



**NEW PERSPECTIVES  
ON CONTEMPORARY EDUCATIONAL STUDIES**

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ISBN 978-88-909162-6-7



9 788890 916267

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NEW PERSPECTIVES  
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First published in 2015

Revised in 2021

ISBN 9788890916267

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Published by

Revistia

Publishing and Research

Address: 11, Portland Road, London, SE25 4UF, United Kingdom

Tel : +44 2080680407

E-Mail : [office@revistia.com](mailto:office@revistia.com)

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## TABLE OF CONTENTS

<b>EXPLORING BELIEFS AND PRACTICES AMONG TEACHERS TO ELEVATE CREATIVITY LEVEL OF PRESCHOOL CHILDREN .....</b>	<b>6</b>
AZLI ARIFFIN .....	6
<b>EXAMINING THE IMPACT OF PRE-SCHOOL EDUCATION ON SELF-CONCEPT .....</b>	<b>13</b>
FATMA NESRIN DABAKOĞLU .....	13
<b>CONTEXT-BASED SCIENCE CURRICULUM DEVELOPMENT .....</b>	<b>20</b>
MOHAMMED YOUSEF MAI .....	20
<b>EDUCATIONAL RESEARCH PROJECTS AS NEW FORM OF EDUCATIONAL METHODOLOGY .....</b>	<b>34</b>
BEKIM FETAJI .....	34
MAJLINDA FETAJI .....	34
ALAJDIN ABAZI .....	34
MIRLINDA EBIBI .....	34
<b>CHILDREN AND THEORY OF MIND; COMPARISON BETWEEN CHILDREN'S ABILITY TO UNDERSTAND TRYING ACTIONS AND PRETEND ACTIONS IN A BEHAVIOR MODEL ANALYSIS....</b>	<b>40</b>
BESJONA DEDE .....	40
<b>EDUCATIONAL MEDIA TOOLS AND LIFELONG EDUCATION .....</b>	<b>46</b>
MR.SCE. DRITAN CEKA .....	46
MR. ANILA JAKU .....	46
MR. SCE. VJOSA IMERI .....	46
MR.SCE.SHKENDIJE JASHARI .....	46
MR.FITORE HALITI .....	46
<b>EDUCATION CHALLENGES AND DEVELOPMENTS IN FOREIGN LANGUAGE TEACHING IN CROATIAN LAW SCHOOLS EDUCATION CHALLENGES AND DEVELOPMENT FOR THE FUTURE....</b>	<b>56</b>
LJUBICA KORDIĆ .....	56
<b>FIELD BASE TEACHING: A MALAYSIAN EXPERIENCE.....</b>	<b>66</b>
RAMAN MARIYAPPAN .....	66
<b>EDUCATING RITA: THE MUTED WOMAN RAISES HER VOICE .....</b>	<b>72</b>
<b>STUDENT ENGAGEMENT IN FOSTERING QUALITY TEACHING IN HIGHER EDUCATION .....</b>	<b>82</b>
DRAŽENA GAŠPAR .....	82

MIRELA MABIĆ .....	82
<b>RELIGIOUS EDUCATION IN GREECE - ORTHODOX CHRISTIANITY, ISLAM AND SECULARISM .....</b>	<b>90</b>
MARIOS KOUKOUNARAS LIAGKIS .....	90
ANGELIKI ZIAKA .....	90
<b>INTEGRATION OF SCIENCE, EDUCATION AND INDUSTRY IN THE REPUBLIC OF KAZAKHSTAN IN THE CONTEXT OF THE DEVELOPMENT OF NEW EDUCATIONAL PROGRAMS .....</b>	<b>100</b>
UALIKHAN ABDIBEKOV .....	100
DAUREN ZHAKEBAYEV .....	100
OKSANA KARUNA.....	100
YEKATERINA MOISSEYEVA .....	100
<b>THE IMPORTANCE OF AUTOMATIC THOUGHT'S EVALUATION THROUGH COGNITIVE – BEHAVIORAL THERAPY IN PATIENTS WITH GENERALIZED ANXIETY DISORDER.....</b>	<b>105</b>
JONIDA MUSTAFARAJ .....	105
<b>THE ATTACHMENT RELATIONSHIP WITH THE MOTHER AND THE EXPLORATORY BEHAVIOR OF THE CHILDREN AGED 5-6.....</b>	<b>113</b>
FLORA LAMCJA (ZEQAJ) .....	113
<b>ISSUES AND CHALLENGES IN THE PROCESS OF ASSESSMENT .....</b>	<b>121</b>
TEUTA AGAJ, PhD CAND. ....	121
<b>GRAPH COLORING PROBLEMS IN MODERN COMPUTER SCIENCE .....</b>	<b>126</b>
BESJANA TOSUNI .....	126
<b>AGGRESSIVENESS IN ADOLESCENTS AGED 15-18 YEARS OLD, UNDER THE INFLUENCE OF SOCIAL ENVIRONMENT AND THE INTRODUCTION OF NEW TECHNOLOGIES IN EVERY DAY LIFE.....</b>	<b>134</b>
FLORA LAMCJA (ZEQAJ) .....	134
ARMANDO ZEQAJ.....	134
<b>THE PROSPECT OF IMPLEMENTING SAFETY EDUCATION IN MALAYSIAN PRIMARY SCHOOLS: FROM THE PERSPECTIVE OF SCHOOL ADMINISTRATORS.....</b>	<b>139</b>
KHAMSIAH ISMAIL PH. D .....	139
MUHAMAD FARHAN MOHAMAD SHUKRI .....	139
MASTURA BADZIS PH.D .....	139
SSEKAMANYA SIRAJE ABDALLAH PH.D.....	139

<b>THE ALBANIAN ADAPTATION OF PHYSICS ATTITUDE TEST: VALIDATION WITH 10<sup>TH</sup> GRADE STUDENTS.....</b>	<b>162</b>
AHMED FATİH ERSOY .....	162
YLLJET ALIÇKA .....	162
<b>RELATIONSHIP OF EMOTIONAL INTELIGENCE AND EMOTIONAL AND BEHAVIOR PROBLEMS SCALES OF CHILDREN 10-12 YEARS OLD – PARENTS REPORT.....</b>	<b>171</b>
EVIS FILI .....	171
<b>THE DIDACTIC OF SUSTAINABLE DEVELOPMENT TERMS IN SCIENCE EDUCATION .....</b>	<b>177</b>
FATİH SEKER.....	177
BAHATTIN AYDINLI .....	177
<b>HERZBERG'S MOTIVATION- HYGIENE THEORY APPLIED TO HIGH SCHOOL TEACHERS IN TURKEY .....</b>	<b>187</b>
ATALIÇ HİLMİ .....	187
CAN ALİ.....	187
CANTÜRK NİHAL.....	187
<b>PREDICTORS OF SCHOOL SAFETY AWARENESS AMONG MALAYSIAN PRIMARY SCHOOL TEACHERS .....</b>	<b>195</b>
SSEKAMANYA, S.A. ....	195
MASTURA BADZIS .....	195
KHAMSIH ISMAIL .....	195
DAYANG SHUZAIDAH BT ABDULUDIN .....	195
<b>DEVELOPMENTAL PATTERNS IN THE INTERLANGUAGE RESEARCH.....</b>	<b>201</b>
ANTONIJA SARIC .....	201

## Exploring Beliefs and Practices among Teachers to Elevate Creativity Level of Preschool Children

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### Abstract

*The purpose of this study is to examine the influence of teacher's beliefs on creativity construction practices of preschool children in class, explore and understand the beliefs of preschool teachers on the concept of creativity, observe actual practices of preschool teachers in the classroom and identify the factors that may influence teachers' practices in the classroom. This exploratory study adopted the use of qualitative method of inquiry to provide an in-depth understanding of the area being investigated. Interview and observation of four preschool teachers were purposively selected from two government schools were used to collected data. Findings revealed that all the teachers in this study expressed their views that creativity is something related to art works. The teachers' beliefs about how best to facilitate children's creativity can be divided into three categories; (a) Teaching methods, (b) Classroom environment and (c) Characteristic of the teachers. The findings also reveal varieties of constraining factors which influence teachers' classroom practices in promoting creativity for the preschool children. The implication of the findings are that further research need to conduct to identify the value in promoting creativity for children through an effective approach.*

**Keywords:** Beliefs, practice, preschool.

### Introduction

Creativity can be considered as one of the very complex, mysterious and enticing human behaviour. Every great invention or discovery, including all forms of artistic expression depends on high level of creative thinking. However, before the mid-1950s, creativity does not attract much attention among scholars or intellectuals during that time. From 121,000 list of articles appearing in the Psychological Abstracts (Smith, 1959, in Ruggiero 2004) between 1936 and 1959, there were only 186 specific articles that were related to creativity (Ruggiero, 2004).

Our daily lives are constantly surrounded with various problems that require us to think in finding the best solution. Whether we realize it or not, in our struggle to think for problem saving, creativity plays an important role in helping us to find ways that are innovative and effective. Since creativity can be defined as creating a new idea or concept (Guilford, 1950 Mindham, 2005), divergent thoughts (Butcher & Nice, 2005), innovative (Butcher & Nice, 2005), and seeing things in a new light (Mindham, 2005), it clearly demonstrates that creativity is the key to many things related to daily life.

Diakidoy & Kanari (1991) stressed that every effort to improve the level of creativity in schools, should take into account individual factors by referring to teachers who will realize each objectives contained in the program and the national education curriculum. Stipek et al. (2001) mentioned that teachers uphold something that is reliable, this fact will shape teaching practices in the classroom. Pajares (1992) and Hofer et al. (1997) stated that teacher's beliefs can influence the perception and evaluation on the results of teaching, in addition to the choice of methods and activities. The ministry pays much attention to the development of children's creativity, hence studies that examine the understanding and trust of the teachers on the concept of creativity and the actual practice in the classroom need to be carried out, especially on the broad concept of creativity and multiple meanings, and definition.

Kupari (2003) stated that teacher's beliefs are a critical element in determining teaching and learning process in the classroom. According to Cooney and Lin (2001), every action taken by the teacher in the classroom is the result of the

teacher's beliefs. With particular emphasis on aspects of teacher's beliefs, then hopefully it will help the teacher to be able to transform their way of teaching in educating the children, especially on the creativity aspect. This is because the study of teachers' beliefs and practices of teachers in class will contribute as basic knowledge that can be used for us to understand and develop a more effective teaching practices in the future (Kang & Wallace, 2005; Levit, 2001 ; Luft, 1999; Tsai 2002).

Previous studies found that teacher's characters can influence (Pianta et al., 2005; Saracho & Spodek, 2007; Mashburn et al., 2008), trust (Cassidy et al., 1995; Chang, 2003), and quality of early childhood programs (Burchinal et al., 2000, Bryant et al., 1994; Pianta et al., 2005; Howard-Jones, Taylor, & Sutton 2002; Peisner-Burchinal et al., 2001) on the social, emotional and cognitive development. However, there are very few studies that examine its influence on creativity, especially in the early ages of children.

In Malaysia, the importance of development of creative power in early childhood education is clearly stated in discourse of pre-school education curriculum. Among the six components found in the discourse is the creativity and aesthetics component with a focus on developing creative and expressive character through imagination and thinking (Ministry of Education Malaysia, 2001). In 2008, the National Pre-School Curriculum Standard (NPCS) was enacted to strengthen the existing curriculum. The goal is to develop the potential of children aged four to six years in a comprehensive and integrated approach to the physical, emotional, spiritual, intellectual and social development through a safe learning environment, nourished through activities that are fun, creative and meaningful (Ministry of Education, 2009) to provide children with basic skills and concepts to prepare them for learning at primary schools in the future. According to Grouws (2006), many studies have been conducted to see the relationship between belief and teaching practice. Therefore this kind of research is highly relevant to be carried out to explore the beliefs and practices of the teachers.

The purpose of this study is to examine the influence of teacher's beliefs on creativity construction practices of preschool children in class. The main objective is to:

- (a) Explore and understand the beliefs of preschool teachers on the concept of creativity. (b) Observe actual practices of preschool teachers in the classroom.
- (c) Identify the factors that may influence teachers' practices in the classroom.

This study provides an avenue for discussions among preschool teachers through its articulation of implications for teacher education and continuing professional development and may indicate cultural differences in the concept of creativity. Furthermore, this study will also provide a basis for judging whether current practice meets the requirement to promote children's creativity. The findings from this study also will be able to determine how teachers conceptualize creativity and what impact their concepts have on their interpretation and objectives more clearly both in curriculum requirements and in professional preparation and training.

## Method

### Research design

In order to obtain a deeper understanding of teachers' conceptions of creativity and their beliefs about the best way in promoting creativity in classroom this exploratory study adopted the use of qualitative method of inquiry to provide an in-depth understanding of the area being investigated. The use of the qualitative method of inquiry is appropriate for this study because it is an attempt to understand the phenomenon of interest from the participant's perspective, not the researcher's. A qualitative researcher is interested in understanding the meaning people have constructed; that is how they make sense of their world and the experiences they have in the world (Sherman & Webb, 1988). Moreover, Burn (1997) asserts that the task of the qualitative methodologist is to capture what people say and do as a product of how they interpret the complexity of their world, to understand events from the viewpoints of the participants.

### Sampling

The subjects of this study consisted of four preschool teachers were purposively selected from two government schools. As Denzin and Lincoln (1994) put it, many qualitative researchers employ purposive, and not random, sampling methods. In the context of this study, the said teachers have been purposely selected for the fact that they might show differences in ideas, beliefs and practices because of the different characteristic of their personalities and physical settings.

## Data Collection Methods

Data were gathered using semi-structured interviews consisting of open-ended questions and classroom observations. The use of two instruments acts as a data triangulation to increase the authenticity and trustworthiness of the data collected. The data gathered from the interviews and observations were shared with the teachers and discussions were held with them to find out why they had acted in certain ways during their actual teaching. Data collections was done in three phases as two different schools with different settings were involved in this research. Classroom observation was thought to be the most appropriate means of obtaining information to answer the main questions of the link between teachers' perceptions of creativity and their actual practice in the classroom. The researcher employed non-participation observation technique where he observed the subjects without being actively involved with the activities which left him free to make notes and audio-recording.

## Findings

In this study, the analyses provide three broad conceptual themes in attempt to address the research questions. The themes are:

1. Teachers' conceptions about creativity.
2. Preschool curricula that could promote children's creative development.
3. Teachers' priorities for creativity in the preschool curriculum.
4. The role of classroom environment in facilitating creativity.

### Teachers' conceptions about creativity

All the teachers in this study expressed their views that creativity is something related to art works.

"Creativity is something involved with art like pasting small piece of paper on drawing blocks...I meant collage. It is something to do with drawing... other art activities such as colouring, painting or creating something from the clay".

Another teacher expressed her idea of creativity as a way to express feeling. Meanwhile, two teachers conceptualized creativity as the ability to produce something unique or something that is different and unexpected.

"When children can draw something that is unexpected and they can colour it beautifully and we can see varieties of object in their drawing such as tree, animals and another that is beyond our expectation". Teachers also considered creativity when children can draw nicely and with perfection. "When the children can draw a nice picture... for example if he can draw a ball then colour it very nicely and neatly".

### Preschool teachers act in the classroom

Having analyzed the responses in the interview, the teachers' beliefs about how best to facilitate children's creativity can be divided into three categories; (a) Teaching methods, (b) Classroom environment and (c) Characteristic of the teachers.

#### (a) Teaching methods

All teachers believe that providing enough time for children to engage in arts activities will help to promote children's creativity. Besides that, giving children freedom is another way to facilitate children's creativity. Allowing some choices of their own in learning activities such as the freedom to use of materials and to sing any song are some examples given by some of the teachers.

"Give them freedom...for example they can use any colour as they like for their drawing".

The use of materials in the teaching and learning process is very important to facilitate children's creative development. This was expressed by all four teachers.

"Teaching materials are very important if we want to develop children creativity".

Besides that, the teachers also expressed the need for the teacher to be flexible during teaching as they believed that doing so will help to promote children's creativity in the classroom. Three of the teachers was implied that by giving children the opportunity for interaction between themselves, and asking open-ended questions would also help to develop children's creativity. The teachers also responses that giving the opportunity for children to engage in group work and discussion is another way to promote creativity in the classroom.

(b) Classroom environment

Facilitating creativity in the classroom requires some commitment to space which

Means being aware of physical space in the classroom and of the ways it may foster children's creativity. All of the teachers believed that classroom environment plays an important role in promoting children's creativity. A classroom that is attractive and well-organized with learning corners can contribute towards children's creative development.

"Making the classroom look attractive is also important. Children like a classroom that is colourfull, attractive, some cartoon, toys like dolls, and things like this can make the children like the classroom and make them more creative".

Meanwhile, two other teachers said that plenty of resources in the classroom are also required not only for learning purpose but children to easily access materials including books, construction blocks and others.

(c) Teachers' characteristics

All teachers also agreed that teachers' personal qualities that they bring into the classroom are also important in nurturing children's creativity. A majority of the of the teachers mentioned that the promotion of children's creativity requires the teachers themselves to be creative. It was discovered that none of the teachers regard themselves as particularly creative and they are not confident about their teaching quality in promoting children's creativity. The statements below clearly illustrate about teachers' feeling about themselves:

"I am not a creative teacher... I don't think that I am creative and I am not good at new teaching methods".

"No, I am not creative. It is not easy to be creative teachers and I don't even know wheather I have developed children creativity so far."

In order to be creative, the teacher should be a hardworking person in implementing creative teaching and to prepare various creative activities. Hardworking is also one of the teachers' characteristic that the teacher should have to promote creativity in the classroom.

"You need to squeeze you head and think hard to look for new activities and thinking appropriate teaching materials to be included in the activities."

Another characteristic that teachers should have is confidence. This was expressed by two teachers.

"Teachers must be very confident intheir teaching and they must be ready to face any possibilities from the activities that they have planned. Not everythings you plan can be achieved and this applies to creative activities too."

Another important characteristic required to promote creativity in the classroom is that teacher has to be friendly. The term 'Friendly' in this context means that teachers have to be approachable to the children. Teachers should not be very strict so that children will feel free to be active in the learning activities in providing ideas and to participate without fear of making mistakes. Tolerance is another characteristic that a teacher should have to produce stimulating learning process towards the development of children's creativity. To be accepting of children's ideas; to be appreciative of any outcomes or products produced by the children and to be patient are among the criteria that the teacher should also have to produce creative children.

### Constraining factors in promoting children's creativity

In seeking to be creative teaching, teachers may often have to deal with what may seem to be rather unsupportive situations, and a number of social constraints. The findings reveal varieties of constraining factors which influence teachers' classroom practices in promoting creativity for the preschool children below:

#### (a) Teachers' own pedagogical limitations

Based on the responses from the interviews, most of the teachers felt that they don't know exactly how to implement teaching which specifically promotes children's creativity. Although all of them are trained teachers, they still found it very difficult to implement in the real classroom. All the teachers expressed their concern about their lack of knowledge in implementing integrated teaching and knowledge in new methods of teaching, especially in math's, reading, writing, courteous behavior, health and safety and play and movement and also how to implement child-centered activities geared toward the promotion of creativity.

"It hard to implement creativity in other subjects especially in basic counting...even reading activities. It is easy to say but hard for me to do it and I don't know how to implement creative activity in my teaching."

#### (b) Large class size

Difficulty in managing the children in the classroom because of large class sizes in the classroom hinders teachers from carrying various learning activities in their teaching. The problem of class sizes had all the teachers expressing difficulty to concentrate in promoting children's creativity and providing child-centered activity. Some of teachers' responses are;

"I just felt I cannot do anything better and even to implement teaching activities that are creative and enjoyable. Having too many children in my classroom is very stressful and most of the time is to monitor the children behavior and to keep the classroom in control. So I think I better keep to a formal method otherwise the children do not get anything from my teaching."

#### (c) The pressure of expectations from Primary one Teachers and Parents.

All of the teachers cited the pressure of expectations from primary one teachers and parents which push them to concentrate more on preparing the children with the three basic skills (reading, writing and counting) rather than promoting children's creative development. One teacher explained in detail how the preschool children's achievements at the end of the year are judged by their ability to master the three basic skills by the primary one teacher.

Two teachers feel threatened by the attitudes of some of the parents they encounter. They feel under pressure to 'teach to please parents'. Parents expecting their children to be able to count and read in short period of time forced the teachers to teach three basic skills and implement teaching in formal manner and at the same time ignore other areas of learning which include creative development. Two teachers describe:

"They think that we should emphasise on the 3M's. If the children are having problems with the 3Ms, we are the one to be blame and considered our teaching is not very effective."

#### (d) Lack of resources

A lack of resources in terms of art and play materials are another constrain on the teachers' efforts to implement creative activities for the preschool children. Two teachers who really believe the use of materials is very important in order to promote children's creativity. All teachers stated that the budget allocated by the school is not enough and mentioned that they have spent a considerable amount of money to purchase some of the materials. Although they have a workshops to train preschool teachers to recycle unused materials as their teaching aids, they still need additional materials to make the teaching aids more attractive. Two teachers described their situation:

"I have to plan my teachings according to the resources available. Sometimes I have to change my actual planning if the resources are not enough for all children."

"I have to prepare everything, even basic equipment like papers and others too such as water colour, crayon. It is very stressful where at the end you have to prepare everything."

## Conclusion

It is reasonable to say that creative development is indeed valuable for our education system and that a wealth of benefits for the children can be gained if it is implemented effectively. Teachers are in position to either enhance or inhibit children's creative development, thus they should make an effort to promote creativity in the classroom. Others relevant authorities such as the Ministry of Educations, the Curriculum department and teacher training institutions also play an important role in ensuring that aim of promoting children's creativity can come true. The development of children's creativity needs to be put on the forefront of the agenda so that a more holistic and meaningful development of our children is achieved.

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## Examining the Impact of Pre-School Education on Self-Concept

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### Abstract

*The purpose of this study is to investigate the relation between third grade students' self-concepts who attend the pre-school education and who do not. The sample of the study consists of 560 third grade students from 13 separate public secondary schools in Ankara. In order to determine self-concept level of students, both Piers Harris Children's Self-Concept Scale and a Personal Information Form which was developed by the researcher to gain demographic information about the students who attended in this research were used. The results of this study can be summarized as follows; Pre-school education positively affects the self-concept of students who attend this education.*

**Keywords:** Importance of Preschool Education, Development, Self-concept

### Introduction

Early childhood period has a critical role in the lives of individuals (Black et.al, 1995). During this period, all the material and spiritual opportunities of school life, especially parents' opportunities, provide a positive contribution to a child's development. Besides the psychological, social and cultural opportunities that came into service of child allow informed and educated individuals to grow (Karavasiliş et al., 2003). Preschool education provides multiple supports to child's different competence fields from childhood period and also leave an important trace on individual's life with gained domestic experiences (Avci, 1995).

For child, school constitutes the most important social environment following family life (Calhoun, 2001). Preschool education, which is the first step of school education, supports the child's development mentally, emotionally, socially and physically (Aral et al., 2000). At the preschool period, development covers a very fast and critical process. There is a mutual interaction between all development and competence fields of individual (Deckard, 2000). During this period, negativity or neglect in any aspect of the development may adversely affect the child's life (Confield et al. 1994). Children's capabilities and limitations, and emotional problems should be identified in the period of early childhood in preschool period and the necessary precautions must be taken (Krahnstoev, 2001). Therefore, in the preschool period that is described as early childhood period and covering zero-six age range, attitudes and behaviors towards child and provided educational opportunities will directly affect his/her personality development, learning experiences and his/her self-concept (Rotenberg et al. 2003).

This research is planned in order to determine whether there is a significant difference between the self-concepts of preschool children who attend the preschool education and those who do not attend.

### Method

This research is planned as a "Descriptive" study in order to determine the importance of preschool education on the development of self- concepts of students (Kaptan, 1998).

The population of this study is constituted by third grade students who attend to public schools in Çankaya district in Ankara at the 2002- 2003 academic year. Among 13 primary schools, a total of 560 third grade students, determined by layering technique, 262 preschool students and 268 students who do not attend preschool education comprise the research sample of this study.

In order to collect the data, we went to schools to obtain general information about students by contacting guidance services in line with school administration and teachers' opinions and permissions. Personal information form developed by the researcher was used in order to get students' demographic information. To measure the dependent variable "self-concepts" of the study, "Piers-Harris Children Self-Concept Scale" was used (Öner, 1994).

The collected data were analyzed in SPS statistic program. In data analysis, determining the scale scores of groups, arithmetic mean and standard deviation were used. Some personal information about the students who attend and not attend to preschool education and about their family are expressed by using frequencies and percentages on crosstabs. In the study, two-dimensional variance analysis (ANOVA) was done in order to determine whether there is a significant difference between some variables and students' self-concepts level, gender, having sister or brother, birth order, parents' age, education and occupation. (Kaptan, 1998).

## Result

Among the mean scores of students' self-concept scale, there is a significant difference according to attendance to preschool education ( $t(690)=3.78, p<.01$ ). The self-concept levels of students attending preschool education were higher than those who do not.

There is no significant difference in terms of gender among the mean scores of students' self-concept scale according to attendance to preschool education. The variation of students attending preschool education is ( $t(304)=1.20, p>.05$ ); the variation of those who do not attend preschool education is ( $t(377)=1.64, p>.05$ ).

Among the mean scores of students' self-concept scale according to attendance to preschool education, there is no significant difference in terms of having a brother or sister or not having. The variable for those attending preschool education is ( $t(304)=0.479, p>.05$ ) and for those who do not attend preschool education is ( $t(377)=1.920, p>.05$ ).

Among the mean scores of students' self-concept scale according to attendance of preschool education, there is no significant difference with regard to the time of attendance to preschool education ( $t(2;304)=0.897, p>.05$ ).

Again there is no significant difference in terms of birth order among the mean scores of students' self-concept scale according to attendance to preschool education. The variable for those attending preschool education is ( $t(2;303)=0.755, p>.05$ ) and for those who do not attend preschool education is ( $t(2;377)=0.269, p>.05$ ).

Among the mean scores of students' self-concept scale according to attendance to preschool education, there is no significant difference in terms of mother's age. The variable for those attending preschool education is ( $f(2;302)=0.463, p>.05$ ) and for those who do not attend preschool education is ( $f(2;375)=0.843, p>.05$ ).

There is a significant difference in terms of father's age among the mean scores of students' self-concept scale according to attendance to preschool education. The variation of students attending preschool education is ( $f(2;303)=0.554, p<.01$ ); the variation of those who do not attend preschool education is ( $f(2;369)=6.682, p<.01$ ).

When the results were analyzed, the self-concept levels of students attending to preschool education were higher than the levels of those who do not attend the preschool education.

There is a significant difference in terms of mother's education among the mean scores of students' self-concept scale according to attendance to preschool education. The variation of students attending preschool education is ( $f(4;267)=1.946, p<.01$ ); the variation of those who do not attend preschool education is ( $f(5;288)=1.950, p<.01$ ). When the average scale score is analyzed, it can be said that if the education level of mother is high, the self-concept level will be high. However, when the results were analyzed, it is seen that the education levels of mothers whose children attend the preschool education are higher than those whose children do not attend to preschool education. For example, there is no illiterate among the mothers whose children attend the preschool education but there are illiterate parents among those whose children do not attend to preschool education.

Again there is a significant difference in terms of father's education among the mean scores of students' self-concept scale according to attendance to preschool education. The variation of students attending preschool education is ( $f(4;271)=1.871, p<.01$ ); the variation of those who do not attend preschool education is ( $f(4;295)=3.280, p<.05$ ). When analyzing the above-mentioned scale scores, if the father's education level is high, then the students self-concept levels will increase. Meanwhile, the average values between fathers who are literate and fathers who graduated from high school are very close. When analyzing the self-concept scale scores according to the students who do not attend to preschool education, self-concept levels of students whose fathers graduated from college are higher than those whose fathers are literate.

There is a significant difference in terms of parents' occupation among the mean scores of third grade students' self-concept scale.

According to the scale scores, a positive relation between mother's occupation and self-concept level is determined in terms of attending preschool education. The variation of students attending preschool education is ( $f(2.280) = 2.849, P < .01$ ); the variation of those who do not attend preschool education is ( $f(2.359) = 2.221, P < .01$ ). According to these results, students whose mothers are public servants have higher self-concept level than the other students. As the education levels of mothers whose children do not attend the preschool education are lower than those whose children attend this education, the self-concept levels of students whose mothers are housewives are higher than the other students.

Among the mean scores of third grade students' self-concept scale according to attendance to preschool education, there is a significant difference in terms of father's occupation. The variation of students attending preschool education is ( $f(2.278) = 2.886, P < .01$ ); the variation of those who do not attend preschool education is ( $f(3.350) = 3.856, P < .01$ ).

In this case, students whose fathers are public servants have higher self-concept level than the other students among the students who attend or not attend the preschool education. However, the self-concept levels of students whose fathers are employees are as high as to those whose fathers are public servants.

## Conclusion

In the study, among the mean scores of third grade students' self-concept scale according to attending or not attending to preschool education, it is determined that there is a significant difference in terms of attending preschool education ( $p < 0.01$ ). According to scale implementation results, the self-concept levels of third grade students that attend to preschool education are higher than those who do not.

