Soviet Citizen”. Thus, the writing of Kazakh history in this period was directed by Soviet authorities. As a result, rather than long Turkish history, Russian history was taught and voluntary participation of Kazakhs in the Russian Federation and its ascent together with the Soviet Union were greatly emphasized. Following the attainment of independence, it was seen to be necessary to reshape the national identity and to raise the consciousness of national history. Kazakh state tried to achieve these goals in a clever manner. That is, they preferred to carefully investigate their past while looking at future (Kıdırali, 2013; 1).

Kazakh Republic made many regulations to nationalize the education and recreate it after the independence. One of them is the teaching of Kazakh history at state school as of 1989-1990 school year as a separate course. The new education plan developed in 1991-1992 dealt with how Kazakh history should be taught in the Faculties of History. Since 1992, Kazakh history has been effectively taught at different levels of schooling. Obligation of taking an exam about the history of homeland during higher education resulted in an increasing importance attached to Kazakh history. In the beginning of 90s, methods, curriculums and textbooks were not suitable to teach Kazakh history. This problem was first pointed out by the prominent historians of the nation. In this regard, Prof. Dr. C. Kasımbayev published an article about history education in Kazakhstan and there, he identified some points to be addressed such as revision of history education in Kazakh schools, training of historians having nationalistic sentiments and training of history teachers (<http://e-history.kz/1765>).

The solution to the issue of national identity was found within the great project defined as “Cultural Heritage” in the public address of the president Nursultan Nazarbayev in 2003. Within the context of this project, data and documents about Kazakh culture, history, ethnography, archeology, linguistics, philosophy and works of art were compiled and archived (Hakim, 2009; 52).

The objectives and ways of achieving these objectives in the desired education system were discussed in many different laws, regulations and speeches such as Law of Science in Kazakh Republic, Regulation of the Content of the Curriculums of Schools Offering General Education, Kazakh Republic Education Development Project up to 2015, State Program for the Development of Kazakh Republic Education in the Period of 2011-2020, Speech of Kazakh President addressing the Kazakh Nation.

The president Nursultan Nazabayev was closely interested in history education and criticized the history education in Kazakhstan as it was the continuation of Soviet system in his report “Social renovation of Kazakhstan” and stated that the main goal of history education should be to educate individuals dedicated to their nation. As a result, the history education in Kazakhstan is given in a chronological order from secondary education to higher education and evaluative approach used in the Soviet era in history teaching was abandoned (Tulebayev, 2012). It was necessary to reshape the national identity for legitimizing the independence of

Kazakhstan and for its independence to attain meaning. In order to accomplish this objective, new state-based history writing was adopted and new myths were created. In 1995, the National Board of State Policies chaired by the president Nazarbayev came up with “The Document of Establishing the Conception of Kazakh History”. Policies were developed to prove that Kazakh history dates back to 2500 years ago, they founded many states, these states were not barbarian tribes and they made important contributions to humanity. Kazakh Education Academy carried out the first comprehensive changes in the textbooks prepared in Soviet era, in 1992, national anthem was written, national flag was started to be used and national emblem was created and through such symbols representing the national identity, history of Kazakhs was started to be written again (Kaya, 2012; 366-368. Yapıcı, 2009;12. Gürbüz, 2004: 199. Kurubaş, 2006).

Researching and teaching of Kazakh history became one of the priorities of the state. Debates

about the history of independent Kazakhstan have been going on and many different opinions have been proposed in relation to Kazakh history by different circles. These debates have revealed that one of the important problems is considered to be the exploration and teaching of the history of independent Kazakhstan. Some problems found in some research conducted and textbooks written about Kazakh history were solved. However, efforts invested to inform Kazakh people about profound changes made since the declaration of independence were found to be inadequate. There are few reasons behind this: first, until the recent past, the main emphasis in history education during the Soviet era was put on the history of Russians and the world and Kazakh history was studied as a part of Soviet history; thus, overlooked to a great extent. Second, the private institutes writing and publishing textbooks in Russia are still working. There are not enough private institutes researching Kazakh history in Kazakhstan. The research topic of the existing institutes has been mostly the important events of Kazakh history. The history of independent Kazakhstan is addressed in only few textbooks. *The Present History of Kazakhstan* written by B. Ayagan and M. Şaimerdenovanın for secondary school 9<sup>th</sup> graders can be given as an example to these books. Fourth section of this book deals with the history of independent Kazakhstan and the difficult time spent during the foundation of independent Kazakhstan is presented as a part of the history of all nations. The reasons for the collapse of the Soviet Union, its effect on the longevity of our nation and the development of the nation during the years of independence are explained in detail (<http://e-history.kz/1731>, <http://e-history.kz>. a).

Efforts made to convert Kazakh identity into a national identity have been particularly supported by Kazakh intellectuals and politicians. Before the state, Kazakh intellectuals started to work on this issue in 1990s (Hakim, 2009; 52).

Some revisions were made in curriculums after Kazakhstan gained its independence. In this respect, the history course curriculums were also revised. Though such changes were made in the education system and curriculums, the influence of Russian education system is still prevalent in general and as a result, history teaching is still under the influence of Russian approaches. Development of historical-methodic schools and collection of historical information in books in Russia affected the history education in Kazakhstan (Curasova, 2012).

While writing the new Kazakh history as an indispensable part of gaining a national identity, it is greatly emphasized that Kazakh history dates back to 2500 years ago, they founded many states, these states were not barbarian tribes and they were bright civilizations making important contributions to humanity. These seemed to be basic requirements to be one of the modern nation states and to prove that they are the sole owners of Kazakh lands (Gürbüz, 2011, 199).

The issue of History or historical identity in Kazakhstan has played an important role in the protection of Kazakh culture, traditions, language and the most importantly the national identity. Many writers, poets and educators started to explore and investigate the issues related to history, culture and language. They tried to keep the important figures of past and present at the forefront and explain their lives in their biographies so that national consciousness could be raised among the public (Söylemez 2002;581). They suggested that national values should be protected and national history and heritage should be researched for Kazakh nation to remain an independent nation in the modern world. As in the developed countries of the world, it was emphasized that research should be conducted to reveal the facts about Kazakh history by determining the theory and methodology of history science. Research in this area is still considered to be inadequate because Kazakh nation lived for a long time under the reign of Soviet regime. As a result, Kazakh history was distorted and those writing this history were the representatives of other nations. But, there were some Kazakh authors researching and writing about the national history, yet censors and bans prevented them from publishing their findings. History had to be written in accordance with the political ideology. History was written in line with Marks theory and methodology. In the past, history was written under the influence Marxian ideology to promote the Marxian theory and methodology. Today, the

concepts of Kazak history, history education and the power of history education are used and researched in daily life and social life. Particularly after the declaration of independence, the obligation to educate the future generations in compliance with the new historical point of view was strongly felt by the state. Only people having in-depth knowledge of their spiritual national values and history could be trained as real patriots (Ensenov, 2013).

### **Comparison of the General Objectives of the History-centered Courses in Turkey and Kazakhstan**

The general goals of the Social Studies courses taught in secondary schools in Turkey are common for fifth, sixth and seventh grades. In order to accomplish these general goals, objectives to be attained were placed within the units set for each grade. When the history-centered general goals of the social studies course are examined, it is seen that the main purpose is to train individuals who can understand the role of Atatürk's principles and reforms in the social, cultural and economic development of the Turkish Republic; are eager to protect secular, democratic, national and contemporary values; contribute to the formation of the national consciousness by internalizing the basic elements constituting Turkish culture and history; accept the necessity of protecting and developing cultural heritage; determine the similarities and differences between people, objects, events and phenomena by questioning the evidence belonging to different eras and settings; attach importance to scientific ethics in reaching, using and producing information on the grounds of scientific thinking; make use of the basic concepts of social sciences while explaining the relationships between the individual, society and state; organize their lives according to democratic rules by internalizing the historical processes of the concepts of human rights, national, secularity and republic and their effects on today's Turkey; analyze the international political, social, cultural and economic interactions in different eras and places and display sensitivity towards issues concerning their country and the world with the awareness that they are a part of humanity.

The general goal of the course of Turkish Republic Revolution History and Kemalism taught in the eight grade is to train individuals who can understand the life and personal characteristics of Atatürk; believe that Turkish nation can overcome any challenge with its strong perception of freedom, independence and patriotism; know the historical importance of Turkish revolution; organize their lives according to democratic rules by understanding the meaning of the concepts of human rights, national sovereignty, nationalism, democracy, contemporaneity, secularity and republic for Turkish nation and their importance; are eager to protect democratic, national and contemporary values, love their country and nation as citizens of the Turkish Republic; know and use their rights; meet their responsibilities; are sensitive towards internal and external threats by evaluating the regional geopolitical importance of Turkey in terms of regional and global impacts and display sensitivity towards issues concerning their country and the world with the awareness that they are a part of humanity. All these objectives indicate that through these courses, it is aimed to train individuals who can understand the basic qualifications of the Turkish Republic, are respectful to human rights and sensitive to Turkish nation and culture and have acquired their national identity.

When the general goals of the Kazakh History course taught at Kazakh secondary schools are examined, it is seen that it aims to train individuals who are knowledgeable about the periods of Kazakh history; understand the evolution of the historical terminology throughout the Kazakh history; have learned the purposes of historical events and appreciate the importance of the skill of compiling historical facts and analyzing historical events; can conduct the analysis of the events related to science, history and culture; are interested in the cultural heritages of Kazakhs and other nations; can have access to scientific information through different sources and can work individually. In general, it can be argued that the general aim of this course seems to be; though not explicitly stated within the objectives, to impart Kazakh national identity and culture to students.

It is of great importance to teach national history and to give value education at secondary and higher education. During this process, the analytic thinking of students and adults should be developed by continuously drawing their attention to certain historical events and how to assign new meanings to historical events from the current viewpoint should be taught. Responsibility should be assumed by teachers and parents as well as by the school system in the training of citizens having high ethical values; thus, involvement of parents with their values, traditions and customs in this education process is very important (Abdildabekova, <http://www.tarihbilim.kz>).

The general objectives of the course of The World History taught in Kazakh secondary schools can be summarized as follows: to give information about important events and changes and their connections and chronology in the world history and to train individuals who appreciate national values by gaining information about civil, religious and national traditions within the framework of historical developments; develop their skill of using their historical information in their daily lives; can analyze the development of the society by understanding the regularities and characteristics of historical evolution on the basis of their personal opinions; are respectful to human freedom and democratic attitudes; learn how to study historical information and method by using their own unique methods and data resources, develop positive attitudes towards the world culture and acquire the skill of using historical information in the analysis of the current political, socio-economic and international problems.

The general objectives of history education at secondary level are the elements showing what students at the end of the history education given at this level are expected to acquire in terms of information, skill and attitude. In this regard, general objectives not only show teachers what to teach but also serve the function of a guide showing what students can do by means of history courses. When the general objectives of the history education in developed countries are examined, it is seen that they differ from country to country. Particularly in economically and technologically developed countries, history education is seen as a means of imparting citizenship consciousness, analytic thinking and problem solving skills as well as historical information and the culture of the society to students and history curriculums were revised in this line (Demircioğlu,2006; 134-135).

#### **4. RESULTS AND DISCUSSION**

After the collapse of the Ottoman state, fighting for its independence against western nations, the Turkish Republic constructed its state on national, democratic and secular foundations. This new restructuring required the establishment of many new institutions in the fields of education, culture, language, commerce, industry etc. to reach the level of contemporary civilizations. Through the adjustments made in the education system, education was made one of the basic tools used in the restructuring of the state. In line with the constructed new secular education system, the curriculums of the courses were renewed in such a way to fit the new structure of the state. Some of the educational institutions inherited from the Ottoman state were closed down and others were converted to be in harmony with the new structure of the state.

Kazakh Republic fought for independence against the Soviet Union. Research was conducted on Kazakh history neglected and distorted during the Soviet era, was built on Marxist grounds. State and national restructuring processes taking place during the independence periods of Turkey and Kazakhstan can be likened to each other.

When the ideological foundations of the history education in Turkey and Kazakhstan are examined, it is seen that they have similar characteristics:

1. Both of the countries viewed history education as an important means of constructing a national identity.
2. Both of the countries built history education on the ideology of nationalism.

3. In both of the countries, history was built on Central Asian Turkish culture during the period of independence.

4. Turkish identity and history neglected in the Ottoman state were attempted to be reconstructed after the declaration of the Republic.

5. Kazakh culture and identity tried to be demolished during the Soviet era were attempted to be reconstructed after the independence in Kazakhstan.

6. In Turkey and Kazakhstan, Turkish history was started to be researched. By using national heroes and legends, a national identity was attempted to be constructed.

7. In both Turkey and Kazakhstan, history education was viewed as a tool to impart citizenship consciousness, scientific thinking and problem solving skills as well as the national culture to students.

8. In Turkey and Kazakhstan, history education was renewed according to changing conditions and needs.

In light of these findings, common curriculums can be developed for Turkish culture and history by establishing commissions with the contribution of the two countries coming from the same origin. These works can be extended to other Turkic nations and thus, educational programs can be developed to create a common future for the Turkic nations.

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# War Studies - new trends in education

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## ABSTRACT

The aim of the article is to discuss the new approaches to education in the field of military art at the University of Defence. Author describes the reasons which led to changes that have occurred in the teaching of the fundamentals of military art in master's degree programs. The article presents the results of the project "INOSPEM" conducted within the Faculty of Military Leadership supported by European funds. The methodology used in project was a combination of system analysis, synthesis and comparative analysis. Results and later recommendations led to the development of new subject – War Studies. The explorative methods were used for the description of proposed educational methods and approaches for the lecturing new courses. Among the decisive qualities of future military officers belongs the ability to utilize the knowledge of Military history and Military art, to lead even in harsh conditions and under stress, to be able to perform training and combat command at a platoon level in the context of company and battalion levels and to be proficient with his set of weapons and military equipment and to understand the principles of their employment. The thematic areas of War studies I and War studies II subjects has not previously been so comprehensively conceived and taught. The courses enable the students to acquire the basic knowledge of the theory of Military art, essential terminology and the paradigms in warfare. The course War studies I. focuses on the topic of the Military art, Armed forces, Military operations, the principles of the Military art and the fundamentals of theory of commanding the Armed forces. The course War Studies II builds upon War Studies I, which it expands on the analytical and synthetic work emphasizing work of small teams of students on particular military operations. Apart from theory the course focuses on practical applications of the theory of war and its reflection in the military art, the experience from the wars and conflicts of 20th and 21st centuries and the command of armies in the 21. century. The newly developed system of education in the field of the Military art modifies the experience and knowledge of historical development of the Military art to fit the current conditions. The art of individual and responsible decision-making in the ever-changing security environment which takes into account the wider social consequences of the decisions is highly emphasized during the lectures, war games and seminars. Moreover, the application of new way of distant communication between the student and the lecturer enables effective lecturing, consultation and control action using the software MOODLE.

Keywords Military art, operation, war studies.

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## NOTE

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## 1. INTRODUCTION

Mastering the theory of "Military art" is one of the basic skills of a professional soldier - commander. Knowledge of the basic principles of military art is a prerequisite for understanding other military activities related to the preparation and conduct of military operations. At University of Defence there emerged new courses, War Studies I, War Studies II and Military history, which were incorporated into the new master's degree programs. The aim of these courses is to combine historical knowledge with the current method of conducting operations in the postmodern wars, taking into account the changing operative environment.

Contemporary postmodern wars and conflicts in the crisis areas are much more demanding toward the current and future military professionals, they require far more complex way of thinking both when planning and when executing the operations. The changes in operating environment influence not only the actual execution of operation, but necessarily influence the system which is responsible for preparing new members of armed forces for these realities. It is no longer enough for soldier to perfectly handle his weapon and to manage only the tactical execution for successful achievement of military missions. It is still more necessary for him to be able of functioning in the environment, which is drastically different, particularly in culture, habits and not least in the conduct of combat.

The use of force is the traditional duty of a soldier. Yet it is apparent that much more is expected of them than their combat nature. It is expected they enhance the process by broad spectrum of peacemaking and nation building skills. Modern warfare appears to be less about direct combat and more about broader scale of activity in pursuit of stability and peace in war.

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Due to changes in operating environment, it is crucial for an officer in the new age to manage fundamentals of war regardless of his expertise.

### **Warfare, Military Science And The Military Art**

The term warfare is frequently used too loosely to describe everything that has to do with the actions of armed forces, with war and with military operation. According to the Great encyclopedia, the term warfare means: domain including all the issues of military operational practice, which are related to organization, preparedness, training and combat action of armed forces. It thus follows that the term warfare is not the exclusive issue of armed forces but it is necessary to understand it as the complex of actions beginning at the level of state, where the characteristic approaches of government toward securing the defense are raised. Only after that comes the implementation at the level of armed forces, followed by development of doctrinal system, organization of armies, securing persons and materiel and training with the purpose of teaching the professionals how to conduct military operations, which is their most important mission.

Military science as component of warfare is the social science, which is principally interested in armed conflict as the most profound form of conducting war. The object of military science is examining the armed conflict from several perspectives. Among the most prominent is the searching for causes of armed conflict and its laws and principles, the theory of conduct of armed conflict and about the principles of operational and combat action. Particular theories than focus on explaining how to reach preferable outcome - victory and more specifically how to prepare, train, and support armed forces. Related to these is the research of modern trends for new approaches in conducting current and future conflicts.

The military art, as one of the prominent components of military science, is not a novel term and it can be said that its theory accompanies the humankind from the beginning. The particular paradigms have been changed and reformed according to the evolution of humankind and its ways of conducting combat actions. For a long period of time, the military art had been divided into two categories: strategy and tactics. In the past, the ruler usually played the role of strategist while also being the commander at tactical level. The evolution of armed conflict gradually created conditions for the development of connecting element between strategy and tactics and it came to be known as operational art. The changing social, economic and technological conditions had fundamental influence on the creation of operational art. This change enabled the development and deployment of mass armies with the possibility of maintaining them in the area of conflict for longer periods due to the material supply. It moved the planning of objectives and missions for units (both strategic and operational) to the rear area and the new staffs were developed to take responsibility for it. The strategist (government, leaders of the coalition) thus assigns missions to the operational commanders, who, with the assistance of their staffs, convert the strategic objectives into operational and tactical objectives.

The military art nowadays consists of the theory of military strategy, operational art and tactics. These three components are mutually subordinate in hierarchy, but there exists reverse relationship where higher levels are constrained by the limits of lower levels. The components are therefore mutually preconditioned and they have to be mutually balanced. Missions and objectives at lower levels contribute to achievement of missions and objectives at higher level. It thus follows that senior officer accomplishes his missions via subordinate so he should create the best possible conditions to accomplish the mission. The relationship also exists in reverse order, where it expresses the necessity of operational and strategic level to take into account the results at tactical level.

### **Teaching The Military Art**

The knowledge of principles of military art is nowadays one of the qualities of contemporary and future military professional. As the component of new study programs at the University of Defence, there are developed new courses under the guidance of newly created Department of Military art at the Faculty of Military Leadership. The teaching in these courses is mutually complementary and the students are offered knowledge which is indispensable for him as a military professional regardless of his proficiency. Because of that, the teaching of the course also takes place at Faculty of Military Technologies, where the inputs and the requirements on the students are the same.

The military art is taught in following courses: Military history, War studies I and War studies II. The courses Military history and War studies I are conceived introductory and the students thus obtain basic knowledge of terminology and fundamental principles of warfare. The courses are therefore situated at the beginning of their study. War studies II are situated at the end of their master study (9<sup>th</sup> semester), as a climax of their effort to become military professional.

### **Military History**

Military history is the first course from the area of warfare which the students absolve and it is considered the basic knowledge of military professional. Using historical similarities of campaigns and military operations in

the past it serves to provide the solutions for the conduct of missions and for obtaining the objectives of military operations today.

It shows the cases where the principles of military art are put to effect in order to identify general regularities, searches for analogies of historical events with contemporary ones and provides understanding of difficult military situations. Study of military history was always part of the essential schemes of commander training. The course intervenes in all the three components of military art: military strategy, operational art and tactics. The thematic areas are following:

- The evolution of warfare
- Important individuals and their influence on the development of military art and
- Application of the experience and knowledge gained by studying the historical evolution of warfare.

The main mission of the course is to ignite in the students an interest in warfare and to offer them essential information. After completing the course, the student should be able to analyze historical context of military campaigns and military operations and implemented principles of military art to identify general regularities and thus find an analogy between historical events and contemporary situations and understand complex military situations.

### **War Studies I**

The course War studies I loosely builds upon the Military history course. The main goal is to assist the students in gaining essential knowledge of the military art, particularly the terminology and the specific paradigms in warfare and military science. The courses emphasize following thematic areas:

- Military art
- Armed forces
- Military operations
- Principles of military art and operational functions
- Essentials of the theory of leading the armies

Students are learning military art, its components and their mutual relationship. The essential terminology focuses mainly on explaining the terms like combat, operations and different types of combat actions. Then follows the treatment of operational (common) functions, mainly fire, maneuver and support functions. The course consists of both lectures and seminars in which students work on the assigned topic and then advocate it in front of their colleagues. Similarly to the Military history course, the course develops in students the ability to present and advocate their conclusions in front of audience and in this way they develop qualities of future commander. Students also obtain theoretical background for subsequent military courses including Tactics of the individual and Tactics of different types of armies. The courses reflect contemporary security and operative environment. The emphasis is put on student's ability to orientate in the issues of military art, conceived as wider framework off all the military activities.

### **War Studies II**

The course War studies II is taught during 9<sup>th</sup> semester and so it is kind of climax of studying military sciences. The themes develop the essential knowledge three pillars of theory of military strategy. They are divided into following thematic areas:

- The theory of war and its reflection in the military art ,
- Postmodern war and (operative) environment of its conduct,
- Operations against irregular enemy
- Leading the armies in the 21. Century
- Planning and managing support operations (INFOOPS, PSYOPS, CIMIC).

Unlike War studies I, the course is much more oriented toward active participation of students and it is enhanced by analytical - synthetic work of small teams of students working on specific military operations. The main goal of the course is to teach students how to analyze operations using the information about known engagements that took place at our and at foreign territory with the aim of implementing the experience and knowledge gained by studying historical evolution of the military art to contemporary conditions with regard to the contemporary social impacts of the decision-making. The great amount of time is therefore reserved for the individual work in teams, where the students analyze the operation using open sources, reconnaissance of the terrain in operative area (only the territory of Czech Republic) and they then perform the modification using contemporary military knowledge.

The best up-to-date knowledge is implemented into teaching of seminars and lectures, further enhanced by cooperation with civilian actors and the possibilities of using their knowledge for one's advantage. Thanks to this there will be annually upgrade of information, where the students gain new information and then it can be incorporated for following classes.

## 2. STUDY SUPPORT

As we already noted earlier, support of the study will consist of the information in the open sources, which will be implemented to the changing conditions at the place of operative area when analyzing contemporary conflict. The possibility of terrain reconnaissance in the area where the operation took place is also available, mainly in the War studies II course. Although we are limited by time and financial constraints to the territory of Czech Republic, it is possible for students to find areas of operations, where they can check their decisions in real terrain. Nowadays as a part of outdoor sessions of Department of Military art we conduct active research and documentation of known operations. Obtained materials, both photographic and audiovisual, when accordingly modified, enable the students to study the areas and particular tactical episodes even before the actual visits of the very place.

Another support mean for the communication with students is the use of e-learning program Moodle. The long-term good experience of members of department with the program was crucial in accession of the use of this mean. Thanks to this connection it is possible to communicate with students regardless of space and time. Program also offers the possibility of testing student's knowledge via electronic test, which is created individually for every student based on questions in database. Despite this option, we decided not to use this function and to rely on paper tests instead in order to reduce the risk of spreading the questions among students. However, if the access to the PC schoolroom is acquired, we plan to utilize all the possibilities of the program to test the students.

## 3. CONCLUSION

The teaching of principles of military art applied within Military history and War studies I and II courses should prepare future professionals with the new perspectives to solve contemporary crises. By identifying general regularities and spotting analogies between historical and current events, the students will understand contemporary complex military situations. With acquired knowledge and identification of parallels they will be capable of solving these situations. This is another contribution of Department of Military Art to implement new approaches to study of military art, particularly tactics, explained on the practical examples.

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# Utilization of modern management methods in Moravian companies – Advanced stage research results

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## ABSTRACT

Presented paper discusses the issues of attitude of contemporary Moravian companies operating in the Olomouc region to modern management methods. For a purpose of the study there were selected and considered 28 broadly recognized management methods, tools, systems, techniques or indicators (BCG, BSC, HAZOP, EFQM, ERP, EVA, FMEA, Ishikawa diagram, ISO 9000, ISO 10000, ISO 14000, ISO 26000, ISO 31000, ISO 50000, Kaizen, KPI, Lean, MBO, OHSAS 18000, PDCA, PEST(LE), Porter's five forces, SCM, Six Sigma, SMART, SWOT, TQM and VRIO). The examined data base counting 122 Moravian business companies active in Olomouc region in time period 2011-2013 was collected by university questionnaire research realized in spring 2014. This paper presents the results of the survey to document which management methods have companies implemented into their management system in recent years, whether some of management methods tend to cluster in practice of these companies, and how contemporary Moravian companies deal with modern management methods and systems. Based on the research results we can conclude, that the most well-known and utilized management method among Moravian companies is QMS ISO 9000, second and third most popular are simple techniques SWOT and SMART, however we can see big downswing in percentage of utilization between this two methods. Next used is EMS ISO 14000, very close in ratio of usage are than EVA and TQM. Worth to notice is yet BSC, KPI, Ishikawa diagram and MBO. Utilization of all other methods is merely negligible. In general, we must conclude, that the knowledge of modern management methods among Moravian companies is very low.

Key Words: management methods, management tools, questionnaire research, Olomouc region

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## 1. INTRODUCTION

Academics define an immense number of management methods, tools, techniques or indicators that were developed to help the companies achieve the highest efficiency and the best performance. Many of this methods are difficult to establish, some of them could bring the company very tangible outputs, some have less-tangible outcomes. Contemporary companies are employing more management methods, but they appear to be finding them less effective. Usage increased but the average overall satisfaction rating descended. [10] Successful use of chosen management methods is influenced by the ability of executives to measure and communicate resulting benefits. On the other hand, effort to introduce modern management methods without previous proper consideration of their contribution may undermine employees' confidence in changes that are necessary for the thriving development of the organization. Once we are able to find out what managers are thinking about the usefulness of management methods, we can better understand their preferences and hence begin to work out the design of better methods for today and tomorrow. [11]

Management methods tested in this paper involve a set of processes, concepts, exercises or analytic frameworks. We set out to learn which management methods companies have implemented into their management system in recent years, whether some of management methods tend to cluster in practice of these companies, and how contemporary Moravian enterprises deal with modern management methods and systems.

Based on the results of previous study, we expect Moravian companies to prefer unsophisticated management methods that enable simple framing of manager's thinking and help them stimulate connections and interconnections with different types of information trying to generate new insights into difficult problems, and to orient in current chaotic, increasingly dynamic, turbulent and unpredictable environment.

### Theory and research questions

For a purpose of our study we were aware that finite, processable number of tools has to be chosen. Finally, there were 28 thoroughly selected and considered management tools, methods, systems, techniques or indicators to put into questionnaire (listed in alphabetical order): BCG, BSC, HAZOP, EFQM, ERP, EVA, FMEA, Ishikawa diagram, ISO 9000, ISO 10000, ISO 14000, ISO 26000, ISO 31000, ISO 50000, Kaizen, KPI, Lean, MBO,

OHSAS 18000, PDCA, PEST(LE), Porter's five forces, SCM, Six Sigma, SMART, SWOT, TQM and VRIO.

I. **BCG Matrix** (Growth-share matrix) is a portfolio planning tool developed by the consulting company Boston Consulting Group (BCG). The BCG matrix is based on the product life cycle and is used for the evaluation of the organization's product portfolio from two points of view: market growth and relative market share. This tool helps managers determine which product the company should investigate and which one they should avoid or withdraw from the market.

II. **BSC** (Balanced Scorecard) has become the most widely applied performance management system today. It is a system of management and measurement of the performance of the organization, which is based on defining a balanced system of interrelated indicators of business performance. It measures performance across a number of different perspectives (financial, internal business process, innovation and learning and customer perspective).

III. **HAZOP** (HAZard and OPerability) – one of the most commonly used process hazard analysis (PHA) is used for carrying out hazard analysis in many domains of engineering. This technique consists of identifying credible causes of deviations from design intent and subsequent identification of their consequences. The method provides a thorough analysis, but it is necessary to consider a high number of deviations.

IV. **EFQM** Excellence Model (also used in short version EFQM Model) was developed by the European Foundation for Quality Management as a framework for the implementation of quality management methods in the organization. The process perspective is comprised of several categories of indicators from financial and customers to people and leadership.

V. **ERP** (Enterprise Resource Planning) system is a software solution which strives for absolute integration of all business processes and functions. This system enables the company to facilitate a causal connection between a model of business processes and the software implementation of these processes. Such software can be configured for nearly all commercial functions of a company from any sector of industry.

VI. **EVA** (Economic Value Added) is a frequently used indicator of organizational performance. A positive EVA signifies the value for the shareholders. A negative EVA indicates the loss of value. The basic idea of the indicator is that a company can reach the profit only if its revenue covers the company's cost and the cost of capital. EVA is designed to give shareholders better information about the efficiency of managers' decisions that should create the greater company's wealth. [12]

VII. **FMEA** (Failure Mode and Effect Analysis) is an analytical technique employed to prevent and eliminate failures which can appear in the manufacturing process. It enables the company to establish links between causes and effects of emerging failures and to estimate the relative risks. This method is especially efficient when applied in the analysis of elements which causes the whole system to fail. The main goal is to identify and subsequently limit or avoid risk. FMEA is not a new technique – it was applied in Japan and the United States in the fifties of the 20th century.

VIII. **Ishikawa** diagram (also termed the fishbone diagram or the cause-and-effect diagram) is a useful tool in identifying the potential causes of the problem [5]. In fact, it is a form of a mind-map. The term "fishbone diagram" is based on the shape of this map: the fish head represents the effect of the problem; the fish bones symbolize the spheres of potential causes of the problem.

IX. **ISO 9000 family** is a part of the family of international standards issued by the ISO (International Organization for Standardization) focusing on quality management. Standards of this system are not a management method, it is a standard or norm, which serves as a reference model for setting the basic management processes in an organization that continuously helps improve the quality of provided products or services and customer satisfaction (quality management system). It can be used as a tool for business process and continuous performance improvement.

X. **ISO 10000 family** is used in conjunction with the ISO 9000 series and is fully compatible with them. Contrary to those standards, ISO 10000 does not concern the whole quality management system of organization but it focuses on certain areas. The aim of this ISO family is to provide instructions on how to treat the chosen area with specific management tools using the best practices for producing consistently quality services and products.

XI. **ISO 14000 family** is used for environmental management systems. This standard requires the organization to identify all the environmental impacts and related aspects of its business. In addition, it defines the objectives of environment and introduces measures to improve performance through process improvement in areas of high priority.

XII. **ISO 26000 family** focuses on social responsibility. These standards provide guidance for private and public sector organizations on how they can operate in a socially responsible way. The standards are based on international consensus among expert representatives of the main stakeholder groups. ISO 26000 helps organizations act in an ethical and transparent way that contributes to the health and welfare of society.

XIII. **ISO 31000 family** provides framework for risk management. It can be used as guide for internal or external audit programs, but not for the certification purposes. Organizations using this system can apply the common approach to any type of risk with positive or negative consequences and compare their own risk management practices with an internationally recognized benchmark.

XIV. **ISO 50000 family** gives organizations a framework for managing energy. This system provides guidance and enables an organization to continually reduce its energy use and consumption. By the US Energy Information Administration [4] this standards can influence up to 60 % of the world's energy use.

XV. **Kaizen** is a method of gradual improvement based on cultural traditions of Japan. The improvement focuses on the gradual optimizing of the processes and work practices, quality improvement and scrap reducing, material and time savings leading to cost reduction, work safety and reducing workplace accidents.

XVI. **KPI** (Key Performance Indicators) is a term that refers to the performance indicators/metrics associated with the process, service, organizational unit or the entire organization. KPIs reflect the desired performance (quality, efficiency or economy).

XVII. **Lean** (or Lean Management) is a very broad management tool. The term philosophy that the organization (enterprise) must accept is most often used in connection with Lean. Lean is based on several basic principles. Primarily it is the effort of the organization to continuously improve in all areas and to avoid unnecessary wastage. The second principle is the best possible satisfaction of customers' needs, no matter how. Lean is often used with different attributes; depending on the field this philosophy is applied. [2]

XVIII. **MBO** (Management by Objectives) was designed by Peter F. Drucker as a method based on setting and mutual agreement of the objectives and the evaluation of the success of their achievement. The task implementers are allowed to decide which method is most appropriate to achieve the objective. The implementer delegates responsibility to meet the objective. The method is applicable in virtually all management fields.

XIX. **OHSAS 18000** (The Occupational Health and Safety Assessment Series) is a standard for occupational health and safety management systems. It enables organizations from nearly all spheres of industry to put appropriate emphasis on occupational health and safety performance. This standard was developed by the British OHSAS Project Group in 1999. It provides a framework that helps organization identify and control health and safety risks, reduce the potential for accidents, aid in legal compliance, and improve overall firm's performance.

XX. **PDCA** (Plan Do Check Act), also termed the Shewhart cycle or the Deming cycle, is a model which helps organizations plan (define the problem and hypothesis about possible causes and solutions), execute (implement this plan), check how it corresponds with the plan (evaluation of the results) and act (revise the plan if the results are unsatisfactory or stabilize the plan if the results are satisfactory). This model has its origin in Japan in the fifties of the 20th century.

XXI. **PEST(LE)** analysis is an analytical technique used for the strategic analysis of organizational surroundings. PESTLE (sometimes also PESTEL, SLEPTE etc.) is an acronym and each letter represents a different type of external factors (Political, Economic, Social, Technological, Legal, and Ecological).

XXII. **Porter's five forces** is the work of Michael E. Porter. It is a way of analyzing the industry and its risks. The model works with five elements (Five Forces). The principle of this method is forecasting the development of the competitive situation in analyzed industry, based on estimating the potential behavior of subjects and objects involved in a given market and forecasting the risk of imminent business.

XXIII. **SCM** (Supply Chain Management) is a managerial approach aiming at maximizing customer value and gaining sustainable competitive advantage in the market place. Supply chain activities cover all the processes from product development, sourcing, production, and logistics, as well as the information systems needed to coordinate these activities.

XXIV. **Six Sigma** is a complex method of management. It is known more as a philosophy that a company must follow. It is one of the TQM approaches initiated by Motorola (further adopted and propagated by GE), where the focus is put on continuous improvement (innovation) of the organization by understanding customers' needs, using the process analysis and standardization methods in the measurement. It is a comprehensive, flexible management system that is based on understanding customers' needs and expectations, on disciplined use of information and data to management and decision making. It measures the process capability and stability by determining the rate of DPMO (defects per million opportunities).

XXV. **SMART** is an analytical technique for designing objectives in management and planning. SMART is an acronym from the initial letter of the English names of the objective attributes (Specific, Measurable, Achievable/Acceptable, Realistic/Relevant, and Time Specific/Track-able).

XXVI. **SWOT** analysis is a universal analytical technique focusing on the evaluation of internal and external factors affecting the success of an organization or any other evaluated system. Most often, SWOT analysis is used in the strategic management of an organization in the evaluation of a strategic intention. The author of SWOT analysis is Albert Humphrey, who designed it in the sixties of the 20th century.

XXVII. **TQM** (Total Quality Management) is a very complex management approach that puts emphasis on quality management in all dimensions of the organizational life. It goes beyond quality management. This method ensures mutual cooperation of everyone in a company. It is also a method of strategic management and a management philosophy for all the organizational activities. Associated business processes within this tool force the production to meet and exceed the needs and expectations of a company's customers. [6]

XXVIII. **VRIO** framework is closely linked to Barney's theory of resource-based view (RBV), which points out that competitive advantage is based on Valuable, Rare, Inimitable and non-substitutable resources [3], later improved to a question whether the firm is Organized to capture the value. This method helps analyze the potential sources of sustainable competitive advantage of the firm, examine the firm's activities and identify the capabilities that may enhance a company's competitive position in the market [1].

The following are the formulated three main research questions:

Q1: Are simple management techniques such as SWOT or SMART and well known ISO management systems most applied?

Q2: Do most enterprises utilize modern management methods or systems?

Q3: Is it possible to notice groups or "clusters" of management methods with mutual correlation, which are implemented jointly?