## Suggestions

In our developing country, the importance given to the education of our children is increasing. School environment, that constitutes the second important environment following family, begins with the first and basic education gained with preschool education in the early childhood period (Stright, et al. 2003). Forming the first step of education process, preschool education will prepare the child to life and farther educational steps by presenting the support for all competence and development fields in preschool years (Doyle, 2000). Preschool education institutions aim to train individuals by giving the basic skills and experiences in a way the child could understand and also these institutions provide active learning opportunities to child in order to learn incidents, situations, objects and concepts (Purkey et al. 1996). Effective collaboration with the family is inevitable for a school environment. Forming the basis of child-family-school trinity and integrating with family have made preschool education institutions obligatory and indispensable (Ömeroğlu, 1992). Therefore;

- In order to raise the awareness of society, families, parents and children about the importance of preschool education that carried out in two sources- private and public-, some programs and collective activities such as seminars, panels, and mass media can be organized.
- The preschool classes within the primary or vocational high schools can be extended if needed care and support is given.
- The projects that aim to make the preschool education compulsory can be enhanced by the Ministry of Education and Social Services Department with a conscious that preschool education is a right from which every child should benefit and also experts of preschool education in early childhood should be included into this process.
- Educational seminars in order to improve the collaboration of school and family can be organized with experts, institutions and organizations by designing mother-father-teacher education programs which can raise the awareness of parents.
- Apart from this study which aims to examine the effects of preschool education on self-concept, some other studies about the possible changes that preschool education makes on the child and parents can be done.

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## Tables

**Table 1.** Demographic Information about Children According to Participation in Early Childhood Education

Variable	Group	Students attending preschool education		Students not attending preschool education		Total	
		N	%	N	%	N	%
Gender	Female	143	46.7	188	49.6	331	48.3
	Male	163	53.3	191	50.4	354	51.7
	Total	306	100	379	100	685	100
Being Brother or Sister	Yes	239	78.1	348	91.8	587	85.7
	No	67	21.9	31	8.2	98	14.3
	Total	306	100	379	100	685	100
Time of Attending School	One year	156	50.3				
	Two year	58	18.6				
	Three year +	93	31.1				
	Total	307	100				
Birth Order	First child	134	43.8	118	31.1	252	36.7
	Middle child	28	9.2	82	21.8	110	16.2
	Last child	144	47.1	179	47.1	323	47.1
	Total	306	100	380	100	685	100

**Table 2.** Demographic Information about Parents According to Participation in Early Childhood Education

Variable	Group	Students attending preschool education		Students not attending preschool education		Total	
		N	%	N	%	N	%
Mother's Age	30 and below	55	18.0	119	31.5	174	25.5
	31-40	208	66.2	222	58.7	430	63.0
	41 and over	42	13.8	37	9.8	79	11.6
	Total	305	100	378	100	683	100
Father's Age	30 and below	5	2.6	25	6.7	33	4.9
	31-40	118	61.4	23	6.4	426	(2. S
	41 and over	110	35.9	10)	29.3	219	32.3
	Total	306	100	372	100	678	100
Mother's Education	Illiterate	-	-	40	13.6	40	7.1
	Literate	15	5.5	47	16.0	62	11.0
	Graduated from primary school	30	11.0	94	32.0	124	21.9
	Graduated from secondary school	25	9.2	45	15.3	70	12.4
	Graduated from high school	99	38.4	53	18.0	152	26.9

	<b>Graduated from college</b>	103	37.9	15	5.1	118	20.8
	<b>Total</b>	272	100	294	100	566	
<b>Father's Education</b>	<b>Illiterate</b>	-	-	-	-	-	-
	<b>Literate</b>	14	5.1	49	16.3	63	10.9
	<b>Graduated from primary school</b>	15	5.4	84	28.0	99	17.2
	<b>Graduated from secondary school</b>	24	8.7	50	16.7	74	12.8
	<b>Graduated from high school</b>	91	33.0	82	27.3	173	30.0
	<b>Graduated from college</b>	132	47.8	35	11.7	167	29.0
	<b>Total</b>	276	100	300	100	576	100
<b>Mother's Occupation</b>	<b>Without occupation</b>	141	49.0	304	82.6	445	67.8
	<b>Employee</b>	5	1.7	31	8.4	36	5.5
	<b>Public servant</b>	118	41.0	6	1.6	124	18.9
	<b>Self-employment</b>	24	8.3	27	7.3	51	7.8
	<b>Total</b>	288	100	368	100	656	100
<b>Father's Education</b>	<b>Without occupation</b>	7	2.4	34	9.6	41	6.4
	<b>Employee</b>	42	14.6	124	35.0	166	25.9
	<b>Public servant</b>	134	46.5	55	15.5	189	29.4
	<b>Self-employment</b>	105	36.5	141	39.8	246	38.3
	<b>Total</b>	288	100	354	100	642	100

**Table 3.** T-test and ANNOVA Results of Self-concept Level in Terms of Child's Variables Based on the Attendance to Preschool Education

Variable	Group	Students attending preschool education						Students not attending preschool education					
		n	$\bar{X}$	S	Sd	t	p	n	$\bar{X}$	S	Sd	t	p
Gender	Female	143	65.20	9.66	304	1.20	.230	188	62.55	10.81	377	1.64	.101
	Male	163	63.87	9.58				191	60.75	10.45			
	Total												
Being brother or sister	Yes	239	64.72	9.56	304	.479	.632	348	62.02	10.31	377	1.92	.056
	No	67	64.09	9.64				31	58.19	10.80			
	Total												
Variable	Group	n	$\bar{X}$	S	Sd	f	P	n	$\bar{X}$	S	Sd	f	p
Time of Attending Preschool Education	This year	156	62.29	9.16	2.304	.897	.409						
	Two years	58	64.05	10.1									
	Three years +	93	63.72	9.81									
	Total	307	64.58	9.54									
Birth Order	First child	134	64.99	9.01	2.303	.755	.471	118	62.18	11.54	2.377	.269	.764
	Middle child	28	62.53	10.9				83	61.06	9.67			
	Last child	144	64.54	9.91				179	61.64	10.55			

	Total	306	64.55	9.62				380	61.68	10.67			
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**Table 4.** ANNOVA Test Results of Self- concept Level in Terms of Parents' Variables Based on the Attendance to Preschool Education

Variable	Group	Students attending preschool education						Students not attending preschool education					
		n	X	S	Sd	f	P	N	X	S	Sd	f	P
Mother's Age	30 and below	55	64.74	9.24	2.302	.773	.483	119	61.41	10.9	2.375	.171	.843
	31-40	208	64.19	9.79				222	61.96	10.5			
	41 and over	42	64.11	8.85				37	61.11	10.9			
	Total	305	64.57	9.57				378	61.70	10.6			
Father's Age	30 and below	8	62.87	7.32	2.303	.554	.575	25	54.40	12.0			
	31-40	118	64.23	9.83				238	62.41	10.7			
	41 and over	110	65.29	9.23				109	62.03	9.38			
	Total	306	64.58	9.55				372	61.76	10.6	2.369	6.68	.001
Mother's Education	Illiterate	-	-	-	-	-	-	40	58.30	11.2	5.288	1.95	.086
	Literate	15	61.80	7.36	4.267	1.95	.103	47	60.55	11.5			
	Primary school	30	61.63	10.3				94	61.79	10.9			
	Secondary school	25	63.48	9.20				45	63.95	10.8			
	High school	99	64.70	10.4				53	61.30	11.5			
	College	103	66.26	8.51				15	65.26	9.31			
	Total	272	64.68	9.53				294	62.02	11.1			
Father's Education	Illiterate	-	-	-	-	-	-	10	-	-	-	-	-
	Literate	14	64.50	13.2	4.271	1.87	.116	49	57.86	11.4	4.295	3.28	.012
	Primary school	15	59.07	12.8				84	62.21	10.1			
	Secondary school	24	62.25	9.80				50	62.16	10.2			
	High school	91	64.71	8.72				82	61.43	12.5			
	College	132	65.51	9.51				35	66.14	7.58			
	Total	276	64.56	9.75				300	61.90	10.9			
Mother's Occupation	Without occupation	141	63.57	10.1	2.280	2.85	.060	304	62.10	10.5	2.359	2.22	.110
	Employee	5				-	-	31	57.90	11.5			
	Public servant	118	66.20	7.88				6	-	-	-	-	-
	Self-employment	24	63.04	12.5				27	61.48	11.9			
	Total	283	64.62	9.54				362	61.70	10.6			
Father's Occupation	Without occupation	7			2.278	2.89	.057	34	56.52	10.9	3.350	3.86	.010
	Employee	42	65.12	9.03				124	61.60	11.0			
	Public servant	134	65.91	7.72				55	64.22	9.62			
	Self-employment	105	63.02	11.1				141	62.13	10.3			
	Total	281	64.71	9.37				354	61.73	10.7			

## Context-Based Science Curriculum Development

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### Abstract

*Numerous reports and commissions address the need to reform science education in elementary and high schools. In the USA, for example, many reports call for changes in science education that ought to provide functional and useful learning for all students (Yager, 2002). In recent years, there is a new form of education being adopted worldwide. It is based on the concept that the progress of all sciences and development and applications of new technology is, by nature, social processes. The purpose of this research is to describe the process of developing context-based science curriculum. The process of curriculum development starts with the "situation analysis" stage, this is done through documentary analysis, and the review of the previous studies on science education. As a result, the proposed developed context-based physics curriculum caters for relevant objectives, content, learning activities, and evaluation methods.*

**Keywords:** Curriculum development, models of curriculum development, context based curriculum, science education.

### Introduction

worldwide, science education should develop the students' understanding of the natural and physical worlds in which they live, and the effects of such worlds on human living. Also, it should explain how human living affects the natural and physical worlds and how students who study science should discover these worlds. Yager (1993) outlines a contemporary set of curriculum goal clusters for science that are eventually adopted by National Science Teachers Association (NSTA). The original goal clusters include:

1. **Personal Needs:** Science education should prepare individuals to utilize science for improving their own lives and for coping with an increasingly technological world.
2. **Societal Issues:** Science education should produce informed citizens prepared to responsibly deal with science-related societal issues.
3. **Academic Preparation:** Science education should allow students who are likely to pursue science academically as well as professionally to acquire the academic knowledge appropriate for their needs.
4. **Career Education/Awareness:** Science education should give all students awareness of the nature and scope of a wide variety of science and technology-related careers open to students of varying aptitudes and interests.

Science curriculum ought to enhance the personal development of students and contribute to their lives as citizens. Students strive to understand their everyday experiences, and they do not currently feel that science relates to their daily lives simply because they do not apply scientific knowledge outside the classroom. Aikenhead observes that learning canonical science content is meaningfully and simply not achievable for the great majority of students in the context of traditional school science (Aikenhead, 2005).

According to Eijkelhof and Lijnse (1988), it would be necessary to entirely develop new science curricula. To achieve this, there is a need to change some of the traditional practices, to focus more on helping students think scientifically rather than memorize facts, and to attempt to change the curriculum as well. Instead of a list of facts to be covered, the "curriculum" should be holistic. In fact, we need to make different curricula and instructional decisions as we develop courses of study or use instructional materials so that we can have a science curriculum that is for all students.

NSTA in US in its report "Science Education for Middle and Junior High Students" recommends the following: "The primary function of science education at the middle and junior high level is to provide students with the opportunity to explore science in their lives, and to become comfortable and personally involved in it" (Brunhorst & Padilla, 1986).

Therefore, the purpose of science curriculum is to create citizens who understand science in ways that will enable them to participate intelligently and to make decisions on how science and technology can change the society. Such science curriculum is human and society focused, problem centered, and responsive to local issues (Blosser & Helgeson, 1990).

Professional science educators have framed the science education problem in different terms. Yager (1991) sums up the crisis in science education in two related problems: the first is general while the second is specific. The general problem refers to the greatest failure of science education "as not bringing about mass scientific /technological literacy among our citizenry". The specific problem has to do with the outcomes of science teaching. According to Yager, students of science typically remember little of what they have been taught in science, and ultimately express less interest in science after taking a formal course than before (Cited in: (Wraga & Hlebowitsh, 1991)).

Pondering over many studies, Yager (1993) concludes that the most critical problems with traditional science teaching are:

1. Students generally cannot use science (either concepts or processes) that they learn. The number of misconceptions that typical high school students have is large.
2. Well over 90% of all high school graduates do not attain scientific literacy even though they pass courses and generally perform well during such courses.
3. Interest in science and further study of science declines across the K-12 years.
4. Typical science instruction causes students to be less curious, less prone to offer explanations, less able to devise tests, and less able to predict causes and consequences of certain actions.
5. There is no evidence that traditional science teaching results in people who possess the traits which characterize scientifically literate people.

Aikenhead (2003) is much of the opinion of Yager and pinpoints the major failures of science education which are documented in various studies:

1. The first failure is concerned with the primary goal of school science: to produce knowledgeable people to go into careers in science and related jobs; or at least support those who do. The results from many researches show that students lose their interest to continue studying science during high school, and then during university undergraduate programs. Most researches on students' views of the science curriculum conclude that school science transmits content, which is socially sterile, impersonal, frustrating, intellectually boring, and/or dismissive of students' life-worlds.
2. The second major educational failure of the traditional science curriculum is that some strong science students lose their interest in taking further science classes, some students become interested in science for the wrong reasons, and many students become illiterate citizens with respect to the nature and social aspects of the scientific enterprise.
3. The third documented major failure dates back to the 1970s research on student learning: most students tend not to learn science content meaningfully. Furthermore, much of the research suggests that the goal of learning canonical science meaningfully is simply not achievable for the majority of students in the context of traditional school science.

According to Tytler (2007), there are four main elements to the crisis in science education:

1. Evidence of students developing increasingly negative attitudes to science over the secondary school years.
2. Decreasing participation in post-compulsory science subjects, especially the 'enabling' sciences of physics and chemistry.
3. A shortage of science-qualified people in the skilled workforce.
4. A shortage of qualified science teachers.

In other words, the development of modern science and technology and the continuous progress of society have ushered in completely new concepts, new modes of thinking, new teaching materials, new teaching methods, and new technical means in the field of education.

### Effects of context-based approaches

Bennett, Hogarth, and Lubben (2003) summarized meta-analysis of 66 studies of the effects of context-based approaches. They reviewed studies of approaches in the teaching of secondary school science that used contexts as the starting point for the development of scientific ideas. The meta-analysis showed the following interesting results:

- There is some evidence to support the claim that context-based approaches motivate pupils in their science lessons.
- There is evidence to support the claim that such approaches also foster more positive attitudes to science more generally.
- There is good evidence to support the claim that context-based approaches do not adversely affect pupils' understanding of scientific ideas.

Similarly, Aikenhead (2005) obtained the same results about STS science education in terms of curriculum development, student learning, and teacher orientations toward such a curriculum. This revision has been able to document the claims that students in STS science classes (compared with traditional classes) can significantly improve their understanding of social, their attitudes towards science, towards science classes, and towards learning, as well as they can make modest as well as significant gains in thinking skills as a result of learning STS content. Besides, some students can enhance their socially responsible actions, and can make moderate gains in their decision-making skills.

In conclusion, the reported outcomes of context-based approaches are positive from an affective development perspective, but they are somewhat disappointing from a cognitive development point of view. The absence of effects on learning outcomes can be caused by a weak relationship between contexts and relevant concepts in the perception of students and teachers (Bennett et al., 2003).

### Objectives of the Study

In view of the current call for making a link between the students' life and science curriculum and the reflection of this trend in science curriculum, this study aims :

1. to discuss the curriculum development process.
2. to propose a model curriculum for developing context-based physics curriculum.

### Definition of Terms

#### Curriculum

Different people identify a curriculum in different ways and sometimes in multiple ways depending upon the context in which the concept is used. The most common perceptions of curriculum expanded substantially from the types identified by John Goodlad (In: (Saylor, Alexander, & Lewis, 1981)) and suggested by Glatthorn (In: (Print, 1993)) which may be described as:

- The ideal / recommended curriculum : Beliefs of scholars as a solution to meet the need and consequently perceived as the most appropriate curriculum for learners;
- The entitlement curriculum: What society believes learners should expect to be exposed to as part of their learning to become effective members of that society;

- The formal curriculum (Explicit/ intended/ written curriculum): What organizations develop for the learners in their educational systems and what should be done in the class as seen in syllabi, guidelines, textbooks, etc.;
- The instructional/ perceived curriculum :what teachers report they do or trying to do;
- The operational / observed curriculum :what actually goes on in the classroom;
- The experiential curriculum: what the students are perceiving and reacting to; and
- The attained curriculum: the measurement of student learning (usually through a testing process) which reveals those learnings acquired by students.

According to the traditional view, the curriculum definitions emphasize on the role of the teacher and the ways of organizing the knowledge, while the contemporary view of the curriculum emphasis on the learning experiences and the students positive role in the learning process. Its clear that the learners' planned experiences in the school will survive under the teachers' guidance.

In this research, the curriculum definition is "the plans made for guiding learning in schools, usually described in documents (textbooks, curriculum guides, course syllabus, lesson plans) of several levels of generality, and the execution of those plans in and out the classroom. As experienced by learners; those experiences take place in a learning environment (classroom, laboratory, outdoors) which also influences what is learned" (Hassard, 2005). This definition means that 'curriculum' is not only what is written in the syllabus but also encompasses among others things, courses and subject designs, course development and approval of content, teaching and assessment strategies, facilities, timetabling and access to information. Importantly, the curriculum is affected by what is and is not included.

### Curriculum Development

According to the literature review of curriculum development, the term 'model' has been used to explain both the nature and process of curriculum development. Print (1993) points out that the frequently used models in developing curriculum are the graphical models that enable curriculum developers to visualize curriculum elements, their relationships, and the processes of development and implementation. Curriculum Development is a comprehensive, ongoing, cyclical process "to analysis the situation; to develop aims or objectives to address the results of the situation analysis; to determine an appropriate content, teaching methods, learning activities and teaching evaluation; and to carry out a formative evaluation of the context-based curriculum that results from these processes".

### Context-based science curriculum

In context-based science curricula – such as ChemCom, PLON, Salter's Science, Chemie im Kontext and Physik im Kontext – practical applications and/or socioscientific issues act as a starter for the teaching-learning of science (Kortland, 2011). It is an "event centered learning" whereby real-life events or occurrences provide the impetus for curriculum planning (Pedretti, 1996). It was and still is expected that relating science to 'everyday life' would make science teaching more interesting for a larger proportion of the students, that they would be more motivated to learn about and thus would reach a better understanding of the subject knowledge involved. This implies that the science content presented is necessary, and thus its learning is meaningful, for solving a practical or theoretical problem set by the context.

The developed curriculum is context-based. In this approach, the contexts and applications of science are used as the starting point for the development of scientific ideas. This means that taking the students' 'life world' as a starting point, the process of curriculum development takes into account technology, natural phenomena, socio-scientific issues, the nature of science and the interrelations between science, technology and society in secondary physics curriculum.

## Models of Curriculum Development

A model is a simplified representation of reality that is often depicted in diagrammatic form. The purpose of a model is to provide a structure for examining the variables that constitute reality as well as their interrelationships. Scientists in curriculum development have accepted the use of the term 'model' to explain both the nature and process of curriculum development. The models may be considered in many different ways, depending upon the purpose for which they are intended. In general, curriculum development models are graphical models since they enable curriculum developers to visualize curriculum elements, their relationships, and the processes of development and implementation (Print, 1993).

A review of literature in the curriculum area reveals that many ideas have been suggested for models or steps to be taken in curriculum development process. The salient curriculum development process model were appreciated are classified into three categories; rational, cyclical and dynamic. A representative sample of the different aspects has been included in the form of a continuum of curriculum models (figure 1).

The continuum (as seen in Figure 1) describes two extremes of the curriculum process. The rational or objectives models are sequential, rather rigid approaches to viewing the curriculum process, while at the other extreme may be found dynamic or interaction models, which view curriculum processes as flexible, interactive and modifiable. In between, models gradually change from one type to the other.

### 1. **Tyler's Model** (As an example of objectives models)

In his book "Basic Principles of Curriculum and Instruction" in 1949, Tyler argues that curriculum development needs to be treated logically and systematically (Print, 1993). Briefly, his model for the curriculum process is outlined in figure 2.

It is clear from the diagram that the model is linear in nature; it consists of four steps, the four steps are "objectives", "content", "method" and "evaluation". The first step of this model is to think about educational aims and objectives, and secondly about the kinds of subject matter or experiences that require effective organization to help students achieve those objectives. These two views then need to be put together programmatically. The results of using the curriculum need to be evaluated in some way, so the final step in Tyler's process was to determine whether the objectives had been achieved or not.

Certainly, Tyler has had a significant effect upon curriculum developers and writers for the past three decades of the twentieth century.

### 2. **Hilda Taba** (As an example of objectives models)

Of the several books that Hilda Taba wrote on curriculum, the most well known and influential was "Curriculum Development: Theory and Practice" published in 1962. In this work, Taba outlined her ideas of the process of curriculum development. Taba's model is linear in approach; it's similar to Tyler's basic model. In fact, she modified Tyler's model to become more representative of curriculum development. So that she argued for more information input at each stage of the curriculum process. Taba argues that if curriculum development was to be logical, orderly; the way of developing the curriculum would follow seven sequential steps as outlined in figure 3 (Sada'a & Ibrahim, 2004).

Furthermore, Taba contends that scientific curriculum development needs to draw upon analyses of society and culture, studies of the learner and the learning process, and analysis of the nature of knowledge in order to determine the purposes of the school and the nature of its curriculum (Print, 1993).

### 3. **Wheeler's Model** (As an example of cyclical models)

Wheeler's model for curriculum design is an improvement upon Tyler's model. Instead of a linear model, Wheeler developed a cyclical model (figure 4). Evaluation in Wheeler's model is not terminal. Findings from the evaluation are feedback into the objectives and the goals, which influence other stages (Print, 1993; Sada'a & Ibrahim, 2004).

In his model, Wheeler contends that:

- Aims are formulated from the general to the specific in curriculum planning.

- Content is distinguished from the learning experiences which determine that content.

#### 4. **Print's Comprehensive Model** (As an example of Dynamic/interaction models)

After analyzing many curriculum development models, Print (1993) adopted a comprehensive model of curriculum development. Print views his model as logical and sequential in approach, cyclical in its development of a curriculum product and yet concerned with applying the model to realistic situations. It is a model that has the flexibility to be used for developing many types of curriculum.

Three phases organization, development and application are considered to form the basis of this model of curriculum development. Figure 5 depicts the three phases. Print (1993) illustrates these three phases as follow:

##### **Phase 1: Organization**

According to Print, the curriculum presage concerns of the foundations or forces that influence developers' ways of thinking about curriculum. These curriculum foundations are the components that influence and control the content and organization of the curriculum. They are based upon values one has developed about knowledge, society, learning, and the individual. Curriculum foundations derived from philosophical, sociological and psychological sources.

##### **Phase 2: Development**

To achieve the second phase; developers follow the cyclical procedure in the model as seen in figure 5. In other words, they follow the sequence of curriculum elements that begin with situational analysis and continue with aims, goals and objectives; content; learning activities; evaluation and then continuing on to situational analysis again.

##### **Phase 3: application**

The third phase of the model "application" which in turn incorporates three sets of activities:

1. Implementation of the curriculum: For any curriculum document, materials or project to be implemented in a school or school system, change must occur. To make this change occur effectively and with minimal disruption and confusion, a plan for implementing the curriculum innovation must be devised.
2. Monitoring of and feedback from the curriculum: It is an important step in gauging the success of the curriculum activity, and the implementation of the curriculum is a short-term activity, while the monitoring and feedback aspects of the third phase are likely to span several years.
3. The provision of feedback data to the presage group: it relates to life forwarding of feedback data to the curriculum presage group.

#### **Appropriate Curriculum Model**

The previous description of the models of curriculum development shows that there are many types of models. According to their characteristics, they could be classified into three types: the rational or objectives /classical models, the cyclical models, and the dynamic or interaction models. In between, models gradually change from one type to the other.

Rational models sometimes referred to as objectives/classical/means-end models, these approaches to the curriculum development beginning with objectives and following a sequential pattern from objectives to content, method and finally evaluation. Two principal proponents of rational models are Ralph Tyler and Hilda Taba. The main advantage of these models is providing simple, time-efficient approaches to meet the curriculum development, while a significant weakness of the objectives model arises from the unpredictable nature of teaching and learning. The model prescribes specified objectives to be achieved, but often learning occurs beyond these objectives due to factors that could not have been foreseen.

On the contrary, Cyclical models view elements of the curriculum as interrelated and interdependent, so that the distinctions between the elements are less clear than in the rational model. Strengths of cyclical models derived from a logical sequential structure upon which curricula may be devised, otherwise, employing situational analysis as a starting point, provide baseline data upon which effective objectives may be devised, and these models are flexible and less rigid in their application than the others. Inherent weaknesses within cyclical models are more difficult to locate largely, and the fundamental problem in utilizing such models is the amount of time required to undertake an effective situational analysis.

Comparing with rational models, the interactive or dynamic models of curriculum offer an alternative view of the process of curriculum development. Proponents of these models argue that the rational and cyclical models do not reflect the reality of curriculum development process. They contend that it does not follow a lineal, sequential pattern and can commence with any curriculum element and proceed in any order. The dynamic models have emerged from the analyzing of what really happened through the process of curriculum development.

Unlike the objective model, this model does not consider objectives to be important, and the content involves procedures, concepts and criteria that can be used to appraise the curriculum. While, it is not difficult to suggest that dynamic models appear confusing and lacking in direction. According to Print (1993) it's impossible to suggest that only one model of curriculum development is appropriate in all contexts and to all curriculum developers. This is why Curriculum developers should select the most appropriate model for their context.

Oliva (2005) confirmed that before choosing a curriculum development model, it is important to outline the criteria or characteristics that should be in. Oliva pointed out that the model should show the following:

1. Major components of the process, including stages of planning, implementation, and evaluation
2. Customary, but not inflexible "beginning" and "ending" points
3. The relationship between curriculum and instruction
4. Distinction between curriculum and instructional goals and objectives
5. Reciprocal relationships among components
6. A cyclical pattern
7. Feedback lines
8. The possibility of entry at any point in the cycle
9. An internal consistency and logic
10. Enough simplicity to be intelligible and feasible
11. Components in the form of a diagram or chart

Curriculum development refers to all aspects of the curriculum process including review of the current situation, development of aims and objectives, decisions on content and structure, detailing learning activities and teaching methods, developing assessment strategies, as well as evaluating and reviewing the procedures. Therefore, the researcher has modified and adapted parts of the existing materials and integrated them with the new units and format.

### **The process of Context based curriculum Development**

The existing science curriculum in general could be characterised by a 'correct explanations' and a 'solid foundation' emphasis. The shift of emphasis strived for in the Context based curriculum is to balance these with the five additional curriculum emphases of 'everyday coping', 'science, technology and decisions', 'scientific skill development', 'structure of science' and 'self as explainer'. As the basic questions set the scene for the units, these curriculum emphases should be reflected into these questions (Kortland, 2005).

According to Print (1993) there are five major stages in the process of curriculum development. Those are:

1. Situational analysis
2. Formulation of objectives.
3. Selection and organization of content.
4. Selection and organization of learning activities/teaching methods.
5. Evaluation.

These five stages constitute the curriculum development process.

#### **1. Situational Analysis**

Curriculum development should begin with a realistic appraisal and analysis of the existing situation. An 'analysis of the situation' provides an opportunity to gather, analyze and report data regarding the strengths, weaknesses, opportunities and impediments related to the curriculum. By that, developers can then devise appropriate content. Similarly appropriate learning activities can be organized so that the content is learnt effectively and thus the objectives achieved.

## 2. Aims, Goals And Objectives

The process of aims and goals' determination is the first and most important step in the curriculum planning and design process. Aims and goals are the essential element that guide the process of choosing the unique content, methods and teaching strategies, learning activities, and the assessment and evaluation processes for the learning outcomes that the curriculum developer intends to achieve.

The aims of education put forward by the context based science curriculum into a balance between preparing students for further education and/or future employment and for coping with their (future) life roles as a consumer and citizen in a technologically developing, democratic society. Considering the nature of Arabic countries and the Islamic perspective, the researcher suggests the following aims for the developed context-based science curriculum.

### A. Attitude and Values

1. Encourage the learners to develop deep belief in Allah and their Islamic beliefs, and develop positive attitudes towards Islam and the Islamic values.
2. Value the contributions to scientific and technological development made by Arab and Moslem scholars.
3. Increase the learner's awareness of the efforts of a society to encourage and develop science and taking the benefits from its outcome for comprehensive development.
4. Enable students to appreciate the contributions of science and technology towards national development and the well-being of humanity.
5. Enable students to consider further studies and careers in science and technology-related fields.
6. Encourage the students to develop attitudes that support collaborative activity.
7. Encourage the students to demonstrate a concern for safety in science and technology contexts.

### B. Knowledge:

1. Provide the learner with a coherent and functional scientific knowledge, facts, concepts, generalizations, principles, and theories in the different fields of science.
2. Provide the learners with a historical perspective about biology, ecology, chemistry, and physical science in the 19th century.
3. Increase the learner's awareness that theories and scientific methods are changeable and developed as a results of individuals and communities, and realize that its applications are useful for individuals, environment and communities.
4. Provide the learners with culture and scientific preparing for increase their interest in further studying of science, and pursue career possibilities within science-related fields.
5. Increase the learner's awareness of the importance of dealing effectively towards the different applications of science, and take care of his health and environment and play an active role in its preservation and conservation.
6. Acquire knowledge to analyze and explain the interrelationship between science, technology, society and environment; and how the individuals influence them.
7. Acquire knowledge to explore the nature of science and its domains, and outline the importance of science and its relationship with other disciplines and technology.
8. Enable learner to acquire new scientific and technological knowledge and use it to evaluate and make decisions about real-world issues related to the applications and limitations of science and technology, considering a variety of perspectives.

### C. Skills

1. Enable the learner to acquire the scientific, critical, and objective thinking skills, which underlie the scientific approach to problem solving.
2. Ask questions about observed relationships and plan investigations of questions, ideas, problems, and issues by using demonstrate safe and skillful a broad range of tools and techniques to gather and record data and information.
3. Work as a member of a team in addressing problems, planning and carrying out investigations, as well as in generating and evaluating ideas.

The previous curriculum outcomes identify what students are expected to know and value by the end of grades 12 because of their cumulative learning experiences in science.

### 3. The Content

According to Aikenhead (1994) there are three essential groups of possible curricula (each linking everyday contexts and school science). Figure 6 illustrates these three groups. A context-based means that the science courses taught through issues from society (and/or technology); while context-infused, related to science courses that incorporate issues from society (and/or technology); and the context-focused products courses about issues in society (and/or technology) including the required science.

The choice of contexts to be incorporated in the curricula ideally would be influenced by the differences in interest, abilities and plans for the future among students, and by long-term developments in society. The different needs of students could be met by choosing a variety of personal, social and scientific contexts (including nature, culture and technology). The introduction and use of contexts should be accompanied with a lot of care for bridging the gap between meanings of concepts in a daily life context and meanings of these concepts in a science context. The following are the characteristics of adequate contexts (De Jong, 2006):

- Contexts should be well-known and relevant for students
- Contexts should not distract students' attention from related concepts
- Contexts should not be too complicated for students
- Contexts should not confuse students

It is very important to select adequate contexts for incorporating in student courses, especially when contexts are used as starting points for teaching concepts. First, the contexts may be not really be relevant for students and will not motivate them to study the science content. Second, and in contrast with the former cause, the contexts can be so interesting that they distract students' attention from the related concepts. Third, the contexts can be too complicated for students to help them to make proper links with concepts. Finally, the contexts can be confusing for students, because everyday life meanings of topics do not always correspond with science meanings. In conclusion, an important condition for improving context-based chemistry teaching is a careful selection of contexts (De Jong, 2006).

### Teaching methods

Compared to the traditional curricula, the context based curriculum required more practical and more open-ended investigations including reporting by students and whole class discussions. From the constructivism points of view, students actively construct meaning for themselves because of direct, hands-on science experiences, minds-on simulations, and social interactions with other students and/or the teacher will be the considered in the learning activities. This instruction encompasses simulation games and role-playing, forums and debates, individual and cooperative learning, active research fieldwork, guest speakers, and community action.

### Teacher-student interaction

In relation with the changes in teaching methodology, the 'distance' between teacher and students became smaller: less frontal classroom teaching, and more giving guidance to small groups of students. During the reporting sessions, the students completely took over the teaching role of the teacher, with the teacher now in the role of observer with the task of

giving adequate feedback on the students' presentations. Overall, the activities will shift the teacher's role to a classroom manager (managing time, people resources and the emotional classroom environment), away from the role of a classroom performer (Hofstein, Aikenhead, & Riquarts, 1988).

### The Sequencing of Instructional Topics

Aikenhead (1992) has developed a model of the interface between science, technology, and society (Figure 7), this model may help in the sequencing of instructional topics for context-based curriculum. Aikenhead attaches a ring of "technology" around a circle of "science content," and places this on a backdrop of "society." Imagining a vector passing through the diagram, we can follow his idea of sequence. Making decision and taking action is the main goal of teaching any context-based content. Accordingly, the sequencing of instructional topics will be as the following:

1. The instruction could start with a discussion of the societal aspects of an issue.
2. The instruction could cover technological aspects of the issue, in order to understand a societal problem; there is usually some technology to examine. The domain of technology is represented by the gray donut in Figure 7.
3. The instruction could present science concept information related to an issue; this science content will help students understand the technology and the societal issue.
4. Finally, the arrow in figure 7 ends in the domain of society. Here students often address the original key question or issue and then make a decision and take actions.

This sequencing could bring many benefits, once the science concepts are understood; the students reconsider the technological and societal issues, and attempt to make informed decisions or predictions about the issue.

### 4. Evaluation

Evaluation is broader in scope than measurement in that it involves the interpretation of measurement data. In planning evaluation, we can use a broad range of strategies in an appropriate balance to give students multiple opportunities to demonstrate their knowledge, skills, and attitudes. Many types of assessment strategies can be used to gather such information, including, but not limited to, the following:

- Formal and informal observations
- Work samples
- Anecdotal records
- Conferences
- Teacher-made and other tests
- Portfolios
- Learning journals
- Questioning
- Performance assessment
- Peer assessment and self-assessment

Results of assessments and evaluations have a wide variety of uses, such as:

- providing feedback to improve student learning
- determining if curriculum outcomes have been achieved
- certifying that students have achieved certain levels of performance
- setting goals for future student learning
- communicating with parents about their children's learning
- providing information to teachers on the effectiveness of their teaching, the program, and the learning environment

- meeting the needs of guidance and administration personnel

Assessment and evaluation are essential components of learning and teaching in science. The STS issues-based science curriculum emphasizes having a classroom environment in which students will be encouraged to learn scientific processes and knowledge within meaningful contexts. It is important that assessment strategies reflect this emphasis and are consistent in approach.

## Conclusion

The context-based curriculum emphasizes the importance of the students' 'lifeworld', it was taken as a starting point, with an emphasis on technological artefacts and natural phenomena, supplemented with an emphasis on socio-scientific issues and the nature of science. The aims of science education put forward by the context-based curriculum to achieve a balance between preparing students for, on the one hand, further education and/or future employment and, on the other hand, coping with their (future) life roles as a consumer and citizen in a technologically developing, democratic society.

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## Figures

Figure 1 Continuum of curriculum models

Rational/objectives models	Cyclical models	Dynamic/iteration models
Tyler	Wheeler	Walker
Taba	Audrey and Nicholls	Skilbeck
		Kerr
		Beauchamp
		Print

Figure 2 Tyler model of the curriculum process

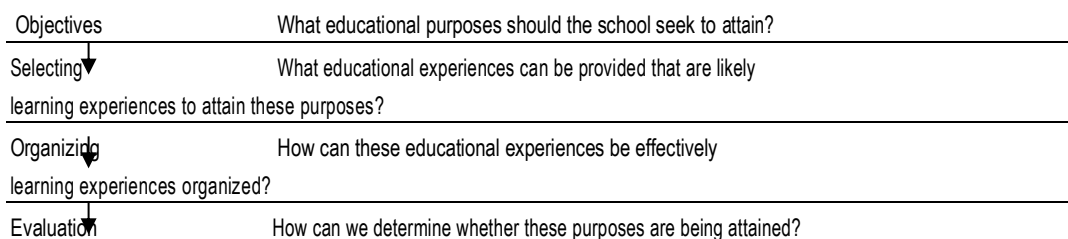
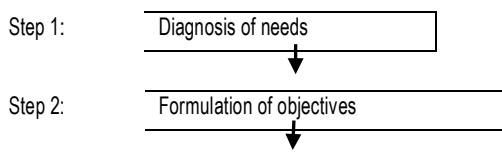


Figure 3:Taba model of the curriculum process



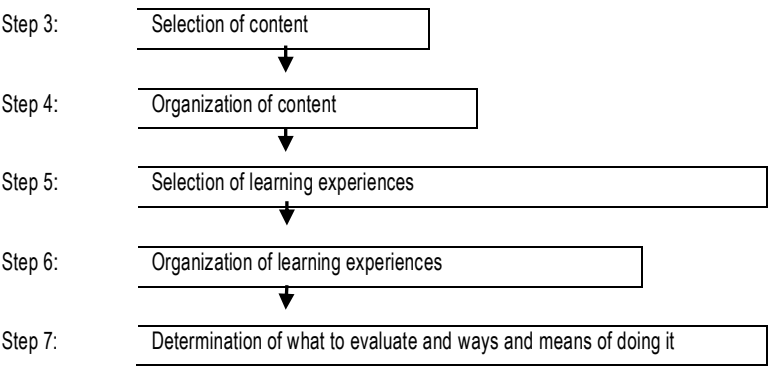


Figure 4: Wheeler's model

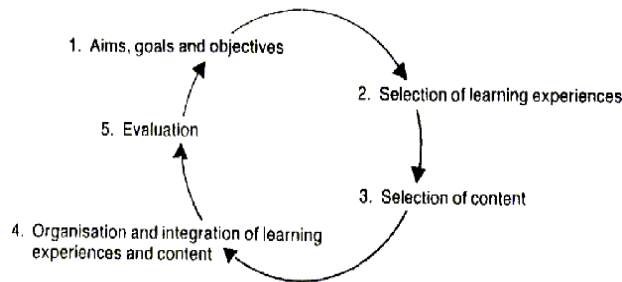


Figure 5: Print's Comprehensive Model

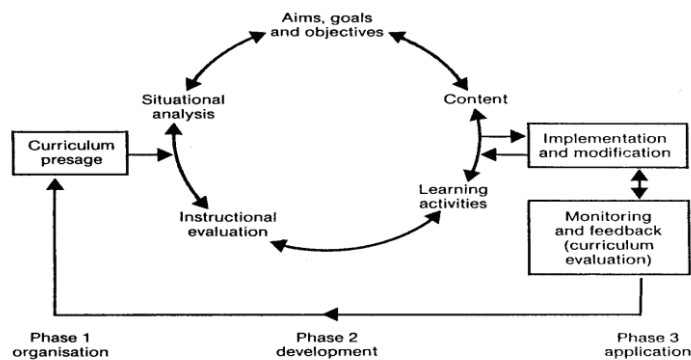


Figure 6  
everyday contexts and school science

Ways of linking

## Context-infused

Everyday context

### Context-based

### Context-focused

Everyday context

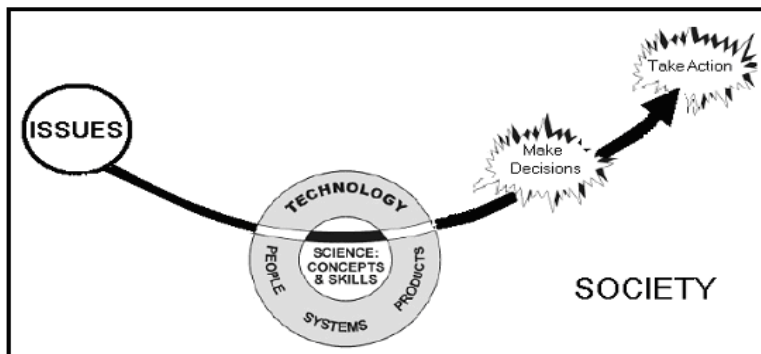


## SCHOOL SCIENCE

 $\Rightarrow$ 

everyday context

Figure 7 A schematic illustrating a possible sequencing of instructional topics



## Educational Research Projects as New Form of Educational Methodology

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### Abstract

*Research study has focused on investigating: could we transform today's outmoded education system to a vibrant learning ecosystem that puts learners at the center?, how technology is changing the way we teach and more importantly the impact it has on the way students learn? The study focused primarily on two objectives. Firstly on assessing and evaluating issues and deficiencies in the current state of technology enhanced education, the second objective, proposing and recommending solutions to the findings from the secondary research and answer both research questions from above. Creating personalized learning for all the learners requires a paradigm shift in current educational methodologies in practice and a deep commitment in order to guide this process tempered with wisdom and based on evidences of practical benefits. The research study is primarily trying to answer these research questions and focused on devising a set of guidelines and recommendations for designing new educational methodology based on the previous analyses. Findings and recommendations are provided.*

**Keywords:** Educational methodologies, educational research projects, technology enhanced education, learning modeling approaches, e-learning

### Introduction

Education has seen big changes, many of which have been technology-driven: social networking tools like facebook, twitter, google +, LinkedIn, the expanding role of e-learning, sophisticated learning-management systems, and new communication tools. Also major impact is realized from, open educational resources (OERs), massive open online courses (MOOCs), and the benefits and challenges of online learning.

Perhaps the most important issues concern how technology is changing the way we teach and more importantly the impact it has on the way students learn. Technology enhanced education also known as e-learning is becoming very important. There has been a greater need for learning technologists to step in and help communities benefit from technology. The role of learning technologists is essential to integrate new technologies and education.

The main research focus of the study is can we transform today's outmoded education system to a vibrant learning ecosystem that puts learners at the center and enables many right combinations of learning resources, experiences, and supports to help each child succeed? Creating personalized learning for all the learners requires a paradigm shift in current educational methodologies in practice and a deep commitment in order to guide this process tempered with wisdom and based on evidences of practical benefits.

## Literature Review

There is evidently a lack of support for instructional techniques and pedagogical learning models, as well as procedures or guidelines how, when and for what particular situation each pedagogical learning model should be supported in the software development process and its conjunction and correlation with the instructional strategies (Fetaji, 2007d).

Instructional strategy is a very important concept that needs to be addressed because the main purpose of any learning activity should be clear to the learner (Merrill et al. 1996).

Instructional design in an e-learning environment can foster the alliance between technology and education for pushing higher education to transform the academic environment. A properly executed instructional design can help faculty and academic departments develop new modes of instruction that use various technologies and teaching strategies. Instructional design represents analysis of learning needs and systematic development of instruction. Instructional design models typically specify a method in using the technology that if followed will facilitate the transfer of knowledge, skills and learning process (Merrill et al. 1996). This learning dimension should provide the context of instruction and desirable outcome. The learning environments require high level of self-organization and metacognitive abilities from the learners engaged in the process of learning that should be captured by the instructional techniques.

There are five main instructional strategies that are currently considered: Problem Based, Project based, Inquiry-based Learning, Task based and Game based learning (Helic et al 2005), (Marjanovic, 2005), (Schroeder, et al 2006), (Mitchell, 1993).

Problem based learning represents the learning that results from working with problems that needs solving. The entire learning process is set around a problem introduced and the knowledge is developed as a consequence of trying to solve the problem. Official description offered by (Mitchell, 1993) generally describe it as "an instructional strategy in which learners confront contextualized, ill structured problems and strive to find meaningful solutions and learn in the process of doing it." In general it is an approach to learning focusing on the process of solving a problem and acquiring knowledge. The approach is also inquiry-based when learners are active in creating the problem. The learners are elevated to the position of analyst and problem-solver and have specific objectives and deadlines to meet. According to (Savery, et al 1995) there are two critical issues involved in presenting the problem. First, if the learners are to engage in authentic problem solving, then they must own the problem. A second critical issue in presenting the problem is to be certain that the data presented does not highlight critical factors in the case. Either the problem must be richly presented or presented only as a basic question. Learning should be synthesized and organized in the context of the problem.

Project-based learning (PBL) is a model that organizes learning around projects. Definitions of "project-based instruction" include features relating to the use of an authentic ("driving") question, a community of inquiry, and the use of cognitive (technology-based) tools (Krajcik, et al 1994). Project-based instruction is an authentic instructional model or strategy in which learners plan, implement, and evaluate projects that have real-world applications beyond the classroom (Harwell, 1997). Projects sometimes go off track, with teachers and students pursuing questions that are peripheral to the subject matter of interest. The solution, according to (Blumenfeld et al. 1991) is to find ways for projects to center on "learning appropriate goals."

Inquiry-based Learning according to (Lin, et al 2006) represents an instructional strategy where involvement in learning implies processing skills and metacognitive abilities in order to seek answers to questions and issues while at the same time constructing new knowledge. Numerous inquiry-based instructional models, such as Authoring Cycle and Inquiry Cycle have been developed to support different learning activities. "Inquiry" is defined as seeking information by questioning. While questioning and searching for answers are extremely important parts of inquiry, effectively generating knowledge from this questioning and searching is greatly aided by a conceptual context for learning. According to (Helic, et al 2006) it usually begins with posing a problem or question, followed by generating and pursuing strategies for investigating, collaborating, reflecting, and justifying the solutions of the problem or answers to the question, and communicating the conclusions.

Task-based learning is an educationally sound, effective and efficient instructional strategy for learning focusing the learning activities around tasks. The term "task-based learning" according to (Nunan, 1989) originated primarily from the work done

in language education. According to (Harden et al, 1996) the learning tasks play a fundamental role in determining the learning outcomes. According to (Harden et al, 1996) it has three advantages:

1. TBL is learning built round tasks is more effective than traditional didactic memory-based or purely apprenticeship-type learning;
2. TBL is learning structured round the tasks is an efficient approach to learning;
3. TBL is likely to lead to more relevant and appropriate education;
4. TBL links theory with practice. The practical task becomes the starting point for the theory: in turn, theory informs and leads to a better understanding of the task (suits to curricula study program);
5. TBL provides an appropriate framework for planned education (curricula driven) where it makes explicit what is to be achieved and how the learner should do this (efficient learning);
6. A TBL approach is likely to result in greater relevance of curriculum content (appropriate for curricula learning).

TBL offers a focused and structured approach to learning and increases the learners' satisfaction and motivation, and at the other side is consonant with current theories of education (Harden et al, 1996). This is the reason we decided to implement a task-based model for the prototype.

Task-based learning offers action and reflection, while in contrast, rote learning is low in action and in reflection. According to (Harden et al, 1996) incidental learning, such as occurs in on-the-job learning, is rich in action but may be low in reflection. Classroom, or formal, learning is frequently high in reflection but low in action.

Game based learning or also lately referred to as digital game-based learning (Prensky, 2001), goal based scenarios and instructional games and simulations are alternatively used to describe the instructional strategy where learning activities are organized around a game or simulation. The academic community regarded game based learning as part of problem based learning using simulations and did not give much of attention in its research, and still today there are a lot of opinions in this regard (Yacci, 2004). According to (Yacci, 2004) educational games and simulations are defined as activities that have rules and constraints, a goal, and an emphasis on competition and also has the additional feature of having a primary objective of enabling a student to learn either facts, skills, attitudes, or all three. (Eklund, 2000) suggests that transfer of knowledge is aided when students actively construct explanations for events. Perhaps the biggest benefit for game -based learning is the fact that it involves students who need to learn complex skills and need to transfer these skills to real life.

However there are no clear procedures, methodologies or rules what learning modeling approach is more appropriate to use when developing e-learning solutions and especially its conjunction and correlation with the instructional strategies discussed previously.

The design and development of e-learning can not be based only in the existing practice of technology, it is necessary to understand the relation between theory and practice to ensure that the design of practice is founded on the learning theory. This concept defined by (Harmon, et al 2003) is given in the figure below:

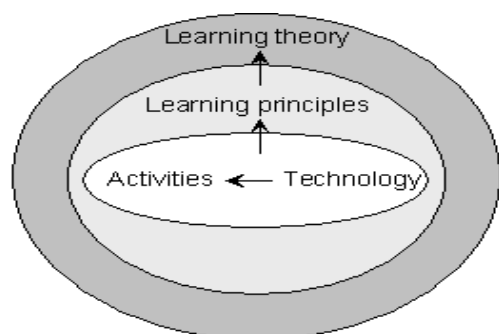


Figure 1 - Theoretically grounded evaluation of technology (Harmon, et al 2003)

E-Learning modeling approaches are very important in the process of the development of e-learning solutions as software products. Although recently in the e-learning community there is acknowledged the importance of pedagogy however there is little research on learning modeling approaches.

It describes that the different learning activities that are driven in the learning environment are supported by the e-learning instructional technologies stated above. The learning principles are formed by the learning activities to be done to produce the learning outcome. The learning activities are crucial to define the features and abilities the learning environment has to support and are supported by the technology.

According to (Marjanovic, 2005) the e-learning solutions development process adopts one of the following learning modeling approaches:

1. the content-oriented,
2. the tool-oriented, or
3. the task-oriented approach

The **content-oriented** approach deals with management of learning content. It is mainly concerned with supporting authoring, structuring, delivering, sharing, re-using, and querying the content (Helic, 2006). The design and authoring of e-learning content requires major input from instructional designers, graphics designers, and programmers. Normally the instructors are expected to develop the content for e-learning on their own. However content creators search for a theoretical basis to justify their designs (Eklund et al. 2003). Normally the instructors are expected to develop the content for e-learning on their own. However they are not aware of the effective methods which can be used to present their content to users. Especially the novice instructors need additional support in developing interactivity since it involves programming. Support might include collaborative tools for enriching the learning content by writing comments and annotations, tools for tracking the student progress with the content, or tools for adapting the content to the students' preferences (Helic, 2006).

**Tool-oriented** approach is based on using the technological infrastructure in the learning process. Learning sessions which follow this approach are organized around the use of the developed software (Helic, 2006). The developed software solution is the main vehicle into increased transfer of knowledge. This learning modeling approach provides clear support and focuses the learning process around the developed tool of instruction as medium.

**Task-oriented** approach deals with learning tasks or learning activities which learners need to perform in their learning sessions. Those tasks are typically structured in very simple learning sequences that the students need to pass in a sequential mode (Helic, 2006). This learning modeling approach clearly support and focuses the learning process on previously created scenarios of sequential tasks that will guide the learner activities into more efficient and higher level of knowledge transfer.

## Conclusions

There are a lot of new methodologies that are considered as advanced and that are considered as the future of e-learning. Learning object methodology, semantic web, Learning Activity Management System (LAMS) and others are considered as new trends and hot topics in e-learning. However, based on the conducted review and important synthesizes of current state of the art in the field of e-learning and e-learning solutions applied the study represents the next conclusions.

Most of the published research papers evidence that different e-learning projects are consisted of only monolithic learning systems and also many current e-learning initiatives follow the "one-size-fits-all" approach (Fetaji et al 2007). Typically, this approach is related to lack of knowledge of the learner audience or factors influencing that audience and therefore fail to provide satisfactory support for most of the learner audience. Conclusion is that we need to focus on some other issues first before we offer learners one of the above discussed monolithic systems.

Regarding the first objective 1) assessing and evaluating issues and deficiencies in the current state of e-learning projects a conclusion is that there are a lot of deficiencies. Some of the most important have been reviewed and analyzed above. The most important issue remains the one dimensional approach to e-learning and failing to recognize and acknowledge its multidimensional nature. A conclusion has been achieved that among the main reasons for the current unsatisfactory results in many e-learning initiatives and in meeting the e-learning expectancies are the above mentioned deficiencies. Therefore, the research strategy should try to address and solve the above identified issues.

Regarding the second objective, 2) Proposing and recommending solutions to the findings from the secondary research based on analyses and literature review. The conclusion is that there is a need to raise the awareness of the factors influencing e-learning in order to enhance learning and identify the nature of obstacles being faced by e-learners as well to approach e-learning recognising its multidimensional nature and trying to address several issues using a methodology that interconnects all of these issues but still addresses their multidimensional specifics.

Therefore, we believe that no new systems are needed but a series of experiments has to be conducted to see what does and does not work in a particular situation and to provide guidelines and recommendations for that situation.

Based on the findings of the research study there are too many factors and personalization that it would be wrong to view the entire process in global. The study views each particular e-learning initiative as specific in many particularities and requires special approach for each one that needs to start with assessment, measurement and evaluation of the defined e-learning indicators. The study proposes is that as starting point in any e-learning initiative to start from measuring and evaluating the factors influencing e-learning that are represented as e-learning indicators, (Fetaji et al 2007).

Therefore there is a need to raise the awareness of the factors and concepts influencing e-learning in order to enhance learning and identify the nature of obstacles being faced by e-learners through the e-learning indicators methodology proposed by Fetaji (2007) and undertake several experiments to see what works in particular situation and try to propose recommendations, procedures and guidelines regarding the gained insights from the experiments.

Based on the review of Learning theories and analyses of learning modeling approaches the study as new learning methodology proposes to engage learners with educational small projects that would require the learners to engage in research within each of the courses. This means that will embrace Project Based Learning which will offer learners the opportunity to be engaged in hands on study and practice the learned content through the project.

In the south East European University – SEEU, under the Instructional Support Center (ISC) (<http://www.seeu.edu.mk/english/isc/home.html>) the faculty are encouraged to use the practical information gained from these research findings and most important tried-and true techniques form these research to improve instruction of their e-learning content. Instructional design in an e-learning environment can foster the alliance between technology and education for pushing higher education to transform the academic environment. The questions that we have opposed the tutors and students to are the next: What does this mean to me? How can I use it? Is this better than what I am doing now? Trying to answer these questions helped tutors to create e-learning content with instructional sound design that will invoke higher level of knowledge and level of learning.

Embracing instructional technology methods helped in increasing the learning process while decreasing costs at the same time. For example we have used it to provide the opportunity for students to interact with experts, even they were not located physically in the campus but were from the region. In order to realize this we have used discussion forums and video conferencing sessions in real time that did prove very efficient and were highly welcomed.

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## Children and Theory of Mind; Comparison between Children's Ability to Understand Trying Actions and Pretend Actions in a Behavior Model Analysis

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### Abstract

*Children who have just reached 2 years old do engage in activities with symbolic elements. Developmental psychologist argue that this is a cognitive developmental feature connected to mind processes development. Some of them discuss about using indented/pretended activities as fact of child' understanding. The research involved 20 children 18 to 25 months old and 25 children 25-36 months old. Children were applied the behavioral protocol of imaginary and intentional behavior. Children's reactions to these actions is observed, measured and assessed using behavioral protocol activities. The purpose of this study is to explore the ability of children 20 to 36 months to understand the intentional actions against symbolic/pretended actions. This study is theoretically based on cognitive development theories in early childhood, focusing on the use of symbolic functions that enable children involvement in the play. Certain elements of the study were stimulated by new theories on the cognitive functioning of representative schemes, ToM and comprehension skills during early childhood. The results of the study show a tendency of children to understand the purpose of the two behavioral structures answered in accordance with the typology behavior: after the demonstration of intentional models children react intentionally and after the demonstration of pretend actions children reacted with imaginative / symbolic actions. The results over the ability to distinguish intention from pretend is then discussed in the Theory of Mind perspective.*

**Keywords:** Theory of Mind (ToM), cognitive structures, pretend play, early childhood development, intentional models, pretend models.

### Introduction

The "behave if" play is such a common activity for children who pass in the second year of life that it is not impossible to be noticed by adults. Their commitment to this form of play is made possible by a set of features associated with motor development, physical, social and emotional. Ability to act, distinguish, claime are necessarily influenced by the level of development of cognitive features of this age.

The term "theory of mind" is used to refer to the development of concepts of mental activity in children. However, theory of mind is more than just a collection of concepts. The theory includes a coherent framework to organize the facts and to make predictions. Theory of mind (Bjorklund, 2005,p.255) includes recognition of different categories in mind as dreams, memories, imagination, and other beliefs that have a frame of causal explanation about the actions of other people.

One aspect of theory of mind in early childhood is related to knowledge of child development; aspects of thinking and implementation of actions and other issues related to cognition as metacognition and representation (Flavell, Green, & Flavell, 1998; Schwanenflugel, Henderson, & Fabricius, 1998 cit. by Bjorklund, 2005 p.256).

Generally there are two groups of researchers discussing about the theory of mind (Wellman et.al, 200, p. 659). Members of the first group argue that children 3 years old (and probably younger) have the same basic abilities as older children but the demands of tasks, issues and complex information processing limitations prevent them from displaying these abilities in many situations.

Members of the second group suggest that there is a real conceptual change during the preschool years and there are age-related differences in the performance of actions "false belief". So, they are the result of "real change in the concept of children on the individual" (Wellmanet. al., 2001 p. 671)

Cognitive development is part of the holistic development of the individual. Basically it is believed that cognitive development processes are a potential combination of genetic and environmental stimuli. There are two different

approaches to cognitive development during the last decade: The first is the increasing emphasis on the biological basis of development and the second position is the increasing emphasis on the social construct of cognition; perspective that the way children learn to think is run by the culture.

Socialcultural psychologists believe that the way we develop, especially the way we think is the primary function of the social and cultural environment in which we grow. This view emphasizes the fact that people think in different ways about the fact that all we have in common the fact we're human being. The universal point of view on cognitive development of Jean Piaget emphasize the cognitive features, the aspects of development that characterize the development in every child. In this attitudes' discussion the conclusion is that cognitive skills are defined by innate traits but the environment determines the development potential of these features.

Thus, according Piaget, the cognitive development passes through several stages. At the age of 2-7 years old children are in the stage of operational thinking. During this stage, children learn symbols that represent objects, play with dolls, develop imagination, imitate the actions of adults (Orhan, 2005, p. 61). The main principle is related to the child, not as a human being that simply imitate itself (J. Piaget, 1976, p. 14). Studies in recent years on child development support the idea of association between cognitive development and symbolic game during early childhood. Based on the classical theory of Piaget, on cognitive development in early childhood children begin using symbolic functions. Thus, according to Harris and Kavanaugh, (2006 cit. Rakoczy ,Tomasello, p.558), after the implementation of some experiments proved that around the age of 2 years children begin to understand and follow the pretend actions by presenting them in a pretend scenario. As related to cognitive ability, Liliard (1998, p.20) has noticed that pretend play involves negotiation between parties with different views, the representation of objects in two ways (real and pretend), role play, all actions that suggest that children who engage in these activities mental representation skills. In the study of Rakoczy & Tomasello, (2006 p.557-564) children 22 months made similar general patterns reaction, although in a much easier way: Generally these children responded significantly to both types of models, revealed by the fact that each type of conclusive answers was performed significantly more often in the same conditions compared with the opposite conditions.