## 2. ORIGINAL RESEARCH AND ITS METHODOLOGY

A research questionnaire was administered during the spring semester 2014 by students of Moravian University College in Olomouc (MUCO), Czech Republic. 122 active companies in Olomouc region in the time period 2011- 2013 were subjects of interest (SMEs are creating 90 % of sample group in accordance with number of employees' criterion). Interview protocol included controlled dialogue of a student with an enterprise owner, an executive manager or a top manager, so the collected data have insights from an expert. Company identification and identification of a student and his opinion on the questionnaire's relevance is a necessary part of each form. The initial sample size of 122 companies were filtered and reduced to 103 credible items. The questionnaire form also includes nondisclosure statement to provide business and privacy protection. Moreover, data were analyzed anonymously and published only as no-name data.

Data reliability is assured (1) by authorization (contact person, signature, stamp), (2) by subjective student relevance evaluation, partially (3) by internet verification and (4) by statistical validity (standard deviation and Pearson correlation index).

The following are evaluated questions/criteria in the presented paper. Numbering of questions correspond the one used in the questionnaire.

Enterprise identification:

- A2: Legal form of enterprise (self-employed, LTD, LLC, other)
- A3: Year of enterprise establishment
- A5: Major branch of economic activity according NACE classification (A – U codes)
- A7: Average number of employees in time period 2011-2013 (0, 1-10, 11-50, 21-100, 101-250, 251+)
- A8: Average annual turnover in time period 2011-2013 (<1 mil., 1-10 mil., 10-100 mil., 100-250 mil., 250 mil.- 1 bill., >1 bill. CZK)

Enterprise's strategic management

- B10: What modern management methods/tools/techniques do you know and use? (EFQM, BSC, KPI, EVA, Porter's 5 forces, OHSAS 18000, SWOT, BCG, SMART, PEST(LE), MBO, PDCA, VRIO, ERP, SCM, FMEA, HAZOP, Ishikawa chart, TQM, 6-sigma, Kaizen, Lean and other – open question)
- B11: What ISO management systems enterprise implemented and respect? (ISO 9000, ISO 10000, ISO 14000, ISO 26000, ISO 31000, ISO 50000)

Based on the results of the previous research, [7, 8] we didn't include the high sophisticated methods as simulation models [13] into the questionnaire.

Data were processed by Microsoft Excel® and IBM SPSS® software. Charts and tables are presented and commented in the next part of the article. Discussion with other published related scientific results is presented later.

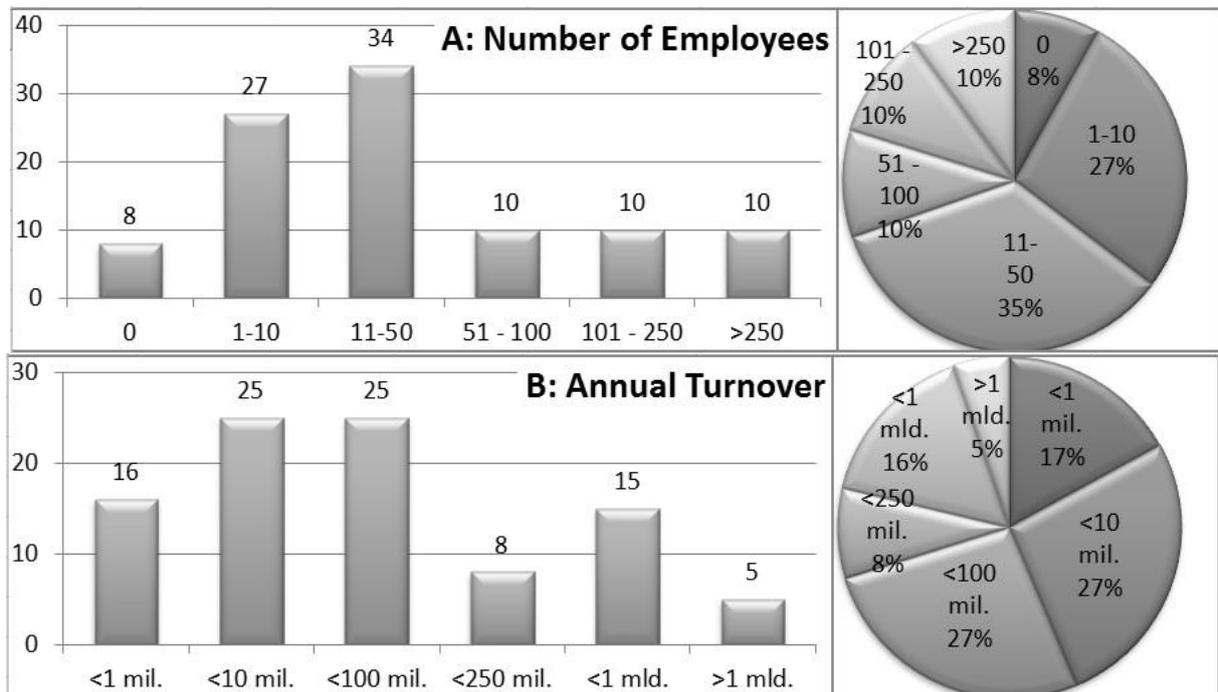
## 3. FINDINGS AND RESULTS

The following chapter presents the data group's description of characteristics and most important results concerning utilization of management methods of settled and active Czech enterprises exclusively in the Olomouc region.

Figure 1 shows the size of enterprises from employees and turnover point of view. Figure 2 shows the percentage of utilization of management methods in the examined data group of enterprises. Table 1 displays Pearson correlation linkages in utilization among selected management methods.

From the legal form point of view on researched enterprises, 32 % are self-employed entrepreneurs, 47 % are LLCs (limited-liability companies) and 20 % are PLCs (public limited companies).

**Figure1:** Size of examined enterprises based on: A – number of employees and B: - annual turnover



Source: own processing by authors

Figure 1A shows that 10 % of the enterprises are big (regarding number of employees criterion), 55 % are small and medium with 11 to 250 employees and 35 % are micro enterprises with no more than 10 employees. Figure 1B shows that less than 5 % of enterprises are big (regarding turnover criterion), more than 46 % are small and medium with turnover of 100 mil. to 1 bill. CZK and more than 44 % are micro enterprises with turnover of less than 10 mil. CZK. Comment respects European Commission directive (EC, 2003).

The timeline of enterprises' year of establishment (enterprise age) show major peak with highest value in 1992. Second and third highest values are in years 1994 and 1993 (circa 20 to 22 years old enterprises). Lower two peaks have maxima in 2000 and 2010.

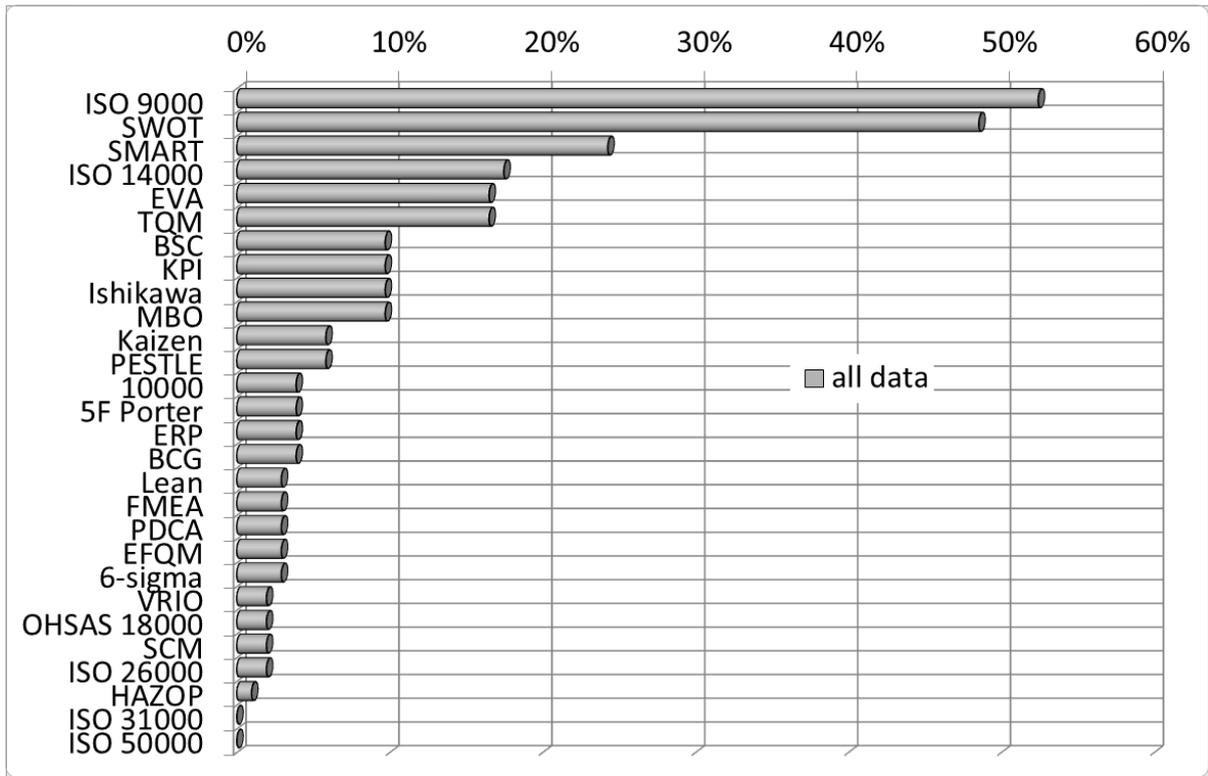
Further characterizations of examined data sample were performed tracking NACE classification of economic activity. NACE statistical evaluation shows that most researched companies (38 %) of examined data group is active in section C – Manufacturing. The next strong category of examined data group (23 %) belong to section G – Wholesale and retail trade; repair of motor vehicles and motorcycles. All other sections are each covered by fewer than 10% of researched enterprises.

Figure 2 shows that generally the most well-known and utilized is QMS ISO 9000, which is used by 52 % of the examined data group. The second and third most popular are simple techniques SWOT (49 %) and SMART (24 %), however we can see big downswing in percentage between these two methods. The fourth most popular is EMS ISO 14000, which is used 18 % of examined enterprises. Very close in ratio of usage are than EVA (17 %) and TQM (17 %). Worth to notice are BSC, KPI, Ishikawa diagram and MBO, which are used by slightly less than 10% of enterprises. All other methods have less than 6 % of utilization in researched enterprises.

Research question Q1 is clarified: Most applied are simple management techniques such as SWOT (49 %) or SMART (24 %) and well known ISO management systems, specifically ISO 9000 (52 %) and ISO 14000 (18 %). These methods occupy the first four places in the ladder of selected examined methods and no other methods are used by more than a quarter of examined enterprises. It is necessary to mention that located in the other side of the ladder are more recent and undiscovered ISO management systems (ISO 26000, ISO 31000 and ISO 50000), which are used no more than by 2 % of enterprises.

Research question Q2 is cleared: Most (more than 50%) enterprises do not utilize modern management methods or systems with two exceptions of ISO 9000 QMS and SWOT technique, which was employed by approximately half of the companies. All other methods are fairly under 30 % and lower. The knowledge of management methods is generally very low.

**Figure 2:** Ratios of management methods utilization in examined “all data” group.



Source: own processing by authors

Table 1 is a triangular Pearson correlation matrix divided into three parts A, B and C. Numbers on the grey background describe mutual link of management methods utilized by examined data group significant at 0,01 level (63 from 325 = 19 % of values). There are also some apparent negative correlations, but with no sufficient significance. Bold numbers are correlation coefficients over 0,4 (6 % of values). Enlarged bold numbers are correlation coefficients over 0,5 (2 % of values).

**Table 1: Triangular matrix of Pearson correlation coefficients by SPSS.**

Pearson Correlation													
part A	EFQM	BSC	KPI	EVA	5F Porter	OHSAS 18 SWOT	BCG	SMART	PESTLE	MBO	PDCA	VRIO	
EFQM	1,000	-0,044	-0,044	0,133	-0,025	-0,014	-0,136	-0,025	-0,078	-0,032	-0,044	-0,020	-0,014
BSC		1,000	0,269	0,151	0,150	-0,031	0,254	-0,054	0,235	0,089	0,025	-0,044	-0,031
KPI			1,000	-0,039	-0,054	-0,031	0,324	-0,054	0,398	0,089	0,025	0,205	0,320
EVA				1,000	0,084	0,231	0,179	0,084	0,079	<b>0,402</b>	-0,039	-0,061	-0,043
5F Porter					1,000	-0,017	0,181	0,313	0,177	0,229	0,355	-0,025	-0,017
OHSAS 18000						1,000	0,103	-0,017	-0,055	-0,023	-0,031	-0,014	-0,010
SWOT							1,000	0,181	0,346	0,145	0,254	0,006	0,103
BCG								1,000	0,040	0,229	-0,054	-0,025	-0,017
SMART									1,000	0,302	0,235	0,088	-0,055
PESTLE										1,000	0,089	-0,032	-0,023
MBO											1,000	-0,044	0,320
PDCA												1,000	-0,014
VRIO													1,000

part B	ERP	SCM	FMEA	Ishikawa	TQM	6-sigma	Kaizen	Lean	ISO 9000	ISO 10000	ISO 14000	ISO 26000
EFQM	-0,025	-0,014	-0,020	-0,044	0,133	-0,020	-0,032	-0,020	0,135	-0,029	0,120	<b>0,490</b>
BSC	0,150	-0,031	-0,044	0,147	0,151	-0,044	0,089	-0,044	0,089	-0,063	0,219	-0,044
KPI	<b>0,560</b>	0,320	0,205	0,269	0,341	<b>0,455</b>	0,250	<b>0,455</b>	0,298	0,115	<b>0,581</b>	-0,044
EVA	-0,075	-0,043	-0,061	0,246	0,333	-0,061	0,027	-0,061	0,196	0,052	0,083	0,328
5F Porter	-0,030	-0,017	-0,025	0,150	0,084	-0,025	-0,040	-0,025	0,167	-0,035	0,224	-0,025
OHSAS 18	-0,017	-0,010	-0,014	-0,031	0,231	-0,014	-0,023	-0,014	0,095	-0,020	0,215	-0,014
SWOT	0,181	0,103	0,006	0,254	0,395	0,147	0,236	0,147	0,249	-0,093	0,327	0,006
BCG	-0,030	-0,017	-0,025	0,355	0,084	-0,025	-0,040	-0,025	0,050	-0,035	-0,081	-0,025
SMART	0,177	0,179	0,088	0,316	0,333	0,255	0,195	0,088	0,112	0,245	0,289	0,088
PESTLE	-0,040	-0,023	-0,032	<b>0,410</b>	<b>0,402</b>	-0,032	0,159	-0,032	0,126	0,188	0,014	0,295
MBO	-0,054	-0,031	-0,044	0,025	0,056	-0,044	0,250	0,205	0,019	0,115	0,128	0,205
PDCA	-0,025	-0,014	-0,020	-0,044	-0,061	-0,020	-0,032	-0,020	0,135	0,336	0,120	-0,020
VRIO	-0,017	-0,010	-0,014	-0,031	-0,043	-0,014	-0,023	<b>0,704</b>	0,095	-0,020	-0,046	-0,014

part C	ERP	SCM	FMEA	Ishikawa	TQM	6-sigma	Kaizen	Lean	ISO 9000	ISO 10000	ISO 14000	ISO 26000
ERP	1,000	<b>0,572</b>	0,394	0,150	0,244	0,394	<b>0,498</b>	0,394	0,167	-0,035	0,376	-0,025
SCM		1,000	<b>0,704</b>	0,320	0,231	<b>0,704</b>	<b>0,438</b>	<b>0,704</b>	0,095	-0,020	0,215	-0,014
FMEA			1,000	0,205	0,133	<b>0,490</b>	0,295	<b>0,490</b>	0,135	-0,029	0,120	-0,020
Ishikawa				1,000	0,341	<b>0,455</b>	0,250	0,205	0,019	-0,063	0,128	0,205
TQM					1,000	0,328	0,277	0,133	0,359	-0,087	<b>0,437</b>	0,328
6-sigma						1,000	0,295	<b>0,490</b>	0,135	-0,029	0,306	-0,020
Kaizen							1,000	0,295	0,126	-0,046	0,133	0,295
Lean								1,000	0,135	-0,029	0,120	-0,020
ISO 9000									1,000	-0,010	<b>0,443</b>	0,135
ISO 10000										1,000	0,171	-0,029
ISO 14000											1,000	0,120
ISO 26000												1,000

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

Source: own processing by authors

Most correlating methods (highest number of grey cells) are KPI (12), TQM (10), SWOT (7), SMART (7), ISO 14000 (7), Ishikawa (7), Kaizen (7), ERP (7) and Lean (7). Less correlating methods (most isolated with lowest number of grey cells) are OHSAS 18000 (0), PDCA (1), EFQM (1), ISO 10000 (1), BSC (2), 5 Porters' forces (2) and BCG (2).

Highest correlations (0,704) have SCM with FMEA, 6-sigma and Lean, next Lean with VRIO. Further correlations above value 0,5 have KPI with ISO 14000 (0,581) and ERP (0,560), next SCM with ERP (0,572).

Creation of management methods clusters characterizes inner interconnections in utilization of management methods. A management method clusters show which methods are used in enterprises together and complementarily. Strongest Pearson correlation (0,704) can be seen among SCM – ERP 0,572) – FMEA – 6-sigma – Lean – VRIO and be called “logistic-manufacturing cluster”. Coefficients over 0,500 (0,455) are among KPI – ISO 14000

– ERP (– 6-sigma – Lean - Kaizen) which can be called “manufacturing-environment cluster”. Third, “quality- environment cluster” ISO 14000 – KPI – ISO 9000 – TQM has mutual correlation coefficients over 0,437. All described clusters are interconnected.

Research question Q3 can be answered: It is possible to notice groups or “clusters” of management methods with mutual correlation, which are implemented jointly.

#### 4. DISCUSSION

We have made similar survey in time period 2009-2011 with wider range – study focused on the Czech and Slovak enterprises in general. The most used methods among researched companies were Lean, Six Sigma and BSC. The most experienced in utilization of modern management methods were companies active in

manufacturing. Researched companies tend to use rather simple management methods that don't require intricate operations. Results of this study were published in Liberec Economic Forum in 2013. [8]

Comparison to previous research results, published at LEF 2013 [8]:

A. Each research data group was collected in different geographic region. Previous enterprises were mostly from Moravian-Silesian region, recent data are solely from Olomouc region. In both researches, manufacturing and SME enterprises were dominant.

B. Both researches indicated that about one half of enterprises utilize only two of examined methods, specifically SWOT and ISO 9000. Three quarters of other methods are not used by more than 10 % of examined enterprises.

C. Both researches indicated ISO 9000, SWOT, SMART, ISO 14000 in its first five positions in the ladder of most utilized methods followed by TQM.

D. Researches detected similar set of correlated and clustered management methods: 6-sigma – Lean – Kaizen – ISO 9000 – ISO 14000 – KPI.

In comparison with the global research periodically carried out by the Bain & Company who has surveyed executives around the whole world since 1993, we arrive at the similar conclusion – companies prefer simple management methods focusing mainly on quality, customers and pursuing the performance. [9]

Revealed low level of knowledge of modern management methods among Moravian companies is a serious challenge for all the educational institutions providing the managerial training, education or lifelong learning.

## 5. CONCLUSION

Presented paper introduced new findings concerning praxis of enterprises in the Czech Republic specifically in Olomouc region regarding utilization of modern management methods and systems. It was confirmed that employment of management system is generally very small. Comparisons with research results published by authors at LEF 2013 as well as with other professional scientific literature were presented.

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# Teaching methods as one of the determinants influencing students' attitudes towards the subject of pedagogy

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## ABSTRACT

The contribution presents a survey documenting the share of influence of teaching methods on students' final attitudes towards the subject of Pedagogics. The introductory and theoretical part of the contribution deals with fundamental issues of research in attitudes in pedagogical reality. The quantitative approach to the given issue is chosen due to the character of the research and objectives of the survey. The objective of our contribution is to introduce the design of a research survey and research tools that could put over the dimension of attitudes towards school subjects from the students' perspective to teachers, and thus point out negatively perceived areas in connection with taught subjects. The tool of first choice is semantic differential, direct structured observation of lessons and a questionnaire using a Likert scale. The research sample consists of teachers and students of a secondary teaching school. 180 questionnaires were distributed; 161 of them were valid. The methods and the chosen tools of the quantitative research are introduced, and the research plan in this area is introduced. An analysis and evaluation of data obtained from the research survey are also presented.

Key words Research design, research methods, research project, students' attitudes to the subject of pedagogy, teaching methods

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## 1. INTRODUCTION

There is a general consensus that some methods, such as problem-oriented learning, critical thinking methods and activation methods, are especially efficient for improvement of students' performance and attitude towards the subject.

The objective of our contribution is to introduce the design of a research survey and research tools that could put over the dimension of attitudes towards school subjects from the students' perspective to teachers, and thus point out negatively perceived areas in connection with taught subjects. Teachers can efficiently target and develop the educational environment for all their students. The improvement of the lesson quality also depends on the collection, analysis and dissemination of particular data of efficient procedures.

Attitude is one of the central terms of the humanities. This term was introduced by Thomas and Znaniecki in 1918 and quickly spread into other scientific branches and pedagogy too. A connection can be seen in the dissemination of research methods, especially questionnaire surveys that have been used for measurement of attitudes.

Examining of attitudes brings along many potential problems. The contemporary psychological knowledge related to the theory of attitude point out the following pitfalls. The term attitude is described in varying width in various contexts, and the fundamental question is various perception of what attitude consists of. We will start with three basic theories dealing with it. According to the first one, attitude includes thinking (cognitive aspects), emotions (feeling) and behaviour (Rosenberg & Hovland, 1960; Greenwald, 1968); according to another theory, it includes cognitive aspects and emotions (Bagozzi, 1978; Chudý, 2006); according to yet another one emotions (Fishbein & Ajzen, 1975). Regardless of these theories it is necessary to be aware of the fact that thoughts, feelings and behaviour can be in mutual contradiction, and all the three components influence each other and are influenced by social environment. This is why it should be clear as soon as when preparing an attitude research how attitude is understood and to what depth it will be examined. Bagozzi (1981) confirmed that various components of attitude correspond to various research tools. E.g. Likert-type attitude scales are the best to measure the cognitive area of attitude; semantic differential is the best to measure the affective component of attitude (Výrost, 1989). In general, the cognitive component of attitude can be studied through questioning by means of attitude scales, e.g. quantitative (cardinal) ones; the affective component can be described by means of ordinal variables with a scale of at least five options or during an unstructured face-to-face interview; the behavioural component by means of observation.

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There are more methodological problems that have to be considered in relation to research in attitudes. What is most mentioned and discussed is validity of research that intend to confirm the relation between attitude and behaviour. It has turned out that the observed connection between declared attitudes and behaviour is not very strong. An explanation is given by a study by Wicker who found out that intervening variables – personal and situational – show in natural behaviour. Real attitudes are never known – known are only responses in questionnaires. An impulse in a verbal situation is usually quite general while an impulse in situations of real conduct is very specific (Výrost, 1989, P. 62). The problem of causality arises in studying of the relation between attitudes and behaviour. Attitudes can influence behaviour, and behaviour can influence attitudes. Great importance is attached to researches examining attitudes' influence on conduct; it is proved by the fact that great changes and crystallization of attitudes are influenced by behaviour of a group. According to Myers (1999), opinions of objects that are not important for an individual and which one has to take a stand on, are evaluated by the same rules as the others' attitudes, especially by behaviour. Outcomes of researches in attitudes show other limit: obligation to respond despite the fact that the respondent's attitude towards the question is not strong. This brings along a certain degree of distortion of outcomes because this respondent's response is not of the same significance as a response of an individual of stable and clear attitudes; it is rather a result of the necessity to choose an answer. Another problem is adjusting of responses to the demand of social acceptability. The respondent may write other than his/her sincere attitudes but sometimes tries to create a certain image of himself/herself in some cases (Chudý & Neumeister, 2014). It is possible to find this phenomenon termed as "social desirability" in English-written literature (Vávra, 2006). This is merely a list of the most important issues encountered by a researcher when studying attitudes.

This presented theoretical knowledge is applied in the next part of the contribution where the research survey is presented.

## 2. DESIGN AND AIMS OF THE RESEARCH SURVEY

The theory of attitudes presupposes certain relations between variables and shows what to study. Our study is based on the above stated approach of the study of attitude presented by Výrost (1989): *Attitudes and their efficient influencing and creation under the influence of external intentional influences. Attitudes and study of groups as a key way to apply social psychology in social practice*. Thus it is presumed that a student's attitudes to the taught subject is one of the entrance determinants of the educational process and are perceived as a prerequisite of the *development of a student's personality as well as a prerequisite of efficiency of the educational process, learning and development of his/her motivational and self-regulative dispositions*.

If the level of this variable is known it is possible to choose more efficient and adequate educational methods in relation to a student, effectively react and influence his/her behaviour. Research attention is paid to teaching methods that are perceived as a predictor of the process of forming of students' attitudes towards the subject of Pedagogy.

When choosing a methodology for the research survey we start with the object of our research, i.e. students' attitudes to the subject of Pedagogy and teaching methods in Pedagogy lessons at secondary school.

Research questions lead the planning of the research project and are followed by the fundamental design aiming of the research project.

- Is there a relation between students' final attitudes towards the subject of Pedagogy and teaching methods?
- What are students' attitudes towards the subject of Pedagogy where traditional teaching methods prevail?
- What are students' attitudes towards the subject of Pedagogy where activation methods prevail?

These research questions are followed by formulation of the research objectives that are of both descriptive and relational character and can be seen on two levels of functional and object goals.

The following functional goals are pursued in the research survey<sup>1</sup>:

- To find out what are students' attitudes towards the subject of Pedagogy. To evaluate and describe students' attitudes towards the subject of Pedagogy.
- To find out what teaching methods and organizational forms are used in Pedagogy lessons.
- To confirm and describe the mutual relation between students' attitudes towards the subject of Pedagogy and teaching methods.

The output of our research activity is defined by means of the set object goals in the form of a measurable quantified output.

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<sup>1</sup> Functional goals related to the planned research activity and strategically aiming the research activity in a certain direction indicate what should be done in the research. Object goals define the research activity in the form of a measurable output (outcome). Object-defined goal directs the research towards a particular measurable output.

- Evaluated students' attitudes towards the subject of Pedagogy, evaluated teaching methods and organizational forms of the subject of Pedagogy.
- Evaluated relation between the attitude towards the subject of Pedagogy and specialization studied by students of secondary teaching school.
- Described relation between the attitude towards the subject of Pedagogy and particular years of secondary teaching school.
- Found relations between the used teaching method and the attitude towards the subject of Pedagogy.

### 3. RESEARCH SURVEY METHODS AND TOOLS

A suitable research methodology is considered on the basis of these set goals. Tools of first choice of research methods are semantic differential, direct structured observation of lessons and a questionnaire using Likert scale for understandable reasons.

The following text presents specifics of particular methods in relation to research in attitudes and teaching methods, and these research tools will subsequently be chosen and designed.

**Table 1. Research tools**

Affective component of attitude towards the subject of Pedagogy	Cognitive component of attitude towards the subject of Pedagogy	Teaching methods of Pedagogy lessons
ATER questionnaire (tested battery of scales and adjectives) - Technique of free associations when formulating the meaning of the term subject of Pedagogy - Semantic analysis of a set of words	Likert-type questionnaire: answers on a five-point scale, the middle option includes the answer "I cannot judge". Respondents express either agreement or disagreement with a presented statement in the form of answer "I absolutely disagree" up to "I absolutely agree".	Direct structured observation of lessons - teaching methods of the subject of Pedagogy (classification according to Maňák & Švec, 2003), - organizational forms (classification according to Vališová & Kasíková, 2007), - phases of lessons (Maňák, 1999). Observation sheet: occurrence and length of observed categories.

The following text gives the characterization of selected methods in relation to their use for our research

#### **3.1. Semantic differential for evaluation of the affective component of attitude towards the subject of Pedagogy**

*Attitude towards the subject of Pedagogy* was set as a dependent variable in the presented research survey. Semantic differential was selected as the method of its measurement. This method embedded in psychology was one of the most widely used research techniques at the turn of the 1950s and 1960s. We believe that this method has not been fully used in pedagogical research despite its great variability of its application, and it is not regularly used in school reality either. An advantage of semantic potential is that it eliminates weaknesses of questionnaire surveys to a certain extent where various respondents can ascribe various meanings to various questions, and thus answer to something else despite appropriately formulated questions. Then it is possible to use this method for measuring of attitudes, study of problems in the area of values, emotions and also observing a change of attitudes mainly by means of a properly chosen impulse word.

There are also its alternative versions, nonverbal semantic differential with graphically presented poles or colour semantic differential used in our country. The method of colour semantic differential was used e.g. in a research survey in young persons for indicative psychological examination; it allows assessment to what extent school and teachers are part of a respondent's sphere of interest (Večerka et al., 2004, Pp. 126-127).

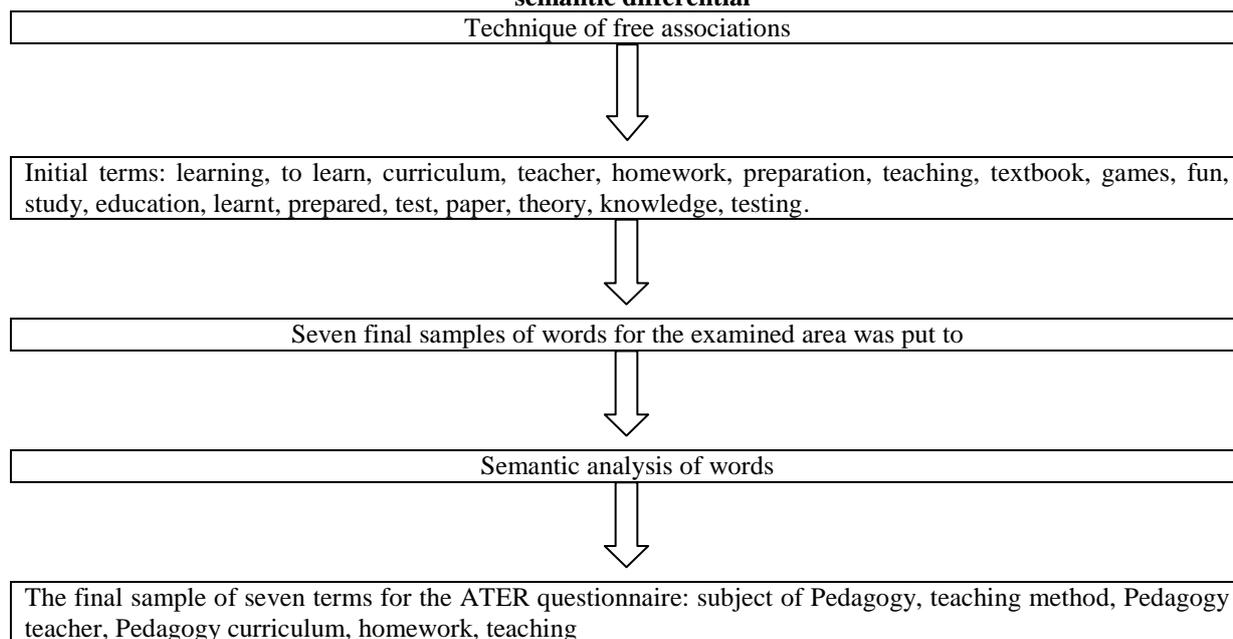
When designing a tool, it is necessary to follow the rules of its design.<sup>2</sup> Semantic differential is now used not quite correctly to describe any method containing bipolar pairs of adjectives. Vašátková and Chvál (2010) point out one of the basic pitfall in its design – representativeness and relevance of pairs of adjectives. The design of semantic differential seems too time consuming for the planned research; this is why we applied the ATER research tool, already used in pedagogic practice (Šlímová, 2009; Nábělková & Vyhnálková, 2010). Our task was to select suitable impulse words representing attitude towards the subject of Pedagogy. First, the technique of free associations was applied in creation of the meaning of the term pedagogy. The outcomes showed what

<sup>2</sup> The basis is five- to seven-point scales with bipolar adjectives as their end options. The respondent's task is to evaluate and mark an impulse word with regard to the given adjectives on each scale of adjectives.

were the associations of this term in students on the ISCED 3 educational level in their school environment, and it was verified whether this technique was applicable for creation of the term pedagogy.<sup>3</sup> This was how we got final sets of words for the examined area and applied semantic analysis to it. Validity and correctness of the selected words were verified in a suitably chosen group of 27 students selected on the basis of age, gender, type of school so that our selection corresponded with the objective of particular measured areas of attitudes. Subsequently, relations between the words and the examined area were measured.<sup>4</sup>

We examined the distinguishing capacity of each term at the same time. After an analysis of the proposed word groups and their testing in our test group, only such words were left in which a relation with the examined area and the differentiation capacity were confirmed. It resulted in a sample of 7 terms which were most relevant for the particular scales of the ATER questionnaire, see the following picture.

**Picture 1. Chart of the selection of impulse words for the ATER questionnaire created on the basis of semantic differential**



The ATER questionnaire is subject to: an analysis of responses on the level of particular scales and adjectives, an analysis of responses on the level of particular dimensions – semantic space. The meaning of the term pedagogy is evaluated in the entire group of the respondents.

### **3.2. Likert-type questionnaire for evaluation of the cognitive component of the attitude to the subject of Pedagogy**

A Likert-type questionnaire<sup>5</sup> is designed for evaluation of the cognitive component of attitude; it is of the type of independent responses, i.e. a response to an item does not influence responses related to other items. It is pointed out in relation to the use of these research tools that consistency of an attitude in the cognitive and emotional areas is questionable, i.e. emotional relation to a certain object does not have to be in agreement with

<sup>3</sup> The term pedagogy was examined by means of the technique of free associations, so-called uncategorized, unstructured clustering without relations. What was observed in the final cluster was terms that were repeated, unusual, significant and fell within our category. The following stage of solving the problem was based on these terms: *learning, to learn, curriculum, teacher, homework, preparation, teaching, textbook, games, fun, education, learnt, prepared, test, paper, theory, knowledge, testing.*

<sup>4</sup> Correlations on the level of significance 0.05

<sup>5</sup> A Likert scale consists responses on a five-option scale where the midpoint includes the answer “I cannot assess”. Respondents express either agreement or disagreement with the presented statement in the form of from the response “I absolutely disagree” to “I absolutely agree”. Suitability of formulation of particular questions and the value of questionnaires in total were verified by means of realization of a pilot research. We tried to find out whether the respondents understood particular questions in a similar way to the questionnaire authors’ understanding, whether the selected form of asked questions would provide a sufficient amount of outputs suitable for the research objective.

knowledge or cognitive treating of this object.<sup>6</sup> Bradburn, Sudman, & Wansink (2004) note that attitudes should be investigated as a combination of responses to several questions. Nineteen statements were formulated for our questionnaire; these are arranged into groups corresponding with term indicators of the ATER questionnaire. Its output is a list of absolute and relative frequency of matching of coefficients to options on a scale and calculation of average coefficients.

### 3.3. Observation of lessons of the subject of Pedagogy for evaluation of teaching methods

Direct structured observation of lessons was used. The following categories are chosen for our observation sheet: teaching methods, organizational forms and stages of lesson. It is based on valid classifications: Maňák & Švec (2003); Vališová & Kasíková (2007); Chudý (2004) and Maňák (1999). Occurrence and duration of the observed categories were recorded in the observation sheet. The teacher and students' activities, the use of didactic aids are observed. The number and duration of the observed categories are recorded, relations between the categories are evaluated.

## 4. RESEARCH SURVEY OUTCOMES

### 4.1. Outcomes of semantic differential evaluating the affective component of the attitude towards the subject of pedagogy

The ATER questionnaire evaluated seven term indicators. The outcome is expression of the respondents' attitudes towards these evaluated terms: subject of Pedagogy, teaching method, activation method, Pedagogy teacher, Pedagogy curriculum, homework, teaching. Each term is evaluated on the basis of two factors. The evaluation factor captures the respondent's perception of the particular term from the viewpoint of good or evil. The energy factor represents the respondent's understanding of the term as something demanding, exhausting Chráska (2007, P. 221).

Table 2 gives final values of the evaluation and energy factors that were calculated from values of semantic differential of all the respondents. The purpose is to find out how the respondents from secondary teaching school perceive the observed terms. Attention will be focused on mutual distance of the observed terms, comp. Poschl (2011, P. 12). Data form semantic space can be interpreted in the sense that the smaller the distance between the terms is the closer the meanings of these terms are. And on the contrary: the more distant the terms are, the more different the respondents perceive the meaning of the given terms.