The concept of theory of mind is developed based on the theory explaining the development of the mind. The theory presented by Simon Baron-Cohen (1995 cit by Bjorklund, 2005, p. 255) relates to the interaction of four separate modules from each other that include reading the mind and development during infancy and early childhood. The earlier module is intentional investigator (ID) that interprets moving objects based on aim or purpose. The second module is of the direction of the eyes (EDD) has three functions related to each other: the presence of visibility investigating to determine the presence of viewing or viewing as a stimulus to determine whether visually refers to the individual or another and interferes thought that when the eye sees something, then that individual is seeing that. These two modules zhvillohen from birth until the 9th month of life. Module tretëeshtë divided attention mechanism (SAM) which includes three modes of interaction and representation (achievement of deduction) Simon Baron-Cohen (1995 cit by Bjorklund, 2005, p. 257). This module takes place in the month of 9 to 18 of life. And the last module of the Theory of Mind (Tomm) qëështë substantially similar to real-desire reasoning and takes place between the ages of 18-48 months.

Rakoczy, Tomasello and Striano (2004, f.388-399) have challenged the theory of behavior as in the claim that children under four years of age do not understand the claim as a form of targeted action. They pretend that younger children already understand the claim as a form of action with specific purpose demeanor as different from other forms of behavior as though they do not understand the epistemic structure of claim, although difficult to accomplish tasks complex.

In a set of experiments conducted by Rakoczy and Tomasello, (2006, p. 557-564 ) children 36 months showed very clearly that they understand the claim and effort in such models: models attempt after they performed actions to realize real trying often commented (eg, "I can not do this ") but after models claim they did not care about the real consequences of their actions (p.sh if there tis water in the holder). Children 26 months showed the same patterns, most models attempt to realize real action or behavior, attempts have and rarely showed by the pretneider. Following models claim they generally performed feedback and trying that claim could lead to the conclusion that the effort may be impossible action at this age. One more important case is that after trying models in children 26 months more answers fail to meet the criteria to be trying and pretending.

In a third study Rakoczy et.al (2009, p.61-69) similar patterns were presented to children 3 years old but not in a conditional imitation game. For encroached upon the practical conditions of the situation are determined to encourage more productive and decisive response by introducing additional objects as working tools and toys that can be used in operations and true

claimant. So in this study and 3 years old children performed significantly more correct than incorrect answers after any kind of model.

These findings were also added to the credibility of the data field of the development of claim: Harris and Kavanaugh (1993) for example found consistently that around the age of 2 years children start to become proficient in understanding and pursuing the pretend scenarios undetected. An additional explanation could be that children may understand what an adult might have done in this model but failed to show sufficient signals in their reactions to achieve the behavior rating scale claimant.

In their theory Nichols. S & Stich.S (2000) claimed representations are kept in a separate mental work, a Possible World Box, that is part of the architecture of the human mind. Representations in the Possible World Box is likely to have the same content as beliefs. Mental representations have the same "code" representation as beliefs and representations in Possible World Box processed from the same update mechanisms and setting (conclusion) that operate on real beliefs. This model also sets a scenario processor included in the decoration of the facts that were there. The authors assert that the behavior seen in pretend play is motivated not by a "desire claim" but from a real desire to act in a way that fits the description built by the Possible World Box. The authors defend the idea that this structure can accommodate the central features of the actions shown in the pretend examples and that alternative structures or can not accommodate or fail to address some pretend features.

Thus, the pretend episodes typically begin with an initial condition or set of conditions which are basic principles on that will be pretend. Pretended behavior is initiated by the pretender in a initiator condition (if he / she who initiates) and must indicate which is the initial condition and decide on the succession if the is other condition or pretender that initiates the pretend action. If the pretender decides to continue, the his / her cognitive system should begin to generate thoughts and actions appropriate to the authenticity of the pretended condition.

Then the determination often plays an important role in meeting the details of what happens during the pretend action. Starting from the initial conditions and then the perceptions, existing knowledge, the memory of what happened in the episode and no doubt from many other sources the pretender is able to chart definitions on what is happening in the claim.

Beyond determining processing in children and adults process and claim scenarios in ways that are not definitive. In some circumstances it is a matter of filling in history by the scenario. Perhaps the most visible evidence on the claim is that the claimant makes the actions that are appropriate for the claim.

Episodes can last claim in different time periods. When an episode is finished claimant typically not claiming implementing activities and events that have occurred in the context of the claim and are a limited effect on the mental state post claimant. One obvious way in which they appear in limited form is when claimants do not believe that the alleged events are happening in reality. Moreover, as Leslie (1987) noted, even the youngest children do not believe that bananas are mobile. And as more adults. For even more during the course of themselves claim, the claimant believes it really is typically distinct from what he believes in the case of claiming episodes context. The belief system of contenders is not completely isolated from the content of the claim. After an episode people typically claim individuals typically have accurate beliefs about what happens in the episode pretender; they remember the case of claim.

## 1. Methodology

### 1.1 Research question

The research question of the study is : Does children 18 to 36 months have the ability to distinguish actions as intentional or symbolic?

2.1 Participants. The sample consisted of 20 children 18 -24 months old and 25 children 25-36 months old; The children selected attend public day care and education institutions (crèches in Tirana city). The Groups of children were selected at random at 3 day care centers. The selection criteria were age and gender. The selection ratio of the age and gender aimed to respect gender and age ratios in the general population of children that frequent the day centers in Tirana. The selection of institutions have all been conducted based on criteria of homogeneity of social factors.

## 2.2 Application

There was applied a model based on the protocol used by Hannes Rakoczy and Michael Tomasello (2006) by a trained specialist. Activities and games used in this procedure were selected from the education program that is implemented in public kindergartens based on group age. There were presented two models of action: if it was eating / trying to eat; pour pretending / trying to pour. Each child was presented two action models of trying and two action models of pretending by the same theme. The order of operations and the definition of objects of the same subject to trying and pretending actions change from case to case. The order of topics within the same sequence was the same. In the beginning the tester specialist and child played freely, the tester did some simple actions, two pretending actions with an object whatever, two pretend actions and asks the child to do the same action. Then realized the first testing session, which consists of two models of actions. The procedure followed by the second session of the trying and pretend the extra phase and the second testing session. During the application protocol a specialist based on coding conducted the behavior classification.

## 2.3 Procedures and preparatory actions

Simple actions preparatory of pretend and trying (1) dig a whole (with a new object, (2) behave if makes a call (with the same object) (3) trying to make music with piano children (by pressing a button that does not work) 2. The first trying and pretending section with additional action: (1) behave if someone is brushing the teeth, (2) behave if it is making a shower (3) attempting to open a container (using pliers), (4) trying to open a second container (then using pliers), (5) act if it is drinking and as it is opening a bottle of fruit juice, (6) cutting some dough with pliers, (7) behave if it is cooking something.3. session of the first test (for half of the children the pretending behavior, the other half the trying behavior) 4. The second trying and pretend session with additional action, (1) behave if someone combs the hair, (2) trying to open a box, (3) behave if it is washing something, (4) tries to write (with a pen that has a lid) .5. The second testing session (for half of the children the pretending behavior, the other half the trying behavior).

Each coding behavior was classified into one of five categories: "inferential pretend" when the child performs an action in accordance with the thematic contender, that goes beyond what the tester performs; "simple pretend" when the child performs what seems like a clear contender. Conversely, responses were coded as "inferential trying" when the child discovers from an action / word recognition that the goal was to implement a successful action or as "simple trying" when the child perform something that looks like a clear example of a trying behavior. Finally, the category "unclear" answers that do not meet the above categories.

## 2.4 Validity and ethical principles

The using standard procedures has minimize subjectivity in applying the protocol from the testers and in data interpretation. The procedure is carried out by a tester/specialist who is instructed to use the same standards applicable to each behavioral sequence of each child. The tester is supervised. The behavioral coding is performed by an appraiser who is instructed and trained to follow the same behavior as indicators of ability. To increase the validity of coding is used a double check procedure. The institutional permission and the informed consent is obtained in advance by the institutions and parents. During the study the ethical and moral principles have been respected. Confidentiality was respected during the work with children.

## Results

At the end of the study showed that from 20 children 18- 25 months during the intentional stimulation behavior model 4 of them follow "inferencial pretending", 3 show "simple pretend", 5 showed "inferencial intention", 7 show "simple intention" and the behavior of one child was classified "not clear". While during pretending stimulation model behavior 6 children show "inferencial pretending", 5 children showed "simple pretending", 3 showed "inferencial intention", 4 show "simple intention/trying" and the behavior of two children was classified "not clear". While the behavior of 25 children 25-36 months showed that from during the intentional stimulation behavior model 3 of them follow "inferencial pretending", 4 show "simple pretend", 6 showed "inferencial intention", 7 show "simple intention" and the behavior of 5 children was classified

"not clear". While during pretending stimulation model behavior 7 children show "inferential pretending", 3 children showed "simple pretending", 3 showed "inferential intention", 3 show "simple intention/trying" and the behavior of 5 children was classified "not clear".

## Discussion

Thus studies in the theory of mind provide complete data than 3 years old children understand the target pretend structure as a specific form of action and game different from other forms of behavior though. In contradiction to the theory of "if behavior", these data indicate that children at smaller age have at least the ability to understand the hidden elements of the pretended or intentional actions. The data for children 2 years old are really unclear. In imitative character studies fail to show children the more correct than incorrect responses after pretend models. This may be a consequence of the conceptual problem that children can not understand the true structure of the pretend actions in target.

Another explanation may be the result of unclear instructions or negative ones. One possibility could be that the problems in the implementation of the guidelines problems occur due to improper submission after pretending models; although they perceive action model presuming they see that the object can be used to perform the action in reality and were unable to overcome the tendencies of "superiority", etc. Another source could be that children misunderstand practical elements of the situation, so they understand the actions modeled as claims and deliberately misinterpret the model as pedagogical aspect.

This option becomes more plausible by the fact that after pretending models many children 2 years old give many answers that do not meet either criteria or attempt to claim.

According to the research issues examined in the present study, specific results show that children 20 to 36 months have the ability to distinguish intentional actions symbolic ones. Children 25-36 months have more ability to distinguish intentional actions with symbolic ones under the stimulus of the respective models; children 20-25 months understand the aim' actions and follow the presented models but find it difficult to improvise beyond the model to introduce and express in words the quality of the acts performed. In a detailed comparison between reactions compatible and not compatible after the presentation of each model, the children presented more compatible responses than non-compatible ones after the presentation of the model. So, the symbolic play influence the cognitive development and the cognitive skills according to the development stage influence the pretend play performance in early childhood. While on the findings in this study show that children 3 years of age but probably sooner have the ability to distinguish the actions purposiveness of the self and others; Well they have a theory of mind.

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## Educational Media Tools and Lifelong Education

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### Abstract

*One of the key factors in lifelong education are also various media including, television, radio, newspapers. The thesis "Educational content in Kosova's television programs" is a thesis that requires multilateral approach as well as psychological, social, pedagogical, andragogical and practical coverage. The importance of this issue remains into the complexity of problem content, because analytic study for the researcher means dividing the problem into two fundamental aspects: the theoretical aspect and practical aspect as well. Actually in Kosova there is a considered number of televisions with 24 hours broadcast, which are identified with a lot of deficiencies, which in fact actualize the problem, but the technological and scientific development especially, have had that impact in human knowledge that the human could not achieve to posses without media help. Latest knowledge become old and are replaced in that speed that it is impossible for human being to cope with these rapid changes if he would not be continuously educated or would not be informed by the media. Besides education, school should prepare the pupil to be able to continue the education further in his life in order to be successful in coping with the latest changes in technology. After finishing the basic education, in order to succeed in his profession and cope with technological, social, economical changes, it requires being continuously educated and informed. Besides everything, the human willingness, involvement and continuous insisting for self improvement help him to achieve success in every field of life, as well as coping with the challenges we face. Without personal involvement for further education even in formal or informal institution, the human as part of society or the society itself could not make it further without media help either television, radio or electronic ones.*

**Keywords:** media, education, culture, television content.

### 1.Introduction

Before 20 or even more years, when man was educated and prepared for a job, with the knowledge that has earned during his schooling, he was able to achieve results at work. Now is a time of rapid and varied changes, because life itself has become more dynamic, and the man will "lose" in these rapid changes, because the school is not able to prepare enough the individual for changes brought about time.

School besides providing knowledge must prepare the individual to be able to be educated throughout his life, in order to be more successful in dealing with the changes. After completing basic education, in order to achieve success in the profession and to withstand the economic, social and technical – technological changes, it is required to be educated in continuously. Man begins his education since childhood and his education is affected by a range of factors and tools. Initially he is prepared in the family, later in different institutions, but also during working life in various forms. It is considered

that after the acquisition of a certain fund of knowledge, skilled individual should be educated independently, without the presence of teachers.

Different educational television programs help to broaden and deepen the knowledge of various fields, without having individual contact with anyone, or to follow any sort of continuing education course. Continuous education leaves room to be implied the development of other sectors such as: the economy, education, health and technology, enabling the active involvement of citizens in these developmental processes. This kind of education will enable our inclusion in the family of democratic nations. Without inclusion and adapting to advanced countries, we will find ourselves in a situation of social, educational and technological disadvantaged. Our society will deal with major challenges, so to overcome these challenges, our society should be active society, which educated and moving in step with global developments.

## **2. Research purpose and objectives**

Television is a very important source of educational advancement of individuals and lifelong education. The role of television has changed the lives and professional development of people. Now television is a medium and a tool which provides good knowledge in many areas. That a man can be educated throughout life, society must ensure that television programs to be diversified, and also the individual is responsible for his education.

The object of study - is to conclude how educational television content affects lifelong education.

## **3. Research questions, hypothesis and research methodology**

Research questions of this research are: Educational TV contents and their importance in lifelong education.

### **3.1. Research methodology**

For the realization of this research are used different methods, combined, descriptive. Also, the research was based on quantitative and qualitative methodology, and we also reviewed research, and other documents related to the subject that we have researched.

### **3.2. Hypothesis: Does educational TV content influence lifelong education?**

## **4. Research importance**

The problem of educational television content and their relevance to lifelong education, as is extensive and actual, is also very complex. This issue must not be confined within a specific area, inter alia due to the multidimensional character it has. Lifelong Education, in addition to general technological and social progress, represents the television as quite an important factor. Along with global developments, television is becoming a medium and a tool, which will serve us in our continuous efforts to the educational and professional raise

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

The purpose of this research is: analyzing the current situation, time when television broadcast educational programs, and their quality. As a main purpose of this research is to detect and identify other causes and motives, of any nature, which influence educational content on Kosovo's televisions.

## **6. Research tasks**

From the above statement of the purpose of research derive also the operational tasks. Within the project was envisaged the realization of specific tasks that the nature of the research and work flow enabled to be achieved.

The tasks of the research were to ascertain:

- ▣ What TV channels offer more educational programs for the citizens of Kosovo;
- ▣ How much is the television used by the citizens of Kosovo for lifelong education;
- ▣ How many of those programs help adults to enhance their knowledge.
- ▣ Which resources are used by the citizens of Kosovo for lifelong education
- ▣ Which educational programs are the most viewed in our country;
- ▣ How satisfied are adults with the diversity and quality of the programs they follow;

## 6. Lifelong education

The aim of the educational policy of any country is to provide opportunities for achieving the appropriate level of education for each one and for all groups of adults as well ensure that all possess the knowledge, skills and attitudes that are in accordance with the requirements of society and labor market. Because of this, education must be accessible to everyone who lives in this society, regardless of age, gender, religious determination, health, ethnicity and socio-financial situation. Also, education and training must have all the conditions for efficiency and effectiveness, in order to be able to offer all general and professional education. Education should be characterized by a certain dynamic and flexible structure, which would enable mobilization of pupils, students and teachers, which will operate with clear mechanisms that will enable adaptation and willingness to deal with the requests for changes of individuals and society in general. Also, education must overcome issues and eliminate factors that promote absence of education and flood of users of educational services. Particular attention should be paid to the differences that will be manifested in the areas of: quality of teaching, learning conditions, adequate infrastructure, possession with adequate staff and physical access into educational institutions. Society must create comprehensive opportunities for education also encourage and motivate them to use these opportunities to improve their position in society, to aim for self actualization, regardless of their social background and educational level. The individual should aim to be updated and actual in the workplace. If he will not be updated and actual, then the results at work will not be enjoyable

Lifelong education is a continuous process of implementation of real opportunities of learning and self learning, in order to unconventionally, indirectly and directly, to obtain knowledge and functional skills for successfully solving important problems at work, also social, family and personal problems. If you rely on the rapid changes occurring in society, and the explosion of new knowledge and aging of them for a short time, it is considered that lifelong education is a necessity of the time. Scientific, technical, technological changes impose lifelong education so that we can move forward and together with all developed countries towards global change.

### 6.1 Forms of lifelong learning

Lifelong Education includes all stages of human life and helps in overcoming the youth education and supplementary education for adults. It emphasizes the man who is educated and not the educational institutions, recognizing, in this way, that education can be accomplished in many different ways and not necessarily in school, under the guidance of teachers and giving exams.

Lifelong Education includes:

#### a. formal education

Formal education is realized in education and training institutions, which provide officially recognized certificates and qualifications and it is structured (in relation to the goals, objectives, duration and the means by which is realized).<sup>1</sup>

#### b. Non-formal education

<sup>1</sup> Prof. dr. Pajtim Bejtja, Të nxënë të shoqërinë e sotme, Tiranë, 2003, fq. 3.

Non-formal education is provided through the activities of organizations and civil society groups, such as youth organizations, trade unions, political parties, as well as through additional services organizations or formal systems, such as art classes, music and sports or private lessons preparing for exams, it is typically structured and ends with award certificates that are not formally recognized or even without issuing certificates.<sup>1</sup>

### c. informal education

Informal education is follow up of the activities that take place during everyday life at work, at home or at leisure, usually unintentional (accidental), so it is unstructured and does not lead to any certification.<sup>2</sup>

## 6.2 Factors that determine the individual to determine for lifelong education<sup>3</sup>

In the century which we live in, the changes are enormous, so human must necessarily be lifelong educated otherwise would not be able to perform professional duties that arise. There are a number of factors that determine lifelong education, among others will include:

**Motivation to be educated.**- This is a very important factor, because the man to be educated continuously must have motive and incentive to learn.

**Awareness of the need to be educated.**- man must be aware of what he knows, what he learns and what you has to learn in the future;

**A clear picture of what should be learned.**- man must clearly know what he has to learn what he needs to learn;

**Practicality of knowledge** – in order the knowledge gained to stay longer in our memory and influence our work they must be exercised. Only with the practicality of knowledge, they can be functional and serve us in our work;

**Filling, expansion and progressive development of Knowledge**- we constantly have to expand and also update new knowledge, in order to go with technical and other scientific –technological developments;

**Updating need**- Adding knowledge, doubling them for a short time helps the man to be continually educated, because it also imposed for a job and a better life. This rapid change of information, and the desire to be present, promotes aspiration for lifelong education

## 6.3 Audiovisual technique and the education

The postwar generation of first world war (1914-1918) and especially that of the 1930s witnessed the birth and development of audiovisual civilization. The postwar generation of II world war grew in an environment in which audiovisual techniques was already fully installed. Children and adolescents of 1960s are fully living with picture and sound civilization. While children of after 1980s, already live and will live more and more in the world of computing. This means that, for some of them the audiovisual technique was rather new phenomenon, which failed to accept and use, for others, the environment provided all the conditions for an accelerated learning as this technique began to be a part of their psychological and personality forming development. For youngsters, the presence of "audiovisuals" is an evident fact and a necessity, such that they have the impression that you can not live without ear headphones. First implications that can be drawn from such a simple conclusion is that pedagogical problems arising out of the audiovisual intervention in the educational process of a few decades ago are no longer the same as those faced today. For this reason there can be distinguished the main following stages. Problems of 1940-1950s were associated with the use of instruments, purely psychological aspects of perception on the screen. In its beginnings audiovisual technique was considered as completing the educational process introduced by the teacher, slowly, it was integrated into the teaching process, but always as second element<sup>4</sup> Audiovisual technique does

<sup>1</sup> Po aty.

<sup>2</sup> Po aty.

<sup>3</sup> Ligjërata të nivelit master, Prof. dr Demë Hoti.

<sup>4</sup> Gastron Mailaret, Pedagogjia e Përgjithshme, Koha, Prishtinë, 1997, fq.430

not remain in the helping role of pedagogical action. It has a central role, being considered today as one of the major elements of the pedagogic action across the spectrum of its constituent ingredients: information, learning and expression. Until a century before, the knowledge sources of an adult were; the family, the physical environment, economy, schools, newspaper reading books, personal and professional experience. Radio and TV are sources of new knowledge, qualitatively different from the previous ones in terms of quantity as well. Just in front of us now is developed actualization and "internationalization" of knowledge. Information, cultural programmes, propaganda, publicity etc.

#### 6.4 Audiovisual technique and new processes

Audiovisual technique, that one of illustrated publications, cartoons, cinema or television to reach the fixed images on the screen, has caused birth of a new form of perception; two dimensions perception of a reality which is three dimensional itself, a perception that necessarily introduces a form of passivity without reference to J. Piaget works on the child's conception of space. Increasingly the question of how elementary student integrates a highly complex landscape plan that gives adults the notion of depth or distance. The teacher is constantly in the flux of possible errors of interpretation of a document and is bound to make the necessary corrections without delay. In fact, what the film shows us is a series of successive images related to the same subject, figures which we are obliged to follow one after another in the order given, to try to integrate the perceived object, place, event or landscapes in their entirety. Cinema, radio and television, are excellent tools for information transmission, while the inactivity of the auditor or spectator is not indicative of a real communication. It is this reason why the teacher must have a minimum of knowledge about making a film laws, on the type of film language used to help young viewers develop their critical spirit. Audiovisual technique is not neutral in this respect<sup>1</sup>.

#### 6.5 Cd player

Cd player is a small instrument, which has not taken its rightful place in the midst of an educational situation. With its ease of use, it is audible witness of what happens in a classroom or what means a certain subject. Its practical use for repeating effect turns in a superb instrument of learning. Thanks to cd player the learning process has been a real revolution. Cd player plays magic mirror role in all educational situations that require verbal expression of subjects.<sup>2</sup>

#### 6.6 Television- short history

In 1947, the US began the first steps in television engagement in educational work, for which were made plans for first television educational programs. Systematic use of television in education starts around 1948 (Japan, USA, England), and educational programs begin to gain more space in programs and television companies. Television is an invention of the 20th century which conquered the world with great speed. Information was not obtained through the written rows anymore, but directly from the filming reality. People could see from their homes what was happening in the world. Television, in fact, changed people informing so quickly and revolutionary. It turned the world into what we call today global village. Prishtina's Television began work with the program in 1974. Television was discovered by John Logie Bard (British) and Vladimir Zworykin (Russian) in America. On October 2, 1925, in his laboratory Bard has successfully transmitted the first television appearance.

#### 6.7 Television in schools

Television in school creates conditions that general and vocational education to be acquired mainly through television. All those who wish to finish a certain type of school, get a qualification or further refine their profession can accomplish this with the help of television in school. "via television various curriculum are broadcasted and students watch, listen, take notes and try to remember."<sup>3</sup> the teacher gives adequate explanation, makes additions and gives certain tasks and thus

<sup>1</sup> Gastron Mailaret, Pedagogjia e Përgjithshme, Koha, Prishtinë, 1997, fq.432

<sup>2</sup> Mirko Bogičević, Tehnologija savremene nastave, Beogra, 1974, fq.177

<sup>3</sup> Petar Mandić, vep e cit. fq. 258.

students imbibe certain school program and benefit proper qualification. Students send questions to television, fill in answers and tests and undergo other modes of exams, while teachers, taking into account pedagogical requirements, organize and develop their teaching work.

### 6.8 CD and DVD- television tools

CD and DVDs are modern teaching tools that can be used successfully in the learning process. As Cd as well as DVDs have many options, ranging from their capacity, up to their potential for large scale exploitation for educational needs. CD and DVD also are practical, as their storage and their use. In these learning tools can be found films, documentaries, but recently has become common practice in Cd to be a whole book, from different areas. A CD or DVD can hold hundreds of thousands of information.

### 6.9 TV contents and their relevance to lifelong education

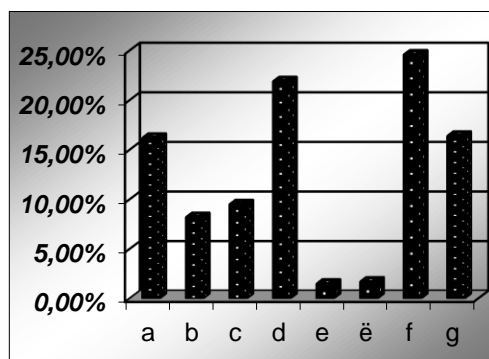
Through television content, individuals have the opportunity to see various events of great importance, which would hardly be followed closely, or due to economic failure. Television has tremendous opportunity to offer your students an event when it is actually happening or through film, drawings and other material and provide different parts of the world, reconstruct events, provide data, show processes (chemical, biological, etc.), produce rare objects, concretize etc. Thanks to television broad popular masses can follow all political, cultural, scientific and sports events and thus became possible the expansion, deepening and updating of educational content, the modernization of methods and forms of teaching and learning.<sup>1</sup> Television is a very powerful tool for informing the public. Broadcasting of television programs and experience in systematic educational television programs for schools has shown that television throughout the education system is a very important tool for the rationalization and modernization of the education system<sup>2</sup>

#### 1. Lifelong education for you means:

Table nr. 1

Options	level	Nr	Percentage
a	Saving time	292	16.2 %
b	Saving money	148	8.2 %
c	Labor preservation	171	9.5 %
d	spiritual tranquility preservation	394	21.9 %
e	Personal security	28	1.5 %
ë	Anxiety and stress preservation	30	1.7 %
f	Intellectual condition storage	442	24.6 %
g	Social balance preservation	295	16.4 %
	total	1800	100 %

Graph nr. 1



<sup>1</sup> Dr. Petar Mandiq, Novacionet në mësim, ETMM, Prishtinë, 1985, fq. 244.

<sup>2</sup> Rtv pedagogija, vep e cit. fq. 7.

### Legend

**a. Time; b. Money, c. labor; d. Spiritual tranquility; e. personal security. ë. anxiety and stress; f. intellectual condition; g. society balance.**

As to the question of what it means lifelong education for participants in the research, this result has been produced:

In first position is **f** option. Lifelong Education is the intellectual Condition storage. In second position is the option under **d**. Lifelong Education is the preservation of spiritual tranquility. In third position is the option **g**. Lifelong education means preserve the balance in society. In fourth position is **a** option. Lifelong education is saving time, then come work option, money etc.

Lifelong Education is the intellectual Condition storage, preservation and conservation work the pace of change.

### 2. Do you watch television?

This question was submitted to elicit information from the respondents that do watch television. Depending on the answer given by the respondents, we continued or not with other questions.

Graph nr. 1.

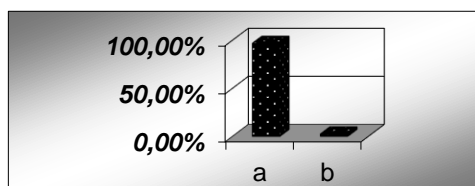


Table nr. 1.

Options	Answers	Number	Percentage
a	yes	1749	97.2 %
b	no	51	2.8 %
Total		1800	100 %

Caption: On the question Do you watch television?, most of the participants in the research claimed that they watch television, while only are few of them said they do not watch television. Depending on the answer given to this question, we proceed or not with the two following questions. Subjects who said they do not watch television, we did not need to ask the question 2 and 3. The answers show that 97.2% of Kosovo citizens find time to watch and actively monitor television programs. Out of these 57% were male and 40.2% were female. Differentiation based on age, about 35% are aged up to 18, 21% aged 19-25 years, 19% aged 26-45 years, 16.2% aged 46-60 years old, 6% aged over 60 years

About 96% of those living in villages and 98.4 of those living in cities watch television. Most of the citizens of Kosovo are interested to watch and watch TV regularly.

### 3. Which programs do you watch more?

Question has the purpose of obtaining information by respondents about programs they watch more..

Graph.5

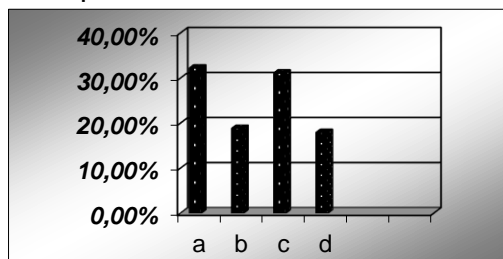


Table nr. 5.

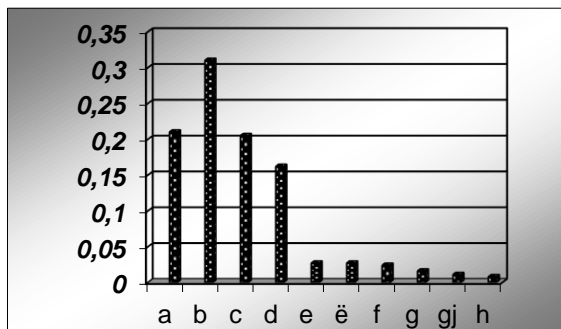
Options	level	Number	Percentage
A	movies (artistic, serials etj)	584	32.2 %
B	Music	341	18.8 %
C	Educational programs	564	31.1 %
D	Other porgrams	324	17.9 %
Total		1813	100 %

Legend: a. movies b. Music c. educational programs d. other programs

In this question we got the following answers: Kosovo citizens mostly watch movies, so in the first place is option **a**, in second place is the option **c**. educational program, in third place is option **b**. music and at the bottom is option **d**. other programs. The outcome shows that educational programs occupy a very important place in the daily programs that citizens of Kosovo watch. However there is further need to provide more, and also educational programs to be followed more by the citizens.

#### 4. Label some national or international tv channels that you watch for your educational raise?

Graph nr. 6 Table nr. 6



Options	TV channel	Nr	Percentage
a	Explorer	780	21 %
b	RTK	1140	31 %
c	KTV	760	20.5 %
d	TV 21	600	16.2 %
e	Discover	100	2.7 %
ë	Top Chanel	100	2.7 %
f	BBC	90	2.4 %
g	Besa	60	1.6 %
gj	Tema	40	1.1 %
h	Mitrovica	30	0.8 %
	Gjithsej	3700	100 %

**Legend:** a. Eksplorert; b. RTK; c. KTV; d. TV 21; e. Discover; ë. Top channel; f. BBC; g. Besa; gj. Tema; h. Mitrovica;

Regarding the TV channels that can be watched in our country, we have a rating of about 10 TV channels followed by the citizens of Kosovo, but we will enumerate only a few who followed the highest percentage of citizens. In first position is Kosovo's public television RTK, in second place digital TV channel: Explorer, then comes the television channel KTV and after him comes TV 21. Six other TV channels are followed by a small number of citizens. Some of these TV channels can not be watched by many people because of the extent of their relay. While for some other channels (Explorer for instance), in some rural areas where there are no cable network installation and they cannot afford the digital access, it is impossible to watch these channels.

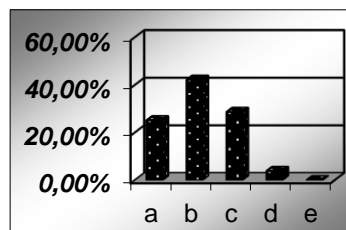
#### 5. How much are you satisfied with the quality of educational programs that broadcast television Kosovo?

The purpose of this question was to have opinions on how much information is provided for lifelong learning.

Table nr. 5

Options	level	Nr	Percentage
a	A lot	374	25.2 %
b	Relatively	626	42.2 %

Graph nr. 5



c	Average	427	28.7 %
d	A little	58	3.9 %
e	Not at all	0	0 %
	total	1485	100 %

Legend a. A lot; b. relatively; c. average; d. a little; e. not at all

According to most participants, whether they are satisfied with television channels that broadcast quality educational programs, they say that it helps for new information from the world of latest technical and technological developments, also there are information about books containing, educational programs for kids, etc. The skills to use the print and electronic resources, help you relatively a lot for lifelong education. In second place stand a group of participants who think that these are average qualitative educational content and there is still need for improvement. In third place is the option a) **a lot** there is a high quality of the educational contents in Kosovo's TVs. While the terms of the option d) has stated that few programs that broadcast quality programs with educational character, and to the last question did not have any correspondent who has provided an answer on this question. Quality education programs have great importance to the general public viewer on new information.

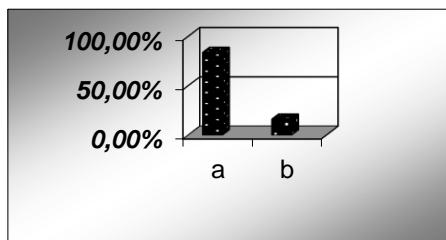
## 6. Do you use other electronic resources and media to your lifelong education?

The purpose of this question was to obtain information whether participant use other resources for their lifelong education.

Table nr. 6

Options	answers	Nr	Percentage
a	yes	1508	83.8 %
b	no	292	16.2 %
	total	1800	100 %

Graph nr. 6



Legend: a. Yes; b. No.

Most participants in the survey say they use other electronic resources and media for their lifelong education. A small number said they cannot exploit these resources.

The reason why the citizens of Kosovo do not use other resources for their educational establishment is that, as more resources are used more information is taken. If they use only the television they could not take much knowledge as well as a few television channels broadcast educational programs for adults

## 7. Conclusions and recommendations

Based on theoretical analysis and practical problem, we can see that television is an important medium for educational establishment, however the actual television centers in Kosovo does not offer enough programs for adult education. Regarding this issue, we draw some conclusions:

Most of Kosovo's citizens watching television meaning they have access to television, most follow local channels on television, more viewers and highest broadcast quality has national television RTK, but the citizens of Kosovo use also other educational resources for their lifelong educational advancement. From the results obtained, we concluded that 53.7%

of respondents are constantly educated in order to gain more knowledge, 14.3% of them want to have good income, 5.5% of them want to be advanced at work, equally wish to be updated in the workplace, 2.3% want higher position, 14.7% want to be role models for their children, while 4% of the respondents have other reasons for continuous education.

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## Education Challenges and Developments in Foreign Language Teaching in Croatian Law Schools Education Challenges and Development for the Future

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### Abstract

*In the modern world of global economic and political associations, the knowledge of foreign languages and communication skills represent essential factors in all professions. In this respect, knowledge of English language as lingua franca of international communication is an indispensable prerequisite for communication within the legal profession worldwide. This paper is a case-study of teaching foreign languages in Croatian Law Schools, presented on the case of the Faculty of Law, University of Osijek. In the introductory part of the paper, a short description of the status and the position of foreign language courses in the Higher Education System of the Republic of Croatia is offered. In the main part the author presents new developments in the foreign language teaching in Croatian law faculties as answers to current challenges of Croatian membership in the EU. On the example of the Faculty of Law, University of Osijek, new projects on teaching foreign languages to practicing lawyers and law students are presented, with an emphasis on the Lifelong Learning Programme for Lawyer-Linguists. This programme, as well as specific foreign language courses in Legal English, Legal German and Legal French, have been developed within the lifelong education projects for lawyers, by which young lawyers are offered an opportunity to learn and/or to improve their knowledge of the three working languages of the EU. These developments in foreign language teaching within the Croatian Higher Education System are one of the responses to current challenges of the internationalization of the modern world.*

**Keywords:** foreign languages, international communication, lifelong learning programmes, law schools, lawyer-linguists

### 1. Introduction

The modern world is characterized by the globalization process, which is defined as the “widening, deepening and speeding up of worldwide interconnectedness” (Held, McGrew, Goldblatt and Perraton, 1999). This process has been brought about by the trends of population mobility and especially by developments in information and communication technologies, which enable establishing instantaneous links all over the world. In the new globalized world communication has taken its central facilitative role. These changes of the modern world have highlighted the importance of foreign languages and brought new requirements and challenges for foreign language teachers. With mobility being one of the main principles of the new Europe, young people need to be proficient in languages of wider communication, especially of English as lingua franca of international communication. Various EU and Council of Europe documents and reports stress the importance of learning languages and put forward multilingualism as one of the highly appreciated values of modern European society.

In the introductory part of this paper, the status of LSP in the Croatian Higher Education System will be briefly described. New developments in LSP teaching will be analysed and discussed with regard to teaching of Legal English and Legal German at the Faculty of Law, University of Osijek, Croatia. The main part will be dedicated to the Lifelong Learning Programme for Lawyer Linguists which has been developed at the Faculty of Law in Osijek as a response to current requirements of Croatian membership in the EU and the challenges of internationalization of the labour market.

### 2. Teaching FL for Legal Purposes and intercultural communication in the EU

The White Book of the European Commission points out that every person should be given the opportunity to learn at least two foreign languages in addition to one's mother tongue (EU Commission, 1995). In accordance with this requirement,

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higher education institutions are encouraged to ensure resources and provide opportunities for students to continue learning a language appropriate to their programmes of study and fields of work (Council of Europe, 1982). Provisions of the Croatian National Curriculum Framework (NCF, 2010) determine foreign language teaching in Croatian secondary schools in accordance with the Common European Framework of Reference for Languages. As for higher education, the Law on Science and Higher Education as the only relevant legal regulation on higher education mentions foreign languages only within individual study programmes and general goals of the European tertiary education system. By ratifying the Bologna Declaration in May 2001, the Republic of Croatia introduced many changes in its higher education system, especially in terms of curriculum reform and student mobility as well as in teaching and learning of foreign languages. The language policies of higher education institutions should include clearly defined activities to promote foreign language learning and the acquisition of linguistic communicative skills as prerequisites for academic mobility within the European Higher Education Area. Students should master a foreign language to such a level to be able to read scientific and professional papers in a foreign language, to participate in conferences and use a foreign language in direct communication with native speakers. Due to autonomy of higher education institutions, these ideas are implemented at Croatian universities in different ways, with different intensity of FLT and different approaches to the status and importance of foreign languages (Kordić, Lj, Cigan, V. , 2013). Such a situation was confirmed by a study on teaching foreign languages at Croatian universities, which was conducted in 2009 in 143 departments of 5 Croatian universities (Osijek, Zagreb, Zadar, Rijeka and Split). The study showed that in 31% of the departments LSP was not offered to the first year students at all, while 30% of the departments had FL in the second and third years. Only 7% had a FL course incorporated into their curriculum continuously during 6 semesters (Poljaković, Martinović, 2009). The results of this study indicate that in Croatian faculties and other higher education institutions there are many discrepancies concerning the status of foreign languages, the intensity of FL courses, and the ECTS credits allocated to those courses. The data from the annual report of the Josip Juraj Strossmayer University of Osijek for the academic year 2010/2011 (Sveučilišni godišnjak) will be shortly presented here as an illustration of the position of FL at Croatian faculties. The language of law being in the focus of the paper, the data presented here specifically refer to foreign languages for specific purposes.

### 3. FLT in Croatian Tertiary Education

The University of Osijek encompasses nine faculties, one Academy of Arts and five departments: Department of Mathematics, Department of Physics, Department of Biology, Department of Chemistry, and Department of Cultural Studies. Foreign languages taught as LSP at the University are English and German, as well as Italian, which is taught as the third FL at the Academy of Arts.

There are many differences between the faculties in the status, number of credits allocated to the course and even the number of teaching hours of foreign language courses per semester. The Department of Chemistry offers LSP only in the first two semesters, and the Departments of Physics and Mathematics, as well as that of Cultural Studies, have LSP in the first four semesters. The Department of Biology does not have any foreign languages in its curriculum at all. At the Faculty of Agriculture, LSP is taught only to the first year students, but more intensely than at other faculties. That workload is allocated 6 ECTS per semester, which is the highest credit allocated to LSP within the Osijek University. At the Faculty of Food Technology, LSP is learned only by the first year students as a compulsory course in all study groups, with the exception of the "main" study programme Food Technology, in which LSP is taught for four semesters at the BA level. The course is allocated 2 credits in every semester. At the Faculty of Law, FL for Legal Purposes is taught in the first four semesters as a compulsory course, with double the intensity in comparison to other faculties. It is also offered as an elective course in the ninth semester. Nevertheless, the credits allocated represent an average at the University level: 3 ECTS for compulsory courses and 4. 5 for the elective courses *English for EU Law* and *Deutsch für Strafrecht* (Kordić, 2013). The cases presented here indicate a strong influence of the University autonomy, reflected in differences in status, intensity of teaching and the number of credits allocated to foreign language courses. A slight improvement of the situation can be noticed in recent years, but the annual report for the academic year 2010/11 clearly implies that in spite of the declaratory appreciation of multilingualism in the EU, this appreciation remains largely invisible in the teaching practice, since foreign languages are not incorporated in the curricula of two out of nine faculties, while in one faculty no ECTS credits are allocated to FL courses.

#### 4. Developments in LSP Teaching in the Faculty of Law in Osijek

Emergence of different varieties of LSP and the developments in this field in terms of methodology and teaching materials have been the topic of many discussions and scientific papers. The reasons for this boom in the linguistic theory of LSP and its practical application in FL teaching in secondary and higher education all over the world can be seen in the demands of the New World after World War II, a revolution in linguistics and a shift of the focus from the teacher to the learner (Hutchinson and Waters, 1987: 5). By putting the learner in the centre of the teaching discourse, learner's needs became as important in FL teaching as the teaching methodology. For the first time, the teaching content, the design of teaching materials and the choice of teaching methods were based on the learner's reason for learning (Hutchinson and Waters, 1987: 19). This new movement in teaching approach is known as the learner-centred approach. This approach implies various developments in the teaching practice in terms of teaching materials developed in accordance with learner's needs (based on needs analysis), teaching is perceived as guiding, scaffolding and facilitating learning rather than transmitting linguistic knowledge to the learner, real-life tasks get priority in teaching, learners are included in the teaching process with more autonomy and responsibility, they accept more challenging tasks and fulfil them autonomously by using modern technologies.

The changed approach and changes of social, environmental and technological circumstances have reflected in a specific way on the most recent developments in teaching foreign languages for specific purposes at the tertiary level. These developments, well elaborated by Elżbieta Jendrych, include: a) content-and-language-integrated-learning (CLIL), b) use of didactic case-studies, c) corpus studies conducted for teaching purposes and aimed at identifying high frequency language elements: terms, specialized lexis items, collocations, phrases, formulae, acronyms, etc. that need to be prioritized in language courses, d) more effective course-books with higher terminology indexes, e) extended use of online materials, f) teaching writing for specific purposes and g) teaching professional culture and non-linguistic skills (Jendrych, 2013: 46). This list of the current developments in LSP illustrates all the complexity of teaching foreign languages for specific purposes at the higher education level and indicates how many challenges and new requirements modern LSP teachers are confronted with. In the following paragraphs the situation in teaching foreign languages for legal purposes at the University of Osijek shall be presented in the light of these new requirements in teaching LSP at the tertiary level.

##### a) Content-and-language-integrated-learning (CLIL)

The concept of CLIL – Content and Language Integrated Learning - has been strongly advocated by the Language Division of the Council of Europe (2004) on all education levels, especially on the university level. According to main principles of the CLIL-approach, in most European universities foreign languages for specific purposes are instructed by teachers who teach both subject matter and the foreign language. Although English and German as foreign languages for specific purposes are taught in most Croatian universities, the dominant FL is English. This phenomenon is especially observable in recent years, when student mobility between European universities has been intensified. Consequently, not only LSP courses, but also some subject matter courses are held in English. Thus it can be stated that English has become not only the lingua franca of professional and business communication, but also of education and academic communication worldwide. No wonder that this new situation is often informally determined as "Englishization" of tertiary education. These new circumstances demand a new kind of FL teacher, too – either a teacher who has learned a subject matter to such an extent that he/she can competently teach students the content and language integrated topics, or a content matter teacher with good linguistic competence. In my contacts with LSP teachers from other European countries, the latter solution is often encountered in some European countries like Poland, Germany or the Czech Republic. Teaching Legal English by lawyers who additionally have studied English as a foreign language or have studied law (even for several semesters) in the USA or Great Britain is not a rare situation at European law schools. But the prevailing case – like in the Republic of Croatia – is that graduated FL teachers teach subject matter topics in the respective FL. Teaching subject matter in a foreign language is a very demanding task, and FL teachers usually learn the subject matter by individual additional learning from legal textbooks or undertake postgraduate or doctoral studies within the subject matter sciences or those related to them (e. g. FL teachers instructing Business English or Legal English can enrol in European Doctoral Studies at the University of Osijek, which is an interdisciplinary study programme integrating law, political studies and economics).

Teachers teaching FL for Legal Purposes at the Faculty of Law, University of Osijek, are able to fulfil this requirement due to the opportunity to participate several years ago in the TEMPUS project "Foreign Languages in the Field of Law – FLIFL", coordinated by the Faculty of Law from the University of Zagreb. Target groups of the project were graduated lawyers and FL teachers in the field of law. The main goals of the project were defined as 1) education of FL teachers employed at

Croatian law faculties in order to improve their professional credibility in LSP ("Teacher Training Programmes"), 2) education of lawyers in foreign languages ("Lawyer Training Programmes") and 3) development of FL curricula and modern teaching methodology in conformity with the Bologna requirements and following the needs of Croatian law students (needs analysis was conducted among Croatian lawyers at the beginning of the Project). Teacher training within the Project was organized as a series of workshops including the following topics: *Basics of the EU Law, European Private Law, European Comparative Law, Introduction to the Analysis of EU Law, Introduction to FL for Legal Purposes; Legal Translation and Terminology, Communication Skills for Lawyers, Introduction to Forensic Linguistics, Intercultural Communication for Lawyers, Legal and Linguistic Aspects of Multilingualism, Teaching Legal English – Skills and Materials*, and, finally, *Language Policy of the EU: Sources of Information*. Workshops were organized and delivered by estimated professors teaching at European universities, like Peter Sandrini of the University of Innsbruck, Paul Verluut, Diane Phillips, and Ludger Kremer of the University of Antwerp, Werner Schroeder, Andreas Müller, and Eva Lechner (University of Innsbruck), John Olsson of the Forensic Linguistics Institute, Powys Wales UK, Helmut Heiss, Sture P. Ureland, and Olga Voronkova of the University of Mannheim, etc. <sup>1</sup> The knowledge and skills acquired in these workshops made Croatian LSP teachers more competent to teach legal content in their foreign language courses and capable of developing new education programmes which could respond to new professional circumstances and challenges of political, economic and legal changes in Europe.

b) Use of didactic case studies

The second characteristic of recent developments in LSP teaching refers to the introduction of specific cases analysed and solved for didactic purposes. In the field of law, this refers to solving simple legal cases: our second year students are asked to solve a specific case of tort law concerning the missing dog. In this way they are involved in solving a real-life task by following the methods used by lawyers in their professional life. Individual work on relevant legal provisions, prepared at home, is combined with classroom group work in simulations of the court case. By introducing concrete case-study methods in FL courses at law faculties, the requirement for real-life tasks as one of the recent developments in LSP teaching is fulfilled. From a didactical point of view, the case-study method is very fruitful because foreign language is used to solve a real-life task, thereby developing productive writing and speaking skills. The case-study method is student-centred and the language is used in a natural way: as a means, not as an end of teaching discourse activity (Jendrych, 2013: 48).

c) Corpus studies conducted for teaching purposes and aimed at identifying high frequency language elements

This requirement can be fulfilled by those FL teachers who are interested in academic writing and linguistic research. This especially refers to research in legal terminology, collocations and phrases which frequently occur in the language of law and thus represent a linguistic feature which should find its place in teaching specific legal language. At the Faculty of Law in Osijek, this requirement is completely met, because all the three FL teachers explore Legal English and Legal German and apply the results of their research in designing their FL courses. As teaching Legal English and Legal German as compulsory courses is partly restricted by the subject matter content of the respective course books and by the limited number of teaching hours per semester, the results of those linguistic studies have been applied to the greatest extent in the development and design of the Lifelong Learning Programme for Lawyer Linguists, which shall be presented in the main part of this paper.

d) More effective course-books with higher terminology indexes

This requirement is partly fulfilled. Although there are modern textbooks of Legal English and Legal German designed in conformity with recent developments within the CLIL-approach, the LSP teachers of the Osijek Faculty of Law are currently working out the idea of developing a new, more effective course-book, which would be based on the needs analysis. It is important to stress that the foundation for this has been built by an extensive and detailed needs analysis among law students, graduated lawyers and law practitioners in different fields of legal profession, which was conducted in 2003 (Kordić, Mujić, 2004) and again in 2014 (Kordić, Papa, 2014).

e) Extended use of online materials

2. <sup>1</sup> Retrieved from: [www.pravo.unizg.hr/.../Tempus\\_workshops\\_final\\_27\\_March.doc](http://www.pravo.unizg.hr/.../Tempus_workshops_final_27_March.doc), accessed 28/02/ 2015, 19:08

Modern computer technologies and achievements of information sciences have been applied in the teaching process at Croatian faculties. This especially refers to students preparing Power Point presentations on legal topics, for which they can use both published legal sources and internet sources. Online sources are also used by students in solving their case study tasks. Still, apart from using sources published on the internet and online dictionaries, there are many other possibilities for law students to use computer technology and online materials, like creating students' own website with the list of legal terminology. This idea has been successfully carried out in some European universities, like in the Foreign Language Centre of the University of Wrocław<sup>1</sup>. Apart from that, there are also online LSP courses that can be used by students on their own. At this point it has to be stressed that students must be warned to use internet information selectively and carefully and to pay attention to credibility of some internet sources they frequently use, e. g. WIKIPEDIA.

f) Teaching professional culture and non-linguistic skills

This requirement is partly fulfilled by means of legal texts dealing with specific topics of the national law (in our case Croatian) and the law of countries where the foreign language is spoken (German law system, British and American legal system). In legal language courses, LSP teachers develop students' cultural and non-linguistic skills as well by sharing their experiences and pointing out the similarities and differences between two professional cultures. Another method we use to achieve this goal is giving individual tasks to students, for example, to watch a TV-series or a movie on specific legal topics and discuss the differences in the classroom.

g) Teaching writing for specific purposes

The achievements within this requirement are rather poor at Croatian law faculties. The emphasis on oral communication skills and the low intensity of teaching hours per week have led to neglecting the importance of writing skills in Croatian law faculties, including the Faculty of Law in Osijek. The only type of written exercise done within FL courses refers to summary writing combined with reading comprehension and determining subtitles to specific legal texts. Our experience and contacts with fellow teachers from other European universities give evidence of far more advanced and intensive use of writing skills, especially in Legal English courses. An interesting example represents creating a website with legal glossary developed by law students, writing legal provisions in plain English, drafting official letters or even contracts in Legal English (Luczak, 2014). It has to be mentioned here that our needs analysis several years ago (2003) showed great interest of our students in speaking skills in LSP, so during the years we have tried to meet this requirement and combine it with internalisation of as much as possible legal terminology and phraseology. Taking into account low intensity of FLT courses per semester and focusing on developing oral communication competence in the respective foreign language, there was little time left to be dedicated to writing skills. Keeping all the factors mentioned here in mind, in my opinion it makes more sense to develop writing skills within groups of students with advanced FL knowledge, like students and graduated lawyers who enrol in lifelong learning programmes in foreign languages and who aspire towards careers on the wider EU labour market. This is the case with the current Lifelong Learning Programme for Lawyer Linguists, which will be described in the following part of this paper.

#### 4. 1 Lifelong Learning Programme for Lawyer Linguists at the Faculty of Law in Osijek

Political and economic changes in modern Europe have reflected on the teaching approach in LSP in a specific way. Financial deregulation, political and economic integrations, greater job mobility and intensified international cooperation, along with the expansion of new communication technologies facilitated and speeded up the international communication and highlighted the importance of foreign languages and communication skills. All these changes have strongly influenced learner's needs in the FL teaching process, especially in the field of FL for legal purposes, which is in the focus of interest in this paper.

Following the guidelines of the Strategy of the Josip Juraj Strossmayer University of Osijek 2011-2020 (Strategy, 2011: 54), the Department of Foreign Languages of the Faculty of Law initiated the introduction of a new lifelong education programme for lawyers. It was a pragmatic response to political and economic changes and requirements of the EU labour market which became accessible to Croatian lawyers as well. The European Personnel Selection Office (EPSO) of the

3. <sup>1</sup> From the workshop „Writing in Plain English“ held by Aleksandra Łuczak in „The first Legal English Workshop SHARE & GAIN“, Supraśl, Poland, 18-19 September 2014

European Commission announced job opportunities on the European labour market with the prospect of Croatian full membership in the EU in July 2013. According to the data of December 2012, the European Union needed translators, interpreters, lawyer linguists, administrators, heads of departments and other officials in the field of Communication, Legal Affairs and Programme Management in the offices of the European Commission, the Court of Justice of the EU and other institutions whose employees should master both legal and linguistic knowledge<sup>1</sup>. As a response to new job opportunities for Croatian lawyers, Departments for Foreign Languages of the Faculty of Law in Zagreb and in Osijek initiated their Lifelong Education Programmes for Lawyer Linguists: the former in the summer semester of the year 2011/12 and the latter in the winter semester 2012/13. The Lifelong Learning Programme for Lawyer Linguists in Osijek was organized on similar principles as the Programme of the Zagreb Faculty of Law, but in conformity with specific circumstances at the respective faculty, especially in terms of FL competences and special professional interests of its teaching staff. The Programme developed in Osijek was approved and officially accredited by the Senate of the Osijek University. Altogether 22 ECTS credits were allocated to the Programme, the maximum credit number that can be achieved by individual participant being 18. It encompasses seven courses with altogether 170 teaching hours. The Programme was offered in the winter semester of 2012/2013 to graduate lawyers and 5th year law students and was financed by a participant fee payable in instalments. The Programme was initially introduced to meet demands of the EU institutions for skilled legal translators, but today the target group comprises young lawyers with good foreign language skills who are interested in finding jobs in different EU institutions and/or international companies, due to diverse job opportunities offered to Croatian lawyers on the EU market. The programme is mostly carried out by FL teachers teaching at the Faculty of Law in Osijek, but also by guest professors from the Faculty of Humanities (for the courses *Croatian Language for Lawyer Linguists* and *Introduction to French Legal Translation*). Lectures and exercises within the Programme were held on Fridays and Saturdays during the period of 10 weeks. In the first term (the year 2012/2013), 25 participants were included in this Programme, in the second 18 participants. In this academic year (2014/2015) we have enrolled 10 participants. The reduced number of participants can be seen as a result of the economic crisis and the fact that most of them are unemployed.

The programme carried out in Osijek includes the following courses:

- 1) Introduction to the Theory of Legal Translation and Terminology
- 2) Croatian Language for Lawyer Linguists
- 3) Introduction to the EU Law
- 4) Introduction to French Legal Translation
- 5) EU Vocabulary and Online Language Tools
- 6) Exercises in Legal Translation – English Language
- 7) Exercises in Legal Translation – German Language.

Table 1: Lifelong Learning Programme for Lawyer Linguists at the Faculty of Law in Osijek

Course	Teaching hours	Status of the course	ECTS	Type of assessment
Compulsory courses				
<b>Introduction to the Theory of Legal Translation and Terminology</b>	<b>15</b>	<b>Compulsory</b>	<b>3</b>	<b>Oral exam</b>
<b>Croatian Language for Lawyer Linguists</b>	<b>20</b>	<b>Compulsory</b>	<b>3</b>	<b>Written exam</b>
<b>Introduction to the EU Law</b>	<b>15</b>	<b>Compulsory</b>	<b>3</b>	<b>Oral exam</b>

4. <sup>1</sup> Retrieved from: [http://www.europa.eu/epso/apply/jobs/temp/index\\_en.htm](http://www.europa.eu/epso/apply/jobs/temp/index_en.htm), accessed 06/09/2012, 20:32

Introduction to French Legal Translation	20	Compulsory	3	Written exam (translation)
EU Vocabulary and Online Language Tools	10	Compulsory	2	Written exam
Legal English-Module	Teaching hours	Status	ECTS	Type of Assessment
Exercises in Legal Translation – English Language FL 1	20	Elective	2	Written exam (translation)
Exercises in Legal Translation – German Language FL 2	20	Elective	2	Written exam (translation)
Legal German Module	Teaching hours	Status	ECTS	Type of Assessment
Exercises in Legal Translation – German Language FL 1	20	Elective	2	Written exam (translation)
Exercises in Legal Translation – English Language FL 2	20	Elective	2	Written exam (translation)

With the exception of the courses in *EU Law* and *EU Vocabulary and Online Language Tools*, the courses are mainly focused on language. In accordance with recent developments in FL teaching, the Programme follows the CLIL approach, as the learner, his interests and learning goals are the central criterion for syllabus design, for choice of teaching materials and most appropriate teaching methods.

All participants have been trained in legal translation in three languages: English, German and French. The knowledge of these three working languages of the EU is required in most jobs announced on the website of the European Personnel Selection Office.<sup>1</sup> As most participants do not speak French, *Introduction to French Legal Translation* is an obligatory course focused on teaching general communication in French including some basic legal terminology.

As for English and German, participants are separated in two groups in these classes: one group includes those who have learned English as their FL 1 and German as their FL 2, and the second group those with German as FL 1 and English as FL 2. Exercises in translation of legal texts in English and in German are focused on the translation process and possible ways of approaching the translation. Teaching materials in both languages are chosen from EU legislation of different types, while several texts pertain to the Croatian national law. Within these courses some changes have been introduced in line with the demands and wishes of our participants: in the beginnings of the Programme, exercises were focused on the analysis and discussion of translations they have done as their homework between sessions, as well as of the translation process, the specific approach to translation of legal texts, specific features of the lexis (polysemy!), syntax, frequent grammar structures and collocations typical of the respective legal language. As learners' needs have been our basic criterion in designing the Programme from the beginning, we have introduced slight changes in the Programme at the request of our participants or based on our own experiences from previous years. This year, therefore, based on experiences of our former attendants who applied for positions in EU institutions or international companies, we have introduced trainings in oral interviews in the last four hours of these courses, because oral interviews conducted by the employer represent an integral part of employment procedure in Europe. Accordingly, from this year on, participants are

<sup>1</sup> Retrieved from [http://europa.eu/epso/apply/jobs/temp/index\\_en.htm#chapter2](http://europa.eu/epso/apply/jobs/temp/index_en.htm#chapter2), accessed 28/02/2015, 23:03

informed in the first session within the Programme about the employment procedure in EU institutions by a FL teacher who experienced all the stages of job application procedure carried out by the EPSO.