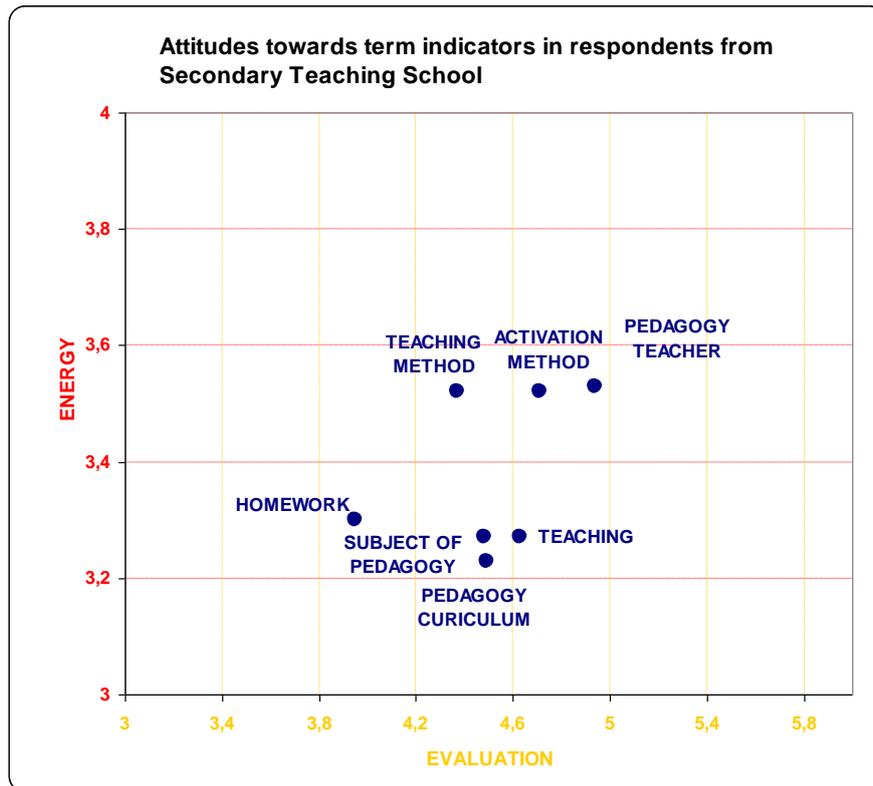
**Table 2. Respondents' overall attitude towards term indicators**

Overall attitude	Subject of Pedagogy	Teaching method	Activation method	Pedagogy teacher	Pedagogy curriculum	Homework	Teaching
Evaluation factor	4.48	4.37	4.71	<b>4.94</b>	4.49	3.95	4.63
Energy factor	3.27	3.52	3.52	<b>3.53</b>	3.23	3.30	3.27

Table 2 shows that the best perceived term is Pedagogy teacher; this term is perceived as the most demanding one at the same time. The least demanding one is Pedagogy curriculum for the students. Homework is evaluated least positively by the students. Distance of these terms orientation in the results can be best described graphically by means of semantic space (graph 1).

<sup>6</sup> The other's opinion can be accepted rationally, logically but it may be unacceptable for us in the emotional area.

**Graph 1. Semantic space of particular indicators**



The term SUBJECT OF PEDAGOGY is a reference point in our semantic space, and the calculated distance from the other terms allows a further interpretational meaning, whether in comparison among the students, comparison of the classes or in the course of time (Vašátková & Chvál, 2010).

The following table 3 shows how closely the particular terms are perceived by our group of students (the lower the value of D-statistics is, the closer the terms are in their meaning). Thus the table represents the so-called D-matrices drawn up on the basis of the calculation of particular D-statistics for all possible combination of pairs of the observed terms in the students' semantic space. Orientation and the work with data in the table is made easier by colour highlighting of data in the table. D-statistics values under 1 are marked by the darkest colour; D-statistics values over 1 are of the lightest colour.

**Table 3. Matrix of distance of terms**

matrix of distance of terms	Subject of Pedagogy	Teaching method	Activation method	Pedagogy teacher	Pedagogy curriculum	Homework	Teaching
Subject of Pedagogy	<b>X</b>	0.44	0.61	0.60	0.09	1.04	0.22
Teaching method		<b>X</b>	0.40	0.65	0.52	0.85	0.44
Activation method			<b>X</b>	0.57	0.69	0.94	0.45
Pedagogy teacher				<b>X</b>	0.62	1.43	0.54
Pedagogy curriculum					<b>X</b>	1.12	0.28
Homework						<b>X</b>	1.00
Teaching							<b>X</b>

**4.2. Outcomes of the Likert-type questionnaire for the cognitive component of the attitude towards the subject of Pedagogy**

The questionnaire was used to find the students' attitude towards the subject of Pedagogy. It consisted of 19 statements set on the basis of the selected fields. The fields correspond with the term indicators used in the Semantic Differential method: *subject of Pedagogy*, *teaching method*, *activation method*, *Pedagogy teacher*, *Pedagogy curriculum*, *homework*, *teaching*. The outcomes of the research survey are presented in the students of the preschool and extra-curricular pedagogy and teaching lyceum specializations.

The data assessment started with calculation of absolute and relative frequencies, matching of coefficients to positions on the scale and calculation of average coefficients. Matching of coefficients followed the rule that the most favourable attitude (*I absolutely agree*) was assigned coefficient 5, and other coefficients were assigned up to the least favourable attitude (*I absolutely disagree*) which was assigned coefficient 1. Coefficient 3 expressed the respondent's ambivalence (*I cannot judge*). After finding out the frequency of choices in each statement, it was necessary to multiply them by the corresponding coefficients. The outcomes in the students of preschool and extra-curricular pedagogy bring the following findings. The first questionnaire item: *Teaching methods used in Pedagogy lessons are interesting*, can be interpreted in this way: The 2<sup>nd</sup> and 3<sup>rd</sup> year students do not have a clear attitude towards the teaching methods; on the contrary, the 1<sup>st</sup> year students evaluate them positively. The use of suitable teaching methods interesting for students is important for adopting a positive attitude towards the subject in students. It would be useful to further explore why the students of the higher years do not perceive the teaching methods so unambiguously. What definitely is a positive finding is the responses to item 5 (*We are encouraged to cooperate during the lessons*) and item 6 (*Space for discussion is created during the lessons*). The outcomes indicate that teaching is focused on the student's own activity.

When focusing on the 1<sup>st</sup> year and comparing item 3 (*Teaching methods used in Pedagogy lessons are interesting*) and item 7 (*The teacher explains the issue in an interesting way*), we find certain inconsistency. On one hand, the 1<sup>st</sup> year students perceive the teaching methods as interesting; on the other hand, they cannot judge whether the teacher explains the issue in an interesting way. More positive attitude in item 7 would be expected in the 1<sup>st</sup> year students. Nevertheless, it turns out that the students evaluate the teacher's teaching style rather positively, and the teacher is appreciated as an expert in the subject of Pedagogy in all the years what corresponds with item 8 (*The teacher gives me an impression of an expert in her branch*).

There is an absolute harmony among the years in item 11 (*I prepare for the lesson only when I expect an exam or test*), item 13 (*Preparation for the lessons is time consuming and content demanding for me*) and item 17 (*Terms and definitions from the Pedagogy curriculum are difficult to understand for me*). It is possible to conclude on the basis of the responses that terms and specialist definitions from the curriculum are not difficult for the students of preschool and extra-curricular pedagogy; they perceive their preparation for the lessons that is not demanding for them, and they prepare for the lessons only when an examination or test is announced.

Only the 2<sup>nd</sup> year students have a clear attitude towards item 18 (*I may apply my creativity, independence and ideas in the lessons*) and item 19 (*The students' active participation is part of the explication*). It is possible to conclude on the basis of the outcomes that the teacher applies the approach of students' active participation in the lessons what contributes to creation of a positive attitude towards the subject. It is possible to sum up that there are differences among the responses to some items in the particular years. These are probably caused by the teachers' different teaching styles and approaches.

Interesting findings were brought by responses of the Teaching Lyceum students. The responses to the items are most distinct in the 2<sup>nd</sup> year. The 2<sup>nd</sup> year students do not actively participate in the lessons, and creation of a positive attitude towards the subject is not fulfilled here. This is concluded on the basis of the results from item 4 (*Explanation is the most frequently used teaching method*), item 12 (*Illustrative aids are used in the lessons*) and item 18 (*I may apply my creativity, independence and ideas in the lessons*). The results indicate that the students experience boredom in the lessons what may be contributed to by the teaching methods used in the lessons by the teacher. The 2<sup>nd</sup> year students mentioned explication as the most frequently used teaching method. They also state that illustrative aids are not used in the lessons. We think a more active approach of the students during the lessons should be used with regard to abstractness of the subject curriculum and the demanding nature of the curriculum theoretical framework of the 2<sup>nd</sup> year.

The outcomes show that item 6 (*Space for discussion is created during the lessons*) is confirmed only by the 3<sup>rd</sup> year students. The students from the other years cannot judge to what extent the method of discussion is applied in the lessons. In spite of it, the 1<sup>st</sup> year students agree with the statement of item 14 (*The teacher supports me in presentation of my own opinion*).

The 1<sup>st</sup> and 2<sup>nd</sup> year students agree on responses to item 7 (*The teacher explains the issue in an interesting way*) and item 8 (*The teacher gives me an impression of an expert in her branch*). It definitely is a positive finding of having such a positive approach to their teacher. The students from all the years agree on the answer to items 11 and 17 related to preparation for the lessons and the demandingness of definitions and terms in the subject of Pedagogy. There is an apparent influence of the teacher's teaching style and approach; it also showed in similar evaluation of the questionnaire items by students of different specializations taught by the same teacher.

### **4.3. Outcomes of direct structured observation of Pedagogy lessons**

The outcomes of direct structured observation include in total 6 observations of three teachers of the subject of Pedagogy. These are expert teachers in all the three cases.

The objective of the performed direct structured observation was to find out what teaching methods and organizational forms were applied by the teachers in Pedagogy lessons and at which stages these were applied. The following conclusions were reached on the basis of the outcomes of the direct structured observation of the Pedagogy lessons. The most frequently methods applied by the teachers were classical teaching methods (163 minutes). The majority of time was dedicated to the method of explanation and dialogue. Activation methods were applied – they occurred in lessons of two teachers. The following table 4 illustrates the occurrence of particular teaching methods and their duration.

**Table 4: Applied teaching methods in Pedagogy lessons and their duration**

Teaching method	Subject of Pedagogy			
	Duration (minutes)			
<b>Classical teaching methods</b>	<b>Teacher 1</b>	<b>Teacher 2</b>	<b>Teacher 3</b>	<b>Σ</b>
Text work	15	–	–	<b>15'</b>
Dialogue	38	10	4	<b>52'</b>
Explanation	12	25	59	<b>96'</b>
<b>Activation methods</b>	<b>Teacher 1</b>	<b>Teacher 2</b>	<b>Teacher 3</b>	<b>Σ</b>
Discussion	15	–	–	<b>15'</b>
Didactic game	–	15	–	<b>15'</b>
<b>Complex teaching methods</b>	<b>Teacher 1</b>	<b>Teacher 2</b>	<b>Teacher 3</b>	<b>Σ</b>
Group teaching	–	20	–	<b>20'</b>
Partner teaching	–	7	8	<b>7'</b>

Source: Based on the author's research

The following table 5 depicts how many minutes were dedicated to classical, activation and complex methods in total.

**Table 5: Time distribution of teaching methods**

	Total	
	minutes	%
Classical methods	163	62
Activation methods	30	11
Complex methods	27	10
Teaching methods in total	220	84
Organizational matters	42	16

Source: Based on the author's research

We were interested in the relationship of teaching methods and organizational forms of teaching. The outcomes are presented in the following table.

**Table 6: Relationship of organizational forms and teaching methods**

Classical teaching methods	Text work	Dialogue	Explanation
	Organizational form of individual teaching	–	10
Organizational form of frontal teaching	15	42	96

Activation of teaching methods	Discussion	Didactic game
Organizational form of frontal teaching	15	15
Complex teaching methods	Partner teaching	Group teaching
Organizational form of pair teaching	15	–
Organizational form of group teaching	–	20

Source: Based on the author's research

Table 6 indicates that the most frequent organizational form is frontal teaching. This may lead to a conclusion that the teacher's role is dominant in the lessons. Further, the organizational forms of individual teaching, pair teaching and group teaching are applied in the lessons. The used organizational forms are interrelated with the used teaching methods. Most teaching methods are applied in the frontal organizational form. This finding is related to both the traditional and activation teaching methods. The complex methods are applied in harmony with the organizational forms of pair and group teaching.

The teaching methods are applied at various stages of the lessons. The teaching process is theoretically divided into the stages of introduction, exposition, fixation, diagnosis and application. The following table 7 is focused on the relations of the teaching methods and the lesson stages.

**Table 7: Relation of the lesson stages and the teaching methods**

Lesson stages	Teaching methods			Σ
	Classical methods (minutes)	Activation methods (minutes)	Complex methods (minutes)	
introduction	–	–	–	–
motivation	10	–	20	30'
exposition	96	–	–	96'
fixation	15	15	7	37'
diagnosis	14	15	–	29'
aplication	28	–	8	36'

Source: On theadě výzkumu autora

Table 7 shows that most time is dedicated to exposition of new information by means of traditional methods. It is followed by the lesson stage of application which is very important for interconnecting theoretical knowledge with practice. It enables students to better understand and remember taught information. Traditional methods were applied most frequently on the lesson stage of application of taught information. These were followed by complex methods. Implementation of the lesson stage of application is certainly a benefit in teaching of the subject of Pedagogy that is based on theoretical knowledge.

The introductory lesson stage is not filled with teaching methods. The teachers dealt with organizational issues on this stage and then proceeded to other lessons stages. The stage of motivation that was important for attracting the students' interest in the taught issue, took 30 minutes. Both the traditional and complex methods were applied. We believe in relation to the lessons stage of exposition that the motivation stage should be given more time. The stage of motivation is suitable for the use of activation methods. Still, these were not applied in any of the lessons. The activation methods were used by the teachers most frequently in the lesson stage of fixation and diagnosis. The taught information is fixed by means of various teaching methods. The classical, activation as well as complex methods were applied here.

## 5. HYPOTHESIS TESTING

The following hypotheses are tested on the basis of findings from the ATER questionnaires, direct structured observation and the Likert-type questionnaire. The hypotheses were verified by means of suitable statistical tests with the use of p-value on the significance level of 0.05.

**H1** – *The students of preschool and extra-curricular pedagogy have different attitudes towards the subject of Pedagogy in comparison to the students of pedagogic lyceum.*

The attitude towards the subject of Pedagogy was evaluated by means of the average of items for the evaluation factor 1, 3, 4, 7, 9 of the questionnaire survey of the semantic differential method. Thus, two groups of averages, averages of evaluation by the students of preschool and extra-curricular pedagogy and averages of evaluation by the students of pedagogic lyceum, are compared. So-called two-sample tests are used for statistical comparison of two groups of values. The choice of a particular test depends mainly on the fact whether the data are distributed in a normal way what can be seen in Table 8.

**Table 8: Testing of normality of data distribution in hypothesis 1**

Specializaton	N	P-value	Decision of normality
PEP	78	<0.01	NO
LYC	83	<0.01	NO

Source: Based on the author's research

Table 8 indicates that the sizes of both the samples are relatively great. This is why the Lilliefors test of normality was used subsequently; its null hypothesis is normality of distribution of the sample values. P-value of both the tests was below 0.05. Thus normality is negated in both the samples.

With regard to the fact that the data are not of normal distribution, the nonparametric Mann-Whitney test was used for the two-sample comparison. The null hypothesis of the Mann-Whitney test is that medians of both the samples are the same.

**Table 9: Outcomes of the statistical testing of hypothesis 1**

Value of test statistics	P-value	Decision about H0
3190	0.876	Not rejected

Source: Based on the author's research

*The null hypothesis is not rejected on the basis of the outcomes of p-value of 0.876.*

**Conclusion: There is no statistically significant difference in evaluation of the subject of Pedagogy between the students of preschool and extra-curricular pedagogy and the students of Pedagogic Lyceum.**

**H2** – *The students of the lower years have more positive attitudes towards the subject of Pedagogy compared to the students of the upper years.*

Hypothesis 2 is verified by multiple comparison of the students' attitudes towards the subject of Pedagogy, for each year separately. Values were examined in students of three years, thus three groups will be compared. It is possible to choose from two statistical methods in such a case. Analysis of variance is used when all groups are of a normal distribution of values. If this precondition is not fulfilled, it is possible to use the Kruskal-Wallis test.

Despite the fact that the size of the compared groups increased after the division of the data sample into particular years, it is still possible to use the Lilliefors test for testing of normality.

**Table 10: Testing of normality of the data distribution in hypothesis 2**

Year	N	P-value	Decision of normality
1	55	<0.01	NO
2	52	<0.01	NO
3	54	<0.01	NO

Source: Based on the author's research

Table 10 shows that the Lilliefors test rejects normality of distribution of the values of evaluation of the subject of Pedagogy in all the years; this is why the Kruskal-Wallis test will be applied.

**Table 11: Outcomes of the statistical testing of hypothesis 2**

Variable	According to variable	Value of test criterion	P-value	Decision of H0
Evaluation of the subject of Pedagogy	year	1.92	0.3830	not rejected

Source: Based on the author's research

The null hypothesis of the Kruskal-Wallis test is: The medians of the compared groups are the same. Because p-value is more than 0.05, the null hypothesis of the Kruskal-Wallis test is not rejected.

**Conclusion: There is no statistically significant difference among the particular years in their evaluation of the subject of Pedagogy.**

*On the basis of testing of the previous hypotheses, it was proceeded to testing of the principal hypothesis for the examined issue:*

**H3** – *There is a relation between the students' attitudes towards the teaching methods and their attitudes towards the subject of Pedagogy.*

This theoretical hypothesis corresponds these statistical hypotheses:

**H0** – *There is no difference in the attitudes towards the subject of Pedagogy between the students of positive and negative attitudes towards the teaching methods in Pedagogy.*

**HA** – *The students having a positive attitude towards the Pedagogy teaching methods show different attitudes towards the subject of Pedagogy in comparison with the students having a negative attitude towards the subject of Pedagogy.*

The relation between the students' attitudes towards the subject of Pedagogy and the attitude towards the teaching methods of Pedagogy was tested by means of the Pearson correlation coefficient on the significance level of 0.05.

The Pearson correlation coefficient expresses a measure of linear dependence between the tested variables. Values of the Pearson correlation coefficient varies between -1 and 1; values near 0 indicate linear independence and values approaching +1(-1) indicate (direct) indirect linear dependence. Positive significant values indicate that higher values of a variable correspond with higher values of another variable. Negative significant values express the opposite relation, i.e. higher values of the first variable correspond with lower values of the second variable and vice versa (Chráska, 2007, P. 115).

Table 12 shows positive and negative correlations in each term indicator. The factor of evaluation is interpreted according to Chráska (2003) as good or wrong of the term. Thus it expresses in what way the student evaluates the particular term. The factor of energy is interpreted as a relations of the term to movement and changes. The students informs us of demandingness of the particular term here.

**Table 12: Correlations of the students' attitudes towards teaching methods and attitudes towards the subject of Pedagogy**

Indicators of attitudes towards the subject of Pedagogy	Correlation coefficient Teaching method (factor h)	Correlation coefficient Teaching method (factor e)
SUBJECT OF PEDAGOGY h	0.484*	-0.248*
SUBJECT OF PEDAGOGY e	-0.166*	0.672*
ACTIVATION METHOD h	0.249*	-0.042
ACTIVATION METHOD e	0.134	0.192*
PEDAGOGY TEACHER h	0.579*	-0.377*

PEDAGOGY TEACHER e	-0.226*	0.497*
PEDAGOGY CURRICULUM h	0.237*	-0.186*
PEDAGOGY CURRICULUM e	-0.094	0.435*
HOMEWORK h	0.228*	-0.169*
HOMEWORK e	0.052	0.407*
TEACHING h	0.383*	-0.253*
TEACHING e	-0.107	0.518*
<i>Education reality h</i>	0.602*	-0.364*
<i>Education reality e</i>	-0.092	0.6*

Source: Based on the author's research

It is clear from table 12 that the strongest direct linear dependence occurs between the factor of energy of the term SUBJECT OF PEDAGOGY and the factor of energy of the term TEACHING METHOD. This finding can be interpreted as follows: the more demanding the student considers the subject of pedagogy, the more demanding she/he considers the teaching methods applied in the lessons.

Another relatively strong direct linear dependence is seen between the factor of evaluation of the term PEDAGOGY TEACHER and the factor of evaluation of the term TEACHING METHOD. It is possible to state on the basis of this correlation that the more positive attitude is adopted towards the Pedagogy teacher by the student, the more positive is her/his attitude towards the teaching method.

In relation to positive correlation it is possible to note the result between the terms of evaluation of TEACHING and evaluation of TEACHING METHOD. This positive correlation indicates that the students who perceive teaching in a positive way also perceive teaching methods in a positive way. This outcome shows that teaching methods are in a certain relation to the way in which the student evaluates and perceives the subject as such.

When looking for negative correlation in the table, the most evident correlation occurs between the terms PEDAGOGY TEACHER factor of evaluation and TEACHING METHOD factor of energy. This finding indicates that the more positive attitude towards the Pedagogy teacher is adopted by the student, the less demanding the teaching methods applied in the lessons are perceived.

The table shows that the pairs of factors of evaluation (h-h) nearly always correlate in a positive way. The pairs of factors of energy and evaluation (e-h) and evaluation and the factor of energy (h-e) nearly always correlate in a negative way. This finding leads to the conclusion that if a student enjoys something, she/he feels that it costs her/her less energy and does not consider it difficult (the higher value of the factor of evaluation, the lower value of the factor of energy). Similarly it is possible to say that if a student does not enjoy something it costs her/him more energy and considers it demanding and difficult (this is presented by a lower value in the factor of evaluation and a higher value of the factor of energy in the table).

This outcome is also reflected in *Educational reality*. It is caused by high frequency of positive correlations of the factor of evaluation and the factor of evaluation of the term indicator teaching method.

The values in the table indicate both direct and indirect dependence between the observed phenomena. These mutual relations are confirmed on the basis of the calculated correlations between *the students' attitudes towards the particular indicators, educational reality* and the attitude towards the teaching method, and *the suggested hypothesis H3 is accepted*.

**Conclusion: The students who perceive SUBJECT OF PEDAGOGY, ACTIVATION METHODS, TEACHER, CURRICULUM, HOMEWORK AND TEACHING as more positive also adopt a more positive attitude towards the teaching method.**

## 6. DISCUSSION

The contribution introduced the suggested design of the realized research survey dealing with the influence of teaching methods on students' resulting attitudes towards the subject of pedagogy. The prevailing methods in the first part of the research were quantifying methods using the method of semantic differential and the Likert-type scale questionnaire; their outcomes help evaluate and interpret the students' attitudes towards the subject of Pedagogy. The second part of the research included evaluation of the teaching methods in the Pedagogy lessons by means of direct structured observation with the objective to prepare materials for testing of statistical relations.

We found correlations between variables by means of this suggested research design; still we could not define why these relations exist. The methods used in the research correspond with the types of research within which are working. The combination of the chosen research tools allowed us to mutually verify the conclusions and thus increase validity of our interpretations. It is possible to state on the basis of testing the principal hypothesis 3 that teachers can form students' attitude towards the subject by means of teaching methods, and

thus increase popularity and interest in the curriculum they teach. It was proved statistically that if a student enjoys and is interested in something she/he does not find it demanding or difficult. And vice versa, if a student does not enjoy something, she/he finds it difficult and demanding at the same time. To make their subjects more interesting for students, teachers may use teaching methods based on students' own activity. Students will probably enjoy stuff they can experience in comparison to passive reception of information from their teachers. We see this as an important starting point for designing a model of pregradual training of future Pedagogy teachers.

The observed dependent variable was a student's attitude towards the subject of Pedagogy. Hypothesis 3 can be related to the set dependent variable. It was found on the basis of outcomes obtained by means of semantic differential that the factor of evaluation expressing popularity of the subject is 4.48 for the subject of Pedagogy, and the factor of energy expressing demandingness of the subject is 3.27. The outcomes can be interpreted in the sense that the students' attitude towards the subject of Pedagogy is neutral but approaching positive evaluation. The students do not consider it an overly demanding subject.

These outcomes correspond with the outcomes obtained by the Likert scale: this confirmed that the students study for the lessons only when a written or oral examination is announced. They do not regard preparation for the Pedagogy lessons to be time or effort demanding. They do not have problems with theoretical demandingness of the subject. The neutral attitude was confirmed by the Likert scale where the students answered the questions whether the subject of Pedagogy is more interesting than other subjects and whether they enjoy the subject of Pedagogy. What we regard a positive finding is that despite the fact that the attitude to the subject seems neutral most students plan to continue their pedagogical studies at university according to the outcomes from the questionnaire. This can be caused by their interest in pedagogy as well as by a certain influence of their parents who have influence on their children's educational path. Education of the students' parents is concentrated in secondary education with school-leaving examination in our research. This is followed by parents of higher education.

## 7. CONCLUSION

The objective of our contribution was to introduce the design of a research survey and research tools that could put over the dimension of attitudes towards school subjects from the students' perspective to teachers, and thus point out negatively perceived areas in connection with taught subjects. The outcomes presented here can serve for preparation of other research tools and designs of new research surveys, as inspiration for future conceptual tasks of research. The contribution can further serve as a complex example of research for researchers dealing with interpretative and quantitative research methods in order to understand pedagogical reality and the logic of research in psychological sciences. And vice versa, there is also an endeavour to integrate psychological knowledge into pedagogical research.

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# Theoretical background for the law of retail gravitation

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## ABSTRACT

One of the many phenomena which may be used to characterize the United States in the late nineteenth and early twentieth centuries is the rapid change which occurred in retail trade relations in various parts of the country. The common feature of these changes was the flow of retail business from small towns to large cities. However, no general analytical laws were known to describe the rise and distribution of this flow of retail business in space and time. From 1927-1930 W. J. Reilly conducted a nationwide study of retail dynamics. One of the findings of this study was the scalar law of retail gravitation. This law of Reilly considered the unidirectional flow of retail trade from small towns to large cities. The reverse flow of retail trade from large cities to small towns was not considered because at the time it was far less significant compared to the flow of retail trade from small towns to large cities. Reilly's scalar one-dimensional model of retail gravitation is generalized in the three-dimensional vector model of retail gravitation for the geoid. The scalar potential of retail gravitation is introduced along with the vector of intensity of retail gravitation.

Keywords Intensity of retail gravitation, Newton's law of gravitation, Newton's laws of motion, Reilly's law of retail gravitation, space economics.

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## NOTE

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## 1. INTRODUCTION

The rapid growth of retail enterprise in the late 19th and early 20th century in the United States initiated significant changes in market structure in terms of space and time. It is very often mentioned with respect to this period that “movies, national magazines, newspapers, radios, rising standards of living, increased leisure and social life have helped to develop nation-wide style sensitivity” (Reilly, 1931, p. 3). This means that those people living in smaller towns began to want the same things that people had in the bigger cities. Shopping in city gradually began to be recognized as a nationwide mass consumption habit.

During this time, the retail map changed so quickly that manufacturers, wholesalers, retailers, advertisers and anyone else directly or indirectly involved in retail faced great difficulty in incorporating these changes in the retail map into their business.

In the autumn of 1927, William John Reilly began a preliminary study of the retail relationships which existed between various large cities and towns in a trial locality in the state of Texas. Seven cities were included in this preliminary study: Fort Worth, Dallas, Houston, Austin, San Antonio, El Paso and Waco. Retail data in these cities was gathered, making it possible to describe and analyze the effect on the retail of each city under various circumstances.

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This preliminary study had three main goals (Reilly, 1931, p. 56). The first goal was to determine what class of people and what types of goods sold comprised retail business drawn from smaller cities and towns to larger cities. The second goal was to discover the position of cities and towns of various sizes in the retail distribution system, i.e. what kinds of goods can every large city support in competition with larger markets. The third goal was to construct a method to measure the influence of cities on retail trade.

This preliminary study of retail relationships in Texas actually did analytically express natural relations which quantified the dynamic of retail trade in the areas surrounding the seven cities observed. The results of the preliminary study were so persuasive that before it was finished, the study area was expanded from just Texas to the entire country for a three year period. The nationwide study was carried out from 1927 – 1930 and gradually included 132 cities and towns in 23 states. A major finding of this three-year study of retail dynamics was that retail business is attracted from smaller cities and towns to larger cities according to a law with an analytical structure nearly identical to that of Newton’s law of gravity.

### Aims

With respect to consilience in economics and physics as well as social sciences and physics, physics is presented with the question of whether it is possible to derive Reilly’s law of retail gravitation from Newton’s law of gravitation. In this paper we will attempt to provide a brief answer to this question.

## 2. METHOD

The simplest formulation of Reilly’s law of retail gravitation is as follows (Reilly 1931, p. 9): “Two cities attract retail trade from any intermediate city or town in the vicinity of the breaking point, approximately in direct proportion to the populations of the two cities and in inverse proportion to the square of the distances from these two cities to the intermediate town”.

A breaking point in Reilly’s law of retail gravitation is defined as follows (Reilly 1931 p. 8): “A breaking point between two cities is defined as a point up to which one city exercises the dominating retail trade influence, and beyond which the other city dominates”. The breaking point lies on the shortest connecting line between the two cities attracting retail trade. The distance of the two cities is measured along the shortest highway connecting the two cities.

Let us assume we are given two large cities,  $A$  and  $B$ , with populations  $P_a$  and  $P_b$ . Let us further assume that around the breaking point there is an intermediate town  $T$  with population  $P_t$ . City  $A$  draws business  $B_{ta}$  and City  $B$  draws business  $B_{tb}$  from town  $T$ . W. J. Reilly presumed an analytical expression of the law of retail gravitation in the form

$$B_{ta} = \beta \frac{P_a^N}{D_{ta}^n}$$

(1)

$$B_{tb} = \beta \frac{P_b^N}{D_{tb}^n},$$

(2)

from which directly follows (Reilly 1931, p. 70)

$$\frac{B_{ta}}{B_{tb}} = \left( \frac{P_a}{P_b} \right)^N \cdot \left( \frac{D_{tb}}{D_{ta}} \right)^n .$$

(3)

Detailed economic investigation determined that  $N = 1$  and  $n = 2$ . The equation (3) then becomes

$$\frac{B_{ta}}{B_{tb}} = \left( \frac{P_a}{P_b} \right) \cdot \left( \frac{D_{tb}}{D_{ta}} \right)^2 .$$

(4)

From equations (1) and (2) we get a dimensional equation for the constant of proportionality  $\beta$  in Reilly's law of retail gravitation

$$c.u. = [\beta] \frac{pers.}{m^2}$$

(5)

from which we derive  $[\beta]$ ,

$$[\beta] = c.u. \cdot m^2 \cdot pers.^{-1}$$

(6)

### 3. RESULTS AND DISCUSSION

In the 1930s the volume of retail trade attracted to intermediate town  $T$  was small and W. J. Reilly did not consider this in the theoretical part of his study. At the present time the attraction of retail trade from the large city to intermediate town  $T$  is considered a common and economically significant phenomenon.

Equation (21) from the present work (Zeithamer 2015, these Proceedings), which is directly derived from Newton's law of gravitation, contains the ratio  $\frac{P_t P_a}{D_{ta}^2}$ . This ratio is essentially a generalization of Reilly's law of retail gravitation.

Let us assume that City  $A$  is represented on the geoid by a tangible point, the gravitational mass  $M_A$  of which is equal to the sum gravitational masses of individual members of the city's population, i.e.  $P_a$ . We define the potential retail gravitation of City  $A$  with the relation

$$\varphi(x, y, z) = \varphi(r) = -\alpha \frac{P_a}{D_a} = -\alpha \frac{P_a}{\sqrt{x^2 + y^2 + z^2}} ,$$

(7)

where  $D_a$  is the distance from City  $A$ ,  $D_a = \sqrt{x^2 + y^2 + z^2}$ ,  $\vec{D}_a = (x, y, z)$  is the position vector of the place of observation of retail trade volume. Proportionality constant  $\alpha$  is expressed in units  $[\alpha] = c.u. \cdot m^2 \cdot pers.^{-2}$ . Vector field  $\vec{K}_a$  of the intensity of retail trade gravitation on the geoid of the business territory of City  $A$  is determined by the negative gradient of potential of retail gravitation  $\varphi$

$$\vec{K}_a = -grad \varphi.$$

(8)

If we express position vector  $\vec{D}_a$  through its components along the axes of the coordinate system, i.e.  $\vec{D}_a = x\vec{i} + y\vec{j} + z\vec{k}$ , then for the intensity of retail trade gravitation

$$\vec{K}_a = -\alpha \frac{P_a}{D_a^3} \vec{D}_a = -\alpha \frac{P_a}{D_a^2} \cdot \frac{\vec{D}_a}{D_a} = \left( -\alpha \frac{P_a}{D_a^3} \right) x \vec{i} + \left( -\alpha \frac{P_a}{D_a^3} \right) y \vec{j} + \left( -\alpha \frac{P_a}{D_a^3} \right) z \vec{k}. \quad (9)$$

This means that for the magnitude of the vector of intensity of retail trade gravitation

$$K_a = |\vec{K}_a| = \alpha \frac{P_a}{D_a^2}.$$

(10)

Let  $A$  and  $B$  be two cities with large populations, which we mark  $P_a$  and  $P_b$ . Let us assume there also exists intermediate town  $T$  with population  $P_t$ , which is much smaller than the populations of cities  $A$  and  $B$ , i.e.  $P_t \ll P_a$  and  $P_t \ll P_b$ . We mark the distances of cities  $A$  and  $B$  from town  $T$  on lines  $D_{ta}$  and  $D_{tb}$ . Reilly's law of retail gravitation for pairs of cities  $A, T$  and  $B, T$  is then in analytical form expressed by the following relations

$$B_{ta} = \alpha(T, A) \cdot \frac{P_t P_a}{D_{ta}^2},$$

(11)

$$B_{tb} = \alpha(T, B) \cdot \frac{P_t P_b}{D_{tb}^2},$$

(12)

where  $B_{ta}$  is the business which City  $A$  draws from any given intermediate town  $T$  and  $B_{tb}$  is the business which City  $B$  draws from that intermediate town  $T$ . In equation (10)  $\alpha(T, A)$  is the constant of proportionality for populations  $P_t$  and  $P_a$  of cities  $T$  and  $A$ . In equation (11)  $\alpha(T, B)$

is the constant of proportionality for populations  $P_t$  and  $P_b$  of cities  $T$  and  $B$ . In accordance with W. J. Reilly, we assume that in equations (10) and (11) there is a universal constant of proportionality, i.e.  $\alpha(T, A) = \alpha(T, B) = \alpha$ . It then follows

$$\frac{B_{ta}}{B_{tb}} = \frac{\alpha \frac{P_t P_a}{D_{ta}^2}}{\alpha \frac{P_t P_b}{D_{tb}^2}} = \frac{P_a}{P_b} \cdot \left( \frac{D_{tb}}{D_{ta}} \right)^2.$$

(13)

By using the preceding theoretical approach, we once again derived Reilly's equation (4).

The expression of physical or economic quantities in basic units is simplified in brackets. Quantities from equations (10) and (11) are expressed in basic units in the following manner:  $[B_{ta}] = [B_{tb}] = c.u.$  (currency unit),  $[P_t] = [P_a] = [P_b] = pers.$  (person),  $[D_{ta}] = [D_{tb}] = m$  (meter). From equations (10) and (11) we get a dimensional equation for proportionality constant  $\alpha$  in Reilly's law of retail gravitation

$$c.u. = [\alpha] \cdot \frac{pers.^2}{m^2}$$

(14)

from which we get

$$[\alpha] = c.u. \cdot m^2 \cdot pers.^{-2}.$$

(15)

Let  $A$  and  $B$  be two cities with large populations, which we mark again  $P_a$  and  $P_b$ . Around the breaking point between the two cities ( $A$  and  $B$ ), the business drawn by City  $A$  is equal to the business drawn by City  $B$  since the ratio  $\frac{B_a}{B_b}$  at the sufficiently small neighborhood of any breaking point is always equal to one or almost equal to one.

#### 4.CONCLUSION

In this paper we assume that non-satiation axioms are general economic axioms which are associated with the genetic essence of life existing in any part of the Universe. Maximizing utility under given initial and boundary conditions is the foremost interest of every individual. Genetically coded into this maximizing of utility is the survival instinct of both the given individual and the species as a whole. The interaction of the geosphere with the biosphere given the maximizing of utility of individuals and groups of individuals results in the rise of temporary and permanent phenomena and regularities in the noosphere.

The paper only briefly outlines the basic construction of three-dimensional vector theory of retail gravitation on a geoid. This means that we describe the course of economic processes in space and time with respect to the cosmic space near Earth (i. e. in Space Economics).

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# Employing the people with Asperger Syndrome

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## ABSTRACT

This paper focuses on the issue of employment of people with Asperger syndrome. It explores the difficulties in finding work, at work, in contacts with colleagues in the workplace. The aim of the research was to: • identify problems that accompany the individual with AS in getting a job even if his performance; • find out in what areas of work are those with AS frequently employed; • find out whether they choose a similar job or it depends on the individuality of each of them; • ascertain how helpful the services such as “social skills training”, “supported employment” and “Self-advocates” are in finding and keeping work. For this purpose, a qualitative research was executed. The method of structured interviews with open questions and analysis of documentation was chosen. The research sample consisted of people with Asperger syndrome who are employed, or are in the stage of job seeking. The research showed that the greatest difficulties in employment for people with AS are in the areas of social interaction and communication. They adapt to change poorly and tend to be quieter and more efficient if they can observe certain rituals and stereotypes, possibly to work according to their own schedule. If being assigned clearly formulated tasks, they are efficient at work, very precise and meticulous. This paper is only a small probe into the complicated issue of employing individuals with a diagnosis of AS and can serve as a gateway to further explore this issue.

Keywords Asperger syndrome, Employing, Determinants of Success and Failure.

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## 1. INTRODUCTION

Work and employment are parts of life which are important for every individual. Nowadays, we usually encounter a progressive view that almost every person has the ability to work, including persons with certain disabilities and restrictions. It is apparent that some people need certain support and adjustments of conditions in order to be able to fully perform their work. Provision of economic independence is an important aspect of work. Even the very status of “being employed” has a positive influence on a person. An employed person has more opportunities to create and develop social interactions. Employment also enforces the feeling of usefulness and increases self-confidence. In the Czech Republic every tenth person is a person with health disability. These include people with physical, sensory (hearing, visual), speech, mental and psychological disabilities, combination of the aforementioned disorders or persons with civilizational diseases. (Collective of authors, 2010).

The charter of fundamental rights and freedoms stipulates that every citizen is entitled to choose his/her profession freely. Article 29 points out to the fact that “*persons with health disabilities are entitled to increased protection of health at work as well as to special working conditions. Young persons and persons with health disabilities are entitled to special protection in employment relations and support in preparation for the profession*” (Charter of fundamental rights and freedoms as a part of the constitutional order of the Czech Republic, 1992, Art. 29). The right to work and the fulfilment thereof leads up to an increased quality of life in persons with health impairment (hereinafter referred to as HI).

As is apparent from Table 1, the unemployment of disabled persons has been rapidly increasing since 1995 as well as the number of applicants per one job.

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**Table 1 - Specific unemployment rate of citizens with HI** (Collective of authors, 2010, p. 32).

Type of data monitored/year								
Numbers of AWC citizens * unemployment registration	22,687	31,455	40,460	48,951	57,615	59,025	61,518	66,907
Number of vacancies for AWC	1,506	1,489	1,291	1,242	1,349	2,811	2,108	1,747
Number of applicants per 1 vacancy	15.1	21.1	31.3	39.4	42.7	21	29.2	38.3
Specific unemployment rate (in %)	11.2	17.2	24.1	29.0	37.2	39.6	42.3	39.7

\*AWC – citizen with altered work capacity (title valid until 2004);

As of 30/09/2015, in the Czech Republic, 57,378 persons of the total number of 441,892 unemployed are persons with health impairment. Thereof, 27 persons are fully disabled, 1,203 are partially disabled, 5,196 are persons with health disadvantage, thereof 50,660 with disability degree 1. or 2. and 214 in degree 3. (<http://portal.mpsv.cz/sz/stat/nz/qrt>).

### ***Problems of people with AS in the work process***

Persons with Asperger syndrome may be almost irreplaceable in certain professions, however with certain difficulties often arising in the work process. Most of them consist in social interaction and stereotypic behaviour.

Firstly, we would like to mention the insistence on the accuracy and adherence to rules. Individuals with AS may almost pedantically insist on the compliance with precision or accurate fulfilment of promises. For other persons, this may be quite incompressible or even uncomfortable and nagging.

Persons with AS also needs to know precisely what is expected from them. They require precise instructions on the workload. What is perfectly logical for the intact society, may not be so clear to an individual with AS. Another significant aspect is that these people must not lose motivation and a logical reason for why they are doing something and what the use of it will be. To do something, it has to be meaningful for them. As soon as the motivation is lost, the individual may lose interest in work and his/her attention paid to the specific activity decreases rapidly. *“People with AS are usually satisfied in routine, predictable, work possibly perceived as not very interesting by a majority of people. If they are satisfied with the established work procedure, they are extremely efficient and reliable”* (Vosmik, Bělohávková, 2010, p. 143).

People with AS often focus on detail at the expense of the whole. This is caused by the decreased generalization ability. This may be a pitfall in jobs where a detached point of view is required - e.g. when writing reports (Bělohávková, Gnanová, 2012). Also, explosive (even aggressive) or on the contrary, anxious (even weepy) reactions to changes may occur. Social relationships are usually a huge problem for these people. In many professions, people come into contact with other people, having to deal with in some way. In the contact with co-workers, also the inability to respect social rules may be a pitfall, for example, asking about excessively personal matters, state certain truths which an intact person keeps quiet about because of politeness, etc. Employers or co-workers should not be surprised if a person with AS does not usually analyse the feelings, while baldly stating the thoughts and opinions. Also, praise is a great support for employees with AS. They take a positive feedback as a great reward. If expressed verbally, there is a higher probability that they would understand it. They might not understand a smile or nod. Even in case of negative feedback, it is better to use words, to make it more understandable for them.

### ***Employment opportunities for people with AS***

*“It is not possible to generalize the assumption of the education level obtained by people with AS. Some of them may succeed in fields such as informatics, transport engineering, professional translating, while others will work, e.g. in a library or help out in a gardening centre”* (Vosmik, Bělohávková, 2010, p. 142).

A person with AS should clearly recognize the area of his/her uniqueness, what are his/her abilities and skills and on the contrary, what are his/her difficulties. It might happen that the person himself/herself will not be able to evaluate this on his/her own; therefore assistance might be needed from the environs (from the family members, friends, psychologist or career counsellor in the SE service).

People with AS usually have excellent verbal skills, therefore they might also succeed in journalism, or may become writers and poets. Nowadays, many books are published by authors with AS. Often, these are confessions and narrations about their life. Temple Grandin is one of the most famous writers (as well as a scientist, patron of animals and pioneer of educating people with ASD. Other authors of books on their life include Josef Schovanec, Donna Williams, Axel Brauns or Christine Preissmann.

A lot of persons with AS succeeded in the artistic sphere. Even among musicians, there were several persons who were retroactively assigned the AS or ASD (Autism Spectre Disorder) diagnosis (Regec, 2013), according to the data on their life.

Persons with AS are very successful in the field of information technologies, accounting, machinery engineering as well as librarianship. Temple Grandin (2013) does not consider it suitable that a person with high-functioning autism or AS worked as a cashier, cook with short order period, waitress, casino croupier, taxi dispatcher, stock exchange trader or even receptionist and telephone operator. These jobs put very high demands on short-term working memory and flexibility. If a person has good visual thinking, programming, drawing, designing equipment and industrial design is usually suitable for him/her. He/she may become a TV cameraman, motor mechanic, animal trainer, computer and small devices service man, etc. For persons who do not think visually, however are gifted in mathematics, music, or have a factographic memory, Grandin (2013) mentions good application in accounting, librarianship, computer programming, mechanical engineering or journalism. Also, they may be taxi drivers, controllers, musical instrument tuners, bank clerks, statisticians, physicists and mathematicians.

### ***Specific procedures used in employing persons with AS***

In searching for and keeping a job, the training of social and working skills is useful for people with AS. Such trainings may take place within the supported employment service (individually or in the job clubs) or in the organizations helping persons with autism spectrum disorders. Furthermore, a person with AS may be developed in these areas by a family member or assistant; these skills may be also outlined and trained by a psychologist, special pedagogue, psychiatrist, etc.

The suitable skills which are usually trained include social skills - public transport travelling, dealing with authorities, communication skills - talking on the phone, job interview training, help with written formalities – writing CVs and motivation letters, advertising navigation, training of proper evaluation of social situations (= “good manners training”) – when to enter other people’s conversation, in what situations to remain quiet, what to ask about and what not, ... and training of practical skills and self-care - shopping, money handling, food preparation, (Vosmik, Bělohávková, 2010).

There are several strategies used for practicing the skills needed to find a job. One of the efficient strategies is **a description of situations** they don't know how to handle. For example, they can create a structure “what to observe when greeting another person” (greeting – eye contact – handshake and introduction). This structure may be first written on a card (and gradually amended - e.g. with questions “How are you?”, “Did you have nice weekend?” etc.), until these skills are mastered by the individual.

**Role-play strategy** shall first take place in a safe (artificial) environment, acting out situations feared by the person with AS. Gradually, the training is transferred to the real environment, where the person with AS tries out the trained situations in real life. **Video recordings** may be also used for training. A person with AS may be recorded in certain situations and contacts with other people. Afterwards, he/she will watch the recording with the assistant and analyse the behaviour of the persons on the video, especially the behaviour of the person with AS.

**Establishing clear rules** is a huge help for people with AS. They provide them with some certainty as they feel safer in a world with rules. For clarity, examples may be written in form such as IF → THEN and fitted to specific situations. “(for example: IF the person calling wants to talk to someone who is not present at the moment → THEN write down who is calling + his/her telephone number, saying that the person will get back to him/her later)” (Bělohávková, Gnanová, 2012, p. 20).

When the individual finds suitable job offers, he/she sends out CVs and motivation letters and is invited to interview, another difficult stage sets in. At the job interview, it is important to make a good impression. It is even more difficult for persons with AS because they are often unable to make and to keep eye-contact. Moreover, they find themselves in an unknown and unmapped environment, which is very stressful for them. Also, it is not exceptional that a person with AS has issues with selecting information about himself/herself - he/she is not sure what to say and on the contrary, what to remain silent about.

The jobseekers should not provide incomprehensible information - for example, the term of Asperger syndrome. The employer might not know what the term means and might be frightened by it. Every jobseeker suffering of this syndrome should consider any factors and decide whether or not to tell the prospective employer about the syndrome or when to tell it.

If the employer (or even the colleagues) of a person with AS are familiar with the diagnosis, they should find out certain information about the characteristics of this syndrome. Of course, it is not necessary for them to read all the studies and specialized publications. The organization APLA Prague issued an information guide intended for employers of persons with AS, titled “Supported Employment of Persons with Asperger syndrome” (“Podporované zaměstnávání pro lidi s Aspergerovým syndromem”) (Bělohávková, Gnanová, 2012). Also the films shot on persons with AS may help with the introduction to the topic. For example, the films such as Mary and Max, Temple Grandin, Mozart and the Whale, Adam, Simple Simon, My Name is Khan, etc.

For persons with AS who already are employed, the **numerical scales** might be helpful in the workplace. Using such scales, it may be rated how the person succeeded during the day, how did he/she feel at work, the colleagues may rate his/her behaviour, the loudness of his/her expression, etc. (Bělohávková, Gnanová, 2012). The persons with AS prefer to express in numbers (it has a sufficient measurable value for them, an order) to verbal descriptions.

An employee with AS should agree with the employer or colleagues in advance, how to react to particular situations. For example, there might be an unexpected change and the person with AS goes berserk or starts crying; a bigger group of people arrives at the workplace, the employee is not prepared for; people are used to wish happy birthday at work and the person with AS, who doesn't like physical contact, is hugged by the birthday person; etc. The best option is if the person with AS is not afraid to communicate and is able to say what bothers him/her and what he/she does not want. For the event of some unexpected situations, it is good to have several **“escape” strategies** prepared. For example, to have an option to take a 5-10 minute break; it is good if the person has a so called safe harbour available. That means a room where he/she may hide for a moment from light and company and calm down. On the contrary, other persons with AS are satisfied if the problem situation is verbalized (for example with an assistant, colleague, manager) and want to find out the reason for their critical reaction.

### ***The projects supporting employment of people with ASD and AS***

At the end of January, a two-year project of the organization APLA Prague was finished titled “Can we get a chance?” The project focused on *“creating jobs and ensuring employability of people with Asperger syndrome, who are a vulnerable group on the labour market due to their health impairment”* (<http://www.praha.apla.cz/projekty-27.html>). The project was prepared for 50 persons with AS and 10 new job opportunities were created for the persons with AS specifically. For example, the service of work diagnostics originated within the project, a one-week residential course was held in 2013 titled “Job Preparation” and a one-week “intensive course of job preparation” (<http://www.praha.apla.cz/projekty-27.html>).

From April 2013 to the end of March 2015, the project “We will make it, with a little help”, which targeted the people with ASD, currently unemployed. (<http://www.praha.apla.cz/projekty-29.html>).

The period from January 2013 to December 2014 was represented by the project “Together, we will make it”. Within the project, also various courses for persons with ASD were organized. These included for example the English language courses, PC, photography, travelling, orientation in the city, etc. The project was aimed at increasing the independence and acquisition of skills needed in the procedure of seeking and keeping jobs in persons with ASD. (<http://www.praha.apla.cz/spolecne-to-dokazeme-2.html>)

Other completed projects of the ALPA Prague organization, engaging in employing people with ASD or with AS in particular, include the following: “Work without barriers” (2010 – 2012), “I can make it with a little help” (2009 – 2011) and “We can make it, even with autism” (2006 – 2008).

The setting up of projects facilitating employment of persons with autism spectrum disorder with the APLA JM (South Moravia) organization, also the European Social Fund in the CR was involved. In 2015, the current project lasting until October titled “Helpful organizations - integration of persons with ASD in the labour market 3”. The project should result in supporting twenty persons with ASD and creating three job opportunities according to the abilities and capacities of the participants (<http://www.esfcr.cz/projekty/vstricne-organizace-integrace-osob-s-pas-na-trh-prace-3>).

## **2. RESEARCH**

Regardless of the fact that a majority of individuals with AS has an average or above-average intelligence, their inclusion on the free labour market encounters a lot of problems. There are many studies and research projects dealing with the issue of education of these persons: globally, e.g. Thren, Engstrom (2009), Sansosti (2012), Dixon, Tanner (2013), Kumar (2014) and in our country, e.g. Vyvlečková (2011) and Janderová (2011), but much less of them are focusing on the field of employment and the degree of support needed for including the persons with AS into the working process.

In Switzerland, a qualitative study was carried out in 2012 (Krieger et al.) focused on the success rate of adults with AS in the field of employment on the free labour market. The research results proved that a comparatively lower number of adults with AS has the potential to be competitive on the labour market. The research was aimed at detecting the contextual factors contributing to employability of some adults with AS on the labour market. It has been shown that they learned most of the skills in the field of social orientation in childhood from their close ones, who provided them with a feeling of safety in social contexts. The study showed that a majority of adults with AS may be successful on the labour market if they are given adequate social support in their early years.

Employment of persons with AS was dealt with also in the article in the American Work magazine (Higgins et al., 2008), which focused on the special needs of adolescents and young adults with AS. The article contains

specific recommendations for facilitating a successful graduation from school and entry into work. Primarily, the idea is emphasized here, that it is important to educate employers about how difficult it might be for an individual with AS to comply with normative behaviour and communication standards in the workplace. Furthermore, it is promoted that the employers helped to develop positive reference framework regarding their employees with AS and created an efficient, adequate and non-discriminatory environment for their employees with AS.

In our country, a quantitative research was carried out in 2007 (Zelenková), aiming at mapping the preparedness of young people with AS to enter the labour market. It has been shown that a majority of respondents is quite well oriented in the labour issues, knowing what they want to engage in in the future, however still worrying about their job. Most of them imagine their future in technical fields, in IT or administration (corresponding with the claims of experts that the persons with AS search for jobs with minimum social interaction).

**The research was aimed at** finding out what problems accompany the individual with AS in seeking a job as well as in the performance thereof. Furthermore, it was ascertained in what working areas the persons with AS are most often employed. The question was whether they choose similar fields of employment, or whether it depends on the individuality of each one of them or if the individual areas are diametrically opposed. Last but not least, the research focused on the question how the services such as “Social skills training”, “Supported employment” and “Self-advocates” are helping the individuals to seek and keep jobs.

The main research questions:

- 1. What are the difficulties persons with AS come across when seeking job and what troubles they encounter at work?**
- 2. Do people with AS choose similar professions?**
- 3. Do people with AS perceive the positives of their diagnosis in terms of employment?**
- 4. Do people with AS know the supported employment services, social skills training and the meetings of Self-advocates? Eventually, how were these services helpful to them?**

#### *Data gathering methods*

The methods of observation, analysis, structured interview with open questions, and interview with the use of prompts were used in the research, which served as the source for creating case studies of individual respondents.

The structured interview with open questions was the key method in applying the research, characterized by a number of carefully formulated questions answered by the respondents (Hendl, 2008).

Due to the diversity of the research sample in the employment area (employed respondents, unemployed respondents with work experience, unemployed respondents without work experience), 3 models of questions were used (for each group separately).

#### *Selection of respondents*

The research sample consisted of one group of respondents in productive age. The criterion for selecting the respondents was the Asperger syndrome diagnosis and the fact that they were employed or looking for a job. A majority of persons were addressed through the APLA Prague organization. Our call was responded by 18 of the persons addressed. Thereof, 7 persons were chosen at random, with whom a personal meeting was scheduled. The age of respondents ranged from 25 to 45 years and most of them came from Prague. The group comprised two women and five men.

**Table 2 - Basic information about respondents**

<b>Respondent</b>	<b>Age</b>	<b>Diagnosis</b>	<b>Age of diagnosis</b>	<b>IQ</b>	<b>Employment status</b>	<b>Awareness of the diagnosis at work</b>
1	45	Highly functioning AS	41	over 130	Yes	No
2	37	Medium functioning AS	34	average	No	-
3	35	AS	27	176	Yes	Self-employed
4	26	AS	14	134	No	-
5	37	Highly functioning AS	31	140	Yes	Currently yes
6	29	AS	27	132	Yes	Yes – SHE*
7	37	AS	18	average	Yes	Yes – SHE*

\*SHE - Sheltered employment

### 3. ANALYSIS OF THE DATA GATHERED AND INTERPRETATION OF THE RESEARCH RESULTS

#### ***Research question 1: What are the difficulties persons with AS come across when seeking job and what troubles they encounter at work?***

The research has shown that a majority of respondents takes social contacts poorly. They have troubles communicating with people, they cannot read emotions which often results in mutual misunderstanding. Despite these aspects, some of the respondents are satisfied at work, they feel to be full partners of the working team and the colleagues treat them equally.

The respondents also need clear task assignment, adherence to rules, require accuracy and sometimes cling to their rituals. Two of the respondents were talking about conflicts arising due to sudden change and one of them experienced bullying at work. The research also revealed that people with AS might have reduced attention level and suffer of increased fatigue.

#### ***Research question 2: Do people with AS choose similar professions?***

Individual respondents were working in the fields of journalism, administration, translations, auxiliary fundraising events and people addressing, IT and cleaning services. However, certain similarities may be found. Three of the respondents work or did work in administration. Three of them have experiences with programming and technical fields and two of them work with words spoken or written (translating and journalism). Several respondents changed a few jobs before finding the area closest to them.

What is interesting is that some of the respondents work (or used to work) as auxiliary or cleaning service, even if they would be qualified for better positions according to their education.

#### ***Research question 3: Do people with AS perceive the positives of their diagnosis in terms of employment?***

Precision was the positive mentioned by the respondents most frequently. They feel that they do their work correctly, carefully and consistently, and they are rewarded for it. The same feature was also mentioned in a negative sense. Respondent No. 7 feels that the co-workers in many working positions hated him due to this attribute. As another positive of the diagnosis, three of the respondents mentioned the ability to focus on details, which is a benefit e.g. in translating, creating reports as well as analysing computer applications.

Furthermore, the features such as: creativity, inability to lie and deceive, technical insight, ability of fast data search and processing, or illegibility of the respondent's emotions were listed as positives. Respondent No. 3, who works as a translator, also sees the positive in the fact that he acquired an almost exclusive right to translate books written by persons with ASD from English.

A majority of respondents found at least one positive of the AS which they find useful in their job. Only the respondent No. 7 does not see any positives for the employment resulting from the syndrome.

#### ***Research question 4: Do people with AS know the supported employment services, social skills training and the meetings of Self-advocates? Eventually, how were these services helpful to them?***

Of the seven respondents, four did attend or are now attending the social skills trainings, whereof the respondent No. 5 only attended one course focused on partner relationships. Respondent No. 3 did not consider the training as particularly helpful, as *"I had come across the situations we were rehearsing before and I had to deal with them on my own."* Respondent No. 6 prefers personal assistance and shopping assistance. Respondent No. 2 utilised both individual training and group sessions within the social skills training. He was satisfied with the services, he liked that they *"learned to tolerate people who are worse off than them"*. After consulting with a psychologist, respondent No. 1 concluded that he doesn't need the trainings. The psychologist only advised him to try keeping eye-contact and how to react to certain everyday situations. Respondent No. 4 did not use the training. He was offered the training of good manners but they agreed with the consultant that *"he could actually teach them"*. Respondent No. 7 does not use these services: *"I don't need it; I don't care about social contacts"*.

Only two of the respondents are active Self-advocates members. Respondent No. 6 enjoys going to different trips with the group, they have to plan themselves. One of the respondents has never heard about the Self-advocates, and the others who do not attend the meetings, know about them but either have no time or are not interested (Respondent No 7: *"I don't attend the self-advocate meetings, there are too many people."*).

Four of the respondents use the services of supported employment (some of them individually, some also attend the Job Club). They consider the help in job seeking, assistant support when entering the job, option of work diagnostics, help with deciphering messages as the positives of the supported employment (SE) service.

Two respondents are satisfied in their work position, therefore they don't need the SE services (neither did in the past). Two of them entered their current employment before being diagnosed with AS. One respondent feels that if she knew about the AS earlier, she would definitely utilise these services, especially in the period after having graduated from high school.

### ***Other findings***

The casuistries also showed that all respondents were diagnosed with AS later than in childhood. One of the respondents was 14 years old when being diagnosed while others were already adults.

Another interesting finding was that almost every one of the respondents encountered bullying at school or ostracisms at least. At school, nobody tried to solve this with any of the respondents, therefore some of them managed to cope with it on their own and shook of the unwanted interest in them. On the contrary, others were suffering for a longer time (e.g. until they changed the school or graduated). We can only guess how much trouble they brought with them to adulthood due to the oblivion of teachers and parents.

The respondents have a differing opinion on the fact whether or not the employer should know about the diagnosis of their employee. One of the respondents, even though working in a sheltered job with the APLA Prague organization, therefore his diagnosis is known to the employers, holds the opinion that it is not necessary to communicate the diagnosis to the employer. On the other hand, another respondent is glad that they know about the diagnosis at work because they are more helpful. When entering the job, she didn't know about the diagnosis herself, however she opened up to her manager several months after learning about it, and he is fully supporting her now. In the employment of respondent No. 1 they don't know about his diagnosis, however, in his own words *"everyone is weird there in some way, so nobody really cares about my otherness."*

Furthermore, it results from the individual cases that if an individual has a problem or conflict which prevents him/her from work performance, it is good to find a certain strategy how to solve it. Marcela has made an arrangement that as soon as a higher number of people occur in the company, she can close herself in the "cubby hole". Or if there is a problem, she can retreat for a few minutes. At another respondent's work, the HR employee works as her counsellor who would listen to her if some change throws her off. Even her manager discusses any changes with her in individual steps, preparing her for the changes in order to prevent any surprises.

The research has revealed that supported employment is not needed by all persons with AS. Some of the respondents, due to the uniqueness of their job position, do not even need a certain support and understanding at work. For example, the translator's work has an advantage for a person with AS in that the individual is working from home, communicating with people only when necessary and the work schedule is fully within his/her competence. One of the respondents is a television reporter who learned to work with any technology needed for recording in order to be able to work independently, without the need of other persons (cameraman, soundman). At work, they only have meetings once per week; otherwise he is in the field or at home processing the reports giving them their final form. This position suits him fully, he sees his colleagues rarely and does the job which he enjoys very much and is good at.

## **4. CONCLUSION**

The research has revealed that social contacts are the greatest issue of persons with AS in employment (and in seeking thereof). These people have troubles communicating with people; they have difficulties with reading emotions, do not understand facial expressions, and therefore often do not understand non-verbal meanings. The research also points out that the persons with AS are more comfortable if they know clearly what they are supposed to do. They are calmer when their day has a strict order and when they adhere to specific stereotypes and rituals. Considering the specialized publications dealing with the topic of Asperger syndrome (e.g. Thorová, 2006; Atwood, 2003; Preissmann, 2010), our results confirm the facts stated.

As has already been mentioned, in 2007 (Zelenková) a research was carried out, aiming at mapping the preparedness of people with AS to enter the labour market. A majority of respondents imagined their future in technical fields (IT, administration). From our research, 5 of the 6 respondents (having previous work experience) worked in similar fields. On the other hand, there are currently only 2 employed in the technical field (other two are already working in a different area and one of them is jobless).

In 2009 (Zádilská), research was carried out, implying that the adolescents and adult individuals with AS see their future occupation differently. Sometimes, their ideas for the future were almost at the borders of fantasy and unreality. This is partially confirmed by the respondent called Bára, who mentioned in the interview that at the age of 19, she wanted to be an actress, painter, archaeologist or cowgirl. Retroactively, she realised that these ideas were unreal.

It also resulted from our research that communicating the handicap to the employer might not always be necessary or desirable. Some individuals with AS do not need any support in their job position, therefore they have no need to be "labelled". On the contrary, the article from the Work magazine (Higgins et al., 2008) promotes the idea that it is important to educate employers on the topic of Asperger syndrome. We believe that this idea should not be uniform, even if the correct awareness of people at work might help a lot of people with AS.

Based on the findings, we consider it necessary to dedicate more attention to this issue, for example in form of further research activities.

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# Practice as a facilitator for consumer value co-creation in the higher education sector \*

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## ABSTRACT

Service-Dominant logic provides a framework for refinements in the concepts of value creation and co-creation between multiple actors. Moreover, S-D logic provides a shift from outcome to process by arguing that value is not created and delivered in terms of output rather than co-created in a process. Recently the focus of interest is on Higher Education and how value is co-created between actors in Higher Education. However, it is not yet known, the practices within value is co-created in the Higher Education. Drawing on S-D logic framework and practice theory, the aim of this paper is to discuss and understand how practices in Higher Education such as interacting may offer opportunities to facilitate cocreation and contribute to value in-use in the higher education sector.

Keywords Service-dominant logic, Practice Theory, Value Co-Creation, Higher Education.

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## 1. INTRODUCTION

Service-Dominant (S-D) logic provides a broader framework for the investigation of how value is created, co-created, destroyed and co-destroyed among multiple actors. Since its appearance, S-D logic has changed the traditional view in marketing activities from an output oriented logic to a process oriented logic (Vargo and Lusch 2004, 2008a). Therefore, although traditionally, firms created and delivered value for customers in terms of products and services, in S-D logic value is co-created between firms and customers collaboratively (Vargo and Lusch, 2004, 2006).

After the seminal paper of Vargo and Lusch's (2004) regarding the Service-dominant logic, a paradigm shift has been established with profound influence on marketing and management. Among others foundational premises authors suggested that customers are always co-producers because they "... always involve in the production of value by ... continuing the marketing, consumption, and value-creation and delivery processes" (Vargo and Lusch, 2004, p. 11). Later, Vargo and Lusch, (2006; 2008) changed that premise from "The customer is always a co-producer" to "The customer is always a co-creator of value" due to the fact that the term "co-production" was a good-dominant logic term and a component of value co-creation (Vargo and Lusch, 2008a).

The value is not a new term and it has been examined. In this paper, we follow the definition of Vargo, Maglio, and Akaka (2008, p. 149) who define value as "an improvement in system well-being" which can be measured "in terms of a system's adaptiveness or ability to fit in its environment". They highlight the "central role of resources" to S-D logic and to the co-creation of value as well (Vargo and Lusch, 2011, p. 184). More specifically, value is co-created when service systems (for example individuals and organisations) integrate "operant resources" (the intangible resources that produce effects) and "operand resources" (those resources that must be acted on to be beneficial, such as natural resources, goods, and other generally static matter) in a mutually beneficial way, (Vargo *et al.*, 2008). In line with this, researchers such as Grönroos (2008) argued that companies are not even co-creators of value but simple value facilitators trying to deliver value propositions. Consequently, value is co-created during the interaction between customers and providers (Prahalad and Ramaswamy, 2004; Ramírez, 1999; Vargo and Lusch, 2004) who can actively and directly influence their experiences and therefore also their value creation (Grönroos & Ravald, 2011).

Despite the wide interest, it is not yet clear of how value is co-created in the higher education industry between students and lecturers. Therefore, drawing from S-D logic, and practice theory we seek to address these issues, by theoretically explore the process of value co-creation in the tourism industry. S-D logic, and practice theory suggest that students' capabilities and value-expected outcomes with co-creation process shaped practices where co-creation of value is derived.

We suggest that parallel with the shift of perspective from a value delivery approach – doing something "to" students – to a co-creation approach – doing something "with" students (Díaz-Méndez, & Gummesson, 2012) understanding the practices of resource integration process provides a broader framework for improvement teaching quality in higher education.

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## 2. LITERATURE REVIEW

### 2.1 Service-Dominant logic and Value Co-Creation

Traditionally, firms controlled all business activities and consequently it was their view of value that was dominant (Prahalad & Ramaswamy, 2002). In this firm-centric logic goods are tangible output embedded with value and services are intangible goods or add-ons which enhance the value of goods (Vargo and Lusch, 2008b), while the source of value creation is the internal cost efficiency (Prahalad & Ramaswamy, 2002). Customer has little or no influence in the value creation until the point of exchange where the ownership of the product is typically transferred to the consumer from the firm (Prahalad & Ramaswamy, 2002) and value-in-exchange was realized. That is, value-in-exchange characterized the Good-dominant Logic (G-D) logic (Vargo and Lusch, 2004; Vargo et al., 2008) and value is embedded in good or services (Grönroos, 2008; Vargo and Lusch, 2008a), it is created by the firm and distributed in the market, usually through exchange of goods and money (Vargo et al., 2008).

This prevalent logic was challenged by a consumer-centric logic (Prahalad & Ramaswamy, 2002; Vargo and Lusch, 2004; Grönroos, 2008) according to which consumers influence value creation in multiple ways. According to this customer-centric logic, also called as Service-Dominant Logic (S-D) logic (see Vargo and Lusch, 2004; Vargo and Lusch, 2008) or Service Logic (see Grönroos, 2006; Grönroos, 2008; Grönroos and Ravald, 2011), the value is created when customers use goods and services (value-in-use) (Grönroos, 2008); therefore value shifts from value-in-exchange to value-in-use (Vargo and Lusch, 2004; Grönroos, 2008) and the basis for value shifts from products to experiences (Prahalad & Ramaswamy, 2002). In the consumer-centric logic service is the application of specialized competences (operant resources knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself while goods are the distribution mechanisms for service provision (Vargo and Lusch, 2004; 2008b).

In this aforementioned, service-grounded perspective, the concept of co-creation is dominant and has attracted considerable attention. Gradually, the concept of co-creation has become a central issue in conferences presentations and marketing journals. First, Prahalad & Ramaswamy, (2000; 2002) introduce the term of co-creation and argue that “companies must learn to co-create value with their customers”, (Prahalad & Ramaswamy, 2002, p. 4). Later, authors argued that, “value will have to be jointly created by both the firm and the consumer”, (Prahalad & Ramaswamy, 2004a, p.7) and that value of co-creation is realized “through personalized interactions” and that “all the points of consumer-company interaction are critical for creating value” (Prahalad & Ramaswamy, 2004, p.10). Furthermore, authors developed the building blocks of interactions between the firm and consumers that facilitate co-creation experiences, DART model of co-creation which is made up four components: dialogue, access, risk assessment and transparency (Prahalad & Ramaswamy, 2004a; b). At the same time, in their seminal paper Vargo and Lusch (2004) regarding the Service-dominant logic, a paradigm shift has been established with profound influence on marketing and management. Among others foundational premises authors suggested that customers are always co-producers because they “... always involve in the production of value by ... continuing the marketing, consumption, and value-creation and delivery processes” (Vargo and Lusch, 2004, p. 11). Later, Vargo and Lusch, (2006; 2008a) changed that premise from “The customer is always a co-producer” to “The customer is always a co-creator of value” due to the fact that the term “co-production” was a good-dominant logic term and a component of value co-creation (Vargo and Lusch, 2008a). Contrary to (S-D) logic and following the Nordic school of thought, Grönroos, (2008) argued that customers are not co-creators of value but they are value creators and suppliers are value facilitators, who could be invited to join this process as co-creators (Grönroos, 2011). The author explains that due to the fact that value is created in the customer’s sphere, as value-in-use, in a value creating process in which consumer is in charge (Grönroos, 2000; Grönroos 2008; Grönroos 2011), and therefore customer is the value creator.

The value is not a new term and it has been extensively examined. First, Aristotle made the distinction between value-in-exchange and value-in-use (Aristotle 4th century B.C.) and concluded that value is derived subjectively through the user’s experiences with resources, while stated that all consumption involves interactions between a subject and an object. Value-in-exchange is a function of value-in-use (Aristotle, *Ethica*, 1133, 26-29), and according to Smith, 1776/2000, p.31 “the things which have the greatest value in use have frequently little or no value in exchange; and on the contrary, those which have the greatest value in exchange have frequently little or no value in use”, cited by Vargo et al., (2008). Although value-in-use is more important than value-in-exchange (Grönroos, 2008), and it is possible to exist without value-in-exchange (Vargo and Lusch, 2006), the latter is required for value creation (Vargo et al., 2008) and can exist at different points during value creation process, where potential value exists ( see Grönroos and Voima, 2013).

Value-in-use emerges during consumption process (Becker, 1965; Lusch and Vargo, 2006; Grönroos, 2006;

Grönroos, 2008; Grönroos and Voima, 2013). The notion that value is realized through consumption has its roots in Marxian economics. In support of this, I would like to take a step back to the Karl Marx’s book, *A Contribution to the Critique of Political Economy*, in which Marx asserts that: “A use-value has value only in

use, and is realized only in the process of consumption.” The concept of consumption traditionally has been treated as a black box in marketing (Grönroos, 2006). An important contribution in the consumption concept was made by Grönroos, (2006) who extended the consumption concept by arguing that except the customers interactions with physical objects, consumption also encompasses other elements such as information, people-to-people encounters, encounters with systems and infrastructures and customers’ perception of elements of any sort with which they interact during the consumption processes that together have an impact on customer’s value creation.

Vargo, et al., (2008, p. 149) define value as “an improvement in system well-being” which can be measured “in terms of a system’s adaptiveness or ability to fit in its environment”. Later, Vargo and Lusch, (2011, p. 184) highlighted the “central role of resources” to S-D logic and to the co-creation of value as well. More specifically, value is co-created when service systems (for example individuals and organisations) integrate “operand resources” (the intangible resources that produce effects, e.g knowledge and skills) and “operant resources” (those resources that must be acted on to be beneficial, such as natural resources, goods, and other generally static matter) in a mutually beneficial way, (Vargo et al., 2008). Consequently, value is co-created during the interaction between \ customers and providers (Prahalad and Ramaswamy, 2004; Ramirez, 1999; Vargo and Lusch, 2004) who can actively and directly influence their experiences and therefore also their value creation (Grönroos & Ravald, 2011).

## 2.2 Resources and Resource Integration

According to Hunt (2000, p.138) resources are the “tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a market offering that has value for some market segment(s)”. Previously literature on resources suggests different classification. Barney (1991) classifies firm resources into three categories: physical capital resources (e.g technology, equipment), human capital resources (e.g experience, intelligence, relationships) and organizational capital resources (e.g controlling, planning, coordinating systems). Later, Constantin and Lusch (1994) categorize resources as operand and operant resources. Operand resources are employed to act on operand resources (and other operand resources), and operand resources, are resources on which an operation or an act is performed to produce an effect. Hunt & Morgan, (1995) categorize them into tangible and intangible. In their work, in which they proposed a new theory of competition by contrasting the neoclassical theory, they expanded the resources from capital, labor, and land (Neoclassical Theory) to financial, physical, legal, human, organizational, informational, and relational (Comparative Advantage Theory). Similarly, with the categorization of resources into tangible and intangible of Hunt & Morgan, (1995) (regarding the function) and based on Constantin and Lusch (1994), later Vargo and Lusch, (2004) categorized them as operand and operant. Hunt, (2004) by commented the new dominant logic of Vargo and Lusch’s, through resource-advantage theory argued that operand resources are typically physical (e.g raw materials), while operant resources are mainly human (e.g., the skills and knowledge of individual employees), organizational (e.g cultures, competences), informational (e.g knowledge about market competitors), and relational (e.g relationships with customers, suppliers, etc.).