Within the course *Croatian Language for Lawyer Linguists* participants are trained in good writing skills, in appropriate use of Croatian orthography and punctuation, with specific reference to dilemmas emerging while writing translation in standard Croatian language. In this course, students participate in the course design by pointing out their own problems arising in writing texts in Croatian language.

*Introduction to the EU Law* has been incorporated in the Programme primarily to meet the needs of those graduate lawyers participating in the Programme who did not have this course in their curriculum while studying law. The participants who had passed the exam in EU Law in their regular study time are exempted from attending this course.

*EU Vocabulary & Online Language Tools* has been introduced as a response to demands of modern business communication as well as to recent developments in translation methodology and translation tools designed by using information technologies. The course is taught by an experienced EFL teacher who was trained in these skills within the TEMPUS project mentioned in the introductory part of this paper. This teacher is probably the most proficient user of information technologies and online translation tools among the teaching staff at the Faculty of Law in Osijek.

#### **4. 2 Designing the Course *Introduction to the Theory of Legal Translation and Terminology*: Achievements and Perspectives**

As mentioned in the introduction to this paper, the entire Programme of education of lawyer-linguists was designed according to learners' needs (learner-centred), based on the CLIL-approach and adjusted to specific circumstances of the Osijek University, especially in terms of appropriate teaching staff equipped and competent to teach specific subjects. Thus, *Introduction to the Theory of Legal Translation and Terminology* was designed and delivered by the author of this paper. The principal factors taken into consideration in the process of the course design were the purpose of the course and the target group of learners, who were equipped with little or no theoretical linguistic knowledge in legal language and in translation process in this field. As one of the main prerequisites for successful teaching outcomes is a competent and motivated teacher, able to motivate his/her students and meet their needs in the respective teaching process, the syllabus was designed based on scientific research the teacher (author of this paper) has conducted in the fields of German, English and Croatian Legal Language since 2004, as well as on written sources on legal translation, specifically Baker's *Encyclopedia of Translation* (Baker, 2009), *New Approach to Legal Translation* by Susan Šarčević (Šarčević, 1997), and Prunc's *Entwicklungslinien der Translationswissenschaft: Von den Asymmetrien der Sprachen zu den Asymmetrien der Macht* (Prunc, 2012).

Apart from the introductory lecture, the course comprises seven basic topics delivered in two hours per week during 10 weeks. Those topics are: 1) General features of legal language; 2) Linguistic features of the German, English and Croatian language of law, 3) Translation as a communication process, 4) Basics of the translation approach in the field of law, 5) EU terminology and phraseology, 6) Poetic elements in legal language – a comparative approach, 7) Summary of the course – most important issues. In the first lecture some universal features typical of the language of law are presented and discussed, such as: a) polysemy and complexity of legal terms, b) difficulties in understanding legal texts due to frequency of Latin loanwords and abstract terms, c) nominal style and frequency of complex and complicated sentences, and d) numerous text types of specific rigid structure and form. In the second lecture linguistic features of German, English and Croatian legal language are discussed on all levels of linguistic analysis apart from phonetics: lexis and semantics, morphology and syntax, word formation and style. Every feature is illustrated by examples in three languages and every session is concluded by a specific task for participants. In the third lecture the translation process is observed from the perspective of communication theory and different translation theories and approaches are discussed with specific reference to legal discourse. The forth lecture is dedicated to modern approach to the translation process, by highlighting the principle defined by Professor Erich Prunc of the University of Graz as "Enttönnung des Ausgangstextes" and by explaining recent developments of the modern functionalist approach as defined by Vermeer (in: Baker, 2009). The purpose of translation, the target language and the final user of translation as main factors of recent developments in translation theory are discussed and illustrated with specific translation tasks. Special attention is paid to the specific approach required in legal translation, which has been informally determined as "from-the-macro-level-to-the-micro-level-approach". In the

conclusion of the topic, participants are warned about several problematic issues in legal translation which should be kept in mind in the process of translation, especially concerning conceptual and cultural differences between specific legal systems. In the lecture dedicated to EU terminology students are informed about the importance of the standardization of the EU terminology and consistency in using standardized terms. Additionally, the list of most common EU terms in the field of EU legislation and EU institutions in the three languages is offered to participants, as well as the list of some new EU terms that are not used or are used in a different meaning in standard British English. The lecture dedicated to poetic elements in the language of law discusses this unusual phenomenon from the historic perspective, pointing out that back in 1815 Jakob Grimm had published an article titled "On the Poetry of the Legal Language" (Kordić, 2010). In the main part of the lecture, by using a comparative approach, specific examples of metaphor, alliteration, tautology, personification and doublets are presented in German, English and Croatian language of law, based on the comparative corpus research in German, Croatian and English criminal laws that the author of this paper carried out in 2009 (Kordić, 2010). The final session is planned as a summary of most important facts on legal translation and preparation for the oral exam.

## 5. Concluding remarks

In the introductory part of the paper recent developments in LSP teaching as applied in the Faculty of Law in Osijek have been discussed: a) content-and-language-integrated-learning (CLIL), b) use of didactic case studies, c) corpus studies conducted for teaching purposes and aimed at identifying high frequency language elements, d) more effective course books with higher terminology indexes, e) extended use of online materials, f) teaching writing for specific purposes, and g) teaching professional culture and non-linguistic skills. A short presentation of the Lifelong Education Programme for Lawyer Linguists conducted successfully for three years at the Faculty of Law, University of Osijek, Croatia, can well illustrate that best fulfilment of those requirements can be expected in such LSP programmes developed for specific groups of highly motivated learners attending the courses with clearly defined real-life purposes. It can be concluded that new developments in LSP teaching, resulting from political and economic integrations, greater job mobility and intensified international cooperation by means of new communication technologies, find their most appropriate application in the lifelong learning programmes designed in accordance with real life needs and aspirations of the target group of learners. The learner-centred approach opens the opportunity to students to participate in the course design and to help adjust it to their needs and current requirements of the labour market. However, this implies new requirements, challenges and responsibilities for LSP teachers.

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## Field Base Teaching: A Malaysian Experience

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### Abstract

*This paper narrates the field base teaching method that has been incorporated in Northern University of Malaysia. By tradition, the university is a management university, which emphasis on management skills, such as banking, finance, entrepreneurship and other essential components of management. Beginning of 1995, the university realizes that a wider curriculum scope is needed to cater ever growing demand on humanities programs. As a result of this, courses such as history, sociology, anthropology, geography and other courses related to humanities programs were introduced. Components of geography were introduced as regional geography and environmental management in 1997 as one of the elective subject in Public Administration Undergraduate Program. Generally, the teaching method being employed at the university was lectures, tutorial and the assessments were more exams oriented. Starting from the academic session of 2000/2001, the evaluation processes were altered and assignments were introduced. I took this opportunity to introduce assignments based on report writing about development projects and its impacts on natural environment surroundings the university. This paved way for the students to conduct surveys and data collection prior to the report writing. Slowly, I introduced the idea and the importance of field base teaching to the students and the management. Initially it was well perceived by the management and the students. Latter, when the number of students increased from merely 20 to few hundreds, issues such logistics, cost and other related issues influenced the management to rethink the idea of field base teaching. At present the number of students varies from 1,000 to 1,500 per academic semester. The numbers of instructors were also increased from one to fifteen. Unfortunately my present role as an instructor and coordinator does not provide the luxury of practicing field-based teaching due to financial and man power constrain. It is an uphill task to design a syllabus and convince the faculty members to participate in the field based teaching.*

**Keywords:** field base teaching, teaching, method, university

### Introduction

Education plays a fundamental role in creating a well-structured society. Education promotes self-identification, creates self-ability in order to participate and function in a society. Discovering self is very important because this lead to harmony in a society. Each individual are unique in the sense that he/she displays a different pattern of thinking and displays various ways of doing things. This is called process of education. It is very crucial that each individual must attain self- knowledge or self-excellence (Romeo Aquino, 2010). So education is an essential tool that our modern society needs to progress in various fields.

Education plays vital role in transforming society and improving community's living standard. Education also plays an important role in enhancing economic growth and economic development. So, the government has the responsibility to run the education system for the benefits of the public. In this context the tertiary education system also comes under the state's social responsibility. Meanwhile the stakeholders involved are government, public, parents, students and many others. It is an essential for the stockholder's active participation to ensure the maximum benefits from the public education system. In Malaysia, several public universities were formed to cater the ever increasing demand for tertiary education. *Universiti Utara Malaysia* or Northern University of Malaysia was one of the public universities funded fully by the Federal Government to fulfill the government's agenda in education transformation.

Northern University of Malaysia or *Universiti Utara Malaysia* was formally incorporated on 16<sup>th</sup> February 1984, with the unique mission to provide academic excellence in the areas of business management, education, information technology, and quality management. Faced with this challenging task, the university has since its inception, ensured that its academic niche areas are focused on such disciplines as management, accountancy, economics, information technology, entrepreneurial development, tourism management, banking & finance, social development, human resource development

and international affairs management. Active learning occurs when students are mentally engaged in processing knowledge in order to construct understanding. Through mental engagement, meaning is made, learning is internalized, and knowledge, skills, and concepts are applied (Starnes & Carone, 2002).

In many classroom settings today, however, it is not uncommon to observe students taking a fairly passive role in their learning. This is especially the case when instructors employ mainly traditional methods of teaching (i.e., lecturing, note-taking, and using multiple-choice and true-false exams). Unfortunately, while these methods can be convenient for the instructor, they often do not impact student learning in a significant way. As reported by Wingfield and Black (2005), passive methods of teaching are likely to be more instructor-centered. Conversely, active styles of teaching foster greater student participation, which oftentimes results in more intense and longer-lasting learning. Active learning has also been linked to critical thinking, increased levels of social integration resulting in subsequent institutional commitment, and enhancement of the well-being and personal growth of students (Braxon, Milem, & Sullivan, 2000; Koljatic & Kuh, 2001). Field-based instruction, a form of active learning, has proven to be worthwhile to enhancing student learning outcomes, including retention of the subject matter, and improving student's problem solving skills (Davis, 1993). Field experiences are learner-centered, allowing students the opportunity to apply ideas and concepts taught in a traditional classroom setting to an environment that stimulates critical thinking and analysis (Hickcox, 2002). Field experiences enable students to further develop cognitively from more simplistic positions (Barr & Tagg, 1995; Ediger, 2001).

As a geographer I was trained and exposed well in field based teaching. Unfortunately my present role as an instructor and coordinator does not provide the luxury of practicing field-based teaching due to financial and man power constrain. It is an uphill task to design a syllabus and convince the faculty members to participate in the field based teaching.

### **The Puzzle**

Geography was first introduced as regional geography in 1997/98 academic session at Northern University of Malaysia. The author was given the responsibility to outline the curriculum syllabus. Based on the university's practice at the time, the teaching mode were lectures and assessment based on exams. Furthermore the subject was only an elective subject, part of the Public Management Program. The first batch consists of 16 students and none of the students had previous learning experience on geography or geography related issues. This was really challenging for the author to design the lecture notes in order to cater the student's needs. The issue was whether to introduce a different set of leaning objectives and learning outcomes. The teaching method also designed differently with introduction of field work observation and data collection. Since the students did not have any knowledge on field observation techniques, they were given simple assignment such as fauna and flora observation (natural geography) and traffic analysis (human geography). Unfortunately the students cannot perform this simple task due to lack of knowledge. The first puzzle was that, what is the best teaching method to employ to this group of students?

For the past 5-10 years the author was involved in teaching courses such as Environmental Management and Social Science Studies. As a coordinator for the Social Science Studies, part of my responsibilities is to design the syllabus. The Social Science Studies comprises of various disciplines and one of which is Geography and Environmental Management. Each semester the number of students ranges from one thousand to two thousand five hundred from various faculties (Law, Accounting, Finance, Business Management, Computer Studies, International Studies, Public Management, Developmental Management, Project Management, Housing Management, Communications, Communication Business, International Business and many other courses. Devising a workable field-based program was contentious because the change entailed much than combining faculty and curriculum.

Due to the large number of students, basically the approach is 32 hours of theoretical teaching and 10 hours of field-based teaching. The students will be divided into smaller groups (10-15) and given first-hand experience (one day trip) on the issues such as policy formulation and policy implementation by various government agencies. The students will be placed (for one day) in government agencies and private sectors which is related to environmental management, such as irrigation agency, land agency, department of environment, river agency, department of agricultural, local authorities, housing developers and public utility departments. Then students will come out with a mini report (15 pages) and a presentation (10 minutes) based on the field trip. The report and presentation must entirely base on their experience gained from the various agencies.

The author realized that there are several shortcomings: i) one day field trip is not sufficient, ii) participating government agencies are below par, iii) the accompanying officer from the government agencies are not equipped with proper knowledge or information and iv) the total number of students and too many groups are too large for a field-based teaching. Due to various constraints the field-based component being revised and probably will be phased out sooner. This is due the instructors were not keen and the monetary resources cannot sustain the field-based teaching expenses.

## **Discussion**

Fortunately the field-based teaching of Environmental Management is more pragmatic and futile towards end results. During the past three years I am involved designing the suitable field-based teaching syllabus that benefited most to the students and the instructors. This course is about managing the environmental resources such as water, forest, land, coast, wetlands, rivers and etc. The course involves three phases starting from the third semester until the sixth semester. The third semester comprises of 32 hours of theoretical teaching and 10 hours of field-based teaching. The theoretical teaching is about four earth spheres and various ecosystems and the relation to human activities. The field trip involves visit to Forest department, Irrigation department, Department of environment, Department of minerals and other government agencies that deals directly about environmental resources. Based on the theoretical findings and the relations to the field trip will be presented in the class room comprising 15-20 minutes presentation.

The fourth semester is 20 hours of theoretical teaching and 22 hours of field-based teaching. The field-trip involves visiting and experiencing the management of reservoir, wetlands, rivers, forest reserves, forest parks, beaches and etc. This is really exciting because the students will get to see natural process at work, the importance of hydrological cycle, the importance of trees, coastal processes etc. The students will prepare a report how man interacts with nature.

The fifth and sixth semester is about 30 hours of field-based teaching. The students will collaborate with local communities such schools, business communities, farmers, professionals, non governmental agencies to design a project that reflects man's responsibilities' towards environmental resources. This involves projects such as: a) adopting a stream, b) conserving water, c) clean water streams and fish, d) water pollution, e) earth day, f) ecosystems, g) importance of mangroves, h) plant a tree, i) pollution, j) recycle. At the end of the sixth semester a comprehensive report will be prepared. The most outstanding report will be given priority to be developed into a graduation thesis. Refer to table 1.

After 3-4 years of experimenting, I realize that field based teachings with sound theoretical background; the whole teaching and learning process were much more educational and practical. It also gives a new dimension to the teaching profession at the tertiary level. Let me share my experience with a good case study involving the replanting of mangroves in Penang Island. During the Third Semester the students were taught about mangroves and its importance to the coastal system especially in Malaysia. A visit to the one of the best managed mangrove forest in Malaysia that is Matang Mangrove Forest<sup>1</sup> in Perak, Malaysia, enhance the participants/student knowledge to understand better the mangrove ecological system.

To practice what had been learned in the classroom and at Matang mangrove Forest, we decided to volunteer for two programs called "Save the Mangrove Forest in Penang"<sup>2</sup> and "Clean the Gurney Drive Coastal Waters"<sup>3</sup> organized by the Penang State Government in 2009 and 2010.

<sup>1</sup> Matang Mangrove Forest Reserve in the largest single forest in Peninsular Malaysia, covering an area of 40,151ha. It is one of the world's best well-managed mangrove swamps. The forest reserve has received various international awards. Mangrove eco-systems are highly productive and represent the life support systems for fisheries, forestry, medicine, food and other products. Within this mangrove swamp are found multitudes of tree species, birds and marine life which is haven to natural lovers (Perak Tourism Board, 2014).

<sup>2</sup> The eastern coastal of Penang Island is undergoing tremendous changes in the past 30 years. Observation would tell us that once the east coast of Penang Island was full of mangroves forest with various species of flora and fauna. The swamps were reclaimed to cater for the ever growing industrial, commercial and housing sectors.

<sup>3</sup> Gurney Drive is a popular seafront promenade in Georgetown, Penang, Malaysia. The road also one of Penang's most popular tourist destinations, famous for the hawker food. Previously known as the New Coastal Road, which was completed in 1936 and renamed in 1952 after Sir Henry Gurney, the British High Commissioner of Malaya (1950-1951). Over the years, the beaches along Gurney Drive have largely been lost to coastal erosion. More recently, a land reclamation project near by area Tanjung Tokong has reversed the erosion,

The students were divided into two groups and the first groups were involved in the mangrove replanting and the other groups were involved in the cleaning of Gurney Drive. Some 1,000 saplings were planted off the Marina Bay condominiums near Tanjung Tokong. The other group was involved in making EM mud balls<sup>1</sup> and throwing into the Gurney Drive coastal waters. Both the activities were instrumental for the undergraduates about understanding the process of nature that they decided to continue to participate on their own during weekends. This is just one of the examples that I experimented and bravely can say that the field-based teaching has great potential to offer compare to the class room based method. Nevertheless the number of participant is very essential in-order to achieve the outlined objectives of the syllabus.

Table 1 Summary of the field-base teaching that relates to activities, evaluation and cost.

Item	Sem	No. of students	Teaching (hrs)		Activities	Evaluation	Cost
			Theory	Field-base			
1	3	60	32	10	Educational Visits; Forrest department, Irrigation department, DOE, etc	Group presentation; policy formation & policy implementation	10-15 usd per student
2	4	60	20	22	Educational visits; Reservoir, Wetland, river, Forrest reserve, Beach parks	Report writing; how man interacts with nature	20 usd per student
3	5 & 6	60	12	30	Design a project which reflects men's responsibilities towards mother nature; planting trees, recycling, adopting stream		10-15 usd per student

Source: Raman, 2010.

## Advantages

Mary Jane Gray (1975) argues that field base teaching must be incorporated in elementary school. She outlines three major areas; cooperating teachers, cooperating schools and evaluating effectiveness of students prepaid in this way. She emphasizes on availability and usage of a laboratory, which plays essential role in this education system. In the long run the system brings the result which is far better than class room base teachings.

Maryellen Weimer 2009, on the other hand carefully scrutinizes the following which supports the PBL. From the student's perspectives, PBL creates student centered approach, which can be used as yardstick to outline the ability of the student's achievements. PBL also creates an enjoyable and satisfying scenario. This can be explained by sighting an example where any kind of interaction with public or specific person will create anxiety and develop interest from the students to participate actively. A personal experience encourages greater understandings with gathered information. This garners higher abilities and develops lifelong learning skills. From the instructor's perspectives, PBL enhances the class attendance increases due to intense class room discussion among students. This method affords more intrinsic reward and encourages students

leading to accretion of silt and mud off Gurney Drive. Mangrove sapling has sprouted in the mud, which is now frequented by egrets and other birds, as well as mudskippers. There have suggestions that the Gurney Drive coastal area, formerly earmarked for reclamation under the Penang Outer Ring Road project (at present suspended), be reclaimed for a recreational park or allowed to develop into mangrove forest.

<sup>1</sup> EM mud balls are a bio-remedial environmental solution of reducing water pollutants and improving water quality of rivers. The fermentation emitted from the mud balls will prevent algae growth and pathogenic microbes which causes infectious diseases

spend more time studying. PBL also promotes interdisciplinarity interaction, which benefits the students. From the institutions perspectives, PBL makes student learning a priority and helps students' retention. PBL also may be taken as evidence that an institution values teachings.

The PBL promotes a dynamic learning approach. It also creates a suitable atmosphere for group discussions, synthesizing ideas, promotes lifelong learning experiences, new studying approaches cultivates student centered learning process, betterment the sharing process, instills sense of belonging among students, creates networking with outside world, connects people from various disciplines and promotes active participation.

### **Disadvantages**

Maryellen Weimer 2009, from the students' perspectives, prior learning experiences do not prepare well for PBL. It also takes more time and takes away study time from other subjects. PBL creates anxiety because learning is no more in systematic manner. Due to group dynamics issues compromise PBL defectiveness and maybe less content knowledge may be learned. From the instructors perspectives, to create suitable problem scenario is difficult. This again warrants more preparation time for the lessons. It is very difficult to pinpoint the exact needs of each student. Sometimes group dynamic issues may require faculty intervention. Lastly the assessment being employed may be in question mark.

Other than that, one of the most disadvantages using the field base teaching method is the high costing involved. The table 1.1 shows, every aspect of the field base teachings involves expenses. Initially the expenses were low, but as the number of students gets bigger as per semester, the expense also soars up. The faculty does not want to burden the students with the extra expenses and at the same time the faculty also does not want to own the responsibility of sharing the expenses. From the institutions perspectives, PBL requires a change educational philosophy for faculty who mostly lecture. To support the additional burden, the faculty will need to incorporate faculty staff development and support for PBL. Again it involves more recruitment of instructors. It also needs a better classroom, if possible a laboratory with flexible classroom space. Definitely it will engender resistance from faculty who questions its efficacy.

### **Conclusion**

This paper is about sharing the experience on the field-base teaching method. Field-base teaching offers variety in the context learning. It also enhances and enriches the learner's ability to analyze a particular issue from different perspective. The instructor also gains valuable experience through trial and error. Teaching and learning becomes very much interesting and the whole process of learning is given a new dimension.

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## ***Educating Rita: The Muted Woman Raises her Voice***

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### **Abstract**

*For centuries, women have been excluded from the literary canon which has been under the dominance of male authors. The socio-political and domestic spheres of life have been divided according to the Cartesian dualism between the mind and body which is based on the already determined characteristics of man and woman by the patriarchal order. Woman has been doomed to the domestic sphere with certain responsibilities as a wife and mother; thus, she has been deprived of an active participation in the social sphere of life. If woman stays at home, she is drowned in a lack of a self, however, if she wants to pave her way towards an intellectual life, she will have to obtain a masculine position which, again, absorbs her female identity. In *Educating Rita*, Willy Russell narrates the story of Rita, a working class woman, who is devoid of a self and tries to overcome the difficulties life brings to her due to her social status and her sex. This paper is going to discuss Rita's personal struggle to pass beyond these restrictions via reading and writing in order to obtain her own thinking and critical self that gives her the right to choose rather than to be chosen. Thus, overcoming the distinction between the reproductive body and contemplative mind, woman is able to assert her sophisticated self through active participation in the intellectual life outside the domestic sphere. Consequently, the muted woman is able to raise her voice by claiming her own independent identity.*

**Keywords:** Woman's identity, reading theory, woman's writing.

In *What Is a Woman?* Toril Moi discusses that science and philosophy are based on the Cartesian mind/body dualism. The patriarchal worldview structures society on the separation of the mind and body from a sexist perspective. Within this structure, man represents the mind while woman is pre-destined to be the symbol of the body. The socio-political and domestic spheres of life are divided according to this dualism which is based on the determined characteristics of man and woman by the masculine order. Thus woman is believed to be fit to be a good wife, mother and housekeeper while man's way is paved for a more social, political and philosophical life in which he can use his creative intellect. From this point of view, woman's tasks are the ones that do not necessitate a creative-thinking process such as bearing and rearing babies, cooking and cleaning the house while man's duties are more social and enable him to be part of the social structure. Moi (1999) emphasizes that "the rational, active, masculine intellect operates on the passive, objectified, feminized body" (p. 348). Hence woman is doomed to a submissive state as the object in this subject/object relationship between the sexes.

As an ultimate result of this dualistic approach, science, philosophy and literature have always been under the dominance of man; therefore, if woman is ever eager to be part of this system in order to include herself in philosophy and literature, she is supposed to have a masculine status ignoring her womanhood. Otherwise, Moi (1999) asserts, she has to obey the sexist structure that destines women to become the irrational and thoughtless bodies of the rational and creative minds (p. 348). The problem woman faces within this patriarchal structure is that she is left without a true self, and this causes her to forget about her existence and identity; eventually she becomes part of the male world as an object, and she ends up being both the tool and victim of patriarchy. If she stays at home as expected from her, she is drowned in the lack of a self, however, on the other hand, if she wants to pave her way towards a more social and philosophical life, she will have to obtain a masculine position which, again, absorbs her identity. In *Educating Rita*, Willy Russell narrates the story of Rita, a working class woman, who is devoid of a self and tries to overcome the difficulties life brings to her due to her social status and her sex. This paper is going to discuss Rita's personal struggle to pass beyond these restrictions via reading and writing in order to obtain her own thinking and critical self that gives her the right to choose rather than to be chosen.

For centuries, women have been excluded from the literary canon which has been under the dominance of male authors. This male dominance in the literary and philosophical domains has been caused by the Cartesian dualism between the mind and body as discussed above. Because of their procreative status as mothers, women have been regarded as pure wombs, and they have been devoid of other creative activities like thinking and writing that were attributed to the male

genius with his creative intellectuality. Sandra M. Gilbert and Susan Gubar (2000) begin their discussion about the male-dominated philosophy and literature in *The Madwoman in the Attic* with the following question: "Is a pen a metaphorical penis?" (p. 3). Literature and philosophy have always been under such an influence of the patriarchal structure that women have been almost completely alienated from the process of creative thinking and writing since they have been supposed to be the irrational and passive side of the dual structure. Gilbert and Gubar (2000) continue their debate about this comparison between the pen and penis questioning the position of woman within this structure:

If the pen is a metaphorical penis, with what organ can females generate texts? The question may seem frivolous, but both the patriarchal etiology that defines a solitary Father God as the only creator of all things, and the male metaphors of literary creation that depend upon such an etiology, have long "confused" literary women, readers and writers alike. For what if such a proudly masculine cosmic Author is the sole legitimate model for all earthly authors? Or worse, what if the male generative power is not just the only legitimate power but the only power there is? That literary theoreticians from Aristotle to Hopkins seemed to believe this was so no doubt prevented many women from ever "attempting the pen" and caused enormous anxiety in generations of those women who are "presumptuous" enough to dare such an attempt. (p. 7)

As stated above, if the pen is a metaphorical penis, there is no way left for a woman to be included in this patriarchal literary canon since she clearly lacks the penis which prevents her from raising her voice in the masculine order of literature and philosophy. Beginning with God the Father as the creator of all things in the world, man is attributed the quality of intellectual creativity while woman is left out as the passive object on which the male intellect operates. Since woman is doomed to stay as the mere womb which is a tool to help male procreation, man has been regarded as the chief being within the philosophical thinking and critical writing process. Since the ancient times of the primary philosophers like Aristotle and Plato, men have been considered to be the only legitimate generative power, and this patriarchal view of philosophy and literature has determined the restricted position of woman.

The exclusion of woman from the literary and philosophical domains has eventually resulted in the belief that the women who attempt to include themselves in this creative process are actually "presumptuous" since they betray their nature doing so. At this point, arguing about the so-called female nature that is betrayed by the women who try to exceed their boundaries surrounding their domestic lives, Gilbert and Gubar (2000) assert that these women are not only called to be "intrusive" and "presumptuous", but they are also completely "unredeemable" because there is a big mistake in trying to overcome the boundaries drawn by nature (p. 8). However, it is vitally important to emphasize that these boundaries that the woman, who is interested in philosophical thinking, is considered to cross betraying her nature are not determined by nature itself but only by the patriarchal system that situates man as the primary intellectual and creative subject.

This is actually what Rita tries to do in Willy Russell's *Educating Rita*. As a working class woman, Rita struggles very hard in order to cross the boundaries that enclose her within a structure that is chosen for her. All her attempt is to become the one who is capable of choosing for herself avoiding the patriarchal power that determines her fate as a true wife and mother. The way she chooses to liberate herself goes through studying, and she tries to learn reading and writing critically. She is enrolled in the Open University, and she also takes courses from an English professor Frank. The play includes the relationship between Rita and Frank which eventually affects not only Rita's but also Frank's perspective for reading and writing critically; as a result, they end up teaching each other and switching their roles. In the early beginning of the play, Frank is on the stage talking to his girlfriend on the phone. While he is talking about Rita, his sexist prejudices appear clearly:

Yes?... Of course I'm still here... Because I've got this Open University woman coming, haven't I?... Yes, I probably shall go to the pub afterwards, I shall need to wash away the memory of some silly woman's attempts to get into the mind of Henry James or whoever it is we're supposed to study on this course... (Russell, 2001, p. 3)

Frank's first ideas about Rita who studies at the Open University show man's reaction to woman's attempts to participate in the literary sphere. Mocking Rita as a prototype of all women who try to learn critical thinking and reading, Frank makes the prejudiced male opinion clear. According to this perspective, women are not capable of critical reading and thinking since they can easily be over-identified with the author or the characters in the story. In *Theories of Reading* Karin Littau (2006) discusses the problem of over-identification especially for women readers who are believed to end up devouring stories by reading fleetingly. However, Littau asserts that over-identification is not the only problem that makes reading fiction dangerous. She asserts that another important aspect of this danger is the belief that "unlike serious reading which 'lifts the reader from sensation to intellect', the novel actually does the opposite" (p. 65). Since woman has always been

made synonymous with sensation, her over-identification and absorption in novel reading is explained as her lack of capability for critical and objective reading.