According to S-D logic, all economic actors are resource integrators (FP9) (Lusch and Vargo 2006; Vargo and Lusch 2006; 2008a) and value co-creation is realized through resource integration (Vargo and Lusch 2004; 2008a). Integration requires process (es) and forms of collaboration (Kleinaltenkamp et al, 2012), while resources provided by customers into company process are called customer resources (Moeller, 2008).

The most representative paper regarding the process of resource integration is the work of Moeller. Moeller (2008), which provides a useful framework (FTU) of service provision to examine customer and firm integration process. She argues that a customer integrates his/her resources (physical possessions, nominal goods, and personal data) with company resources, in order to transform them into value. Customer integration enables service provision to be divided into the following stages: facilities, transformation, and usage. The first stage, *facilities*, is a prerequisite to any offering and includes all company resources (tangible and intangible e.g employees, know-how etc.). In this stage, firms *operate autonomously* regarding its decision and exhibit only *potential value*. The second stage, *transformation*, is the stage that either company resources are combined with other company resources to accomplish a transformation (company-induced transformation) or customer resources are integrated into the service provision for the purposes transformation (customer-induced transformation). In the former case (company-induced transformation) customers are neither co-producers nor co-creators, while in the latter case, *consumption* begins with the integration (customers are co-creators of value, by using value propositions). In this stage, in case of company-induced transformation, firms continue to operate autonomously and only potential value exists. Contrary, in case of customer-induced transformation, firms’ level of autonomy is low and *value-in-transformation* (that can be positive or negative) exists. The transition from transformation to the *usage* (third stage) depends on whether the transformation is induced by the company or the customer (e.g who is the prime resource integrator). From a company-induced transformation perspective, customers create value for themselves and assume their roles of co-creators, while from a customer-induced transformation perspective, the transition from transformation to usage occurs when consumer resources exit the

company's sphere, therefore benefits and usage begin after the transformation (e.g. students' graduation). In this stage, from a company-induced perspective, *value-in-use* is accomplished as well as from a customer-induced perspective. Last, in case of *direct service provision*, customers contribute to customer-induced transformation (and to usage with resources and activities, while in the case of *indirect service provision*, customers only contribute during usage in co-creating their own value.

### **2.3 Co-Creation in higher education**

Co-creation has been examined in higher education (e.g. Bowden and D'Alessandro, 2011; Fagerstrøm & Ghinea, 2013; Díaz-Méndez & Gummesson, 2012). Bowden and D'Alessandro, (2011) examined whether student perceived value, namely social or functional value, satisfaction, and loyalty differs for students participating in a personal response technology enabled classroom experience, versus a more traditional classroom experience. They suggested that it is the pedagogy, and not the technology that matters in higher education provision. Fagerstrøm & Ghinea, (2013) argue that social network marketing in higher education gives a great opportunity to replace the passive view of customers with an active view in which applicants are invited to use their own initiatives rather than simply react to predetermined marketing activities. Díaz-Méndez & Gummesson, (2012) investigate value co-creation in university service and especially the implications of the status of the interacting parties, nature of service, methods to evaluate teaching quality, real value for students, and long-term consequences. They found that value co-creation has not been considered in the design of the specific teaching evaluation program.

### **2.4 Practice Theory**

Practice theory consists of key propositions, rather than being a specific theory. A practice has been described as "background coping skills" (Chia, 2004, p. 32) and practices are formed as the resources of customers and providers interlink with different contextual elements (Reckwitz, 2002). Practices can be understood as the routine activities and sense making frameworks that people carry out and use in a particular context (Skålén et al., 2014); practices are enacted by people in order to act and to make sense of other people's actions (Reckwitz 2002; Schatzki 1996). Drawing on practice theory, we will describe and analyze how resource integration and co-creation are realized through real activities and interactions in different service systems in the higher education industry ecosystem.

Giddens (1979, 1984) stressed that action, e.g., value co-creation and resource integration, which we focus on, and social order, e.g., service systems and other systems relating to the tourism ecosystem including formal hotel, travel agencies only become possible and comprehensible in relation to common and shared practices. These practices include shared routines, ways of doing things, scripts, and habits, all of which actors enact in order to act and to interpret the actions of other actors (Giddens, 1979; Reckwitz, 2002; Schatzki, 1996). We use Practice Theory (Kjellberg and Helgesson 2006, 2007) to examine the value co-creation in the higher education industry highlighting the role of practices, interactions and norms that direct the activities and interactions of resource integrators in institutional ecosystem.

## **3. SYNTHESIS OF THEORETICAL FRAMEWORK**

We argue that value is co-creation in the higher education sector between multiple actors in the same ecosystem as a result of specific practices. As practice theory stresses, the way that actors in the higher education sector views their role in the ecosystem (representational practices) affects how they interact with others through accepting or adjusting norms (normalizing practices) which in turn, affects the way that do things in their daily activities (their exchange practices). For example, lecturers in a hotel adopt specialized roles which help organizational development, sustain a positive attitude towards customer service, co-create value with students etc. lecturers can adjust their roles very quickly in order to co-create value with students by assessing the impact of any changes in their environment. However the way of the lecturers view themselves, adopt their roles and adjust their norms highly depends on the context as well as from both psychological factors. Moreover, this view has an impact on their exchange practices. Lecturers daily, interacting with students through a series of practices e.g. suggesting, supporting in value co-creation, informing, and helping. These specific practices, reflect how value is co-created and consequently how value is co-destroyed in the specific service ecosystem of the higher education sector. Lecturers in the university suggesting students in their decision making process, regarding various issues (e.g. in their dissertation). In this example, the practice is "*suggesting*" during which value is co-created, because during this specific verbal communication, lecturers and students approach each other mutually and provide the basis for a relationship between them. In the same vein, lecturers supporting students in their daily activities in value co-creation by providing them a operand and operant resources (e.g. manner of thinking, possible solutions in problems, facilities in the university, opportunities to innovative etc.). The specific practice here is "*supporting*" in daily activities and represents the direct interaction for value co-creation. Moreover, the role of lecturers do not restrict in their duties. Informally, they inform students in different

choices regarding their decision to continue their study, e.g. for a master degree, and therefore co-creating learning experience. In this way, students can co-create better experiences due to the appropriate information. The practice of "informing" contributes to the improvement of the "learning experience". Last, the lecturers help students when faced with different problems such as difficulties to solve a mathematical problem, or with problems related to processes and procedures to educational system. The practice of "helping" is both improvement co-creation of value and also an interactive practice.

#### 4. DISCUSSION

To the best of our knowledge, this is the first paper which theoretically explores the application of service dominant logic into higher educational system through practice theory. Since, S-D logic provides a fundamental shift from goods to service, from outcome to process (see Vargo and Lusch, 2004;2008), we suggest that this framework should be applied to the higher educational sector for value co-creation between multiple actors. Traditionally, lecturers create and deliver value (knowledge) to the students through the teaching process, and students acquire this value by learning inside the classroom. However, our suggestion according to S-D logic is that since knowledge cannot be created and delivered, it is better to focus on these specific practices in order to co-create it and maximize the learning experience. Our point of view is that since value is a personal evaluative judgement (Hilton et al., 2012), it cannot be delivered in the education sector, while it should be co-created, through suggesting, supporting, informing, and helping lecturers integrate their resources with students resources and therefore value is co-created for both of them. Empirical research is needed for further understanding the factors which affect lecturers behaviour toward these specific practices. Moreover, the role of context in value co-creation in the higher education remains unexplored. Future research should address these issues in order to provide a better understanding of different systems' behaviour in the higher educational ecosystem.

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# Post-trauma interaction skill development model for children aged 10-12

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## ABSTRACT

With this study, it was aimed to organize a summer camp for children who were aged 10-12, lived in the disaster area and whose fathers or relatives were miners intended for an interaction based psycho-social intervention in collaboration with the Department of PCG (Psychological Consulting and Guidance), Faculty of Education, KOU(Kocaeli University). The main objective of the study was to develop the interaction skills of the children in the region which would contribute to their psycho-social development through the camp program. In this camp, children contributed to activities such as building self-knowledge and increasing communicating skills. Moreover, this study covered group consultant schedules between study experts and children.

Key words: Interaction, trauma, miner, post-disaster study.

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## 1. INTRODUCTION

Disasters are events which emerge relatively suddenly in a certain geographical region, create collective stress and significant losses, disrupt community life and exceed all the coping resources of an individual (Karancı and Erdur-Baker,2012). Some authors mention two different disaster traumas which are “individual trauma” and “social trauma” when they describe the impacts of disasters. Individual traumas manifest themselves through symptoms such as stress, mourning and depressive mood, whereas social traumas manifest themselves as the dissolution of ties and trust between the people living together, loss of social harmony and rupture of relationships such as friendship and neighborhood (Erdur-Baker, Doğan, 2014).

Examining the post-disaster studies, approaches can be said to be generally adopted in three categories (Shore, Tatum and Vollmer, 1999) including 1- Psychiatric approach, 2- Behavioral approach, 3- Interpersonal communication approach. (Erdur-Baker,Doğan 2014).

As a result of the deaths experienced in Soma mine in 2014, many children in the region were left fatherless and this situation created traumas in many people. The post-disaster risk group consists of children and adolescents. In a study carried out on children and adolescents aged 9-13 years in Turkey, fear was reported in a higher number and more intensely by girls (Erol, Şahin, 1995). As there are natural groups in the society and at school, it is stated that it is important to canalize the therapeutic support to these places. The purpose here is to try to give information to reduce the anxiety based on uncertainty and ignorance, to share the feelings, to increase the coping skill and sense of the children and to solve some common problems. The support group provides the individual with confidence, the sense of sharing, a purpose, a different perspective, the re-evaluation of the situation and the sources and the required sources (<http://www.rehberlikci.8m.com/bilgilendirme/travma.htm>). The basis in the process of psychological support and therapy is to re-establishment and acquisition of the sense of being safe, which is severely worn-out in the child. This acquisition will end many psychological symptoms and support and facilitate the treatment of many disorders. As Okuyama stated (1999), especially children are more prone to development of problems than adults when they are not supported in an environment where there is no basic mutual trust because their mental and emotional functions are not yet fully developed. Children should be psychologically supported in order to overcome the painful experiences of disasters throughout their development (Okuyama1999).

### Aims

With this study, it was aimed to organize a summer camp for children who were aged 10-12, lived in the disaster area and whose fathers or relatives were miners intended for an interaction based psycho-social intervention in collaboration with the Department of PCG, Faculty of Education, KOU. The main objective of the study was to develop the interaction skills of the children in the region which would contribute to their psycho-social development through the camp program.

## 2. METHODS

Student selection: 12 female and 20 male students participated in the camp as a result of the listing performed with the decision of the staff working in Soma District Directorate of Social Services and Soma District Directorate of National Education. The students were in the age range of 10-12. The residential camp lasted 5 days.

Trauma based studies were not carried out with the students participating in the camp with priority. Expert-supported group studies were carried out when needed in the process. The day started with meeting, starting the day and warm-up activities and for the end of the day, individual and group works facilitating self-expression of students through evaluation and feedback activities were planned and implemented as semi-structured programs.

In the program, the participants were allowed to determine the rules they would follow during the 5 days together in "rulemaking" and "I am a child and I have rights" activities. With this activity, it was aimed to develop the skills of the participants to make their own decisions and to take responsibility. It was determined that the group complied with the decisions taken on the first day until the end of the camp.

It was aimed to develop their skills to explore their various features and to respect differences through ceramic workshops and activities to reveal their personal skills. In the ceramic workshop, each student designed his own unique material and was able to praise each other's materials.

In the process of group learning accompanied by a leader, the students developed their skills to comply with the guidelines and to cooperate.

Activities aimed at the self-expression skills of the children, active participation in the group and activities through meeting and orientation studies and receiving feedback about their traumatic experiences if any were planned and implemented through drama and theater activities.

As it was a residential camp, the students aged 10-12 demonstrated the skills to remain separated from their families, to perform self-care skills without help, to develop problem-solving skills in the problems that arose from room sharing with different people, to be punctual and to act as a group.

Meetings where group works were performed and emotion reports were received were held every day. The students were observed to make progress in expressing their emotions and thoughts during the camp.

Before the implementation of the program, Social Style Inventory, Self-Esteem and Self-Efficacy Scale and Mood Scale were applied to the students to evaluate their emotional, social and self-perceptions. The results obtained from the scales are as follows;

According to the data obtained from the self-esteem scale, all the participants were decisive individuals with high rates of self-esteem.

Examining the self-efficacy scores, 81.8% can be said to experience very little stress while coping with change and to have a good level of self-efficacy. 18.2% were found to generally cope with changes well, but sometimes experienced stress. They can be said to be in an average level in terms of self-efficacy. 70% were found to have an extrovert social style.

In the 36 different moods obtained through the mood scale, the participants marked items indicating that they felt positive emotions more intensely, but they had not felt negative emotions intensely for the last week. The qualitative data on their emotions support each other.

It was concluded that the content of the camp program intended for the development of interaction process was appropriate for the age group of 10-12 and the content of the activity can be diversified and adapted to different camp programs.

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# Examination of the relationship between the teacher efficacy perceptions and the self-control levels of teacher candidates

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## ABSTRACT

In this study, it was aimed to examine the self-efficacy perceptions and self-control levels of teacher candidates and how these levels differentiated by the variables of gender, department and faculty. In addition, the examination of the impact of self-control levels on teacher efficacy perceptions through the investigation of the relationship between the self-control levels and teacher efficacy perceptions of teacher candidates constituted another purpose of the study. In line with the purposes of the study, the population of the study was composed of the students who participated in the pedagogical formation training courses started at the Education Faculty of Kocaeli University in 2013-2014 academic year and the 3rd and 4th grade students studying at the Education Faculty. In the sampling of the study, simple random sampling method was used. Thus, a total of 776 students, 237 of whom were from the branches of Physics, Turkish Language and Literature, Chemistry, Art History, History, Mathematics and Biology attending the Pedagogical Formation Training course, and, 539 of whom were the 3rd and 4th grade students studying in the departments of Psychological Counseling and Guidance, English Teaching, Classroom Teaching, Mathematics Teaching, Preschool Teaching, Computer and Instructional Technologies and Science Teaching at the Faculty of Education, were included in the sampling frame. According to the research findings, of the self-control scale dimensions; the arithmetic mean of the self-monitoring dimension scores was determined to be higher than the self-evaluation and self-reinforcement dimensions and also the dimension with the highest teacher efficacy scale mean scores was found to be orientation and the dimension with the lowest ones was assessment and evaluation. In this context, it can be said that self-monitoring levels of teacher candidates and their orientation perceptions in terms of teacher efficacy are high. Self-reinforcement perceptions of female teacher candidates were found to significantly differ from males. In terms of total self-control scale scores, the mean scores of female teacher candidates were also found to significantly differ from male teacher candidates. In terms of teacher efficacy, male teacher candidates were determined to have a higher average than female teachers in the dimension of behavior management and also in terms of the total teacher efficacy scores, the mean scores of female teacher candidates were found to significantly vary. The teacher candidates participating in the pedagogical formation training were found to have a higher average in terms of behavior management compared to the students of the education faculty. However, the teacher candidates from the education faculty were determined to have a higher average in terms of their self-control levels compared to the students participating in the pedagogical formation training course. Consequently, the total scores of teacher efficacy scale were determined to have a positive relationship with the variables of self-monitoring, self-evaluation and self-reinforcement. Therefore, it can be argued that development of self-control behaviors of teachers will be positively reflected in their own competence.

Keywords: Teacher efficacy, self-control, Teacher candidate

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## 1. INTRODUCTION

Examination of the concept of self-efficacy, which is defined as the judgments of people about their own capacities/competencies for the organization and execution of the necessary activities to realize their performances in certain areas, and the concept of self-control, which is expressed as the capability of a person to organize his behaviors, able to cope with the pedagogical difficulties they encounter and their way of self-perception and self-judgment in terms of knowledge, skill and experience for the provision of an efficient education play a leading role. Competencies emotions and desires in order to function in the society, is important in the realization of the goals to train qualified teachers. Teachers acquire their core competencies during the teacher training period and develop them in the teaching duty they carry out in schools (Baloğlu and Karadağ, 2008).

Teacher candidates' being of individuals consist of two different structures including self-efficacy and goal achievement efficacy. Self-efficacy is defined as the belief of individuals in their own skills and abilities to overcome difficult situations they may encounter in order to reach the desired success level in any matter. Bandura (1977) developed a model to explain human behaviors and behavioral changes. He believes that some cognitive variables have a mediation function in behavioral change. Self-efficacy perception is considered an important variable for behavioral change and is defined as the expectation of successful performance of a behavior to achieve specific results. There is a correlation between behavior and competency expectation. Beliefs in competencies influence behaviors and also are influenced from the successful or unsuccessful behaviors of the individuals. Teacher efficacy is defined as the beliefs of teachers in being able to perform the

teaching duty successfully in a certain context and exhibit the necessary behaviors to be able change the behaviors of students (Tschannen-Moran, Woolfolk and Hoy, 1998). According to the researches carried out, high teacher efficacy is associated with the relationships with the school management and parents, the success in the management of student behavior, being able to cope with the psychological and physical symptoms of stress, the effective use of stress management techniques and reducing the level of stress (Parkay, Greenwood, Olenjik & Proller, 1988). Allen & Greenberger (1980) suggest that the concept of locus of control is similar to Bandura's self-efficacy concept. Loadings of locus of control are evaluated before the formation of the result and stated to be associated with how the individual perceives the result; related or unrelated to his behaviors. However, self-efficacy is stated to occur after the formation of the result (Palenzuela, 1984).ocus of control is a strong indicator of job attitude and organizational perception of teachers (Cheng, 1994). Alderman (1990) determined that internal locus of control is associated with high self -efficacy in teachers; and Radford, Cashion & Latchford (1993) determined that locus of control has influence on the business perception and job satisfaction of teachers, the relationships between the students and teachers and the motivating and even teaching competency of the teacher.

### **Aims**

In this study, it was aimed to examine the self-efficacy perceptions and self-control levels of teacher candidates and how these levels differentiated by the variables of gender, department and faculty. In addition, the examination of the impact of self-control levels on teacher efficacy perceptions through the investigation of the relationship between the self-control levels and teacher efficacy perceptions of teacher candidates constituted another purpose of the study. Within the frame of this general purpose, the following sub-purposes were adopted;

1. What is the level of the self-control scale scores of the teacher candidates?
2. What is the level of the self-efficacy scale scores of the teacher candidates?
3. Do the self-control scale scores of the teacher candidates differ significantly by the variable of gender?
4. Do the self-efficacy scale scores of the teacher candidates differ significantly by the variable of gender?
5. Do the self-efficacy scale scores of the teacher candidates differ significantly by the variable of the faculty studied in?
6. Do the self-control scale scores of the teacher candidates differ significantly by the variable of the faculty studied in?
7. Do the self-control scale scores of the teacher candidates differ significantly by the variable of seniority?
8. Do the self-efficacy scale scores of the teacher candidates differ significantly by the variable of seniority?
9. Do the self-control levels of the teacher candidates predict the sub-dimensions related to teacher efficacy significantly?

## **2.METHODOLOGY**

In line with the purposes of the study, the population of the study was composed of the students who participated in the pedagogical formation training courses started at the Education Faculty of Kocaeli University in 2013-2014 academic year and the 3rd and 4th grade students studying at the Education Faculty. In the sampling of the study, simple random sampling method was used. Thus, a total of 776 students, 237 of whom were from the branches of Physics, Turkish Language and Literature, Chemistry, Art History, History, Mathematics and Biology attending the Pedagogical Formation Training course, and, 539 of whom were the 3rd and 4th grade students studying in the departments of Psychological Counseling and Guidance, English Teaching, Classroom Teaching, Mathematics Teaching, Preschool Teaching, Computer and Instructional Technologies and Science Teaching at the Faculty of Education, were included in the sampling frame. In the study, The Ohio Teacher Efficacy Scale, developed by Tschannen-Moran & Woolfolk-Hoy and adapted into Turkish by Balođu and Karadađ (2008), was used in order to determine the teachers' efficacy perceptions. The scale consisted of 5 sub-dimensions including Scale Orientation, Behavior Management, Motivation, Training Skill and Assessment and Evaluation and 24 items." The Self-Control and Self-Management Scale (SCMS)", developed by Mezo (2009), and, the Turkish validity and reliability studies of which were carried out by Akın, Demirci and Ćardak (2012), was used in order to determine the self -control levels of the teacher candidates. This scale had 3 sub-dimensions including Self-Monitoring, Self-Evaluation and Self- Reinforcement and 16 question items.

### 3.RESULTS

The first sub-purpose of the study is to determine the self-control scale scores of the teacher candidates. Descriptive statistics were used to determine the level of the self-control scale scores. The arithmetic mean standard deviation values of the self-control scale scores of the teacher candidates are presented in Table 1.

**Table 1.** The Arithmetic Mean and the Standard Deviation Values of the Self-Control Scale Scores of the Teacher Candidates

Scales	N	$\bar{X}$	sd
Self-Control Total	776	20,10	3,15
Self-Monitoring	776	22,86	3,78
Self-Evaluation	776	18,45	5,18
Self-Reinforcement	776	18,98	4,10

The self-control scale consists of self-monitoring, self-evaluation and self-reinforcement dimensions. In the study conducted with 776 participants, the arithmetic mean values of self-monitoring dimension are seen to be higher than those of self-evaluation and self-reinforcement dimensions [(X(Self-Monitoring)=22,86)>(X(Self-Reinforcement)= 18,98)>(X(Self-Evaluation)=18,45)]. The arithmetic mean and standard deviation values of the teacher efficacy scores are presented in Table 2.

**Table 2.** The Arithmetic Mean and Standard Deviation Values of the Teacher Efficacy Scale Scores of the Teacher Candidates

Scales	N	$\bar{X}$	sd
Teacher efficacy total	776	18,41	1,92
Orientation	776	23,14	2,50
Behavior management	776	19,59	2,46
Motivation	776	22,00	2,88
Teaching skill	776	19,35	2,57
Assessment and evaluation	776	7,97	1,14

$\bar{X}$  Teacher efficacy scale consists of self-monitoring, orientation, behavior management, motivation, teaching skill, assessment and evaluation dimensions. In the study conducted with 776 participants, the dimension with the highest mean scores is orientation (X=23,14) and the dimension with the lowest mean scores is assessment and evaluation (X=7,97). The t-test for independent samples was used to investigate whether the total scores of the teacher efficacy scale and its sub-dimensions varied significantly by gender. The results of the t-test by gender for the scores of the self-control scale are indicated in Table 3.

**Table 3.** The Results of the t-test by Gender for the Self-Control Scale Scores of the Teacher Candidates

	Gender	N	$\bar{X}$	sd	df	t	p
Self-Monitoring	Women	567	22,98	3,68	741	,869	,385
	Men	209	22,70	4,00			
Self-Evaluation	Women	567	18,75	5,04	741	1,85	,064
	Men	209	17,94	5,16			
Self-Reinforcement	Women	567	19,42	3,88	741	5,24	,000**
	Men	209	17,58	4,61			
Self-Control Total	Women	567	20,38	3,02	741	3,63	,000**
	Men	209	19,41	3,41			

\*\*p<.01 \*p<.05

According to Table-3, the scores of self-monitoring (sd=741; t=,869; p>,05) and self-evaluation dimensions do not differ significantly by gender. However, the scores of self-reinforcement dimension differ significantly by gender (sd=741; t=5,249; p=,000). The mean score of female teachers for the dimension of self-reinforcement ( $\bar{X}$ =19,42) is higher than that of male teachers ( $\bar{X}$ =17,58). The scores of self-control also differ significantly by gender (sd=741; t=3,632; p=,000). The mean score of female teachers for the dimension of self-control ( $\bar{X}$ =20,38), is higher than that of male teachers ( $\bar{X}$ =19,41).

The t-test for independent samples was used to investigate whether the scores of the teacher efficacy scale and its sub-dimensions varied significantly by gender. The results of the t -test by gender for the Scores of the Teacher Efficacy Scale are indicated in Table 4.

**Table 4.** The Results of the t-test by Gender for the Scores of the Teacher Efficacy Scale

	Gender	N	$\bar{X}$	sd	df	t	p
Teacher Efficacy	Women	567	18,34	1,86	774	-2,05	,040
	Men	209	18,68	2,11			
Orientation	Women	567	23,09	2,42	774	-1,61	,107
	Men	209	23,43	2,74			
Behavior Management	Women	567	19,50	2,37	774	-1,95	,050
	Men	209	19,92	2,72			
Motivation	Women	567	21,92	2,84	741	-1,33	,182
	Men	209	22,25	2,95			
Teaching Skill	Women	567	19,20	2,51	741	-2,70	,007**
	Men	209	19,80	2,80			
Assessment and Evaluation	Women	567	7,98	1,10	741	-0,13	,896
	Men	209	7,99	1,23			

\*\*p<.01 \*p<.05

According to Table 4, the dimensions of orientation (sd=741; t=-1,61; p>,05), behavior management (sd=741; t=-1,95; p=,05) motivation (sd=741; t=-1,33 ; p>,05) and assessment and evaluation (sd=741; t=-0,13 ; t>,05) do not differ significantly by gender. However, the scores of teacher efficacy scale vary significantly by gender (sd=741; t=-2,05; p<,05). The mean score of male teachers for teacher efficacy ( $\bar{X}$ =18,68) is higher than that of female teachers ( $\bar{X}$ =18,34). The mean score of teaching skill also differs significantly by gender (sd=741; t=-2,70 ; p<,05). According to this result, the teaching skill scores of male teachers ( $\bar{X}$ =2,80) are higher than those of female teachers ( $\bar{X}$ =2,51).The t-test for independent samples was used to investigate whether the total scores of the teacher efficacy scale and its sub-dimensions varied significantly by the faculty studied in. The results of the t -test by the variable of faculty for the Scores of the Teacher Efficacy Scale are indicated in Table 5. According to Table 5, the mean scores of the teacher efficacy scale ( p>,05) and the dimensions of orientation ( p>,05), motivation (p>,05), teaching skill (p>,05) and assessment and evaluation (p>,05) do not differ significantly by the faculty studied in. However, the scores of the behavior management scale vary significantly by the faculty the teacher candidates study in (t=-2,572; p<,05). Accordingly, behavior management scores of the students of the Faculty of Science and Literature ( $\bar{X}$ =20,12) are higher compared to those of the students of the Faculty of Education ( $\bar{X}$ =19,51).

**Table 5-** The Results of the t-test by the Faculty Studied in for the Scores of the Teacher Efficacy Scale

	Faculty	N	$\bar{X}$	sd	df	t	p
Teacher Efficacy	Science& Literature	280	18,68	1,76	774	1,445	,149
	Education	496	18,41	2,03			
Orientation	Science& Literature	280	23,55	2,33	638	1,722	,086
	Education	496	23,13	2,59			
Behavior Management	Science& Literature	280	20,12	2,25	638	2,572	,010*
	Education	496	19,51	2,58			
Motivation	Science& Literature	280	22,05	2,70	638	-,197	,844
	Education	496	22,11	3,07			

Training Skill	Science& Literature Education	280	19,67	2,41	638	1,482	,139
Assessment and Evaluation	Science& Literature Education	496	19,30	2,71			
	Science& Literature Education	280	8,03	1,11	638	,113	,910
	Science& Literature Education	496	8,02	1,1			

Levene f1=2,366; p>,05    Levene f2=,046; p>,05    Levene f3=1,664; p<,05  
Levene f4=2,258; p>,05    Levene f5=1,323; p>,05    Levene f6=,101; p>,05  
\*\*p<.01 \*p<.05

The t-test for independent samples was used to investigate whether the total scores of the self-control scale and its sub-dimensions varied significantly by the faculty studied in. The results of the t -test by the faculty studied in for the Scores of the Self-Control Scale are indicated in Table 6.

According to Table 6; The scores of the self-reinforcement scale (p>,05) do not vary significantly by department. However, the scores of self-control (t=2,441; p<,05), self-monitoring (t=2,591; p<,05) and self-evaluation (t=2,879; p<,05) differ significantly by department. In terms of self-monitoring; the mean score of the Department of Science and Literature (X=23,63) is higher than that of the Department of Education (X=22,68). In terms of the scores of self-evaluation; the mean score of the Department of Science and Literature (X=19,62) is also higher than that of the Department of Education (X=18,23). Similarly, in terms of the total scores of self-control; the mean score of the Department of Science and Literature (X=20,75) is higher than that of the Department of Education (X=20,01).

**Table 6-** The t-test Results by the Variable of the Faculty Studied in for the Self-Control Scale Scores

	Faculty	N	$\bar{X}$	sd	df	t	p
Self-Monitoring	Fen Edb	144	23,6378	3,38186	638	2,591	,010*
	Eğitim	496	22,6823	4,03127			
Self-Evaluation	Fen Edb	144	19,6209	4,14443	638	2,879	,004
	Eğitim	496	18,2366	5,31996			
Self-Reinforcement	Fen Edb	144	18,9990	4,29949	638	-,346	,729
	Eğitim	496	19,1361	4,14265			
Self-Control Total	Fen Edb	144	20,7526	2,82547	638	2,441	,015*
	Eğitim	496	20,0183	3,27305			

Levene f1=4,081; p<,05    Levene f2=11,995; p<,05    Levene f3=,196; p>,05    Levene f4=6,188; p<,05  
\*\*p<.01 \*p<.05

The correlation matrix for the relationship between the dimensions of the teacher efficacy scale and the dimensions of the self-control scale are indicated in Table 7.

**Table 7.** The Correlation Matrix for the Relationship between the Dimensions of the Teacher Efficacy Scale and the Dimensions of the Self-Control Scale

	Self-Monitoring	Self-Evaluation	Self-Reinforcement	Orientation	Behavior Management	Motivation	Teaching Skill	Assessment and Evaluation
Self-Monitoring	1							
Self-Evaluation	,360**	1						
Self-Reinforcement	,306**	,183**	1					
Orientation	,346**	,242**	,228**	1				
Behavior Management	,415**	,291**	,215**	,635**	1			
Motivation	,376**	,189**	,170**	,622**	,634**	1		

Teaching Skill		,359**	,217**	,162 **	,586**	,635**	,669**	1	
Assessment and Evaluation		,332**	,269**	,195**	,531 **	,572**	,492**	,616*	1

\*\*p<.01 \*p<.05

According to Table 7, there are positive and significant relationship between the variables. Table 8 shows the results of the multiple regression analysis for the impact of self-control levels of the teacher candidates on the orientation dimension of the teacher efficacy scale.

**Table 8.** The Results of the Multiple Regression Analysis for the Impact of Self-Control Levels of the Teacher Candidates on the Orientation Dimension of the Teacher Efficacy Scale

Dimensions	B	$\beta$	t	p
Constant	16,612		28,948	,000
Self-Monitoring	,174	,263	7,137	,000
Self-Evaluation	,060	,124	3,487	,001
Self-Reinforcement	,076	,124	3,555	,000
R= ,387	R2= ,149			
F (3, 272)= 45,220	p= ,000			

According to Table 8, the variables of self-monitoring, self-evaluation and self-reinforcement, together exhibited a significant correlation: R= ,387 and R2= ,149; F (3, 272)= 45,220, p<.01. These three variables together explain 14% of the total variance in the dimension of orientation. The following is the relative order of importance between the predictive variables upon orientation, according to standardized regression coefficients: Self -Monitoring ( $\beta$ =,263), Self-Evaluation ( $\beta$ =,124) and Self-Reinforcement ( $\beta$ =,124). When the significance tests are considered, it is seen that Self-Monitoring, Self-Evaluation and Self-Reinforcement variables predict the orientation dimension of teacher efficacy. The results of the multiple regression analysis for the impact of self-control levels of the teacher candidates on the behavior management dimension of the teacher efficacy scale are indicated in Table 9.

**Table 9.** The Results of the Multiple Regression Analysis for the Impact of Self-Control Levels of the Teacher Candidates on the Behavior Management Dimension of the Teacher Efficacy Scale

Dimensions	B	$\beta$	t	p
Constant	12,309		22,523	,000
Self-Monitoring	,217	,333	9,321	,000
Self-Evaluation	,074	,155	4,494	,000
Self-Reinforcement	,051	,085	2,505	,012
R= ,449	R2= ,202			
F (3, 272)= 64,966	p= ,000			

According to Table 9, the variables of self-monitoring, self-evaluation and self-reinforcement together exhibited a significant correlation: R= ,449 and R2= ,202; F (3, 272)= 64,966, p<.01. These three variables together explain 20% of the total variance in behavior management. The following is the relative order of importance between the predictive variables upon behavior management, according to standardized regression coefficients: Self-Monitoring ( $\beta$ =,333), Self-Evaluation ( $\beta$ =,155) and Self-Reinforcement ( $\beta$ =,085). When the significance tests are considered, it is seen self-monitoring, self-evaluation and self-reinforcement variables predict the behavior management dimension of teacher efficacy. The Results of the Multiple Regression Analysis for the Impact of Self-Control Levels of the Teacher Candidates on the Motivation Dimension of the Teacher Efficacy Scale are indicated in Table 10.

**Table 10.** The Results of the Multiple Regression Analysis for the Impact of Self-Control Levels of the Teacher Candidates on the Motivation Dimension of the Teacher Efficacy Scale

Dimensions	B	$\beta$	t	p
Constant	14,786		22,395	,000
Self-Monitoring	,258	,338	9,170	,000
Self-Evaluation	,032	,057	1,592	,112
Self-Reinforcement	,039	,056	1,600	,110
R= ,384	R2= ,148			
F (3, 272)= 44,534	p= ,000			

According to Table 10, the variables of self-monitoring, self-evaluation and self-reinforcement together exhibited a significant correlation:  $R = ,384$  and  $R^2 = ,148$ ;  $F(3, 272) = 44,534$ ,  $p < .01$ . These three variables together explain 15% of the total variance in motivation. The following is the relative order of importance between the predictive variables upon motivation, according to standardized regression coefficients: Self-Monitoring ( $\beta = ,338$ ), Self-Evaluation ( $\beta = ,057$ ) and Self-Reinforcement ( $\beta = ,056$ ). When the significance tests are considered, it is seen that only the variables of self-monitoring predict the motivation dimension of teacher efficacy.

**Table 11.** The Results of the Multiple Regression Analysis for the Impact of Self-Control Levels of the Teacher Candidates on the Teaching Skill Dimension of the Teacher Efficacy Scale

Dimensions	B	$\beta$	t	p
Constant	13,061		22,040	,000
Self-Monitoring	,211	,309	8,343	,000
Self-Evaluation	,048	,097	2,692	,007
Self-Reinforcement	,031	,050	1,410	,159
R = ,374	R <sup>2</sup> = ,140			
F (3, 272) = 41,918	p = ,000			

According to Table 11, the variables of self-monitoring, self-evaluation and self-reinforcement together exhibited a significant correlation:  $R = ,374$  and  $R^2 = ,140$ ;  $F(3, 272) = 41,918$ ,  $p < .01$ . These three variables together explain 14% of the total variance in teaching skill. The following is the relative order of importance between the predictive variables upon teaching skill, according to standardized regression coefficients: self-monitoring ( $\beta = ,309$ ), self-evaluation ( $\beta = ,097$ ) and self-reinforcement ( $\beta = ,050$ ). When the significance tests are considered, it is seen that only the variables of self-monitoring and self-evaluation predict the teaching skill dimension of teacher efficacy.

**Table 12.** The Results of the Multiple Regression Analysis for the Impact of Self-Control Levels of the Teacher Candidates on the Assessment and Evaluation Skill Dimension of the Teacher Efficacy Scale

Dimensions	B	$\beta$	t	p
Constant	5,135		19,529	,000
Self-Monitoring	,074	,246	6,648	,000
Self-Evaluation	,036	,164	4,566	,000
Self-Reinforcement	,025	,090	2,561	,011
R = ,378	R <sup>2</sup> = ,143			
F (3, 272) = 41,918	p = ,000			

According to Table 12, the variables of self-monitoring, self-evaluation and self-reinforcement together exhibited a significant correlation:  $R = ,378$  and  $R^2 = ,143$ ;  $F(3, 272) = 19,529$ ,  $p < .01$ . These three variables together explain 14% of the total variance in assessment and evaluation skill. The following is the relative order of importance between the predictive variables upon assessment and evaluation skill, according to standardized regression coefficients: self-monitoring ( $\beta = ,246$ ), self-evaluation ( $\beta = ,164$ ) and self-reinforcement ( $\beta = ,090$ ). When the significance tests are considered, it is seen self-monitoring, self-evaluation and self-reinforcement variables predict the assessment and evaluation skill dimension of teacher efficacy.