On the other hand, focusing on the comparison between the lack of a penis and the female exclusion from philosophy, Toril Moi (1999) asserts that:

First, woman is perceived as lacking the phallus. According to the patriarchal imagination, what a woman needs is a man, not philosophy. If a woman declares that she too feels the philosophical lack, her desire for knowledge can only be a compensation for her primary sexual frustration. On this logic, then, the thinking woman necessarily becomes synonymous with the bluestocking, the frustrated spinster of patriarchal ideology: the female lack is never *truly* a philosophical lack. In other words, the woman is always suspected of not being able to think simply because she is taken to suffer from the *wrong* lack. (p. 356)

Based on the sexual discrimination that is structured on man's physical and sexual power deriving from the phallus, Toril Moi (1999) argues about the patriarchal belief that the true lack of woman is not philosophical thinking but the male sexual organ which gives him autonomy. Thus, what woman needs to fulfil the absence of the phallus is not philosophy but man himself. This analysis of woman's lack stems from the dichotomy within the patriarchal structure that controls the sexist approach based on the certain gender roles attributed to both sexes. That is why, Moi asserts, woman's attempt to fulfil herself philosophically is actually considered to be seeking for fulfilment for a wrong lack because the true lack that she suffers from can be fulfilled only through submission to male sexual and intellectual power. Thus, woman's desire for knowledge is regarded as a wrong way of compensation for the female lack of the generative phallus and her ultimate sexual frustration from the masculine perspective (p. 356). As a result of this active male physical and sexual power, man has claimed himself as the authoritative voice in the socio-political, economic and philosophical life subordinating woman to a passive status in which she is absolutely objectified, and her voice is silenced within the domestic sphere. As clearly seen in the example of Rita, woman is not considered to be capable of philosophical and critical reading, and her wish to pave her way into a more literary life forces her to be part of this male-dominated structure. Thus the most important aspect of this process for Rita is not only to become an acknowledged person but also to be a free one to choose for herself rather than being a dependent woman for whom others choose. As discussed above, woman's attempts to be included in this sphere ultimately results in detaching her from her identity since this literary canon is dominated by the masculine power. As a result, woman is forced to choose between her womanhood and her literacy in an unjust way. However, for Rita this process of being taught by Frank becomes a way for her to seek her independent choice without the male authority.

When Rita meets Frank for the first time, this is actually not the beginning of her reading process. While she introduces herself as Rita, Frank who checks her admission papers realizes that her name is written as Mrs. S. White. Although her actual name is Susan, she renames herself after Rita Mae Brown, the author of *Rubyfruit Jungle* which is one of her favourite novels in the beginning. In a sense, she identifies herself with this author she likes most, and this shows her wish to become a reader and writer at the same time.

In his arguments about woman's tendency for identification David Bleich (1986) indicates that, woman tends to identify more with the author of the story or with the characters in it. For him, the reason for woman's tendency for identification stems from "the condition of less otherness" (p. 264). Bleich points out that the difference between man and woman in regard to this topic stems from their different responses to otherness and objectivity. According to him both men and women attempt to objectify things, however, this act of objectification does not seem to be an immediately necessary one for women as it is for men. David Bleich (1986) tries to explain this notion of "less otherness" biologically focusing on the fact that although both man and woman are born of women, man needs to detach himself from his mother to find his own identity. On the other hand, as woman tries to detach herself from her mother to discover her self, she will have to turn back to her mother while trying to acquire her gender based identity. This case is completely different for man who gets more and more detached from his mother as he continues to shape his gender based identity (p. 265). Eventually, the result is that man feels the urgent need to objectify his readings while woman lacks this urgency, and she is more easily absorbed in the fictional lives of characters as well as the creators of that fictional life. Thus Rita's naming herself after her favourite fiction writer shows us her struggle to find her liberation out of the prison she is entrapped in both as a working class member and a woman in the patriarchal order.

In the first conversation Rita and Frank have, Rita talks about her previous readings, and all the names she utters are the ones Frank is not even familiar with. This shows us her social and literary background; she comes from the working class environment, and her taste in the literary field is actually shaped by junk literature. The first time when they begin teaching each other in the opposite ways is when she gives *Rubyfruit Jungle* to Frank to read while she borrows *Howards End* from him. As she takes *Howards End* to read, Rita says she will post it to him if she decides to drop the course because she "might decide it was a soft idea" (Russell, 2001, p. 8). At this point she still seems to be in conflict with what she is struggling for since it is obviously a betrayal for her so-called nature both in her working class environment and in the overall patriarchal structure. The problem for woman in this masculine system is that her voice has been silenced by the male-dominated philosophical canon, and eventually she is doomed to her so-called feminine nature to deal with the female sphere of life. This position of woman in the patriarchal society has affected her existence as a reader and writer at the same time.

Thus arguing about reader's construction of meaning and the effects of gender on comprehension, Mary Crawford and Roger Chaffin (1986) focus on women as a muted group and state that,

The theory of muted groups was developed to describe situations in which groups of people exist in asymmetrical power relationships. The theory proposes that language and the norms for its use are controlled by the dominant group. Members of the muted group are disadvantaged in articulating their experience, since the language they must use is derived largely from the perceptions of the dominant group... In order to be heard, muted group members must learn the dominant idiom and attempt to articulate within it, even though this attempt will inevitably lead to some loss of meaning. (p. 21)

Due to the male dominance in literature and philosophy, language is also under the control of the patriarchal point of view which excludes women from the canon. As a result, women have been subordinated as the muted group while men have been included in the dominant group that controls language. Extremely surrounded by the patriarchal dominance, the muted group of women has been forced to identify with this language in order to tell about women's experiences. However, since this language serves the dominant group, the muted group always lacks the proper way of expression for its own experiences. As Crawford and Chaffin (1986) also point out, the muted group is supposed to learn the dominant group's idiom in order to be heard within this structure, and this will eventually cause women to lose their intended meaning within the male idiom (p. 21).

Since man and woman have different backgrounds that are shaped according to their sex, their reading and critical thinking will also be affected deeply by the contexts they find themselves in the patriarchal society. As a direct consequence of the masculine language in the philosophical and literary canon, woman has to face her loss of self, and her attempts to find herself in the masculine language dooms her to a contradictory status between her real female identity and the masculine representation of her femininity. Hence, man's authority in philosophy has silenced woman's voice to be lost in the male sovereignty. The women who have been interested in critical thinking and writing have been doomed to the masculine dominance both in literature and language which has resulted in their contradictory position between a real female self and the male representation of the female gender.

Focusing on the problem of the representation of woman in the male-dominated language, Judith Butler (2006) discusses that:

For feminist theory, the development of a language that fully or adequately represents women has seemed necessary to foster the political visibility of women. This has seemed obviously important considering the pervasive cultural condition in which women's lives were either misrepresented or not represented at all. (p. 2)

As Judith Butler argues, the development of a language that is not based on the patriarchal power and its representation of woman has been one of the most important points of the feminist movement so far. Since the masculine language either misrepresents or does not represent the circumstances women find themselves in at all, woman has been doomed to an absolute loss of self, and this loss subordinates her to the passive and irrational status she is entrapped in. Therefore, the development of a language free from the masculine domination is necessary to pave woman's way into a creative and philosophical sphere. However, it is also necessary to keep in mind that the only way to develop such a language goes through getting familiar with the male dominated literary canon so that woman can face man's representation of woman and then assert her own representation of herself. Thus, woman should betray her so-called nature that is determined by the patriarchal system in order to cross the boundaries that surround her within the limited space she is allowed in. For Rita, this is also the first step she needs to take in order to educate herself. She needs to be familiar with the literary canon

that is dominated by the male authors who also control the language that is used. As Patrocínio P. Schweickart (1986) asserts, "The feminist inquiry into the activity of reading begins with the realization that the literary canon is androcentric, and that this has a profoundly damaging effect on women readers" (p. 40). In the beginning, the first novel Rita borrows from Frank is E.M. Forster's *Howard's End*. Her education begins and continues with male authors until the very end of the play, and this shows us Frank's tendency to associate literature with male authors as well as woman's need to become familiar with the male authority in the literary canon so that she can raise her voice later on.

Upon their discussion on "packing it in" Frank questions Rita why she has enrolled in if she is still in conflict about what she wants. Rita answers, "Because I wanna know" and upon being questioned about what she wants to know, she says she wants to know everything (Russell, 2001, p. 8). In this dialogue what is obvious is Rita's hunger for knowledge. In the patriarchal society, woman's hunger for knowledge is generally replaced by her maternal functions like bearing and rearing babies; therefore, she is not supposed to feed her own identity with literary or philosophical knowledge. Her so-called nature demands her to act as a womb which means she is doomed to be a tool for the male procreation, and her creative function is restricted to child-bearing. However, Rita does not want to be restricted to what is pre-determined for her; on the contrary, she dreams for freedom out of this imprisonment both as a working class member and a woman. Her wish for freedom becomes more obvious when she questions, "God, what's it like to be free?" (Russell, 2001, p. 9). Rita is not free as a working class woman, and she dreams about freedom that would enable her to find her own self. And the only possible way to have this independence she seeks is to change, and this change should come from inside.

Working as a hairdresser Rita observes woman's wish for physical change, and she becomes critical of this claiming that, "But these women, you see, they come to the hairdresser's cos they wanna be changed. But if you want to change y' have to do it from the inside, don't y'? Know like I'm doin'" (Russell, 2001, p. 14). She sees the reality about woman's position, and she understands that the ultimate solution lies within an inner change for woman. When women come to the hairdresser's, they expect too much according to Rita because each wants to leave as a completely different person, however, the change in the hair or physical appearance does not bring any changes for woman's problem in the patriarchal society. That is why as a working class woman who is suffering not only because of being a woman in a masculine order but also because of her financial and cultural position in her class, Rita seeks her inner change through reading and eventually writing objectively so that she can raise her own voice within this male-dominated canon.

Rita is also a woman whose pre-determined destiny in the patriarchal structure dooms her to be a wife and a mother while her working-class background forces her to work outside the home in order to contribute to her family financially. Her position as a woman necessitates her to have a baby, however, although everyone expects her to do so, she says she does not want a baby yet. Thus, she deceives her husband saying that she has stopped taking pills although she has not. The explanation she gives in order not to have a baby shows that Rita's primary purpose is about herself and her position as a woman. She says, "See I don't wanna baby yet. See, I wanna discover meself first" (Russell, 2001, p. 15). As a woman, Rita's role has been pre-determined for her by patriarchy but she does not want to be subordinated by this fate, and she tries to change it via educating herself in an intellectual way. Through her reading and writing, Rita aims at discovering her lost self and voice as a woman under the masculine domination.

Rita's quest for her identity causes many problems in her relationship with her husband. In the beginning Rita tries to explain her husband what she is struggling for and why. However, all her attempts end up being in vain because when she says she wants "a better way of living her life", her husband answers, they might begin saving money in order to move to a new house in Formby (Russell, 2001, p. 16). Her reading and watching something different drives her husband mad since he cannot understand the real reason behind her discomfort. Her search for a new self does not mean anything for a man who thinks that they should have a baby now. Having a better house with babies is more than enough to make a woman happy from man's perspective, however, Rita cannot be satisfied with that, and she begins a discovery in order to seek her right to choose. However, while she is trying to obtain the right to choose, this process disturbs her husband Denny deeply that she cannot even study at home, and she has to write her essays at work. When she talks about Denny's reaction to her studies, she says, "It makes me stronger comin' here. That's what Denny's frightened of" (Russell, 2001, p. 36-37). Rita realizes that man is afraid of losing his pre-given power and authority in the patriarchal system if woman begins searching for her free self which cannot be controlled. This is actually what Denny feels about Rita's education. He is completely disturbed by her addiction to this education since he is aware that she is getting more conscious of her identity and directly more powerful.

Thus when Denny finds out that Rita is still taking pills not to have a baby; he gets completely mad and burns all her books and essays. Rita's more subjective purposes as a woman disturbs her husband extremely since she does not act properly according to the family structure in society. In "Women's Time" Julia Kristeva (1986) argues about woman's sacrifice in the patriarchal society and claims that the new generation of women has begun to revolt against this sacrifice. Kristeva asserts that, "The new generation of women is showing that its major social concern has become the symbolic contract as a sacrificial contract... And we consequently face a mass phenomenon – that they are forced to experience this sacrificial contract against their will" (p. 200). It is possible to mention Rita's name within this new generation of women Kristeva is alluding to since she is also in a struggle against this symbolic contract that forces women to sacrifice themselves in order to serve for the well-being of the other sex. Her rejection of having babies is obviously her first step that she takes towards obtaining a free self that is not based on the expected sacrifice. Rita's refusal to exist for others becomes obvious when she tells Frank how Denny has burnt all her books. She emphasizes how she is busy finding herself and that is why she cannot even have an affair with somebody else because having an affair means that she will forget about herself for the sake of him. While she is talking about her discovery inside, she focuses on her/self, and she says although this might sound selfish, the only thing she is interested in is what she has begun to find in herself (Russell, 2001, p. 39).

In her struggle to obtain her free self, Rita replaces her expected function as a woman to bear babies with her ambition to read and learn more in order to become an educated woman who can raise her voice against the socially constructed gender roles and woman's sacrifice. Focusing on Rita's choice of literature over having babies to fulfil her maternal function, it would be useful to refer to Julia Kristeva's (1986) argument about woman's choice of literature when she tries to answer the question of "Why literature?" as follows:

This identification with the potency of the imaginary is not only an identification, an imaginary potency, as a far too normative view of the social and symbolic relationship would have it. This identification also bears witness to women's desire to lift the weight of what is sacrificial in the social contract from their shoulders, to nourish our societies with a more flexible and free discourse, one able to name what has thus far never been an object of circulation in the community: the enigmas of the body, the dreams, secret joys, shames, hatreds of the second sex. (p. 207)

Kristeva (1986) asserts that a woman reader's identification with the imaginary world of literary texts stems from her wish to overcome the barriers that are set up in front of her. The social contract necessitates sacrifice for woman while man is allowed to fulfil his identity. Thus, Kristeva claims that this identification in literature presents new worlds for women in which they can define their bodies, pleasures, joys and hatreds at the same time (p. 207). Before enrolling in the Open University, Rita's devouring pulp fiction shows us her over-identification especially after she reveals that she has named herself after her favourite fiction writer. This can be analysed as her escape from the social contract that dooms her to self-sacrifice. She accepts that she has always had this feeling that she lacks something important in her life, however, each time she has tried to overcome this feeling via buying some new dresses. This is completely similar to what other women she is being critical of do when they try to change themselves at the hairdresser's. But now, after she decides to change herself inside, Rita says she has not been buying new dresses for twelve months, and she will not have one until she becomes acknowledged enough to pass an exam (Russell, 2001, p. 22).

Frank claims that Rita should learn objective criticism in order to succeed in her struggle, and he begins teaching her how to be objective in her criticism supported by references to "established literary critique" without including any sentiments (Russell, 2001, p. 22). But the important aspect of this process of getting educated by Frank is that Rita is absolutely absorbed in the male dominated literary canon reading male authors. Jill LeBihan (2001) also focuses on the lack of women writers in English departments in her article titled "Feminism and Literature" claiming that until the 1980s English literature departments at British Universities were extremely dominated by the works of the male authors. She continues to assert that even though a few female authors like George Eliot and Jane Austen were taught, this teaching had nothing to do with the feminist issues. Within this male authorized canon, feminists were generally dealing with the representations of women in the works written by men; these works, Jill claims, shaped the definition of woman "by representing women as sexual objects rather than politically powerful subjects"; thus "women receive a version of femininity and womanhood that is perpetually limited and therefore limiting" (p. 129). Also Rita's way towards a more critical self goes through her knowledge of literature dominated by men.

Discussing woman's reading, and the subject-object relationship between a text and its reader, Patrocinio P. Schweickart (1986) focuses on the imasculation of women via reading male-authored texts. Arguing whether the text manipulates the reader or the reader manipulates the text to make meaning, she highlights how the male texts affect the woman reader in

her reading process. Eventually she asserts that, although some feminist critics believe that male texts have damaging effects on the woman reader, actually women themselves become the agents of their own immasculation via reading, and their autonomy in this process cannot be ignored. She questions what it means for a reader to take control of the reading experience:

Recall that a crucial feature of the process of immasculation is the woman reader's bifurcated response. She reads the text both as a man and as a woman. But in either case, the result is the same: she confirms her position as other. Taking control of the reading experience means reading the text as it was not meant to be read, in fact, reading it against itself. Specifically, one must identify the nature of the choices proffered by the text and, equally important, what the text precludes – namely, the possibility of reading as a woman *without* putting one's self in the position of the other, of reading so as to affirm womanhood as another, equally valid, paradigm of human existence. (p. 50)

From this perspective, even the feminist critics cannot avoid reading androcentric works because literature in the patriarchal structure is dominated by the male authors. Therefore, Schweickart (1986) asserts, by the time a woman becomes a feminist critic, she has already read various androcentric works. Throughout this process of the female inclusion within the male literary canon, the woman reader becomes immasculated. However, as Schweickart emphasizes, it is not possible to think of women as mere victims of patriarchy in this process; on the other hand, it is unavoidable that women end up being the agents of their own immasculation via their attempts to pave their way into the male dominated literary canon. When the woman reader reads male texts, as stated above, she reads both as a man and as a woman. In both cases, either when she reads as a man or as a woman, she has the same consequence of approving her position as the other. However, what she actually needs to succeed within this process of reading is to assert herself as an autonomous another that exists with her own worth and values. For Schweickart, this is possible by means of reading the text against itself focusing on what it includes as well as what it excludes (p. 50). In Rita's case, her immasculation begins at the moment when she prefers reading and educating herself into a more philosophical way of life instead of having babies as a proper wife. Her devouring pulp fiction in a feminine manner is shifted towards a more male reading of male texts under the guidance of Frank who provides her with the major texts of the male authors. However, the fact that Rita chooses to read also as a man does not only mean that she completely ignores her femininity in order to be absorbed in the male literary canon; on the contrary, this is the way she chooses in order to assert her own identity that is as valid as the male one.

On the other hand, while Rita is trying to educate herself in order to seek for a female self that is not pre-determined by the patriarchal structure; she also tries to find the meaning of life which the working class people are devoid of. Thus it would not be enough to assert that the barriers in front of her that prevent her discovery of self are established by the subordination of woman. As well as being a woman in the masculine order, Rita also comes from a working class background which makes her conditions even more difficult compared to other women in the upper class. Thus her fight is not only against patriarchy but also against the working class life that is devoid of a meaning and a proper culture. Beginning with her desire to go to school as a child, the shallow perspective of her mates and her family that "school could be anything" other than useless" turns out to be a clear example of the lifestyle she has been forced to adopt within the environment she has grown up (Russell, 2001, p. 21). After she decides to educate herself in order to free her restricted identity both as a woman and a working class member, her first criticism about E.M. Forster's *Howards End* that she considers as crap stems from her subjective dislike with the author who says, "We are not concerned with the poor" (Russell, 2001, p. 23). Here Frank indicates that she is being completely subjective with this approach, and if she wants to be an objective critic, she has to learn to analyse the texts from an objective point of view. During this process, Frank emphasizes that "Devouring pulp fiction is not being well read" and he tells her she needs to be more selective while reading (Russell, 2001, p. 30). However, for a long time until the very end of the play, Frank is the one who chooses what to read for Rita, and, as has already been stated, what he chooses is always a male-authored text.

During the process of education, Rita also fights against the meaninglessness of the working class life she has been pursuing. Thus, she is not only struggling against the subordination of woman but also against her social background. In her discussion of patriarchy Sheila Rowbotham (2006) refers to the working class women who lack the opportunities the upper class women have. She claims that:

It has often been said that as women we have come to know that the personal is 'political' because we have been isolated in the personal sphere. I think this is only half the story. We *were* isolated in the personal sphere, but some of us were hurtled dramatically out of it by the expansion of education and the growth of administrative and welfare work, and while some (working-class and black women) were never so luxuriously confined. (p. 55)

Although the restriction of woman within the male-dominated culture cannot be ignored, the differences among women themselves should not be disregarded, either. So, while considering Rita's case and her struggle to search for her free self, it is clearly not enough to analyse her position only as a woman without referring to her social background. As Rowbotham points out above, the circumstances of the working class women differ from the others who have at least the comfort and luxury of their financial status.

Thus, Rita does not only search for a free female self but she also tries to find the meaning of life which the working class people lack. When she talks about *Peer Gynt* to one of the women at the hairdresser's, the woman thinks it is a new perm lotion. However, when Rita tells about the play, the woman says, "I wish I could go off searchin' for the meanin' of life" (Russell, 2001, p. 35). Contemplating about this wish, Rita asserts that although the working class people seem to be content with what they have, they are actually not deep inside because there is no meaning in their life. Despite of their better positions compared to the past, she claims, "there's like this sort of disease, but no one mentions it" (Russell, 2001, p. 36). There is a disease in this part of society, but nobody dares to mention or do something about it; therefore, Rita appears to be the courageous one as a woman who can dare to stand against both the disadvantages of being a woman in the patriarchal system and a working class member in a capitalist society. She ceases to pretend any more as others do, she understands the reality behind what is visible especially when she sees her mother who begins crying just after she sings in the pub claiming that they could actually sing better songs.

Rita's entire attempt is to sing better songs through her education in literature and philosophy. She does not want to join the dinner at Frank's house because she does not want to be mocked as a silly woman who tries to learn. She wants to become as serious as those educated men and women from the upper class so that she can raise her voice among them in order to be heard, and she works hard for this purpose. When Frank claims it is enough for her to be herself, she answers, "I don't want to be myself. Me? What's me?" (Russell, 2001, p. 52). Both as a subordinated woman and a working class member, she is devoid of the meaning of life as well as an independent self that can enable her to make individual decisions. Nevertheless, she cannot keep her silence against this fate, and she makes her first important decision not to go on living as emptily as she has been doing until she is twenty-six. Although her husband Denny claims hers is not the age to get educated, she insists on her own decision.

Considering Rita's insistence not to conform to her pre-determined fate, it is possible to conclude that she does not accept to be the tool of her own victimization as a woman. In "Feminism and History" Judith M. Bennett (2006) indicates that:

Women have a large part to play in this historical study of patriarchy, not merely as victims, but also as agents. Women's support has always been crucial to the endurance of patriarchy; hence, we must examine and understand the motivations of women who have colluded in their own oppression. (p. 67)

The belief that women are fragile beings and the pre-determined space is the safest one for them which protects them from the dangers outside has been imposed on women who have ended up admitting their subordination for the sake of safety instead of dangerous freedom. However, in Rita's case, she makes her most important decision when she has to choose between her education and her matrimonial life. One day she comes home to find her case packed by her husband who forces her to choose. Eventually Rita makes her choice of education to have her independent self sacrificing her family life. That means Rita rejects to be the agent of her own victimization under the masculine order. Denny's fear that Rita gets more powerful as she attends the courses with Frank is eventually realized when Rita makes this important decision leaving her so-called safe home for the dangerous outer world without being afraid of her vulnerability.

In the beginning of Act II when Rita is back from the summer school in London, she is in a new, second-hand dress. This dress on her shows the change she has been through as a result of her reading and writing. Especially after the summer school, Rita appears to be a woman who can contemplate and talk about important works of art in an objective and critical way. Even her new house and her flatmate Trish appear to be the symbols of the big change in her life; she has a room now full of plants and books like Frank's office. She even attempts to alter her voice in order to talk properly. On the one hand, as Rita changes towards Frank's lifestyle as well as thinking style; on the other hand, Frank begins to change towards Rita's old way of acting and thinking. While Rita can understand the difference between pulp fiction and serious literature now, Frank begins to think that *Rubyfruit Jungle* is an excellent book. This shift in the roles of Frank and Rita becomes obvious when Rita sits "in the armchair by the window, reading a heavy tome" and Frank "enters carrying his briefcase" (Russell, 2001, p. 68). Clearly the roles are shifted between Frank and Rita, and eventually each becomes a teacher for the other. While Frank teaches Rita how to be an objective and critical reader, Rita teaches Frank how to be more

sentimental and subjective judging the education system. Hence, Frank concludes that he wants to change his name to Mary Shelley; in a way, he compares himself to Frankenstein who creates a monster. Frankenstein is also very enthusiastic with what he intends to create in the beginning, however, upon seeing the monster that is born, he runs away not to see him again. He cannot even dare to look at his own creature. In Frank's case, as he helps Rita change in the way she wants, he himself changes, and consequently he cannot tolerate seeing Rita in her new existence that is dependent on nobody.

As a result of her education process Rita fulfils her search for an independent self in order to make her own choices. Discussing the self-less existence of woman under the domination of patriarchy Sandra M. Gilbert and Susan Gubar (2000) point out that:

Whether she becomes an *objet d'art* or a saint, however, it is the surrender of her self – of her personal comfort, her personal desires, or both – that is the beautiful angel-woman's key act, while it is precisely this sacrifice which dooms her both to death and to heaven. For to be selfless is not only to be noble, it is to be dead. A life that has no story is really a life of death, a death-in-life. The ideal of "contemplative purity" evokes, finally, both heaven and the grave. (p. 25)

Obedying the patriarchal structure that confines woman to the domestic sphere asserting that the outer world threatens her safety, woman sacrifices her identity. Eventually if she chooses to be protected, she does it at the cost of her independent self; thus, she becomes selfless and dependent. All her desires and pleasures are sacrificed for the male protection, however, this safety dooms her to a passive and repetitive lifestyle which lacks a philosophical and critical approach to life. As Gilbert and Gubar also point out, this sacrifice causes her to die while she is still alive because this lifestyle does not allow her to be actively creative. Within these circumstances Rita seeks for a rebirth which she believes she might have via education. As a result, she is capable of claiming her free self in order to choose for herself without being dependent on either a husband or a teacher. At this moment, she gets furious with Frank because he also tries to shape her according to his own ideas, and he cannot tolerate her thinking differently. She does not want to be dependent on anybody, what she would like to do is to make her own reasonable decisions without being bound to anybody else. As Frank goes on calling her Rita, she announces that there is nobody left who calls her Rita any more. Frank's reaction to this is whether she has changed it to Virginia, or Charlotte, or Jane, or Emily (Russell, 2001, p. 79). For the first time in the play, Frank utters the names of famous women writers in British literature, and this gives hope about Rita's future as a woman writer.

The most important aspect of Rita's change is that now she can choose what she wants to do. In the end of the play she emphasizes the importance of this difference saying, "I dunno. I might go to France. I might go to my mother's. I might even have a baby. I dunno. I'll make a decision, I'll choose. I dunno" (Russell, 2001, p. 83). Then she puts on the new dress Frank has bought for her, and this is a dress an educated woman would have. In her new mood and new appearance, Rita's life completely changes. She has so many options, and obviously she is happy to have the luxury to choose without obeying the pre-determined decisions for her. Now, she might even have a baby because it would be her own wish not somebody else's. Consequently, Rita's cutting Frank's hair in the last scene of the play can be regarded as man's emasculation by woman's creativity. Frank who has represented the male dominated philosophy and literature throughout the story is eventually emasculated by a woman who is able to raise her voice after getting familiar with the dominant male voice in literature.

The early discussion in this paper about the Cartesian dualism between the mind and body each represented by each sex ultimately results in woman's subordination as the lacking other who does not have the potential to think critically. However, this so-called defection of woman is actually not natural but constructed by patriarchy in order to serve man. The woman whose voice has been silenced by the male domination in literature first needs to have a familiarity with this male-dominated literature in order to raise her own voice as an objective and critical reader and writer. This is what Rita experiences during her education studying the male authored texts chosen by Frank, however, eventually she causes Frank to utter the names of women writers which shows a hopeful sign for Rita's future as a reader and writer. In the end, when she cuts Frank's hair, she also proves her power over him via attempting to give him a new appearance. Thus, the woman that has represented the body on which man's mind operates claims her own self not only as a passive body but also as a creative intellect. Consequently, the muted woman is able to raise her voice by claiming her own independent identity.

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## Student Engagement in Fostering Quality Teaching in Higher Education

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### Abstract

*Student engagement should be one of the most powerful drivers for improvement of quality teaching in higher education. As students are direct beneficiaries of quality teaching, they are able to provide crucial feedback not only on what works well but also on what they would like to be done differently and how. The paper presents results of research related to students' perception of course Accounting Information Systems (AIS) and way of its implementation at the Faculty of Economic - University of Mostar. At this course lectures include many opportunities for active student engagement through cooperative learning activities (debates, team work, and presentation of project results). The authors developed two questionnaires in order to investigate the students' understanding of AIS course at the beginning and at the end of lectures. At the first class students completed a questionnaire about their expectations from AIS lectures (content, their engagement, learning activities, learning outcomes, assessment) and at the last class they completed another questionnaire about their real experiences related to AIS lectures. Research has been conducted for last two years and it enabled authors to use its results to tailor lectures in accordance with student's expectation and accordingly to improve teaching process.*

**Keywords:** student survey, student evaluation of teaching, teaching quality, student engagement.

### Introduction

Last decades it has become obvious that citizens of an increasingly complex community, country and globalized world need the skills, critically reflective processes and creative approaches in order to cope successfully. Education institutions are urged to prepare students for entry into this competitive environment by equipping them with appropriate skills, knowledge, values and attributes. There is a strong drive to build and create knowledge together with an understanding of working life and reformulate the concept of knowledge in education institutions. Namely, education institutions, especially higher education institutions, are bound to provide quality teaching that leads to learning outcomes and, above all, added value for their students.