#### 4. DISCUSSION

The findings of this study revealed that teachers are aware of the importance of lifelong education for their professional development, and as a consequence of this they believe that distance education and the Internet are important means and have an important place and role in the current educational systems. For example, the teachers developed “train”, “present box”, “tree”, “experience”, “life”, “space”, “water”, “improvement”, “light”, and “voyage” metaphors for lifelong education. Demirel and Yagci (2012) found the following description for lifelong education, as: “The concept of lifelong education was associated with learning time by some participants, the others explained this concept related with personal development and integration” (p:100). Additionally Poyraz and Titrek (2013) stated that “lifelong education isn’t only the responsibility of the individual or school, in this regard government has an important role” (p:129). In their study Senyuva and Caliskan (2014) found similar teaching profession metaphors as the present study, “baby, water, tree and children” (p:372). In this respect it can be said that there is a similarity between the results of the present study and the literature. The teachers developed “qualifications”, “advantage”, “innovation”, “locomotive”, “drama”, “seminar”, “mirror”, “mountain” and “requirements” metaphors for professional development. In relation to professional development

metaphors, Pearson, Scott and Sugden (2011) found the following descriptions: “individuals’ progress can be viewed in terms of both acquiring knowledge and also progress from ‘novice to expert’” (p:42). In this respect it can be said that there is a similarity between the results of the present study and the literature. The teachers developed “bread”, “holy”, “effect”, “picture”, “journey”, “light”, “model”, “captain”, “solver”, “sea”, “love”, “art” and “youngtree” metaphors for the teaching profession. When the literature is examined about the teaching profession it can be said that there is a similarity between the results of the present study and the literature (Alger 2009; Kucukoglu, Tasgin and Saadine 2014; Nartgun and Ozen 2015). In their study Nartgun and Ozen (2015) found similar teaching profession metaphors as the present study: “happiness”, “patience”, “future”, “prestige”, “pedagogy knowledge”, “holiness”, “valuable”, “patience”, “liberal education”, “valuable professional” (p:2674). Additionally, Alger (2009) found “guiding, nurturing, molding, transmitting, providing tools, and engaging in community metaphors in relation to teaching in his study” (p:744). Meanwhile, Kucukoglu, Tasgin and Saadine (2014) found the following descriptions and metaphors: “being a specialist in his/her field, achieving the objectives, guidance, openness to innovation, being a leader” (p:395). In this respect it can be said that there is a similarity between the results of this study and the literature. The teachers developed “access”, “television”, “cinema”, “unscented rose”, “flexible” and “development” metaphors for distance education. When the literature is examined it can be said that there is a similarity between the results of the present study and the results of the literature (Tuncay and Ozcinar 2009; Tuncay and Poyraz 2013). In relation to the distance education metaphors Tuncay and Poyraz (2013) reported: “impossible, magic, space, light and laptop” (p:150). Likewise, Tuncay and Ozcinar (2009) reported: “ocean” (p:2883). In this respect it can be said that there is a similarity between the results of this study and the literature. The teachers developed “lion”, “art”, “king”, “tree”, “talent”, “charisma”, “virtue” and “make a difference” metaphors for leadership. In relation to the leadership metaphors, Angel (2004) found the following descriptions: “leadership characteristics derived from the mentor, hero and prophet” (p:1). In this respect it can be said that there is a similarity between the results of this study and the literature. The teachers developed “amusement park”, “knife”, “close friend”, “a way of civilization”, “power”, “opportunity”, “danger”, “a herd of data”, “invention” and “literacy” metaphors for the Internet. When the literature is examined about the Internet, it can be seen that the literature (Arabacioglu and Gokdas 2015:8; Isomursu, Isomursu, Hinman, and Spasojevic 2007:259; Porto-Requejo 2007:195; Sahin and Baturay 2013:183; Senyuva and Kaya 2013:89; Taniguchi 2003:18; Wu and Chen 2013:65) presents the following metaphors and descriptions about the Internet: “a source of information, trail, link, thread, highway, person, friend, cyberspace, communication tool, world, book, library, encyclopedia, water, sea, bread, drug, meal, chocolate, knife, entertainment, toy, magic box, compass, cobweb, campfire, watering, hole and cave, virus”. In this respect it can be said that there is a similarity between the results of the present study and the literature.

## 5. CONCLUSION

As a conclusion, our experience regarding metaphors in the research indicates that metaphors can be a very powerful and useful creative tool. Additionally, they can help us understand the nature of lifelong education, professional development, the teaching profession, distance education, leadership, and the Internet.

The results of this study reveal that teachers consider lifelong education as a necessary and essential means to develop themselves and they perceive professional development as one of the requirements of lifelong education. Also, they stated certain characteristics a teacher should have where their metaphors about the teaching profession and leadership are concerned. Concerning their metaphors about distance education and Internet, it can be seen that they were referring to some of the basic characteristics of distance education and the Internet.

## 6. RECOMMENDATIONS

Further studies need to be planned and actualized with large sample groups. Based on the teachers’ opinions about the Internet and distance education, various professional development opportunities need to be planned and organized to develop their professional knowledge and skills and to increase their awareness of professional development.

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# Teachers' perceptions of learning organizations

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## ABSTRACT

As a result of an organizational learning attitude which elevates learning from a personal level to an organizational activity, examining the learning organization perception of school managements' components is very important to reveal the state of schools in terms of becoming learning organizations. In order to better assess educational organizations' openness to the process of change and schools' states in terms of becoming learning organizations, it is worth examining schools' perceptions of learning organizations. It is thought that examining primary schools' openness to learning as an organization and revealing their competence in terms of learning organization disciplines will provide an idea about primary schools' possibility of becoming "schools of the future". The purpose of this study is to examine primary school teachers' perceptions of their schools in terms of the learning organization approach. The study group of the research consists of 392 teachers working in the European side of İstanbul. A "Learning School Scale", in order to reveal teachers' perception of learning schools was used in this study. A "Screening Model" was used in this study to determine teachers' perceptions of learning organizations. Descriptive statistical methods and a statistical package program were used to analyze the data. Teachers' perceptions of learning organizations related to their own schools was examined based on gender, field, school type, seniority, and educational status variables. The findings obtained as a result of this study suggest that team learning activities should be the center of focus in order to familiarize teachers with the idea of a shared vision in the vision creation process and enhance their belief in the possibility of realizing this vision.

Keywords: Learning School, Learning Organization, Teacher Perception

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## 1. INTRODUCTION

The matter of adjustment of schools, which can be deemed as the basic building block of the education system, to the information society, and changing conditions of the 21st century should be considered with administrators', teachers' and other shareholders' openness to learning. The main goal of education is not to teach students how to read, write, and do basic math, but to gain qualities such as high-level problem-solving skills and technological literacy (Bakioglu and Hesapcioglu 1997). It is a matter of discussion as to what degree these goals are achieved and what the position of the education system is in this sense. However, the goals in question are not only set for students, but are also required for the success of the school, administrators, and teachers, and are necessary for life-long learning. Administrators and teachers who have high communication skills, problem-solving skills, and who follow technological innovations related to their field will become pioneers and developers in every sense with these qualities. It is clear that schools still maintain their importance in the current era. However, the concept of a school representing this century is thought to be different from the traditional school concept (Ozdemir 2000). While it is becoming more and more important to renovate educational programs according to changes and innovations in the world and to gain a dynamic rather than a static structure (Alıcıgüzel 2001), it is also equally important to adapt the school management system to developments and to create an open system in line with internal and external conditions.

Basaran (2000) considers schools with these qualities as schools of the future and refers to them as learning schools. Without a doubt, qualified schools that are open to change and development question the status quo and see the structure of education as a system that is only possible with organization members who possess these discipline values. Therefore, it is impossible to think of learning schools without teachers and administrators who have absorbed the concept of organizational learning and who contribute to this process.

One point is very clear according to Senge (2007): Schools can be re-created, made vital, and renewed not by fiat or command, nor by regulation, but by embracing the principles of the learning organization. Along with supporting information management, learning in organizations supports creativity as well as promoting new findings and ideas and increasing the ability to understand and implement these new ideas (Aragon-Correa et al., 2007; İraz and Yıldırım, 2004).

Since the late 1970s, organizations have begun to live in an environment of major change and uncertainty. Organizations that have attempted to become "systems constantly researching their environments" to be able to maintain their presence in such an environment have begun seeking new ways to achieve success by reducing the number of uncertainties surrounding them. Organizations that have turned into systems able to think, learn, and research like a brain have found it much easier to adapt to the changes around them (Yazıcı 2001). A great many organizations from different industries have been trying to become a "Learning Organization" since those times. It is the common goal of many organizations, no matter in which industry, to develop within this process and predict the future. The concept of a learning organization refers to an institution's constant efforts to draw conclusions from events, to use these conclusions to adapt to changing environmental conditions, and to create a system that develops its personnel, thus becoming a changing, evolving, self-regenerating, and dynamic organization (Kocer, 1996). In learning schools, teachers and administrators have the mindset of "my school" rather than "my class" (Kaya 2003). Today, educational organizations are not only addressed as organizations that educate students, but also dynamic

structures that change and renew during these processes. Education in schools is not intended for the present, but for qualified individuals of the future. “In the information society, education will provide balance. Those who make a lot of money but without a life worth living cannot eliminate the educated barbarian type and those who are cultured but lack the ability to be decisive and efficient cannot eliminate the amateur type.” (Drucker 1996). What is needed today is to focus on high-quality education and educational organizations that are open to change and learning. The schools’ duty is to lead changes and become the transforming dynamic of society through education, rather than adapting to society. In the information society, schools must become learning organizations, rather than only teaching organizations (Celik 2007).

As a result of an organizational learning attitude which elevates learning from a personal level to an organizational activity, examining the learning organization perception of school managements’ components is very important to reveal the state of schools in terms of becoming learning organizations. In order to better assess educational organizations’ openness to the process of change and schools’ states in terms of becoming learning organizations, it is worth examining schools’ perceptions of learning organizations. It is thought that examining primary schools’ openness to learning as an organization and revealing their competence in terms of learning organization disciplines will provide an idea about primary schools’ possibility of becoming “schools of future”.

The problem statement of this study was determined to be “What is the level of primary school teachers’ perceptions of learning schools?” As for the problem in question, we tried to answer the following sub-problems:

Is there a significant difference between primary school teachers’ perceptions of learning schools according to the following properties?

1. Gender
2. School Type
3. Field
4. Seniority
5. Educational Status

## 2. METHODS

### Study Group

The study group of the research consists of 392 teachers working on the European side of Istanbul in the 2013-2014 academic year. A “Stratified Purposive Sampling Method” was used in the study. This method depends on forming sub-groups from the population in order to show, describe, and compare certain sub-groups of the study (Buyukozturk et al., 2009). Empty or incorrectly filled surveys were not included in the study.

### Data Collection Tool

A “Learning School Scale” developed by Subas (2010) in order to reveal teachers’ perceptions of learning schools was used in the study. There is a total of 30 items on the Learning School Scale. The Cronbach Alpha internal consistency coefficient, calculated based on item analysis for the reliability of the scale, was determined to be 0.91 for the whole scale. The scale factors were structured according to Senge’s five disciplines (2007) learning organization approach. The scale was graded as a 4-point Likert scale. The data analysis was based on the following score: 1.00-1.75 for “strongly disagree”, 1.75-2.50 for “disagree”, 2.50-3.25 for “agree”, and 3.25-4.00 for “strongly agree”.

### Data Analysis

A “Screening Model” was used in this study to determine teachers’ perceptions of learning organizations. Descriptive statistical methods and a statistical package program were used to analyze the data.

## 3. FINDINGS

Teachers’ perceptions of learning organizations related to their own schools was examined based on gender, field, school type, age, and seniority variables, and the findings are presented in tables. Table 1 shows teachers’ perceptions of learning organizations by gender.

**Table 1: Teachers’ Perceptions Of Learning Schools By Gender**

	Male (N=117)		Female (N=275)		Levene’s Test of Equal Variances		t-test			
	$\bar{X}$	SS	$\bar{X}$	SS	F	P	t	sd	p	Avg. Difference
Personal Mastery Discipline	3.28	0.45	3.36	0.45	.001	.973	-1.660	390	.098	-.082

Mental Model Discipline	3.33	0.42	3.30	0.43	.046	.831	.556	390	.578	.026
Shared Vision Discipline	3.06	0.64	3.06	0.61	1.133	.288	.062	390	.950	.004
Team Learning Discipline	3.07	0.60	3.14	0.57	.572	.450	-1.015	390	.311	-.064
Systemic Thinking Discipline	3.26	0.52	3.28	0.49	.161	.688	-.385	390	.701	-.021
Total Learning School Score	95.37	12.51	96.31	12.05	.828	.364	-.697	390	.486	-.937

Given the data in Table 1, a significant difference between teachers' perceptions of learning schools according to the gender variable ( $p > 0.05$ ) could not be found. Teachers' perceptions of learning organization disciplines and learning schools were examined based on the school type variable and the relevant findings are given in Table 2.

**Table 2: Teachers' Perceptions Of Learning Schools By School Type**

	Public (N=244)		Private (N=148)		Levene's Test of Equal Variances		t-test			Avg. Difference
	$\bar{X}$ :	SS	$\bar{X}$ :	SS	F	P	t	sd	p	
Personal Mastery	3.25	.45	3.48	.42	1.250	.264	-4.934	390	.000**	-.225
Mental Model Discipline	3.28	.46	3.36	.37	9.473	.002	-2.100	362.082	.036*	-.088
Shared Vision Discipline	2.89	.65	3.34	.44	10.067	.002	-8.226	385.038	.000**	-.451
Team Learning Discipline	2.97	.60	3.35	.45	4.142	.043	-7.190	374.387	.000**	-.383
Systemic Thinking	3.22	.51	3.38	.46	0.320	.572	-3.118	390	.002**	-.159
Total Learning School Score	92.75	12.37	101.42	9.74	7.163	.008	-7.696	364.289	.000**	-8.664

The findings in Table 2 show that teachers' perceptions of learning schools varied in favor of private schools. Teachers working in private schools had more positive opinions about their schools and their activities in terms of the mental model discipline ( $p < .05$ ), the personal mastery discipline, the shared vision discipline, the team learning discipline, the systemic thinking discipline, and general learning school perception ( $p < .01$ ). Table 3 shows a comparison between form teachers and field teachers in terms of their perceptions of learning schools.

**Table 3: Teachers' Perceptions Of Learning Schools By Field**

	Field (N=230)		Form (N=162)		Levene's Test of Equal Variances		t-test			Avg. Difference
	$\bar{X}$ :	SS	$\bar{X}$ :	SS	F	P	t	sd	p	
Personal Mastery Discipline	3.33	.47	3.34	.43	1.001	.318	-.238	390	.812	-.011
Mental Model Discipline	3.30	.44	3.33	.42	.266	.606	-.771	390	.441	-.033

Shared Vision Discipline	3.10	.60	3.01	.64	.155	.694	1.346	390	.179	.085
Team Learning Discipline	3.16	.56	3.05	.60	.123	.726	1.918	390	.056	.113
Systemic Thinking Discipline	3.28	.49	3.27	.51	.002	.964	.130	390	.896	.006
Total Learning School Score	96.56	12.07	95.27	12.33	.084	.772	1.037	390	.300	1.295

Table 3 shows that teachers' perceptions of learning schools present no significant difference according to field. Table 4 shows whether there is a significant difference between teachers' perceptions of learning organization disciplines and learning schools according to seniority and their years of service.

**Table 4:** Teachers' Perceptions Of Learning Schools By Seniority

	Teacher Seniority	N	ANOVA					Groups Showing Difference-LSD
			$\bar{X}$	SS	sd	F	p	
Personal Mastery Discipline	1-5 years	134	3.40	.44	4	1.496	0.203	
	6-10 years	86	3.31	.47	387			
	11-15 years	86	3.26	.44				
	16-20 years	19	3.28	.55	391			
	Over 20 years	67	3.36	.42				
Mental Model Discipline	1-5 years	134	3.26	.44	4	0.870	0.482	
	6-10 years	86	3.35	.42	387			
	11-15 years	86	3.33	.43				
	16-20 years	19	3.29	.46	391			
	Over 20 years	67	3.34	.40				
Shared Vision Discipline	1-5 years	134	3.12	.58	4	2.829	0.025*	1-3
	6-10 years	86	3.17	.62	387			1-4
	11-15 years	86	2.92	.61				
	16-20 years	19	2.82	.82	391			2-3
	Over 20 years	67	3.05	.60				
Team Learning Discipline	1-5 years	134	3.19	.52	4	2.086	0.082	
	6-10 years	86	3.16	.58	387			
	11-15 years	86	3.02	.58				
	16-20 years	19	2.89	.74	391			
	Over 20 years	67	3.08	.62				
Systemic Thinking Discipline	1-5 years	134	3.28	.50	4	1.025	0.394	
	6-10 years	86	3.30	.51	387			
	11-15 years	86	3.25	.50				
	16-20 years	19	3.08	.43	391			
	Over 20 years	67	3.33	.50				
Total Learning School Score	1-5 years	134	97.16	11.67	4	1.956	0.101	
	6-10 years	86	97.35	12.19	387			
	11-15 years	86	93.84	11.87				
	16-20 years	19	91.37	15.28				
	Over 20 years	67	96.18	12.27	391			

\* p<.05

Table 4 shows that there was a significant difference according to seniority in terms of teachers' perceptions of learning schools in the shared vision discipline sub-dimension ( $p < .05$ ). As a result of the LSD test performed in order to determine between which of the seniority groups there was a difference, it was seen that the difference was in favor of teachers with fewer years of service. Table 5 shows teachers' perceptions of learning organization according to their educational status.

**Table 5: Teachers' Perceptions Of Learning Schools By Educational Status**

	Educational Status	N	ANOVA				
			$\bar{X}$	SS	sd	F	p
Personal Mastery Discipline	Associate's	43	3.31	.42	2	.606	.546
	Bachelor's Degree	307	3.35	.46			
	Master's Degree	42	3.27	.45			
Mental Model Discipline	Associate's	43	3.27	.49	2	1.064	.346
	Bachelor's Degree	307	3.33	.41			
	Master's Degree	42	3.23	.47			
Shared Vision Discipline	Associate's	43	2.93	.60	2	1.216	.298
	Bachelor's Degree	307	3.08	.62			
	Master's Degree	42	3.04	.64			
Team Learning Discipline	Associate's	43	3.08	.61	2	.668	.513
	Bachelor's Degree	307	3.13	.57			
	Master's Degree	42	3.03	.65			
Systemic Thinking Discipline	Associate's	43	3.20	.63	2	.583	.559
	Bachelor's Degree	307	3.29	.49			
	Master's Degree	42	3.26	.44			
Total Learning School Score	Associate's	43	94.16	12.86	2	1.145	.319
	Bachelor's Degree	307	96.51	12.14			
	Master's Degree	42	94.36	11.73			

The findings in Table 5 show that there was no significant difference between teachers' perceptions of learning organization disciplines and learning schools according to educational status ( $p > .05$ ).

#### 4. DISCUSSION

As a result of this study, it was seen that teachers' perceptions of learning schools did not differentiate according to gender. Similar to the findings of our study, a significant difference between teachers' perceptions of learning schools could not be found in the study conducted by Coskun (2008) either. On the other hand, Subas (2010) found a significant difference in teachers' perceptions of learning schools in favor of male teachers in the systemic thinking sub-dimension. No difference was found in the other disciplines. In the study conducted by Kılıc (2009), a difference was found between teachers' perceptions of learning schools in favor of female teachers in the personal mastery discipline. No difference according to gender was found in the other disciplines. The fact that teachers' perceptions of learning schools was similar for both male and female teachers was interpreted that this perception did not depend on gender, and thus possible gender differences such as sensuality, social status, and cultural differences.

It was found in this study that teachers' perceptions of learning schools varied in favor of private schools. Similar to the findings of our study, it was found in the study conducted by Uysal (2005) that private school teachers had a higher perception in all learning organization disciplines compared to their colleagues in state schools. Kumus (1998) and Toremén (2001) mentioned problems in state schools such as a lack of communication, an inability to create a vision, and a lack of team spirit. These can be interpreted as factors preventing state schools from becoming learning organizations.

It was seen that teachers' perceptions of learning schools showed a significant difference according to field. A difference between form teachers and field teachers was also found in the study conducted by Subas (2010). In the study conducted by Alp (2007), it was revealed that field teachers had a more positive approach to the shared vision discipline compared to form teachers. The group meetings and common examinations that field

teachers are required to hold may help them become more open to teamwork and the exchange of ideas. It can also be considered that having more free days in their weekly schedules or more free hours in their daily schedules compared to form teachers presents a better basis for field teachers' personal improvement.

According to the data, there was a significant difference according to seniority in terms of teachers' perceptions of learning schools in the shared vision discipline sub-dimension. It was seen that the difference was in favor of teachers with fewer years of service. In other words, teachers' perceptions of shared vision practices in schools decreased as their seniority increased. In the study conducted by Subas (2010), it was found that there was a difference between teachers' perceptions of shared vision according to seniority. It was seen that the shared vision perception of teachers with fewer than 5 years of service was lower compared to teachers with 16 or more years of service. In the study conducted by Kılıc (2009), it was found that there was a difference between teachers' perceptions of personal mastery, systemic thinking, and team learning disciplines according to seniority. It was found that the team learning perceptions of new teachers with 1-5 years of service was higher compared to teachers with 6-10 years of service. It was also found that the personal mastery and systemic thinking perceptions of teachers with 11-15 years of service were higher compared to teachers with 6-10 years of service. On the other hand, Alp (2007) did not find a significant difference between teachers' perceptions of the five disciplines of a learning organization according to seniority.

No significant difference was found in this study between teachers' perceptions of learning organization disciplines and learning schools according to educational status. Similar to our findings, Uysal (2005) and Turkoglu (2002) did not find a difference between teachers' perceptions of learning organizations according to educational status. While a difference in perceptions of the personal mastery and mental model disciplines, which mostly highlights personal qualities in favor of teachers with master's or doctorate degrees is not seen in studies on learning organization disciplines, it was found in the study conducted by Subas (2010) that teachers with associate degrees had higher perceptions compared to teachers with bachelor's and master's degrees.

## 5. CONCLUSION

The findings obtained as a result of this study suggest that team learning activities should be the center of focus in order to familiarize teachers with the idea of a shared vision in the vision creation process and enhance their belief in the possibility of realizing this vision. Given criticisms about teachers regarding the poor coordination of study teams in schools, team work activities in state schools should be planned more carefully and effectively.

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# Sustainable life and performing arts with the senior people in the context of lifelong education

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## ABSTRACT

Maturity is the era in life that consists the later periods of life. The main determining factors of this era are physiological changes, psychosocial and chronological factors. Although there are differences between countries maturity can bring some problems with it. Especially psychological problems are a social risk that reduces the quality of living among senior citizens. Being alone comes with feeling useless and depression which creates unbalance and unsustainability in elder people's lives.

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## 1. INTRODUCTION

Maturity is the era in life that consists the later periods of life. The main determining factors of this era are physiological changes, psychosocial and chronological factors. Although there are differences between countries maturity can bring some problems with it. Especially psychological problems are a social risk that reduces the quality of living among senior citizens. Being alone comes with feeling useless and depression which creates unbalance and unsustainability in elder people's lives.

## 2. ACTIVITY THEORY AGAINST LONELINESS AND DEPRESSION FOR SUSTAINABLE LIFE OF THE ELDERLY

The sense of loneliness at old age leads to various psychological and physical problems. Lack of social environment constitutes a stress spiral that can entirely affect human health, damage immune system and weaken the body. In psychological terms, the continuity of this feeling leads the person to depression in the course of time. In general terms, psychological reasons cause withdrawal of seniors from life. The old individuals, who no more enjoy life, turn in on themselves, minimize their connection with life and withdraw from it.

Activity theory is defined as the opposite of withdrawal theory; it is based on the view that people will enjoy life as much as they are active. According to activity theory, our activities and roles determine our thought about ourselves; in other words, we are what we do. Activity theory asserts that many elderly people continue their previous roles and life activities, since they have the same requirements and values (Görgün- Baran Aylin 2003:47).

Activity theory is, in a sense, one of the key elements for a sustainable life. The older individuals can establish a sustainable life only if they are healthy in physical and psychological terms. Especially social belongingness, collective habits from the past, obtained values and individual tendencies serve as a guarantee for sustainable life. In this respect, social activities are directly proportional with social roles or socialization process of the individual. The individual socialization process has a totality that covers the course of life.

"...The most important processes in adult socialization are the social ones in structural terms. In later periods, however, physiological oppressions may grow more intense as in childhood. These explanations point out to the influence of socialization process at old age. The subjection of the life of an older individual in a regulatory socialization process is important so as to enhance his life satisfaction and quality. On the other hand, a conscious individual is that who has the power to control his life. Therefore, it is in his power to arrange his life. Older individual experiences socialization depending on his level of learning from each social interaction. In other words, it is crucial that a senior individual does not abandon life and sticks by it. At old age, new conditions such as settlement of individual in a retirement home, establishment of new friendships, and beginning of a treatment process to heal a disease, require his socialization. As Bourdieu indicates, such conditions are closely related with the experiences, knowledge and rituals of the individual, namely, his cultural capital from childhood." (Görgün-Baran 2008:90)

The perception of old age and ageing can vary depending on different periods and social structures.

Prior to industrialization, there was a strong relation and organic solidarity between family members, as well as between the family and their external social environment; upon industrialization, however, this form of relation left for desensitization and mechanical solidarity based on intense competition. In other words, the feeling of "we" was dominant during pre-industrialist era, while "I" became more prominent afterwards. As the feeling of "we", which is at the heart of social relation, is replaced with sense of "I" and it was followed by

individualism, old age became a point of concern in sociological terms and problems of the elderly increased. (Er, 2009:132-133)

In modern society, there is a high level of loneliness and alienation among individuals; accordingly, old age suffered a loss of meaning and value. The senior citizens had a reputable status in traditional cultural societies, as transmitters of knowledge and experience; in modern world, however, they are considered as a social problem. Older characters, who represent wisdom and virtue, have been subject to many literary/folkloric works by means of their sayings or the values they symbolize. The personalities and works such as Dede Korkut, Kutadgu Bilig, Iliad, wise old man tales, once standing for cultural richness, are now occasionally seen as a social burden. In our day, the modern perception of old age and the elderly bears no profundity so as to understand and give a meaning to it.

To put it in different way, in Wilhelm Schmid's words, a cultural meaning, which is to be ascribed to ageing, is the present discovery of sources that facilitate and enrich the life. Silence is one of these sources. We seem to suffer the lack of silence: Modernism tosses around people and ruin their lives in such manner that the longing for silence gradually increases (Schmid, 2015:12).

### 3. LIFELONG LEARNING

Throughout the history, the concept of lifelong learning emerged in 19<sup>th</sup> century in the West for social objectives, so as to educate the individuals, who could not go to school due to any reason.

The development lifelong learning dates back to recent times. Two institutions stand out with respect to this concept that first appeared in Europe. The first institution is UNESCO, which played a significant part in emergence and evolution of lifelong learning. The second institution is European Union. Grundtvig Programme, a EU project, seeks adult education.

The objective of programme is defined as follows (ref to EU, 2010, by Toprak, Erdoğan, 2012, p.84): To meet educational requirements of ageing population in Europe; to assist the adults in developing their knowledge and competencies through new methods; to enhance circulation of adults all around Europe for adult education and improve the quality of such education; to improve collaboration between institutions of adult education all around Europe; to help the old persons from marginal and socially weak social layers, who have left the school and lack fundamental competencies so as to provide alternative opportunities for their access to adult education; to develop creative practices in adult education and to facilitate transnational sharing; innovative bitwise content, services and pedagogical and practice support for lifelong learning; to improve the administration of adult education organizations as well as pedagogical approaches. The programme concentrates on education and learning requirements of persons who receive adult education. Alternative educational courses and relevant organisations are also within the scope of programme. The programme intends to improve adult education sector, encourages providing more people with education experience and motivates that people get these courses in other European countries. The programme, which began in 2000, seeks enhancing knowledge and skills of adults, accelerating their personal development and improving employment opportunities for them. The programme also helps overcoming the problems of ageing European population.

The philosophical background of lifelong learning, in general terms, consists of issues such as social inclusion, active citizenship, personal development, employability that are present at every phase of human life; with respect to old age, however, the concept focuses on adaptation to new conditions due to ever changing individual and social circumstances and ensuring a sustainable and happy life perspective. In other words, lifelong learning, particularly for the elderly, means positive and significant contribution to life of senior citizens in physical, psychological and social terms.

Lifelong education may comprise various domains. Art is one the principal domains due to values it may add and contributions it may make to sustainable life of the elderly. Art is a fundamental leisure for old people and of great importance for their sustainable life. Art provides man with power and pleasure for live, rendering it meaningful and beautiful. Especially performing arts, such as music and dancing, contribute to socialisation process of old people thanks to their collective nature, and these practices prevent isolation. The sound and movement of music is so powerful that it may serve as a means to guarantee the physical and psychological health.

In this respect, we will talk about the content, methodology and outcomes of the project called "Voices between Bosphorus, Rhein and Maas", carried out in 2010 by Turkish Music Conservatory, Istanbul Technical University with people over the age of 50 as a EU Grundtvig Project. The project, which may serve as a case, had 35 participants of ages between 55-80 from Turkey, Germany, Holland, France, Belgium, Austria and Poland. The participants were accompanied by an orchestra of about 20 persons, including conservatory students from Turkey and Holland.

The topics of project "Voices between Bosphorus, Rhein and Maas," were decided as intercultural communication, sustainable life, lifelong learning, artistic education and international learning. The songs in Turkish, which would be taught within the scope of project, were sent to participants via e-mail 3 months

beforehand in form of audio files and notes. Thus, participants became familiar with Turkish music through listening.

The fundamental activities within the project are determined as follows: vocal exercises, introducing Turkish musical instrument, audio and video representation of the Turkish music and body culture, teaching the Turkish song along with a coach for the final concert; rehearsals accompanied by musical instrument players; final concerts by musical instrument players open public audience.

The expected outputs were to have a sense of a different culture by means of Turkish songs, to generate a collective work in a multicultural environment, to share experience with senior citizens from different cultures, and to make multicultural older participants to perform a concert.

The participants, who mostly came from European countries, stayed in Turkey for 8 days. They were taught Turkish music at Turkish Music Conservatory, Istanbul Technical University, for 5 days.

Music workshops began the day with instruction of Turkish pronunciation of lyrics, and continued with teaching songs in the company of music. Occasional dancing exercises, such as waltz steps and “the butcher’s dance” steps, enhanced both psychological motivation and physical activity among the old people. The older choristers were accompanied by instruments of young students; thus the youngsters also enjoyed a distinctive experience, and an intergenerational communication was established.

Besides, various tours, dinners and evening parties, tea parties were held every day, in addition to brief introduction about Turkish instruments. Such activities greatly contributed to great sympathy among participants from different countries.

The multicultural choir performed in two concerts at the end of musical workshop. The concerts were a real success, even though the preparations lasted only 5 days. The energy of participants during the performance fascinated the audience. The guests, who came to concert out of respect to us (project organizers) and had no true expectation from the elderly, gave a standing ovation at the end of the performance.

The banquet on final evening of the project, which hosted 35 persons of 55 to 80 years from Turkey, Germany, Holland, France, Belgium, Austria and Poland, was very interesting for the organisers. We embraced with the participants as if we knew them not for merely 8 days, but for years, as if we were parting from a relative. Our guests must have felt the same way, since some of them couldn’t help crying.

During the project evaluation among organisers, we concluded that we were good at demonstrating our feelings, love and respect to the old people, as is common in geographical and traditional culture. The project ranked as good practices as an exemplary project.

The project “Voices between Bosphorus, Rhein and Maas”, within the scope of EU Grundvig Project, became, in a sense, “our” interpretation of lifelong learning.

#### 4. CONCLUSION

Lifelong learning is a very important concept for the old people and serves as a guarantee for their sustainable life.

In Turkey, lifelong learning should definitely be generalised among the elderly, especially in form of performing arts such as music.

Our society has the tradition of collective singing, making music and musical intercourse. Besides, we traditionally sing *türkü*, one of the most notable representatives of our folkloric culture in Anatolia. If we can reanimate our cultural richness so as to serve for reconstruction of our cultural identity and social structure, this will also help establishing a sustainable life for old people and fulfil a social objective.

After all, music is never only music; music is tradition, memory, philosophy and collective life.

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# The educational functions imposed to folk tales in schoolbooks for children's literature course\*

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## ABSTRACT

The aim of this study is to investigate the educational functions which imposed to folk tales in school and reference books for Children's Literature Course in Turkish Universities. The document review, one of the qualitative data collection methods, is conducted in the study. Document scanning method was used to collect data. According to the investigation of thirteen children books, it is said that folk narratives, in the context of mother tongue acquiring process, contribute to get opportunities of cultural continuity, common transfers in mother tongue from past to future and intergenerational language unity, developments in cognitive and social fields, self-expression skills and creativity. In those thirteen books examined in this study, positive attitudes about contributions of using folk narrative genres in education are exhibited and the use of folk narratives in the education of native language and literature is recommended.

**Keywords:** folk tales, children's literature, native language, culture, education

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## 1. INTRODUCTION

It is clearly known that folk tales, one of the traditional folk narratives, are the creations of contextual oral culture. Because they include information about the historical background of the society which could be different from the written information and they are known to form a cultural memory. Folk tales are the carriers of the genetic memory. Because they carry family, social life, social and individual fears and elevations, criticism, individual desires, and motives, obsessions and frailties and the individual's conflicts with himself and with the society. Folk tales are also updated while they are being told either in social or in individual values from past to present.

For this reason, Turkish Ministry of Education gives great importance to benefit from folk narratives and folk tales during the mother language acquiring period (MEB, 2005;17, 24, 28, 40, 59, 78, 93, 123, 249). Tales are told to contribute to cultural continuity, to the common transport of the native language from the past to the future, to the language association among generations, to the development in cognitive and social fields and to the skill of expressing himself as well as creativity and having suitable opportunities to have self-confidence. Tales are also described as great contributors to the moral development of the child with good role models, especially when the good, the kind and the honest wins in these tales. At Educational Faculties, the course book and reference books written for the Children's Literature classes at pre-school, elementary and secondary school programmers take this positive effect into consideration.

Therefore, the curriculum for the Children's Literature class has a great deal of folk narratives. Tales are known to be positive, educational and amusing. It is not always possible for all the tales in books and course books to be positive. Because adults are the ones who fictionalize tales, so they might sometimes go beyond their imaginary world.

Moreover, tales that have a great collection will contribute to language, literature, culture and entertainment while carrying the unknown to this world. So, the researcher's task is to propose this topic for the agenda, classify and rearrange them and adapt them into today's world.

### The Purpose

The aim of this study is to investigate and review the educational functions which imposed to folk tales in school and reference books for Children's Literature Course in Turkish Universities.

## 2. METHODOLOGY

### Research Model

In this research, literature review method, one of the qualitative research methods, was applied. Documentary review method was used to collect the data (Karasar, 2005:183-184). Document review involves analysis of written materials that have information about the targeted phenomenon (YildirimveSimsek, 2008:187).

The data in this research was collected from 13 course books in Children's Literature that include folk tales. Besides, the information that came from literature review was benefitted in this research, too.

### 3.FINDINGS

The findings that were collected from examining 13 course books having educational functions of folk tales in child literature are as follows:

#### **The Book Writers Who Support the Idea That Folk Tales Have Positive Educational Functions on Children**

In the books that were examined, the benefits of folk tales for the children can be summarized like this: Being successful for the child to express himself and to develop reading skills is an inevitable outcome if he reads or listens to folk tales and then if he narrates them around. The supernatural events in these tales will attract children, it will help them develop positive feelings towards Literature and Art or Reading. They will help the reader or the listener to be aware of both his own culture and other cultures and also the variety of cultural differences. With the help of this, cultural elements will be carried in to the future (Dedeoglu, 2013).

The reason why children love fictional stories more than real ones can be explained with the fact that they like dreaming while they are growing up and that they have a fantastic perception because their perception is closer to the fictional one. Thanks to this, children will be able to go on a fictional trip with tales (Gunes, 2002;Sirin, 2007).

Tales which are suitable for pre-school children and elementary school children improve their imagination, language skills and their mental lexicon. They can be considered as an important way of using the vocabulary in an appropriate way (Oguzkan, 2001;Gunes, 2002;Nas, 2002; Guleryuz, 2006;Arici, 2007;Tanju, 2013;Dedeoglu, 2013). When tales include rhythm and imitations, they help audio and kinetic skills as well as language skills (Guleryuz, 2006). Tales improve children's imagination; they affect their language improvement in a positive way; they stimulate the curiosity and promotes the desire to learn and help children improve listening skills (Quoted from Gulec and Gecgel, 2006: 48). Simsek (2002) stated that tales improve children's imagination and stimulate curiosity, that's why, they lead the child into learning and they teach the child to listen.

Sahin explained the importance of tales an language improvement by saying that tales are the first to Show the child all the characteristics of his mother language, to teach how it is used, how rich his language is, how flexible and how fine it is (Quoted from Tanju, 2013: 104). MuhsineHelimoğluYavuz summaries the benefits of tales for children as follows: Amusing tongue twisters, which have a rich international harmony, will make the child love his language. Besides, they will help the child to develop an ability to say extraordinary words correctly (Quoted from Nas, 2002: 214).

PertevNailiBoratav states that tales are the first to teach the child how to use his native language like a worker using his tool. They show the child how his native language is full of skills, how rich, how flexible and how fine it is. They are the first to make the child go further from those who cannot speak the language and go nearer to the ones who can speak it. They are doing this with the help of lullabies, tongue twisters and folk songs - but possibly deeper than them (quoted from Yardimci and Tuncer, 2000).

Tales prepare the child for life and they feed his feelings. They have great contributions to the child's psychological development, to his self-confidence, to know himself, to realize the economic and social side of life and to develop reading habits (Gunes, 2002;Nas, 2002; Demirel, Cecen, Seven, Tozlu and Uludag,2010).Gunes stated that tales prepare the child for life because they not only feed the child's mind, adorn his soul and enrich his thought, they also tell the realities of life in an indirect way with symbols and with a childish language.

Sahin, too, declared in a similar expression that the most important function of tales was to prepare children for life by helping them to overcome problems they faced and develop their imagination (quoted from Tanju, 2013: 104). When the symbolic and imaginary elements in tales are ignored, there comes out the real life. Tales prepare the child for life indirectly in this way (Simsek, 2002)SelahattinDiliduzgun stated that tales indirectly go into the child's inner world by implying his inner problems and frustration. According to this, the child finds himself inside a tale without noticing (quoted from Nas, 2002).

According to TurhanBaraz, tales improve children's listening skills, justice and recognizing one's rights (quoted from Nas, 2002.) Yalcin and Aytas explained that happy endings of tales had positive effect on children and those happy endings played an important role on child's moral development (quoted from Tanju, 2013). Tales can be accepted to lead children into the good, the nice, the right, and the honest; so they have a great effect on training children (Quoted from Arici,2007). Tales are educational as well as being amusing for children. They contribute to training children by helping them have positive feelings and developing kindness. Because the good, the nice and the honest side always wins at the end of tales, the child tends to be good, as well, by identifying himself with them. (Gunes, 2002; Simsek, 2002).

The authentic heroes look pure and gullible in tales even though they have witty intelligence beneath this purity. If they are applied in an appropriate way in child-training, they can let the child form a deeper soul (Tanju, 2013).

All children read and listen to folk tales with a great pleasure. They prepare pre-school children for the school; for learning and school period. They improve their listening skills (Oguzkan, 2001).

Tales have a great role to make the Turkish classes more fun (Arici, 2007). Furthermore, the entertaining and fantastic world of tales might play an important role in encouraging the child to read and get a reading habit after school. They can be accepted as good reading materials for the child who has just learned how to read (Gunes, 2002).

With the help of unlimited power used in tales, the world, even the universe, can be formed again. When the child reads the tale, which has this unlimited freedom, he develops a creative mind. So he can have a distinctive and different point of view when he faces a problem (Guleryuz, 2006).

Sahin stated that tales might help the child to meet the value judgements of the society to become social. He also stated that children would learn to perceive life with hope, to be patient in difficult situations, and the results of being jealous, having fears and anxieties. He added that tales would show the child the importance of being sensitive to other people's feelings, having mutual love and respect in making friends, being merciful, and the importance of sharing. The child identifies himself with the heroes in tales and knows about his sexuality and get a healthy gender perception (Quoted from Tanju, 2013: 104).

According to Sahin, not only do tales play an important role in the development of the child's cognitive, sensitive, psychological, social, lexical, moral and sexual world but they also have great contributions to the cultural transport (Quoted from Tanju, 2013: 104). Thanks to folk tales, a lot of cultural information that belongs to that era can be collected indirectly. In today's world, children spend their leisure time on very different things. That's why, it can be said that there is no reaction between the producer and the consumer of the tale. As a result, children of this era are unfortunately deprived of the creative and exciting power of tales (Guleryuz, 2006).

#### **The Book Writers Who Support the Idea That Folk Tales Have Negative Effects on Children as well as Positive Ones**

There are authors who believe that tales can have harmful effects on children. N. Boileau (1636-1711) and J.J. Rousseau (1712-1778) stated that giving children tales including imaginary events and people was not an appropriate idea (Nas, 2002). Children can get frightened by some violence in tales because of the fact that they do not have an abstract concept until they are 9 years old (Quoted from: Gulec and Gecgel, 2006: 48).

Using tales that include violence and frightening things in them can have harmful effects even if they are aimed to give educational or moral lessons. However, tales introduces us the real life both with the good and the bad. Therefore, ignoring such a big source can be seen as ending a relationship with literature, life and the world. For this reason, instead of taking tales out of our lives, being selective will be enough (Gunes, 2002).

İpsiroglu stated that folk tales are not appropriate for children as they have violence in their original forms. Naki Tezel, too, approves of the importance of tales in child education cannot be ignored, he adds that if the bad elements in folk tales are taken out and they are rewritten by simplifying and shortening, they will contribute to children's literature (Quoted from Nas,2002). On the other hand, even if the frightening figures in tales can make children scared, these figures' begging forgiveness at the end and ending the tale happily can give the child a positive message that we can overcome difficulties, even though it is a bit difficult (Tanju, 2013).

#### **4. RESULTS, DISCUSSION AND SUGGESTIONS**

Tales, one of the folk narrative types, are told to have great contributions to pre-school education till the high school education for learning the native language and literature education. Common thought that is reached in books; the child, who is a member of the society, should be fed with tales in language and cultural areas. These course books load tales with a charge of transporting the native language traditionally and culturally. Because tales are the narratives of cultural context, they are known to involve information about the society's past and this oral information is different from the written ones, as a result, they form a cultural memory.

Tales are told to contribute to cultural continuity, to the native language transport from the past to the future, to the language association, to the development in cognitive and social area, to the creativity as well as being able to express oneself, and to have confidence in himself. Tales are determined to help the moral development of the children with good role models because the good, the helpful and the honest character beats in these tales. The books that were examined for this research exhibit a generally positive approach to the use of these tales in child education. That's why, they suggest that we use these folk tales in native language acquisition and literature teaching. The followings are the authors that have a positive approach: Yardimci and Tuncer, 2000;Oguzkan, 2000;Simsek, 2002;Nas, 2002;Gunes, 2002;GulecveGecgel, 2006;Guleryuz, 2006;Arici, 2007; Tanju, 2013; Dedeoglu, 2013.

Even though the authors mentioned aboveGunes, 2002; Nas, 2002;Gulec and Gecgel, 2006; admit the positive effects of tales, they mention its negative effects, as well. These authors defend the idea that these traditional tales ought to be rearranged according to the child and they should be cleared off frightening and violent elements, they should be shortened; simplified and rewritten with a simple language.

When we want to see if these writers prove their thesis about positive-negative educational effects of tales in course books, we see that they were observed not to get any support from any scientific research. They are not based on worldwide scientific research. That's why, it is suggested that more qualitative and quantitative scientific research should be performed about the educational functions of tales.

The authors of the 13 course books chosen for this research were observed to defend their opinions mostly from reference books. All the authors defend the idea that tales are important educational tools in language and culture training. So, doing scientific research to benefit from tales will contribute to the use of these very important cultural and lexical sources.

Tales play ideological games with simple fictions, symbolic and metaphoric narrations too. It is the kind of art, which tells a lot to the past, to the future and to now with its amusing, fantastic and educational characteristics. Knowing what it tells, and determining its function enables us to use it as an educational tool.

The good and the bad are clearly separated from each other. However, is it the same in real life? Most of the heroes obey without questioning. Beautiful girls have nice lives and lucky fortune. The princess is woken up with a kiss. But it is a rape in real life (Blue; 2015). In tales, little brothers are always wanted to be killed, there is a fatal rivalry between brothers; step mothers are always ill-hearted; mothers-in law are always bad; the royal and beautiful always wins without any effort; sons and daughters are dismissed from home as a punishment; the punishment at the end of a tale is always a torture or being killed; the hero is the good one, he always wins in the end, but he usually has to kill his step mother, step brother or father, or he has supernatural power during his journeys. He doesn't need to use his mind or he doesn't have to work. He is always successful. Are the good always good and successful in real life? How does a child of this era interpret the countries being reigned by the king and the queen? How does a child perceive the metaphors in tales in real life? Or does every child get the subtext message at the same level?

New steps should be taken for the tales such as reviewing them, revealing out the parts that we do not know, making them appropriate for the child's level, studying the compiled sources again, classifying them for the child and the teenager and using them more effectively and in a more qualified way. These studies should be done collectively by experts in language, literature and pedagogy.

For this reason, tales, like any other artistic texts, cinema, or art, should be dealt with according to the child's level. Tales, that is, open-ended texts, are the kinds that can contribute to science, art, and communication areas. In the area of education, though, much specialized studies are required to carry this work of art into today by determining the child's perception level.

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# Effective instructional design for listening in English language teaching

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## ABSTRACT

Listening is one of the most salient components of foreign language learning (FLE). Therefore, true communication heavily depends on learners' competence in listening. This study was aimed to discover the quality of listening instruction, how motivating listening activities are, and how effectively listening activities are applied at school. A survey in two Georgian and one Turkish university was applied to both English language teachers and learners. An experiment with 14 university students was conducted. Research findings indicate that students' listening skills are dissatisfactory and insufficient due to the listening activities that are not authentic, interesting, and motivating. A number of strategies on teaching and learning listening are suggested to increase learners' listening competence.

**Key words:** EFL, listening, motivation, authentic, listening activities

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## 1.INTRODUCTION

The significance of listening comprehension, particularly in foreign language learning context, is supported by the fact that listening constitutes 45% of daily communication among individuals (Celce-Murcia, 1995). Listening activities in classrooms should provide a comprehensible language input to the learner, and without understanding this input at the right level, any language learning simply cannot begin (Al-Hariree, 2004 ; Krashen, 1985). While explaining the nature of input, Shrum and Glisan (2005) claims that authentic oral and written texts play an important role in language acquisition, but teachers have to help students make sense out of input to make it comprehensible.

Time dedicated to listening comprehension is limited compared to native language acquisition. We are daily submitted to listening for hours in native language but in an FL setting it is different. The time spent daily on listening to teachers, class-mates and recordings in class does not exceed an hour or so while learners do home tasks and/or watch a foreign channel. All – or almost all “authentic” listening we can do is recorded (FL learners seldom or never communicate with native speakers face to face in non-native context) and it is rather tiring to listen with comprehension to hours of recordings. At the same time, compared to other skills, listening has an essential difficulty – authentic listening is ephemeral (you hear it once), even listening to a recording is more ephemeral, as you can repeat it, but it is not represented visually.

Listening, according to Brown (1994, p.241) is "a complex skill involving a large number of sub-skills or micro-skills such as discriminating English sounds, recognizing stress patterns, intonation meanings, recognizing words and expressions involved in the spoken discourse, and organizing grammatical rules". Moreover, the listener has to guess the meaning from the verbal and non-verbal contexts and adjust listening strategies to listening purposes. Above all, s/he has to use his background knowledge and experience to make inferences, predict outcomes and comprehend relationships among ideas (Goh, 1999). Lam (2002) underlines that listening is one of the most difficult skills. Rost (1999, p. 225) groups difficulties of listening as: linguistic (lack of given aspect of linguistic knowledge or decoding problems), inferential (inadequate strategy selection, inappropriate schemata), and procedural (unskilled response). Thus, it is easy to understand how important it is to increase the efficiency of listening activities if we cannot increase their duration.

Assessing the activities that are used to develop listening comprehension skills, Arnold (2005, p. 11) suggests "simply asking students to listen to something and answer some questions is a little unfair, and makes developing listening skills much harder". She asserts that inadequate listening practice could have negative effects on foreign language learners. Many pupils can become afraid of and bored by listening when they listen to something and feel that they understand very little. Students doing listening activities are often unmotivated by the contents of the texts they listen to and by inauthentic tasks. All this, certainly, decreases the efficiency of teaching listening.

While texts students listen to in EFL classes are basically authentic, which can be viewed as a great achievement of the recent decades, majority of activities they fulfill on them are still basically inauthentic. In real life we never do true/false, gap filling, multiple choice tasks while we listen to the radio, TV, our interlocutors, lectures, participate in a telephone conversation, etc. We do not normally answer the questions on what we have heard. We do sometimes retell what we have heard, but only to somebody who has not heard it. Thus, we believe that the general practice of teaching listening permits to assess the skills in inauthentic situations, but doesn't either efficiently develop listening in authentic situation skills, or assess them.

We have noticed that, on the one hand, level of EFL students' listening skills is generally lower than level of other skills, and on the other hand, motivation to fulfill listening tasks is low. Ramanathan and Bruning (2002) state that very little time is allocated to developing listening skills in Indian schools, correspondingly, listening skills are not assessed. According to a nationwide report in the US concerning the proficiency level of foreign language skills held by the Center for Applied Second Language Studies (CASLS, 2010), University of Oregon surprisingly doesn't include results on the level of listening skills (it includes, however, assessment of speaking skills, which are more difficult to assess), probably due to analogous reasons. Morchio (2009) in her questionnaire found that students in Argentina find listening "easy", but when she studied details, it turned out that they seldom listen to authentic texts and teacher comments in their native tongue whenever they can't understand something, besides, all lexical and grammatical difficulties are removed on the pre-listening stage. Teachers in her research state that students have grave problems in listening. Even in English as a native language deficiency in listening skills is reported (Klein, 2000): school graduate staff cannot understand what their boss is telling them and soldiers in the military service misinterpret commands. Brigman, Lane & Switzer (1999) report that 60-75% of oral communication is inefficient as it is quickly forgotten, ignored or misunderstood.

## 2. RESEARCH DESIGN

### Participants and setting

97 students and 18 teachers from 2 universities (one state and one foundation university) in Georgia and 103 students and 22 teachers from a foundation university in Turkey responded the questionnaire. We held a questionnaire to find out whether our intuition about the quality of listening EFL skills and the motivation of fulfillment of corresponding activities was really that bad. The questionnaire was in Likert scale (1-totally disagree □□ 5 – totally agree) and open-ended questions format.

### Research Questions

- Do listening activities applied in classroom setting motivate learners?
- Are listening activities sufficient for learners to improve their listening skills?
- Can language teachers apply effective listening teaching strategies?

### Instruments and procedures

We held a mini-experiment at a foundation University in Tbilisi in Georgia. The course books we used were Roni S. Lebauer's *Learn to Listen, Listen to Learn*. (Pearson Education, 2000) and Helen S. Solorzano's Jenifer P. L. Schmidt's *NorthStar Listening and Speaking* ( Intermediate- High Intermediate, Pearson Education, 2006).

The participants were freshman students of the Faculty of Education and Humanities learning Advanced English Listening and Pronunciation as a course, but also learning their major (English Philology) in English. Two groups were involved: control, where everything went as the course demanded, and experimental, where only a few drills/activities from the textbook were used (to prepare students for assessment), the rest of activities were as in the hypothesis. As we did not have two groups at the faculty, we split the existing group at random for the time of the experiment. The students agreed to participate in the experiment. There were 7 students in each group (5 females and 2 males). The experiment lasted for a month. Besides the way in which listening was taught to them, they were taught the same number of hours of Listening classes (3 hrs per week) and the same number (16 hrs per week) of all English classes (Advanced Reading and Vocabulary, Advanced Grammar, Advanced Speaking, and Advanced Writing). The level of listening skills was assessed in a 100-point scale, the pre-, while and post-test included tasks of the same format (true/false/no evidence, multiple choice, gap-filling) and difficulty level. The level of students' listening skills was approximately the same in both groups as assessed by the pre-test (also the students had passed the Unified National Exam which is equivalent to B1 level). The pre-test was held a week before the experiment, the while-test – in the third week of the experiment, and the post-test – a week after the experiment. During the experiment the students of control group were taught exactly according to the textbook, while in the experimental group some (less interesting and useful) listening drills and activities were substituted by the activities included in the hypothesis. The average results of the experiment are presented below in table 3 and graphically if Figure 1. The detailed results are shown in tables 4 and 5 in the appendix. They have been calculated with SPSS.16 program. Tables 4 and 5 show that in the experimental group all students improved their results significantly, while in the experimental group some students increased results insignificantly, while others did not achieve any improvement. The standard deviation in both groups is between 6.20 and 8.44, which in a 100 points scale of assessment means that the groups are homogeneous enough.

We offer such activities as:

- Listening for assessment (pleasure listening). Let students listen to a (recording of

a) poem/story/song and discuss whether they liked it or not and why.

- Choosing the video (it should contain speaking). The teacher finds several videos. Students, according to the title and picture, decide which of them to listen to. After listening they discuss whether the video justified their expectations.
- Catch the liar. The group has read/listened to a story. One student retells it in his/her interpretation (s/he has to falsify 3 facts). The group listens to him/her, trying to find the lies.
- Eavesdropping 1. Students sit at two desks. Students at one desk are talking about some exciting issue, e.g., tomorrow's test. Students at the other desk try to catch as much information as they can.
- Eavesdropping 2. A "husband" is talking on the telephone. The "wife" is very interested and tries to understand to whom he is talking about and what he is saying.
- Sharing news. Let students tell some – from their viewpoint – exciting news which they really heard on the radio/TV in English and others express their opinions about it.
- Note taking. Find out some hobbies that unite many of your students (growing room flowers, cooking/baking, making airplane/ship models, etc.). Split them into groups according to interests. Choose an adequate to each group's interests listening text containing recommendations/recipes. Ask students to write down as many recommendations as they can individually, then help each other a complete make a list.
- Giving evidence. Students watch an episode from a movie. Then role play occurs: they give evidence in court about what happened.
- Taking a message. A role play telephone conversation. There is a call (you can use mobile phones to make the role play more realistic) for N., but s/he is out. Take a message and tell it to him/her when s/he is back.
- Listening digest. Give students as homework to listen to news on the radio/on the TV and prepare a digest which they will self-record with the help of mobile phones. Then their group mates will listen to their digest and offer their own digests, too. News that have already been heard should be omitted (it guarantees that students listen to each others' digests).

### 3. RESULTS

**Table 1.** Teacher questionnaire average results: Attitudes about listening skills among Georgian and Turkish teachers

Questions	Average points	
	received from Georgian teachers	received from Turkish teachers
Compared to other skills (vocabulary, grammar, speaking, reading, writing) you find teaching listening easy	2.7	2.9
My students' level of listening skills is high	2.4	2.2
I enjoy holding listening activities in class	3.6	3.7
Listening tasks offered in textbooks do not help much to develop listening skills	3.1	3.3
My students would do more independent listening if the tasks were more interesting and effective	3.7	3.6

Teaching listening is not easy for teachers from both countries (2.7 and 2.9 out of 5 points), as students' listening skills' level is not high (2.4 and 2.2 points). However, the teachers are enthusiastic enough and enjoy holding listening activities (3.6 and 3.7 points). They more or less positively assess the listening tasks in the textbooks they are using (3.1 and 3.3), however, it is obviously desirable that the quality of the tasks could be higher. And the teachers believe that students would listen in English not only in class, but also at home, if the tasks were more interesting.

The most common responses to the interview in Appendix I are given below.

1- What are the most difficult problems while teaching listening?

- Low motivation of students
- Student concentration (difficulty of listening without seeing)
- Accents in recordings

- 2- What do you think teachers should do in order to teach listening easily and fruitfully?
  - Involve students in watching TV in English at home
  - Use more entertaining tasks (like listening pop songs and programs for the young)
  - Explain to students that listening deals not only with recordings, but also with listening to each other in class
- 3- Do you think that the students should take notes or use the teacher's notes during the listening activities?
  - Yes, mini-lectures from the theoretical course they study would be a good idea
  - I like the idea of best lecture notes' contests
- 4- Should your students watch original or subtitled movies to improve their listening skill?
  - It is very useful, as based on the picture, they develop guessing skills and strategies, which they lack
  - Yes, it increases motivation, but they should start from programs were English is simple (soap operas, for example)
- 5- When you compare the listening skill to the others is it more difficult or easier? If so why? why not?
  - For me it's the most difficult skill, as I studied English when there were no recordings available and to practice was difficult
  - Our student have more problems with listening than with speaking. While speaking they use the resources they have (even if the resources are poor), but while listening they may not know the language that the speaker is using
  - Everybody thinks that listening is easy (yes – without comprehension!). But it is so only in the mother tongue. In a foreign language it is very difficult, even stressful.
  - Students' vocabulary is poor, so they get stuck when they hear a word they do not know and stop listening
- 6- Do you think that textbooks have some certain methodology of teaching listening skills or they just include testing exercises?
  - Probably they do, but too few.
  - The listening tasks are the same as used in testing

**Table 2.** Student questionnaire average results: Attitudes about listening skills among Georgian and Turkish students

	Average points received from Georgian students	Average points received from Turkish students
I find listening easier than the skills like grammar, vocabulary, speaking, writing.	2.7	3.1
I am good at listening.	2.9	2.8
I enjoy participating in listening exercises in class.	3.0	3.2
The activities in the course book do not help to improve my listening skills.	2.5	2.9
If the tasks given were more interesting, I would do more independent listening.	4.1	3.8

Georgian students did not view listening skills as easy (2.7), while their Turkish counterparts view them as relatively easy (3.1). This can be partly explained by better listening equipment and materials available in Turkish schools. On the other hand, experience (test results, lectures delivered in English) shows that Turkish students do have serious problems with listening skills which they may not realize. The answer to the second question, which is not too high for both Georgian (2.9) and Turkish students (2.8), confirms this guess. Students like to a certain degree the listening tasks (3.0 and 3.2), but the results could / should have been really higher, if we want to teach listening effectively. Also students are quite critical towards the listening activities (2.5 and

2.9). And the students from both countries agree that they would do more independent work in listening, had the task be more interesting (4.1 and 3.8).

Also please find some interesting / popular students' answers to open-ended questions: 1- What are the difficulties you face when you are doing listening?

- While I'm thinking what one sentence means, the text is finished.
- I cannot concentrate and pay attention to all details
- While I listen, I seem to understand, but then I do not remember what was said in the text

2- What do you think you should do to improve listening in an easy and efficient way?

- Listen to songs not just for pleasure but to understand the words
- Spend more time listening (not exercises, but radio, etc.)

3- Which one improves your listening skills more- watching English movies with English subtitles, or watching English movies with no subtitles? Why?

- With subtitles – I look there when I do not hear or understand
- With subtitles – I try not to look on them, but I feel more confident.
- Without subtitles – I am only reading instead of listening and watching

4- Is listening easier or more difficult than other skills? Why?

- If it is not a test, it is easy, but tests are very stressful. In class the teacher permits to listen twice, but in a test it is not permitted.

- It seems easy, but when a teacher or a foreigner asks me something, I often do not understand. The answers to the questionnaires suggested us some ideas for hypothesis:

1. The problems with listening are:

- Low student motivation
- Lack of context where students deal with authentic listening
- Many hours of practice (like in the native tongue) are needed
- Level of language skills in the group differ
- Poor vocabulary
- Students try to understand every word and get stuck
- Listening for a gist skills are very poor
- What teachers can do to improve the situation:
  - find out topics interesting for students
    - make student listen to/view authentic radio/TV programs at home
    - teach listening strategies
    - provide more practice

2. What students can do to improve the listening skills:

- Listen more often to authentic audio and video materials

3. Majority of teachers think that both student and teacher notes are useful.

4. Majority of teachers believe that students should watch original videos (without subtitles), while students prefer the ones with subtitles

5. Majority of teachers agree that listening is more difficult than other skills, however, they note that for visual learners it's especially difficult (unless visual support is provided), that's why application of video is more helpful than "pure" audio, which is mostly practiced in classes

- It is psychologically difficult (depend on the listening partner)
- poor vocabulary is a great problem
- On the other hand, students are more eager to listen than to speak/write or do grammar as it is receptive

6. Majority include testing exercises; few tasks of non-testing character

7. Though students realize that to be able to understand what their interlocutor says is important, they are not very motivated to practice their listening skills as they quickly get tired and bored.

Thus, based on personal experience, existing research and our survey, we believe that it is necessary to find some new ways to increase both the level of listening EFL skills and the motivation to fulfill listening activities.

**Table 3.** Experiment results – students’ average English listening skills levels

Test / group	Experimental	Control
Pre-test	49.57	46.29
While-test	57.00	46.43
Post-test	65.14	48.29
Change	15.57	1.72

We can see both from the table and the figure that the skill level in the experimental group is increasing (the change is 15.57 points), while in the control group – practically not changing (the change is 1.72 points), just fluctuating a bit.

#### 4. DISCUSSION AND CONCLUSION

We believe that, to be effective and motivating, listening activities have to be authentic or at least semi-authentic and should cause curiosity. We believe that some (and, probably, many) of them do not have to be recorded.

Thus, we can conclude that the mini-experiment has concluded our hypothesis – the exercises that we suggested helped increase students’ listening skills (in a month’s time an 15.57-point increase is really good). Of course, the experiment was very limited both in time and in participants’ number, to say nothing about the fact that they came just from one university in one country. To certainly say that the suggested activities can significantly increase listening skill level, a wider-scale research is needed.

Listening skills are very important for foreign language learning and communication, however the state of the matter in this part of language teaching is not too good. To increase the level of listening skills, more authentic and semi-authentic activities are needed. To motivate students, it is useful to cause their curiosity. For this purpose such activities as pleasure listening, choosing the video / audio recording according to the title and illustrations, ‘catch the liar’, eavesdropping, sharing news, note taking, giving evidence, taking a message and ‘listening digest’ may recommended, as they were found inspiring and effective during the mini- experiment held.

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**Appendix I: Interview Questions for Teachers**

- 7- What are the most difficult problems while teaching listening?
- 8- What do you think teachers should do in order to teach listening easily and fruitfully?
- 9- Do you think that the students should take notes or use the teacher’s notes during the listening activities?
- 10- Should your students watch original or subtitled movies to improve their listening skill?
- 11- When you compare the listening skill to the others is it more difficult or easier? If so why? why not?
- 12- Do you think that textbooks have some certain methodology of teaching listening skills or they just include testing exercises?

**Appendix II: Interview Questions for Students**

- 1- What are the difficulties you face when you are doing listening?
- 2- What do you think you should do to improve listening in an easy and efficient way?
- 3- Which one improves your listening skills more- watching English movies with English subtitles, or watching English movies with no subtitles? Why?
- 4- Is listening easier or more difficult than other skills? Why?

**Appendix III: Detailed results**

**Table 4.** Experimental group results

Student/test	Pre-test	While-test	Post-test	Change
1	43	47	55	12
2	47	55	63	16
3	54	59	66	12
4	55	63	71	14
5	39	51	62	23
6	61	68	74	13
7	48	56	65	13
<b>mean</b>	49.57	57.00	65.14	15.57
<b>standard deviation</b>	7.57	7.10	6.20	-

**Table 5.** Experimental group results

Student/test	Pre-test	While-test	Post-test	Change
1	47	49	51	4

<b>2</b>	38	37	39	1
<b>3</b>	55	57	60	5
<b>4</b>	47	47	49	2
<b>5</b>	49	46	48	-1
<b>6</b>	51	52	55	4
<b>7</b>	39	37	36	-3
<b>mean</b>	46.29	46.43	48.29	1.72
<b>standard deviation</b>	6.08	7.39	8.44	-

# Pedagogical formation students & future

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## ABSTRACT

The aim of this study is to investigate pedagogical formation students' opinions about their professional and personal future expectations and their professional and personal future anxieties with their reasons. The pedagogical formation students (n=45) at Abant İzzet Baysal University, Bolu-Turkey in the fall semester of 2014-2015 academic year formed the study group of the present study. In the study the qualitative data were collected through a semi-structured form developed by the researchers and in order to analyze the data, content analysis technique was used. The findings of the study indicated that the pedagogical formation students express their negative feelings for the future when their professional and personal lives are concerned.

Key Words: Pedagogical formation students, future expectations, future anxieties

## 1.INTRODUCTION

Anxiety may be defined as a feeling tone of anticipation, generally unpleasant that often leads to a feeling of fatigue and occurs when we are facing the unknown, the untried, a new situation or role (Neylan, 1962). According to Tektaş (2014), anxiety, defined as fear with uncertain origins, is a feeling that affects social relations, activities, education; in short the daily conduct of a person and that usually creates uneasiness. Neylan (1962) points out that anxiety has useful aspects when it is in moderate amounts as it stimulates the creative activity. In other words, if low in level, this feeling protects the individual from various dangers; and if high, drives the person towards failure and causes a loss of self-confidence (Tektaş, 2014). In the meantime al Matarneh and Altrawneh (2015) consider the feeling of anxiety as a natural sense and accepted interaction and expected under specific circumstances which helps enduring the activities and survival.

Future anxiety is one of anxiety types which means that the person expects a threat, known or obscure (al Matarneh and Altrawneh, 2014). According to al Matarneh and Altrawneh (2014), the future anxiety can be perceived as a state of ambiguity, scare, panic and concentration on expected changes to occur in the long personal future or expecting a bad event to occur. Future anxiety is conceived of as a state of apprehension, uncertainty, fear, worry and concern of unfavorable changes in a more remote personal future. In an extreme case this would be a threat (panic) that something really catastrophic may happen to a person (Zaleski, 1996). Several factors psychological, social and biological have been implicated as accountable for the manifestation of anxiety in students at different times and in different situations (Halaseh and All Shawareb, 2015). Students enter into campus life with certain anxieties and expectations, including getting into the university they want, being an undergraduate, going into the profession they want with the certificate they obtain after graduation and live a happy and healthy life. This new period starting with the campus life brings about not only new expectancies but also various challenges. Generally, when students enter into the university, they experience adjustment problems (Batıgün and Kayış, 2014; Dursun and Aytac, 2009; Kurt, 2007; Şahin, 2011).

In addition, in Turkey, university students start to feel anxious even before the university exam and continue to feel so throughout their undergraduate education because of a great deal of factors (change of location, socio-economic status, social relations, accommodation, job opportunities, plans for future, etc.). Off all, the most prominent source of despair and anxiety they feel towards the end of their undergraduate education is reported to be future anxiety; in other words, "unemployment anxiety" (Dursun and Aytac, 2009; Kurt, 2007; Şahin, 2011). This anxiety continues to increase together with unemployment and social life problems such as failure in social life. While undergraduates or graduates are trying to overcome these problems, they suffer from positive or negative psychological, physiological, and social difficulties.

Additionally, Dursun and Aytac (2009) state that unemployment is widespread among graduates in Turkey, which may lead to an increase in anxiety. Consequently, as Şahin (2011) asserts, many students choose professions in which they have less or no interest in order not to become unemployed when they graduate.

To remove these problems, both governments and individuals are in search of solutions. One of these potential solutions is pedagogical formation certificate program. Regardless of being employed or unemployed, university students and graduates want to guarantee their future with a prestigious and permanent job. It is essential to determine expectations and anxiety levels of students participating in this program in order to raise awareness. In

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this sense, this study aims to examine the perceptions of students in pedagogical formation certificate program on their future expectations and anxieties.

## 2.METHODOLOGY

This study is designed as a case study. In that as a research strategy, the case study is used in many situations to contribute to our knowledge of individual, group, organizational, social, political and related phenomena in brief the case study method allows investigators to retain the holistic and meaningful characteristics of real- life events (Yin, 2003).

### Study Group

The pedagogical formation students (n=45) at Abant İzzet Baysal University, Bolu-Turkey in the fall semester of 2014-2015 academic year formed the study group of the present study. When they are examined in terms of the faculties they graduated, it is seen that while (n=16) of them were the graduates of Faculty of Economics and Administrative Sciences and Medical Sciences, (n=11) of them were the graduates of Faculty of Arts and Sciences and School of Tourism Management and Hospitality School. In terms of their employment, it is observed that (n=24) of them were employed, however, (n=21) of them were unemployed. From the view point of their marital status, it is seen that even though (n=31) of them were single, (n=14) of them were married.

### Data Collection Instrument

In the study a semi-structured form developed by the researchers was used. There were four questions in the form. During the development of the interview form, the literature in relation to the subject area was reviewed, the criticisms and recommendations of four subject-specialists on Educational Sciences were taken into consideration and the final form was obtained. As a pilot study, fourth year preservice teachers (n=4) were asked to answer the questions to test the understandability of the questions in the form. Finally, the questions were asked to the study group. In this regard, the following four questions below were answered, as:

1. What are your professional future expectations?
2. What are your personal future expectations?
3. What are your professional future anxieties? What are the reasons of these anxieties?
4. What are your personal future anxieties? What are the reasons of these anxieties?

### Data Collection Procedure and Analysis

The qualitative data were collected by the researchers during the fall semester of 2014-2015 academic year. For the analysis of the data, content analysis technique was used. In the study, direct quotations were extracted and used for the reliability of the data. Additionally, during the analysis of the data, the opinions of employed and unemployed participants were compared and were listed as if they were employed or not. As participants individually can have more than one opinions about the subject, frequency values can be more or less than 45. The frequency values more than five refers to majority of the participants and less than five refers to minority.

## 3.FINDINGS AND DISCUSSION

The findings in relation to the opinions of pedagogical formation students about their future professional and personal expectations and anxieties are presented in Tables 1, 2, 3 and 4.

1. What are your professional future expectations?

**Table 1:** The findings about pedagogical formation students' opinions in relation to their future professional expectations

Employed	f	Unemployed	f
Being a subject teacher	9	Being a subject teacher	8
Changing occupation	1	Changing occupation	1
Good profession in terms of salary and social rights	6	Work with a qualified personnel	2
Being an academician	2	Good workplace	1
Promotion	2	Jobless future	1
Professional rights under the law	1	Professional development	2
Being successful in the profession	2	Academic promotion	2
Having respect for the profession	2	Starting a business	3
No expectations	2	High score in KPSS	1
		Having a profession they love	1
		No professional expectations	1

The findings related to pedagogical formation students' opinions on their future professional expectations are presented in Table 1. According to the Table 1, most of the pedagogical formation students having a job wanted to be a subject teacher and have a good profession in terms of salary and social rights whereas few of them had expectations in relation to changing occupation and professional rights under the law. In his study, Şahin (2011) stated that some students choose professions in which they have less or no interest in order not to become unemployed when they graduate.

When the findings with regard to pedagogical formation students who did not have a job are examined, it is seen that a great majority of them expected to be a subject teacher. On the other hand, few of them had expectations regarding the matters including changing occupation, having a good workplace and jobless future, getting a high score in KPSS, having a profession they love and no professional expectations. A participant (employed, N. 33) says "unmet expectations makes individuals unhappy and causes professional dissatisfaction". Another participant (unemployed, N. 14) explained that she had no professional expectations, saying "most probably, I stay at home, do the housework, and care a baby. For years, I have taken examinations in vain". The reason behind this may be the decrease in professional prestige, social status, and salary. Similarly, Canbaz, Sünter, Aker and Peken (2007) reported that 87% of the participants in their study indicated that they had concerns for their future. Moreover according to Baltacı, Üngüren, Avsallı and Demirel (2012), the participants who chose their field of study due to having no other options had high levels of anxiety and low levels of satisfaction with education and remained more uncertain about having a career.

2. What are your personal future expectations?

**Table 2:** The findings about pedagogical formation students' opinions in relation to their future personal expectations

Employed	f	Unemployed	f
Self-development through personal development programs (formation, postgraduate education, farming education)	4	Improving life standards	3
Being a good mother	1	Self-development for being a knowledgeable and well-equipped person	3
Safe and peaceful home/workplace	10	Safe and peaceful home/ workplace	6
Hopelessness	1	Having a profession with high status and salary	5
Being an academician	1	Having a good family	4
Having a profession they love	5	Attaining future goals and wishes	1
		Hopelessness	2

The findings concerning pedagogical formation students' opinions on their future personal expectations are given in Table 2. As seen in Table 2, most of the pedagogical formation students having a job wanted to have a safe and peaceful home/workplace while few of them had expectations in relation to being a good mother and academician. On the contrary, when the findings with regard to pedagogical formation students who did not have a job are examined, it is seen that a great majority of them expected to have a safe and peaceful home/workplace, a profession with high status and salary, as well as a good family. On the other hand, few of them had expectations about attaining future goals and wishes (Table 2). Some of both employed and unemployed students indicated that they were hopeless. In a similar vein, in their studies Ceyhan (2004) and Nartgün and Gökçer (2014) found out that pre-service teachers suffered from heavy hopelessness and uncertainty.

3. What are your professional future anxieties? What are the reasons of these anxieties?

**Table 3:** The findings about pedagogical formation students' opinions in relation to their future professional anxieties and their reasons

	Future Anxiety	f	Reasons	f
Employed	Certificate of no worth	1		
	Inconvenience in terms of appointment, professional career and development	2		
	Decrease in employment opportunities	3	Future redundancy in many fields of study	2
	Having a profession they dislike	1		
	Unstable and insecure profession	1		
	Workplace injustice	2		
	Workplace mobbing	1		
	Political affairs/ nepotism rather than professional success	2		
	Disrespect to healthcare personnel	6	Behaviors of healthcare personnel Attitudes of people to healthcare personnel	1
				2

Unemployed	Increase in the number of university graduates	1			
	Heavy working hours and overtime	1			
	Changing education system	1			
	Limited employment opportunities/working in a different field	12			
	Inconvenience in terms of appointment, professional career and development	8			
	Being unqualified and unskilled in the field of study	2	Being unqualified and unready for profession	1	
	Profession of no worth in society	2	Field of study of no worth		1
	Having difficulty until finding a job	1			

The findings in relation to pedagogical formation students' opinions on their future professional anxieties and their reasons are presented in Table 3. When Table 3 is examined in detailed, it is understood that most of the pedagogical formation students having a job had concerns about disrespect to the personnel where they worked whereas few of them had anxieties related to having a profession they dislike and an unstable and insecure profession as well as workplace mobbing, increase in the number of university graduates, heavy working hours and overtime, and changing education system. Table 3 also shows that the reasons behind these concerns were behaviors of healthcare personnel and attitudes of people to healthcare personnel. On the other hand, when the findings with regard to pedagogical formation students who did not have a job are examined, it is seen that a great deal of them had concerns about limited employment opportunities and working in a different field. Conversely, few of them had concerns about having difficulty until finding a job (Table 3). Similar findings were reported in the studies of Dursun and Aykaç (2009) and Ceyhan (2004). Table 3 further displays that pedagogical formation students who did not have a job were worried because they felt unqualified and unready for profession and had a field of study of no worth.

4. What are your personal future anxieties? What are the reasons of these anxieties?

**Table 4:** The findings about pedagogical formation students' opinions in relation to their future personal anxieties and their reasons

	Future Anxiety	Reasons	
Employed	Personal anxiety	1	
	No time for themselves and the family	1	
	Losing enthusiasm for profession due to economic reasons	3	Having a profession they dislike 1 Working in organizations grounded on daily policies 1
	Unable to see the future	3	
	Bad score in KPSS	2	
	Unable to develop themselves professionally	1	
	Risk of war due to geographic and geopolitical position of the country	1	
	Unwilling to take responsibility	1	
	Unhappy individual	2	
	Becoming unemployed	1	
	No future concerns	2	
	Unemployed	Insufficient support for themselves and the family in all areas	4
		Decrease in employment opportunities and fear of unemployment	11
Unable to get appointed as teacher		3	
Unable to find a job due to professional unqualification		1	
Loss of self-confidence as a result of failing to attain goals		1	

The findings in respect to pedagogical formation students' opinions on their future personal anxieties and their reasons are given in Table 4. As Table 4 indicates, pedagogical formation students having a job possessed economic and emotional anxieties for their future. Halaseh and All Shawareb (2015) pointed that several factors

including psychological, social and biological were implicated as accountable for the manifestation of anxiety in students at different times and in different situations.

In the present study, to explain their concerns for future, pedagogical formation students argued that they had professions they disliked and worked in organizations grounded on daily policies. To illustrate, a participant (employed, N. 23) said that s/he was anxious about “the limitations of personal freedom and the emergence of uniform individuals.”

Table 4 also indicates that the concerns of pedagogical formation students who did not have a job focused on the decrease in employment opportunities and fear of unemployment. Besides there were concerns about insufficient support for themselves and the family in all areas and improbability to get appointed as teacher. A participant (unemployed, N. 16) said that when s/he was unable to attain her/his goals, do whatever s/he want, and shape her/his life on her/his own, s/he felt anxious because of the education system in the country, increasingly challenging examinations, difficulties in getting appointed and struggling to survive in a bad world. Likewise, Kurt (2007), Dereli and Kabataş (2009), and Dursun and Aykaç (2009) reported that the problem of finding a job caused anxiety. In addition, Dursun and Aykaç (2009) pointed out that senior students who had no hope for finding a job after graduation had higher levels of despair and constant and situated anxiety compared to those who had hope for finding a job. Bolanowski (2005) reported that difficulties in getting a job and growing anxiety for maintaining the job, low wages, negative impact of work on private and family life, in particular, a conflict between the professional role and mother’s role.

#### 4. RESULTS AND RECOMMENDATIONS

In accordance with the findings of the present study, it can be argued that in addition to providing financial income, having a job has also psychological and social effects. Indeed, unemployment affects not only individuals but also families and societies. Working enables individuals to serve a purpose, have a social status in society, and get returns on their efforts (Yüksel, 2003). Therefore, beyond its economical aspects, it is vital to take psychological and social dimensions of unemployment into account, as well (Dursun, 2012). Today, university students and graduates suffer from studying at fields they dislike and having a profession with no employment opportunities, which leads to an increase in their future anxieties. Thus they want to work in public sector to be socially and economically safe. As a result, regardless of their fields of study all university students and graduates want to participate in pedagogical formation certificate program. In fact, each field of study requires its own expertise and uses a considerable part of public resources. However, graduates of all fields are expected to become equal through pedagogical formation and compete in the same league. In this respect, employment policies should be reconsidered and revisions should be made immediately. Moreover in order to make them hopeful about the future, youth should be provided with opportunities in which they can succeed and be employed.

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# Anthropological perspective on the human body: the human body as object and subject of health care

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## ABSTRACT

The study presents an anthropological reflection on the human body, which repeatedly during a lifetime becomes an object of healthcare. Our intention is to analyze the perception of a client's (patient's) body, its status, changes and reactions under surgery and nursing care, performed by healthcare professionals. From an anthropological point of view, it makes sense to think also of a client's evaluation. The client, through these performances, reflects on himself, on his body, on his feelings, and on the evaluation of health care interventions during hospitalization or outpatient treatment. The analysis of perception and experience of the client, his status, his reactions, including changes on the body or in the body, in connection with the performed medical procedures is enabled by comparative methodology, which give us the possibility to determine how these perspectives intersect and, vice versa, how they more or less diverge. A serious anthropological approach to the human body can help health workers to create a platform to achieve a more optimal concept of a bio-psycho-social approach to the client, a concept that in the so-called Western medicine is needed more. The text of the study thus acquires an applied, praxeological dimension. Its results can be used both in medical and teaching practice, in the context of the educational system for students of medical disciplines.

Key words: client, patient, surgery, nursing care, health experiences

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## 1. INTRODUCTION

Theory about health nature, health maintenance, disease prevention, as well as theory about the nature of diseases and their treatment are culturally determined. In this relation, Kleinman (1997) distinguishes three disease aspects: cultural representation of diseases in a given society; collective experience of the given society with a certain disease; and also experience of individual persons – members of the society with a given disease. The same author, as declared by Mares, claims in his approach to medical anthropology that the objective category „disease“, after deeper examination, is not a biological entity, a category on its own, independent of culture but – as anthropological and ethnographic research shows – it is more likely a social construct (Mareš - Vachková 2010). In other words, it is a socially/culturally constructed entity. A man who feels certain unpleasant symptoms constructs himself an idea of what his problem can be, and gives his disease a certain sense. Similarly, he approaches his own healthy and sick body in the same way. He constructs a certain image of his body, takes a particular stand on it, and has a certain attitude to it.

## 2. The PHENOMENOLOGY OF THE BODY: A Method of Inquiry

### The attitude of a person to their body

The attitude of a person to their body is affected by a multitude of factors. First of all, it is age, gender, followed by personality factors, the influence of one's upbringing and education, then socialisation and enculturation in general. It is in the family environment and the school environment where we acquire and adopt schemas related to the self-concept of our own body and its perception on a cognitive, emotional and behavioural level.

Fox (1997) emphasized the influence of a physical self-concept on one's behaviour and their feeling of well-being. The way a person perceives their body and the attitude to their body determines their physical self and also their attitude towards physical activity, sport, body weight, presentation of their personality and also their coping mechanism, as regards coping with difficult life events, such as serious illness, aging, etc. (Stackeová 2006).

However, it is necessary to separate unconscious perception from semi-conscious perception of one's own body from conscious experience associated with their body image or physical self-concept. As Le Breton (2003) claims, Westerners tend to notice their body only in unusual situations or during moments of crisis. For example, when tired, unable to accomplish something for whatever reason - usually associated with physical abilities, when feeling worn out (by age), when experiencing pain or when injured or ill.

An individual also notices their own body during moments of intimacy, tenderness, or in the case of women, also during their periods, pregnancy and delivery, in the postpartum period and while breastfeeding. These situations either place restrictions on the life of an individual, as claimed by Canguilhem and Leriche (Le Breton 2003) or, conversely, they widen the scope of an individual's influence, which is less frequent. The "present versus non-present" body is the main axis which incorporates a person into the complexities of the world and forms the sine qua non (basic condition) for all social processes. Nevertheless, human consciousness only notices the body when it ceases to fulfil its usual functions, when the everyday routine disappears and the "silence of organs" is disrupted (Le Breton 2003).

The perception of one's own body and problems associated with it, is undoubtedly intensified in situations such as hospitalisation in a medical facility when the person (and their body) is subjected to a series of diagnostic, therapeutic and nursing procedures.

Under normal circumstances we do not operate with a virtual "separation" of a person's mind from the body. We perceive both as an inseparable whole. We do not even perceive, or should not perceive, the body in a purely biological sense. Even though the term "body" refers exclusively to human physicality, the human body is an unparalleled synthesis of biological, psychological, social, cultural and spiritual components, which only when integrated make a person unique in the sense of a distinct, one of a kind entity and value (Cichá – Dorková – Tomanová 2007). Such a view of a person and their body is truly anthropological. In words of Mácha (2004), a person as an "integrum" is an implicit, ever present subject and object of anthropology with their biological and social aspects and the basis for his/her reactions as a human being is a well balanced union of both of these aspects.

The basis of the bio-psycho-social model in medicine, of which without any doubt the base is the anthropological relationship towards a human being, is a systemic approach towards disease. This approach puts emphasis on the reciprocal relationship between body and psyche, as well as on disease examination on all levels (Bishop 1998). Similarly it is reasoned by Mastiliaková (1999), who refers to our own experience showing clearly that our psyche and body are closely related. We contribute that all this takes place in a particular social context, in a certain social situation, which is another important, related factor. Every day, our ordinary experience leads us to awareness of this relationship. Generally we can say that a narrowly specialized view of a human being always brings the danger of ignorance of important aspects of human personality that are closely related. Because of this risk, any of its spheres should not be examined in isolation. If the character of the work requires such a narrow specialization, consequent integration into an organic complex is necessary (Cichá – Goldmann – Fedyn 2007).

### **Reducing a person to a mere body**

As stated, a person and their body constitute a compact unit which implies that reducing a person to a mere body is impossible. However, it does occur to a greater or lesser extent, especially during illness, injury, disability, and in old age. As stated by Le Breton (2003), an old person, in terms of general awareness, is often reduced to a mere body; especially in hospitals, long-term care facilities, hospices and other institutions. In most of these facilities we tend to approach an old person and their individuality as a damaged or broken body that requires feeding and washing - simply requiring care in terms of basic needs, as if this "somebody" did not have any past, as if we were dealing with an anonymous individual. According to Le Breton (2003), aging under the Western concept is a gradual reduction of the body, a process that ultimately makes the individual dependent on their body.

An elderly person is also the most frequent recipient of medical care because old age is accompanied by polymorbidity, i.e. frequent illnesses, hence more frequent hospitalisations. The elderly can be seen as a specific target group of health care recipients, similar to young children and pregnant women. The facts below need to be taken into account with respect to the age of a client (patient), their gender and especially the current situation the patient is in, (their health status, possible pregnancy or the period after delivery, injury or illness). We need to consider the difficulties a patient is experiencing, the diagnosis and therapy or diagnostic and therapeutic interventions, as well as the ability to tolerate stress, adapt to changes, etc.

It is generally known that during the process of providing medical care, it is essential to pay attention to the professional aspect of the medical (curative or nursing) procedure, i.e. its meticulous preparation, the execution of the task itself and nursing the client (patient) after the procedure (standard, safe procedure, *lege artis* procedure). We also need to pay attention to the perception results provided by the client (patient), to his/her experiences, emotions and behaviour associated with handling unusual or stressful, so-called stressogenic situations.

Generally, it is possible to claim that these situations include the hospitalisation itself as the client (patient) has been "extracted" from their social environment, from family or other emotionally significant bonds that play a part in forming one's social network and in effect also one's social support. Social support was one of the first factors identified as moderating the influence of unfavourable life situations and the emotional well-being and health of a person (Kebza 2005).

### 3. DISCUSSION

#### **A person and their body during hospitalization - from the patient's perspective and from the perspective of health professionals**

As stated by Křivohlavý (2002), hospitalisation is a rather new kind of experience for patients. Many things change – not only inside the patient (in their body – in a purely biological sense) but also in the patient's psyche. The cited author compares the psychological status of a healthy and an ill person. In his conclusions, Křivohlavý (2002) validates the hypothesis about stress and the fact that hospitalisation in a medical facility generates stress. Situations that are linked to direct acts of providing medical care, to procedures that the client (patient) is submitted to during hospitalisation are considered especially stressful.

Many of the procedures, whether medical (diagnostic or therapeutic) or nursing care, relate to a certain disruption in the integrity of the human body, to a lesser or larger invasion of intimacy. These are accompanied by unfamiliar or unpleasant sensations, sometimes even pain. Surgical procedures form a special "chapter", especially the ones performed under general anaesthesia. In these cases, the period before the surgery is typically accompanied by a client's (patient's) anxiety or fear of the surgical procedure and the preceding preparations; uncertainty about the outcome of the procedure, fear of complications, etc. (Schmid – Wolf – Freudenmann – Schönfeldt-Lecuona 2009). Indecision about whether to undergo the procedure at all is also stressful. Anxieties, fear, indecision, feeling more or less threatened usually also occur in the period after the procedure, and are further accompanied by pain or other unpleasant phenomena.

The fear of the results of diagnostic tests, especially in situations when the main diagnosis is yet to be established, when a suspicion of an oncologic diagnosis was expressed, even when just feared by the patient though not supported by the doctors, are significant from the client's (patient's) perspective regarding hospitalisation. Another affiliated, but still very significant (and for many patients even the most significant) phenomenon is the client's (patient's) concern about the deficit in the area of self-care (Orem 1991), and consequently one's partial or complete dependence on others, especially with regards to fulfilling basic physiological needs, namely those that invade one's privacy and intimacy. Many clients (patients) fear being powerless about making decisions concerning themselves. In other words, it is necessary to take other more or less negative consequences of hospitalisation into account, particularly the negative aspects of some medical and nursing procedures as they are perceived and experienced by the client (patient).

In spite of being well aware of these generally applicable contexts that exist in the area of medical care, the medical personnel are more focused on the professionalism of the procedure they perform. The feelings, experiences and emotions of the client (patient) are secondary and are not considered worth exploring in greater detail by many (Levinson – Gorawara-Bhat – Lamb 2000; Preston – Cheater – Baker – Hearnshaw 1999).

We can schematically notice the "action", i.e. the procedure being performed by a physician or a nurse, whereas from the patient's perspective, the professional skills of the physician or nurse are naturally not the most important aspects. There are other, equally important, seemingly only appendant phenomena such as a degree of empathy, verbal and nonverbal communication of the medical worker with the client (patient), who is the main "protagonist" here, but also the attitude towards other patients, communication between medical personnel, the overall atmosphere that is omnipresent in such a workplace and to which patients are very sensitive. The outcome of the entire "action", in its all-encompassing complexity, is a logical "reaction" which is qualitatively and quantitatively influenced by the composite action of all the factors above. At the same time, it is necessary to consider their effect on the medical worker, understanding that behaviour of a client (patient) affects the professional's behaviour further.

In reality, this model is similar to one described in connection with psychogenic pain (Knotek – Knotková 1998). It encompasses the following six active subsystems: perception field, experience, cognitive processing, affective and motivational processes, reaction and behaviour, and the reaction and behaviour of others.

The reaction and behaviour of a patient are not only a consequence of the procedure itself or its nature, the level of difficulty, the degree of pain, etc. It is often a consequence of the reactions and behaviour of the medical personnel. This makes the perception field of the patient more complex, affecting the quality and intensity of their experience, and how they cognitively process it. Naturally, it depends on how the results of perception and accompanying emotions affect the reactions and behaviour of the client (patient). Undoubtedly, these reciprocally influence the medical personnel, their perception and assessment of the situation, and their future reactions and behaviour.

Differences in perception are to a certain degree determined by differences in cognitive categories that are related to perception. Perception from the perspective of medical staff relates to professional categories, while the perspective of the client (patient) implies different cognitive categories. Perception from the perspective of a physician, a nurse, or a nurse-midwife serves different purposes from the perceptions of the client (patient).

A health care worker is routinely focused on searching for certain indicators that are relevant to the execution of the procedure and their control. Whereas the client (patient) focuses on signs of a possible threat, especially those indicating possible pain. The primary difference is thus characterised by the differences and functionality of the perception processes and their focus in the health care worker and the client (patient).

In the case of medical personnel there is no random or incidental perception of a patient's body. It is a pragmatically controlled process of observing certain phenomena related to the character of the provided medical procedure. Therefore, the scope of possible perception is somewhat limited. However, other bodily phenomena may enter the process by drawing sufficient attention to themselves by their "attractivity".

The patient's perception can be considered far more variable and complex. It can shift from the position of perceiving "mere body" to the position of perceiving self as a whole, which encompasses the body. Put in other words, the patient could perceive the situation as something being out of order or that something is happening to his body or its part, or the same situation can be perceived as if something is happening to them as an entity, possibly affecting their whole life. The patient could assess the situation as if their body or its parts were in danger, but also as if their entire life was at risk. It could be assumed that the patient and their body is more or less an object for physicians and other medical care providers. However, the patient approaches their body as a subject for medical care.

### **Solutions for the education of healthcare students**

Bishop (1998) claims that medical personnel often display an impersonal attitude towards patients. A patient is for various reasons placed into the position of an object, either because of conventions or the necessity to be as emotionally disengaged as possible in such situations, or because of a belief that it might help calm the situation down. Let us mention a communication model that is illness-centred and in which the physician focuses on the illness, its symptoms and progression, while losing interest in the patient as a personality. On the opposite side there is a patient-centred approach, which recognizes the patient as a personality with their distinct needs and life history. Patient centeredness is ensured by the physician being actively interested in the patient's perspective, even if the patient is unable to express it in words (Janečková 2005). Such approaches can be applied to medical care in general, that is, in all situations in which medical personnel intervene in favour of the client (patient).

The patient's perspective is simply significant. Hahn and Gaines (1995) coined the term "world of patienthood". This concept denotes the patient's perspective of their illness, its beginning, progression, diagnosis, treatment and prognosis.

According to Cassell (2010), illness is personal and individual. It is related to the personal characteristics of the sick individual and it is influenced by the particular individual suffering from a condition. Illness changes patients. It may affect their body, actions, thinking, behaviour, response to others and to the world around them in general. These changes may even occur without the patient's awareness. In reverse, such changes also alter the illness. It is a "circular process". The actions of a health care worker must also be personal, they should act accordingly. The process of providing health care should be directed towards the patients, the symptoms of their illness, the effects of the illness, and the sick persons as such. Therefore, a health care worker should become acquainted with the patient as well as with their illness. Their knowledge should provide them with skills to understand the sick person as an individual.

Galland (2012) believes that the importance of understanding the patient's experience and perception of an illness must not be underestimated. His extensive research on doctor-patient interactions indicates that physicians who fail to pay sufficient attention to their patients' concerns, often miss important clinical signs. The conventional diagnostic paradigm, also called differential diagnosis, leads doctors to ignore or denigrate information which the patient might consider important, or which influences their individual prognosis. This ignorance not only impairs the effectiveness of treatment but it also generates growing dissatisfaction among patients.

In the context of a patient's struggle with a disease, Křivohlavý (2002) brings up the cognitive model. This model is also applicable to coping with hospitalisation, diagnostic process, treatment and nursing during hospitalisation from the patient's perspective. We could make another parallel and extend this model to hospitalisation of pregnant women and situations associated with the delivery, whether physiological or pathological, natural or surgical, and the postpartum period.

In pregnant women, we naturally expect self-perception to be significantly changed or rather, continuously changing, simultaneously with an altered perception and experience of their own "gravid body", as well as an altered perception and experience of the unborn offspring. While from a pure biological sense, the unborn child is a "mere" embryo or fetus, the view of the mother might be diametrically different. It is not necessarily positive in all women. In either case, the various intensity and the various character of perception and experience in pregnant women in association with their pregnancy needs to be taken into consideration. These effects are also not static. We can approach this similarly with women after child delivery.

It is very important how the client (patient) interprets their situation, how they adapt to it, how they cope with stressful situations associated with hospitalisation and the medical care which is provided during their hospitalisation. Thus, the emotional and behavioural strategies employed by the client (patient) while coping with these situations are equally important. This variety complicates the understanding of the clients (patients) by medical care providers, which also makes it difficult for them to respond adequately in given situations.

According to Mareš and Vachková (2009), such subjective information provided by a client (patient) is crucial for the work of professionals. It enables the understanding of the client's individual opinions, attitudes, fears, hopes, and why they cope with their illness in certain way. It serves for an individualised education of the client, for guided involvement of the client in the diagnostic and therapeutic decisions, for winning the client over to voluntarily adhere to a long term treatment plan.

#### 4. CONCLUSION

The conclusions of our study are unconventional. These are the objectives that we want to fulfill in a succeeding empirically oriented study.

- Describe the results of the perceptions of physicians, nurses and nurse-midwives, who are the main providers of medical care – related to the body of a client (patient) as an object of medical care (the course of hospitalization and selected medical interventions). In this context, describe the perceptions, experiences and reactions of the client (patient) as observed by the physicians, nurses and nurse-midwives. Perform an analysis of their relation to age and gender of the client (patient), the nature of their condition or injury, the performed procedure, previous experience, and possibly other variables.
- Describe the results of the perceptions of students of non-physician healthcare professions, who are the providers of health care procedures within their training process (professional training in clinical facilities) regarding the body of a client (patient) as an object of medical care (the course of hospitalization and the selected medical interventions). In this context, describe the perceptions, experiences and reactions of the client (patient) as observed by students of non-physician healthcare professions. Perform an analysis of their relation to age and gender of the client (patient), the nature of their condition or injury, the performed procedure, previous experience, and possibly other variables.
- Perform a comparative analysis of the results of the perceptions in the aforementioned groups of healthcare providers – related to the body of a client (patient) as an object of medical care (the course of hospitalisation and the selected medical interventions). Perform a comparison of the perceptions, experiences and reactions of a client (patient) as observed by the physicians, nurses and nurse-midwives, and students of non-physician healthcare fields. Within the scope of this comparison, perform an analysis regarding age and gender of the client (patient), the nature of their condition or injury, the performed procedure, previous experience, and possibly other variables.
- Describe the results of the perceptions (perceptions, experiences and reactions) of clients (patients) whose perception of their body - as a part of their self-concept – while receiving medical care - is likely to be diametrically different to the perception of the providers of medical procedures (medical personnel, and students of non-physician healthcare fields). Perform the analysis of the results of the perceptions from the client's (patient's) perspective, related to their age and gender, the nature of their condition or injury, the performed procedure, previous experience, and possibly other variables.
- Perform a comparative analysis of the results of the perceptions in medical care providers – regarding the client's (patient's) body, the course of the hospitalisation and select medical interventions on one side, and those of the clients (patients) on the other side. Perform a comparison of the perceptions, experiences and reactions of the client (patient) as observed by the physicians, nurses and nurse-midwives, and students of non-physician healthcare fields, in comparison with the clients (patients) themselves.
- Based on the findings, detect yet unknown factors which with varying intensity, affect the disparity in perception by the medical worker or student of non-physician healthcare fields on one side, and by the patients (clients) on the other side – regarding the course of hospitalisation and the selected medical interventions.
- Based on the findings identify the efficient pedagogic strategies and methods applicable in order to achieve a more precise/effective perception by students of non-physician healthcare professions – regarding the course of hospitalisation and the selected medical interventions performed on a client (patient).
- Based on the findings, build a platform for creating a more optimal concept of the bio-psycho-social approach to the client (patient) as an object and subject of medical care – in relation to the course of hospitalisation and the selected medical interventions.

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# Youth communication technology addiction and leisure time education

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## ABSTRACT

Nowadays, the idea that the leisure time is not for preparation for the working hours has gain importance and the fact that the leisure time activities improve individuals mentally, psychologically and socially has been emphasized. Therefore, it is clear that leisure time education all by itself should be considered as an area of specialization. Before learning how to use spare time, one should need time to gain awareness of what time is and what it is not. Recreation by preschool education is a very good example for this: true motivation, sufficient isolation, adaptation of the objective world, a controlled sphere for free-choice, a process-driven sharing –instead of a result-oriented one. The communication technology should be projected essentially within this system. Miss-use of communication technologies first separates the young people from their real functional social relations in daily life.

Key words: Youth, communication, technology, addiction, leisure time, education

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## 1.INTRODUCTION

*What progress what progress! His father was a slave, his son was the robot.*  
Branca Crnevic

With industrialization, from 19th century, society has experienced significant changes in the structure and even experienced breaks. Thousands of years of traditional social structure has undergone drastic changes from everyday life relationship to social institutions. Some social, economic, legal, political factors will undergo changes but maintaining their presence in public life and new elements specific to the industrial age have become effective. Two of them are time perception and meaning making. The cyclical and repetition sense of time in the agricultural community has replaced with linear perception of time. Meaning creation process has taken out of a traditional and theological line and they are determined due to production and consumption patterns in accordance with developing individual consciousness. An innovation-based industrial society posed by the production and profit arising caused a practical adjustment "free time" beside the working hours of people. Relationship between leisure and education is formed around these three variables. Theoretical studies are approached in terms of more leisure time and working time dilemma. the central role of working in the human life and its relations with resting, fun and relaxation should also be interested in leisure time. The exaltation of the work, if accepted as a precondition for the continuation of the capitalist system, sociologists emphasize the need to study leisure time as much as work.

According to Applebaum, leisure time has become a problem in the world of modernity. It has seen the use of leisure time as a problem of democracy. It is not clear whether this time questioning will be used as the basis to create opportunities for the questioning of established order and intellectual exchange demand or not. There was a strong social movement in 1960s and 1970s that demand more leisure time rather than higher wages. However, as Roberts and Olszewka states, since 1980, economic and political problems caused to ignore free time and more freedom. The content of leisure and its nature is a matter open to debate (Applebaum, 1997: 48).

As Zygmunt Bauman has pointed out, former citizenship policies are no longer exist (McRobbie, 1999: 56). It is true but Bauman's thought about people free time can be arguable since he states that it can be discussed that people free from political obligations would spend their free time at home. First of all, ideological political participation is transferred through social media at the free time of people. Regarding the acquisition of social identities through consumption it is modified since the 1980s and individuals will be able to get social identity not from consumption object but the ability to gain it with her professional status that provides social income. So the problem is not an identity problem but the social actions of the masses who live adolescence, participation in everyday life, and their social position.

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Perhaps at this point, in the identification of flexible viewpoint Baudrillard's consumer society is hosting more meaningful determinations. According to him, the world as consumption society is like "great store". Here there is a price for everything. Furniture, relationships, partnerships, all of them are in circulation with the use values. Bauman's community is "transformed from ethics of work to the ethics of consumption." His definition is descriptive (Bauman 1999: 39-51). Even consumer awareness is shaped by the principle that "work more to consume more". Determining the direction of systematic relations of spare time as a production relation is the result of growing socio-economic designs. Taylorist / Fordist spread worldwide in the working order also disciplined area out of work like an organization. Taylorism was not limited to the production process, non-production areas of leisure, entertainment, consumer activities, etc. are also related. Taylorist logic was reinterpreted. Taylorism production has held up well in other words, consumption, leisure and consumption activities have to work according to their status in Taylorist profit / cost analysis (Webster-Robins, 1989: 334).

Karl Marx's theoretical assessments has a distinct character among theoretical evaluations. Leisure time for Marxist theory, it is the much intra structural problem rather than a fundamental problem of the society. Overcoming the problems related to the work will result in favor of indirectly dependent class. According to Marx, "to create surplus labor is not necessary to reduce labor-time. We need to reduce the necessary labor of society to a certain minimum degree. Indirect result of this reduction, all members of the community, with the help of leisure time and facilities, they develop their education in the field of arts, science and so on." (Marx, 1997: 26).

Dumazedo do not agree with Marx's study about leisure time which "will serve to human development." He believes that leisure time is always away from the service of human development, leisure time within the social context sometimes causes the humiliation of people, in some cases, serve his cultural development. According to him free time "in social conformism, in creativity, in social participation, it can serve as escape" (Arkin, 1992: 34). Marx's constructive proposals on behalf of leisure time and youth awareness are about how to turn the process of capitalist consumer culture-conscious gain axis the need to focus on how youth is began to be produced in this sense.

With industrialization, the development of technology has increased the production and post-industrial welfare. Thus, idle times gradually increased in a modern society. due to the fact that a consumer is actually considered as leisure time consumption. Thus leisure time was constructed with hundreds of branded products, consumption as a time to spend and consume. This development has always tried to be rescued from the time spent on indiscriminate consumption and emphasized education, culture, the art context, awareness of the individual, improvement psychology, the physical health.

People from every fraction have been confronted with more options and preferences to make use of their spare time. Today, although spare time and making use of it appear as a serious problem, it is known that, in their off-hours, people find pleasure in taking rest and being occupied in doing things which allow them to have a good time with their beloved ones (Şahin vd., 2009: 62).

In fact, such perception of spare time arises as a result of human nature. Of course, when managing spare time with educational and cultural purposes, it is important to consider one's predisposition. However, the fact that the use of technological products has been determining our lives in multiple ways can constitute an impediment to such spare time management.

In our study, we will try to examine the effect of addictive use of technology on spare time with reference to the hypothesis that excessive and addictive use of communication technology, which weakens and even breaks of the relation between the individual and the activity dimensions of real life, has negative consequences.

According to Descartes, development level of societies does not arise from their mental capacities, but from their time scheduling practice when they work and rest (Köktaş, 2004: 15). It is observed that the people who do not properly organize time and use it effectively, lose their psychological and mental balance, and their productivity decreases.

Perception and accurate use of time is of big importance for people's socialization, systematic and purposeful acquisition of knowledge and skills, obtaining a profession, happiness and development. However, in today's world, society is no longer a unity with its organizational structure, norms and values which has people as its members; on the contrary, it is now a big system that everyone partly uses, partly joins and wanders in it. The social position and initiative of the family and the social circle have been transferred in the background to the image, brand and product sector, and deactivated. There have emerged new youth sub-cultures dependent on a produced package of symbols and rituals; and a "trainer family" model, which prepares their kids for a competition which will allow them to have branded products and status obtainable through exams. The function of the family and social circle, which transfers the settled norms and values, and introduces the behavioral and consumption patterns to the individual, has become weak.

The socialization problematic aforementioned is closely related to the notion of "spare times" which increasingly develops and centers on the social perception, and the use of "communication technologies" which determine the content of those times. It is very important for the individuals to manage their time accurately and effectively with regards to their happiness and a healthy socialization process. However, most of the time, the

two phenomena do not come together accurately. The behaviors which make the individual happy and a healthy socialization do not go hand in hand. The reason is because; inaccurate habits provide a temporal happiness and attract the individual. However, sharing based on satisfaction leads to unhealthy social relations. It is known that when scheduled poorly, time becomes a stress factor for the individual (Hazar, 1999: 5). Resulting disorders may affect the individual and the whole society. Using time well is dependent on the balance among the time a person allocated for him/herself, for the working life, for the social life and for the satisfaction of his/her biological and physiological needs (Köktaş, 2004: 15).

The communication technology has transformed “time” into a problematic, causing a dramatic change in its quality and quantity. For this reason, it is necessary to highlight the effect of technology on the time phenomenon. The concept of time is defined as objective time and subjective time. *Objective* time is a source which regularly undergoes change, can be measured either by natural events or artificial devices, and is always the same and equal for everyone and everywhere. *Subjective* time, on the other hand, is the time which is perceived differently depending on the context, and felt and lived depending on the individual’s moral values (Akatay, 1997: 284). The widespread and intense use of communication technology united these two different definitions of time. The use of the same communication technology products throughout the world with the same quality and through the same programs generalized the moral value dependent subjective time of the people and turned it into a form that is equal for everyone throughout the world. This fast and easy transformation means that the communication technologies provides an opportunity for the people to spend their time having fun, socializing, obtaining a footing and carrying out formal operations. Spare time is the time which is both brought out and determined most by the communication technology.

In this context, today the definition of the developed society should be made as the society which provides social relations and world perception within a “consciousness of reality” as well as having technological competence and equipment or law-abidingness. The contemporary individual is the one who manages his/her career, social relations, habits of entertainment and relaxation according to this understanding. In this respect, it can be said that the developed countries use the time not based on technosphere, but based on nature.

The communication has a unifier effect on the “working time” and “off-time” distinction. Working time means a series of acts with business purposes and the duration it takes (Aytaç, 2002: 232).

Working time is mostly dependent on a formalist set-up like obligation, being disciplined and dependence on the organizational norms. There is an inherent obligation/connectivity in the nature of work, which rules the individual’s willpower. Acting with personal or organizational obligation makes it impossible to act independently and make individual choices. The compelling quality of working hours has always remained on the agenda of the individual since the industrial society.

Off-hours define obligatory individual activities and leisure time. This time block consists of the time which is required for some basic needs like eating and sleeping, and the time which is leisure (Kır, 2007: 310).

The communication technology which would leak into the formal cage of working time and manipulate it did not appear until recently. However, new communication technologies have the power to show themselves even within the working hours. The meeting of the computer, which is a working equipment, with the Internet caused the communication technology, which rules the spare times, to get into even the working times with all of its entertainment aspects. On the other hand, it is again the developed communication technology which creates the notion of home office and gradually changes the meaning of the workshop which is a gathering space for work. However, home represents a place for the spare time in the conventional time use. The unifier effect of the communication technology which removes the working time vs spare time distinction demonstrates itself in this way.

Researchers examining leisure time defines recreation as “a series of activities such as relaxation, entertainment, developing knowledge and skills, joining social life of one’s own accord which can be carried out after having completed the vocational and social duties” (Büküşoğlu ve Bayturan, 2005: 174). However, this definition has already started to lose its sense. This is because, when the virtual alternatives have started to replace leisure time activities, the time in which those virtual activities are carried out has changed its place. The spare time activities such as family and friend gatherings, reading a book, listening to music, following conferences, looking at photo albums are replaced by virtual alternatives and can take place anywhere and anytime within the unified time of everyday life.

It should be noted that the cultural and art activities, the political and social changes which constitute a basis for modernity emerged with the conscious individual. It is always possible to talk about a modernity which passivates the individual and motivates his/her reservoir for awareness. However, what is the benefit of that the modern world transforms an individual with heightened awareness into a robot which is constantly consuming and having fun? In the long term, does not the system need individuals with heightened awareness who identify themselves within the modern world and capable of producing novelties in an intellectual level? The fact that the modern world which created itself with the transformation in the working methods and business ethics has lost its individual because of undisciplined technology use should be seen as the unforeseen consequence of the technology use rather than a design of modernity’s intellectual centers.

The most rational solution is thought to be the more systematic and controlled inclusion of the communication technology in the leisure times instead of removing it. Of course, this sort of regulation by nature is directly linked to education. We should not consider leisure time as the time for “disorderliness” and “waste” in a similar way of the Luther-centric puritan ethics of 1700s. However, it is clear that the hedonism assisted technology use, which has turned into “idleness,” should be reviewed with all the moral and intellectual accumulation of the human history.

## 2. RESULTS

Nowadays, the idea that the leisure time is not for preparation for the working hours has gain importance and the fact that the leisure time activities improve individuals mentally, psychologically and socially has been emphasized. Therefore, it is clear that leisure time education all by itself should be considered as an area of specialization. Before learning how to use spare time, one should need time to gain awareness of what time is and what it is not. Recreation by preschool education is a very good example for this: true motivation, sufficient isolation, adaptation of the objective world, a controlled sphere for free-choice, a process-driven sharing –instead of a result-oriented one. As long as the education materials and the educators, who perform as the architects, the engineers, the builders and the suppliers in the self-construction process of the individual, are positioned well the individual will be at peace both with himself/herself and with the educational environment. The communication technology should be projected essentially within this system. Hence, the rejection of the communication technology products is not an accurate way of education. Among the actors of triangle of youth-education elements-communication instruments, none should be excluded.

Miss-use of communication technologies first separates the young people from their real functional social relations in daily life. Second, it alienates the individual from the mental and analytic processes taking place in the real life. Third, it makes the young unfit for oral communication. As the fourth negative consequence, we can claim that causing information pollution and separating the young from clean and refined accumulation of human knowledge, the communication technology confines the young to interpersonal psychosocial processes and demolishes world knowledge.

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