In Learning and Teaching, the traditional teacher centred, transmission model of learning adopted by the 'sage on the stage' (McWilliam, 2007; referenced by Martin, 2010) has gradually begun to change to a more facilitative approach to teaching that is learner centred and where the teacher becomes the 'guide on the side'. Barr and Tagg (Barr, Tagg, 1995; referenced by Martin, 2010) see this shift from an 'instructional' to a 'learning' paradigm as changing the role of higher education institutions (HEI) from a 'place of instruction' to a place to 'produce learning'. Given greater democracy in learning, McWilliam (McWilliam, 2007; referenced by Martin, 2010) suggests that the teacher can become the co-creator of new meaning making.

Today's higher education institutions are complex organisations under high pressure from different directions and fostering quality teaching is a daily challenge for them. Although most universities have developed teaching and learning strategies, they still struggle to implement them and effectively assess their impact on the learning experience. It is hard to find

way to match overall learning needs of students with curriculum development and to ensure programmes are relevant for students living in a globalised world.

Quality teaching is a complex issue and it requires the overall commitment of the entire institution:

- *Institution level* - policy development, support for organisation and internal quality assurance systems.
- *Programmes level* - comprising actions to measure and enhance the development, content and delivery of academic programmes.
- *Individual level* - initiatives that help teachers achieve their mission, encouraging teachers to innovate and support improvements to student learning and adopt a learner-oriented approach.

In the framework of international project Tempus CCMLL (Curricula Modernisation and Long Life Learning Centre), University of Mostar developed *Handbook for teaching programme and curricula development*. Handbook consists of two parts. In the first part are explained and described learning outcomes, competence and student oriented teaching. In the second part is presented methodology for development of teaching programme and curricula at University of Mostar. Model of teaching programme development at University Mostar includes following elements (Rezić & Višekruna, 2012):

- Existence of appropriate resources.
- Existence of need for specific teaching programme identified through consultations with internal and external stakeholders (academic staff, students, business, public institutions, non-governmental organizations and so on).
- Well defined profile of teaching programme.
- Defined set of expected learning outcomes expressed as field and generic competences.
- Defined end described academic content (knowledge, understanding and skills) and structure (modules and credits).
- Adequate strategies of teaching, learning and identification of achievement in order to realise expected learning outcomes.
- Adequate system of evaluation and quality assurance, especially focused on coherence of teaching programme and its compatibility with qualifications framework.

The research presented in this paper is result of process of evaluation and quality assurance related to teaching process, especially focused on students' perception of course Accounting Information Systems (AIS) and way of its implementation at the Faculty of Economic - University of Mostar.

### Student engagement in teaching process

The field of student engagement encompasses theory, practice and policy. It is huge and varied, with a significant history of publications in academic journals, published syntheses of literature (Trowler 2010; Trowler and Trowler 2010 referenced by Healey et al. , 2014); edited anthologies of case studies and articles (Nygaard et al. 2013; Bryson 2014; Dunne and Owen 2013a; Solomonides, Reid and Petocz 2012; Little 2011 referenced by Healey et al. , 2014); and nationally commissioned studies and reports (Little et al. 2009 referenced by Healey et al. , 2014).

As a concept, "student engagement" is ambiguous and contested (Healey et al. , 2014). Within learning and teaching it can be divided into two broad areas:

- Student engagement as the way in which students invest time and energy in their own learning,
- Ways in which students are involved and empowered by institutions to shape their learning experiences, both inside the classroom and beyond (Kuh et. al. , 2007 referenced by Fry et al. , 2015).

Kahu argues that problems in the definition of engagement stem partly from the conflation of the state of engagement, its antecedents, and its consequences (Kahu, 2013 referenced by Fry et al. , 2015). Engagement involves the student, the teacher, the institution and the learning context. It is a "meta-constructor" that brings together various threads of research on student success (Fry et al. , 2015).

The common strands around student engagement are (Fry et al. , 2015):

- Institutional characteristics,
- Student characteristics,
- Setting high expectations,
- Identity, belonging and social interaction,
- Students managing their learning,
- Feedback and assessment,
- Teaching.

There is a strong correlation between these different strands (Kahu, 2013 referenced by Fry et al. , 2015).

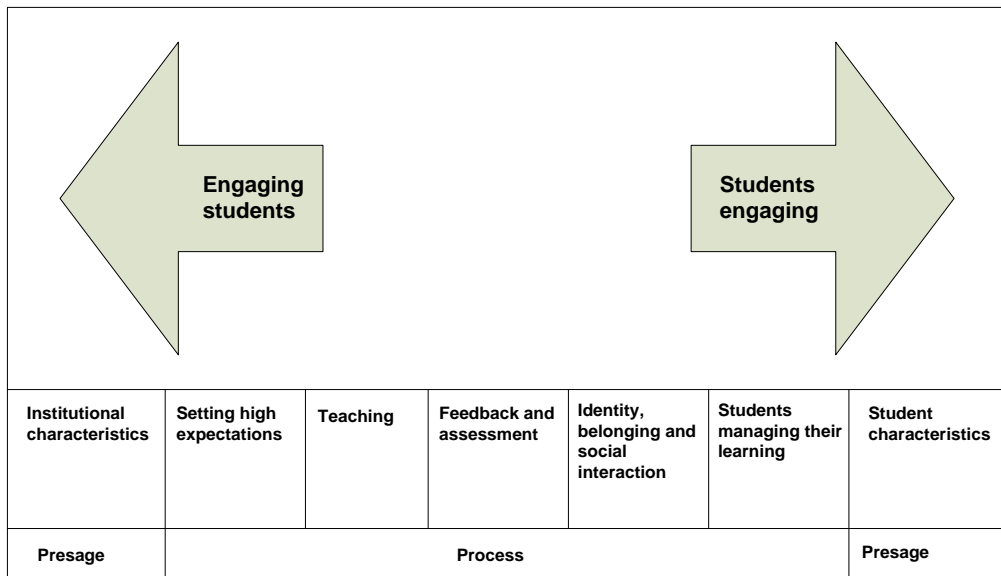


Figure 1. Engaging students (Fry et al. , 2015)

In Figure 1. is presented the continuum of student and institutional efforts to improve engagement, from clear institutional responsibilities at one end, importantly student responsibilities at the other, and joint engagement in the middle (Fry et al. , 2015). Figure 1. shows that it is not all down to the teacher, or to the student, or to the institution.

### Student engagement and quality teaching

Many authors stressed that teachers are key players in fostering student engagement (Akey, 2006; Garcia-Reid et al. , 2005). They work directly with the students and typically are the most influential in a student's educational experience. Creating a culture of achievement in their classroom, developing interactive and relevant lessons and activities, and being encouraging and supportive to students are all ways in which teachers can foster student engagement in the classroom.

Also, student engagement is most powerful as a driver of quality teaching when it involves dialogue, and not only information on the student's experience. As students are the intended beneficiaries of quality teaching, they are able to provide crucial

“customer feedback” not only on what works well but also on what they would like to be done differently and how (Hénard & Roseveare, 2012).

In order to ensure that student engagement will lead to quality teaching, HEI should encourage and define a clear role of students in fostering quality teaching. One of the first steps on that way is building up trust between HEI and students by involving students in developing the teaching and learning framework and ensure that it incorporates what quality teaching means for them. Also, it is necessary to develop the capacity of student bodies to become reliable partners when consulted on teaching matters or when serving as representatives on relevant committees. Institutions should develop reliable instruments and techniques for gathering and using student feedback and convince students that institution will acted upon their feedback. When the teachers are in question, HEI should provide professional development for teachers to learn how to use student feedback most effectively to improve their teaching practice and provide incentives for programmes that implement methods to engage students in relevant and active learning, e. g. new curriculum, project-based learning, new methodologies, active learning classes, cooperative programmes, etc. (Hénard & Roseveare, 2012).

## RESEARCH METHODOLOGY

During the two academic years (2013/2014 and 2014/2015) the authors conducted empirical research on a convenience sample of bachelor students at Faculty of Economics University of Mostar who attended the course Accounting Information System (AIS). The aim of research was to investigate the students' perception of AIS course and way of its implementation. The authors developed two types of questionnaires and students fulfilled one at the first class – at the beginning of lectures, and the second at the last class – after the lectures and all activities related to continuous students' assessment (tests, project and seminar activities) were finished. The first questionnaire was about students' expectations from AIS lectures (content, their engagement, learning activities, learning outcomes, assessment), while the second questionnaire was about their real experiences related to AIS lectures. Data were analyzed in Microsoft Office Excel 2007 and expressed in absolute and relative frequencies (%).

## RESEARCH RESULTS

### The initial questionnaire – Students' expectations of the course AIS

In the first questionnaire students were asked to express their opinion about the course content. The question was open-ended. Also, through this questionnaire authors tried to find out whether the students looking for information about the course, either by asking older colleagues about course, or by themselves browsing Internet and looking for information about AIS. Distributions of students according to researched items in the years of research and in total are shown in the Table 1.

Table 1. Distributions of students

Group of students	2013/2014		2014/2015		Total	
n	46		45		91	
Students looking information about	yes	no	Yes	no	yes	no
the AIS course, generally	25	21	25	20	50	41
the modalities of assessment at AIS	20	26	20	25	40	51
the teaching materials for AIS	16	30	15	30	31	60
the literature for AIS	9	37	16	29	25	66
A type of instruction at AIS	10	36	23	22	33	58

Group of students	2013/2014		2014/2015		Total	
n	46		45		91	
Students looking information about	yes	no	Yes	no	yes	no
the necessity of AIS' class attendance	16	30	20	25	36	55

Results presented in Table 1. Shows that slightly less than half of the respondents did not even asked other about the course and they were expecting to be introduced with everything during lectures. It is interesting that when it comes to looking for information about AIS on the Internet almost all students have said no. Only six students stated that they had used Google for collecting information about "Accounting Information System" and 9 indicated that they are looking for other materials related to the course, too.

Expectations related to the teachers and the course is examined through the open questions. Some of the answers are shown in the Table 2.

Table 2. Some of students' expectations

Expectations of teachers (professor and assistant)	Expectations of teaching (lectures and exercises)
<ul style="list-style-type: none"> <li>• To be accessible for consultation</li> <li>• Try to explain everything and help us with ambiguity</li> <li>• Transfer their course knowledge to us on the best way, the lecture are interest and supported by examples from practice</li> <li>• Good clarifications</li> <li>• Do not be boring</li> <li>• To be interesting</li> <li>• The performers are friendly and collegial</li> <li>• Help in learning course content</li> <li>• A lot of new information and interesting things</li> <li>• To be fair and do not require much of us students</li> <li>• A lot of new information and interesting things</li> <li>• To be fair and do not require much of us (students)</li> <li>• To clarify and approach the subject matter of the course</li> <li>• Sufficient engagement and collaboration with students</li> <li>• To strive, to be always available and to have an understanding</li> <li>• Clearly explain without 20 lessons in a one lecture</li> <li>• Cooperation and delivering of quality knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Teaching is understandable to all students so they would be able to successfully pass this course</li> <li>• Introduction of accounting on practice</li> <li>• Understanding of the course and acquire new knowledge of AIS</li> <li>• To understand the content through practical examples</li> <li>• To learn and to master everything we needed for exams</li> <li>• Expect interesting lectures and exercises, team work, practical work</li> <li>• Successfully pass examination</li> <li>• To master the teaching material of the course</li> <li>• Lectures should be as specific and interesting as possible, and the exercises should adequately prepare me for the exam</li> <li>• To learn as much as possible</li> <li>• Facilitate understanding of the course</li> <li>• Much knowledge and practice</li> <li>• Passing exam</li> <li>• The acquisition of basic knowledge of AIS</li> <li>• That it will arouse interest for further investigation, study and learn about the AIS</li> <li>• Easily mastering accounting by using IT</li> <li>• Full schedule</li> <li>• Acquire new knowledge</li> <li>• To be interesting</li> </ul>

<ul style="list-style-type: none"> <li>• The fair and proper attitude towards the subject and students and to help students to increase their knowledge</li> <li>• A quality approach in the form of interesting and useful lectures</li> <li>• Detailed and understandable explanation</li> <li>• Professional approach and help</li> <li>• In order to see their desire to teach us something new</li> <li>• That will teach us by presenting their practical experience</li> <li>• To be patient</li> </ul>	<ul style="list-style-type: none"> <li>• More practical work on computers</li> </ul>
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As it is evident from the above responses, part of them refers to the substance of the AIS, and part on the communication and interaction of stakeholders - teacher, assistant and students. The students were also asked about their opinion related to the organization of teaching process. They asked what kind of activities they expect in lectures and exercises: ex-cathedra lectures, practical work, a combination or something else. The majority of students, in both generations, pointed out that they expected combination (84. 8% in generation 2013/2014 and 75. 5% in generation 2014/2015). In accordance with this, only few students stated ex-cathedra lectures and practical work separately (approximately 12%), even none in the generation 2013/2014. More than 90% of students from both generations indicated that they expect the lectures abound with numerous practical examples through which is easier to understand the theory. Related to involvement of students, most of them expected a combination of individual and team work. Of course, there are a few of them who were only for individual work, and those who would like to settle all in the team. According to the students' opinions, the ratio of individual and team work should be 40%: 60% and the ratio of theory and practice 50%: 50%. From these ratios we can indicate the responsibility of students, because they recognize the importance of individual work and theory, not only teamwork and practical examples. It shows that their aim is not only to pass the exam but to acquire knowledge and skills that they will use in their future career after graduation.

### The final questionnaire - rating and review of course AIS

As highlighted in the methodology of the survey, after the end of the semester students through the second questionnaire have expressed their views about the realization of teaching process - they have commented organization, teachers, their success, and quality, what they learned and so on. At the second questionnaire the students were asked whether AIS course met their expectations and why. More than 90% of students answered yes. They believe that continuous work and their involvement are essential for successful realization. Students pointed that fact that at the beginning of AIS class they were asked about the expectations and organisation of the lectures and exercises, means a lot to them. It showed them that they are active stakeholders in the educational process.

According to the students' responses, the most common reasons for their high satisfaction with AIS course were: 1) because I learned something new, 2) because I could participate in class and prepare for the final exam, 3) because at the end of the semester I had passed the exams and get good mark, 4) because we worked differently than on the other courses, 5) because the continuous work is more interesting and different from the realization on the other courses, 6) because I had low expectations, but now I have a general information regarding AIS and realized its importance for company, 7) because we have taken the exam on interesting and unusual way, 8) because we were able to actively participate and present our ideas, 9) because there was no ex-cathedra lectures, students were constantly involved in the work and communication, 10) because in the team were only acquaintances not friends so working with them I made new friends. Last reason was worth additional explanation. Namely, one of the goals was that through the active and continuous work and collaboration, students learn to work in teams. Teachers started from the assumption that after graduation, when find the work, students will be in contact with different people (active, slow, innovatory, lazy, disciplined, etc. ) and they will need to cooperate with them if they want to succeed in their jobs. At the beginning of AIS class teams of five students were formed randomly. Their good grades and successfully passed the examination show that students managed to organize and collaborate well.

Of course, some students have pointed out what they didn't like, what is the lack of this kind of work and what should be improved for future generations. Among the disadvantages they mentioned: the physical space and a weekly schedule of lectures.

Weekly schedule is related to the organisation of lecturers at the level of the entire faculty and it is hard to influence on it. But, physical organization is a good observation. The classrooms are mainly organized for ex-cathedra lectures. Professor standing in front of students and teachers. Since the course is based on student involvement, the hall should be organized in another way. The goal would be that all see each other, but considering that the group has about 50-60 people it is a little difficult. So it would be nice to make work-tables for each team that would enhance their internal interaction in lectures.

In order to understand the expectations and desires of students, they were asked to evaluate their satisfaction with the realization of the AIS course. The results are shown in Table 3.

Table 3. Students' satisfaction with the realization of the course AIS

No	Item	Group	M±SD		
			2013/2014	2014/2015	Total
1.	Course content		3,94±0,53	4,36±0,34	4,15±0,43
2.	The content of exercises		4,28±0,58	4,38±0,32	4,33±0,45
3.	Course Organization		4,00±0,63	4,45±0,56	4,23±0,59
4.	Organization exercises		4,06±0,64	4,45±0,55	4,26±0,59
5.	Examination method		4,21±0,98	4,64±0,45	4,43±0,71
6.	Grading standards		4,04±1,00	4,41±0,70	4,23±0,85
7.	Practicality of Course		4,04±0,69	4,56±0,61	4,30±0,65
8.	The independence of students		4,17±0,70	4,78±0,59	4,48±0,65
9.	Satisfaction with College		3,96±0,75	4,59±0,57	4,27±0,66
10.	The degree of fulfillment of expectations		4,04±0,78	4,58±0,59	4,31±0,68

Graph 1 was used to better present the differences in means (Table 3. ).

Graph 1. Students' satisfaction with the realization of the AIS

From the data presented in the Table 4, and even better from the Graph 1, it can be seen that the means are relatively high, all above the mark 4. Comparing the ratings for the two analyzed years, it is evident that the means increased in 2014/2015. Namely, after the first year in which a new way of realization of the course (continuous student engagement) was introduced, the survey results were analysed in detail. Accordingly, some changes were made for the next year (2014/2015): more detailed practical work was introduced, students were more involved in the discussion, students got greater freedom in preparing their presentations, and direct student engagement was raised. Also, students got for more detailed instructions for their tasks and structuring tutorials by lessons which each group solves, so they were better prepared than former generation. Therefore higher students' satisfaction with AIS course in the year 2014/2015 could be expected.

## Conclusion

The findings of conducted research confirm the importance of students' engagement in teaching process. Also, results of research stressed the necessity of surveys among students, related to measures of students' satisfaction with quality of teaching process, with way of organisation and realisation of lectures and with a teachers' approach to course. But, surveys could not be an end in itself. The results of surveys should be carefully analyzed and appropriate actions taken. There is one interesting fact related to presented research – the questionnaires were better filled and students freely expressed their opinions in 2015 than in the first research conducted in 2014. The reason could lay in fact that in 2014 students had no experiences in such kind of surveys and they were unsure about potential consequences of hearty answers. Research showed that students asked their colleagues about their experience related to AIS course, so information through word of mouth obviously encourage students to freely express their opinions in 2015.

Research showed that students were looking for and appreciate when they were asked about teaching process and ways of its realisation, and of course, when saw that their opinions were analyzed and respected, meaning when saw that teacher tries to adapt teaching process and adjust it with their expectations and abilities.

Obviously, it is necessary constantly be alerted to students opinions and attitudes and ensure their engagement in teaching process, starting from course planning till the final realisation and assessment.

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## Religious Education in Greece - Orthodox Christianity, Islam and Secularism

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### Abstract

*This study is an attempt to address the issue of religion in the public sphere and secularism. Since the Eastern Orthodox Church has been established by the Greek constitution (1975) as the prevailing religion of Greece, there are elements of legal agreements- which inevitably spawn interactions- between state and Church in different areas. One such area is Religious Education. This article focuses on Religious Education (RE) in Greece which is a compulsory school subject and on two important interventions that highlight the interplay between religion, politics and education: firstly the new Curriculum for RE (2011) and secondly the introduction of an Islamic RE (2014) in a Greek region (Thrace) where Christians and Muslims have lived together for more than four centuries. The researches are based on fieldwork research and they attempt to open the discussion on the role of RE in a secular education system and its potential for coexistence and social cohesion.*

**Key words:** religious education, secularism, curriculum, Islam, public sphere

### Introduction

This article is focused on Religious Education (hereafter referred as to RE) in Greece and the ongoing debate that is taking place within the Greek public sphere. A debate that involves public education, citizens' rights, the relationship between the church and the state, the country's peculiar historical relationship with Turkey, the identification of Islam—in the collective narrative—with “Turkish Islam,” the presence of indigenous Muslims in Thrace since the Ottoman era, the country's policies on public education and particularly the subject of RE, and the emergence of an ever-increasing radicalism within the public sphere of a part of the populace, which derives from the austere economical situation of the country, massive immigration, high unemployment, and the manipulation of citizens' fear and misery by extreme political and/or religious groups.

Furthermore, the discussion will point to a new issue that has arisen with the introduction of a course on Islam in the Greek state school system—specifically in the region of Thrace, where many Greek Muslim citizens live—, and the attendant heated debates as well as the related minority options of state policy on this issue, and the political antagonism between Greece and Turkey and how that affects this specific community in Greece with its multiple identities.

### Religion in the Public Sphere

Analysis of the role of religion in modern society is closely linked with the process of secularization and the theory (or theories) that interpret it. Secularism is a multidimensional process that goes back to the historical conditions surrounding the formation of the modern state and the loss of religious power via political legitimatization. As a concept, it appears with various meanings depending on the perspective of the researchers who analyze this notion, primarily theologians, philosophers, sociologists, and jurists. Grace Davie has attempted to identify the significance of religion in the modern global order and to rethink the predominant ways of thought concerning the place of religion within secular societies. Looking at the history of Europe, Davie concludes that is not immediately clear what exactly the notion “theory of secularism”

means; at the same time, she underlines that it is quite clear that the sociology of religion must admit that religious experience and religious changes have their impact on societies. Without devaluing all aspects of the notion of secularism—viewing, for example, the legal separation of religion and state as a “healthy” stage of modernism—, she concludes that secularism does not necessarily entail the marginalization of religion to the private sphere nor even the diminution of religious practices. Davie argues that if we want to understand secularism and globalization, we have to take into consideration humanity’s complex and continuous relationship with religion. She maintains that it is possible for society to be both religious and secular (Davie, 2007, pp. 160, 224-243).

It would be argued that modern European societies are at the same time secular and religious, with the possible exception of the French *laïcité* (Bouretz, 2000, p. 58); but even this *laïcité* today suffers at the practical level from the public demands of French Muslims. Secularization is therefore part of a broader political process, the main feature of which is the affirmation of the individual as the subject of political rights and obligations. Among these rights, one which stands out is freedom of thought and religion, which, in order to be fully implemented, requires, from a legal point of view, the separation of Church and State.

The spectacular return of religion to the European public space is due, mainly after the 1990’s and especially in the 21<sup>st</sup> c., to the demands of faithful Muslims within secular societies, and the confrontation of issues concerning “public Islam and the common good.” (Salvatore, 2006, pp. 543-561). Therefore, secular European states are facing new issues that have been raised with the emergence of Islam’s public demands within secular “western” countries.

Similarly, European education, with diverse models in each country, faces the challenge of finding ways to promote the peaceful coexistence of various religious identities in the public space and is thus called upon to manage multiculturalism and multireligiosity in schools. In the European area there has been a dialogue for inter-religious and intercultural education since 2001. Moreover, the Committee of Ministers agreed to a policy recommendation (CM/Rec(2008)12) that all member states should include the impartial study of religions within the curricula of their school’s systems. This recommendation which incorporated ideas from the *White Paper on Intercultural Dialogue*, gives a compelling cultural argument for the study of religions and legitimacy for a compulsory RE. It should be mentioned that its principles provide intercultural dialogue and its dimension of religious and non-religious convictions as significant factors for the development of tolerance and cultural coexistence (Koukounaras Liagkis, 2013a). In 2014 The Council of Europe published *Signposts* as an aid for policy makers, schools and teacher trainers in member states to enable them to interpret and act upon the 2008 recommendation from the Committee of Ministers on teaching about religious and non-religious convictions (Jackson, 2014).

The above raise the controversial question: What are the educational policies of secular states towards their multireligious citizenry (Muslims, Jews, Hindus, Sikhs, non-religious, etc.), and how is the issue of the majority’s religious identity expressed in educational, political, and religious terms? Religious diversity can operate as a cohesive bond or a divisive factor between citizens, and in the case of Islam, what do European Muslims, as well as the newly arrived immigrants, desire for themselves? Is there only one will, and how can secular states satisfy the many different religious tendencies within their societies and support a capable educational system?

These questions are only the beginning of a series of questions, both old and new, that pertain to most of the countries of Europe and especially the countries of the Balkan Peninsula, which has been seized by the most intense religious, political, and territorial antagonisms throughout the nineteenth and twentieth centuries, during and after the collapse of the Ottoman Empire, and where much of the so-called “old” Islam, an inheritance from the Ottomans lives (Ziaka, 2013). According to Tsioumis (2011), the case of Greece “could not be excluded from the attitude of modern-nation states of the Balkans, where ethnic identity developed as opposed to the identity of the ‘other’ and this reality has also affected the management of minority—and majority we could add—educational policy”. The emergence of new nation states also relied, particularly in the case of Greece, on collective memories and traditions about their lost homelands, their resistance to the efforts of Islamisation, the Orthodox faith’s contribution to the preservation of Greek literature, language, culture, and identity (Molokotos-Liederman). The consensus view seems to be that the Greek state is deemed as a case study regarding the secularization process (Prodromou, 1998).

### Greek state schools and Religious Education: old debates under new realities

Greek state schools require RE to be taught in each of the six years of secondary education for two hours per week, while in the upper primary grades RE is offered, from the third grade until the sixth. The framework for RE in schools is provided by the basic Law for Education (1566/1985) which requires that all students on a mandatory basis have to have been taught the 'authentic' tradition of the Orthodox Church (article 1, paragraph 1). Besides article 13, paragraphs 1-2 of the constitution guarantee the basic right to freedom of religion and associate it with the development of religious consciousness. Moreover, according to Law 1566/1985 the state has to provide RE to any religious community who wants to organize its confessional RE on condition that 5 students apply for it. Since 2013 only the Catholic community has been a case in point and in their case they only applied to have their own RE teachers though they have followed the official Curriculum and textbooks of Greek RE from 2003 onward. Of course, every student has a right to be exempted from RE through an application, which must be signed by the two parents, arguing that he has reasons related to other doctrines, religion or religious consciousness, in general (Koukounaras Liagkis, 2015). What is important to stress at this point is that, according to personal fieldwork research, Muslim students in Greece who are immigrants and they do not live in the region of Thrace (north part of Greece) do not likely apply for exemption from RE.

In primary education, those who teach RE are primary school teachers who have not received any special RE training during their university education; in secondary education, RE teachers have graduated from one of the country's two Theological Schools (Athens, Thessaloniki). RE focuses primarily on the Christian faith and Orthodox tradition; Students also are taught about the other major world religions, with two extended sections placing special emphasis on Islam in the textbook of the 2<sup>nd</sup> grade of the Lyceum (Ziaka, 2009). Some but not many references to Islam are in the RE textbooks in primary school and high school/Gymnasium (Primary: 4<sup>th</sup> grade, a photo, p.46, 6<sup>th</sup> grade, a section (33). High school: 1<sup>st</sup> grade, a text, p. 78 and 2<sup>nd</sup> grade, a photo. p.83). In both primary and secondary classes textbooks dominate, since the Curriculum (2003) has remained a content-focused designed Curriculum containing content basically derived more from 'Theology' (related to a particular religion and faith) instead of 'Religious studies' (related to different religions, cultures and traditions). Every teacher is free to extend their teaching to other religions, speaking largely in historical terms about the three monotheistic religions and their historical and cultural encounters with one another. The teachers are Greek civil servants and are not controlled, or appointed by the Greek Orthodox Church and the same holds true for university professors of theology.

All the above were forced to change with the emergence of new realities within the country, and the drafting of a new curriculum for the "New School," as the whole project was named by the Ministry of Education, beginning with the 2010-2011 academic year. The Pedagogical Institute, with the support of the Ministry of Education, developed a new Curriculum and a pilot program for the RE (as all the other subjects of the Curriculum). The pilot program which was organised initially to run for the 2011-12 school year was extended for one year and then more until the June of 2015. Until today there is no certainty, as it is stressed below, that the new Curriculum will be implemented or that there would be changes at least on the current RE Curriculum (2003).

The new Curriculum though is not confessional is still an open Christian Curriculum, with only a 10% of its content dedicated to the study of world religions. The Curriculum, mainly derived of the British experience, defines the inclusion of epistemological, theological and pedagogical approaches, remaining a compulsory subject of the Greek school curriculum. The foregoing discussion implies that the Curriculum has two main characteristics: a) It avoids equating Religious Education with Theology as did all the previous curricula and b) It fundamentally provides a basic constructivist approach to teaching and learning about religions focusing on learning not on teaching. (Koukounaras Liagkis, 2015; Karamouzis, 2011). This approach which has given rise to criticism from the more traditionalist theologians and religious educators who are strongly influenced by either one or the other underlines that it offers new pedagogical tools to the older Curriculum, such as that of interaction between students and teacher, and many other positive developments. Without undermining the older Curriculum it rendered interesting facts but in an outdated and old-fashioned way, in which both the teacher and the student are controlled by the mediating textbook, a static piece of material, which was often unclear and tedious for the student, while the new Curriculum place the student at the center of the teaching process with new pedagogical methods. Thus, the pedagogical methods employed in the new Curriculum are much friendlier to both the students and the teachers, providing more than one interactive choice per lesson, and the possibility of independent study on the part of the students with the facilitation—rather than the necessary intervention—of the teacher, thus the students' recollection of other information sets, experiences, and skills are related to an ecumenical view and understanding of the world, geography, ecology, the

environment, and others which are rightly associated with RE. Furthermore, some Greek researchers lend support to the claim that “the New Pilot Curricula (RE and Greek language) promote the education of the students without social, economic, educational, religious, or cultural discriminations and inequalities. Both cases are marked by an effort to promote the principles of intercultural education within the pedagogical framework where the Curricula are implemented.” (Mitropoulou, Rantzou, & Anagnostopoulou, 2015).

That reform spawned a maelstrom of criticism that continues to gain strength, taking, however, away the essence of the project and contributing nothing to a competent presentation of the material in the new Curriculum (i.e. the texts of the *Curriculum* and the *Guide for the Curriculum*) in the school community or within the broader public sphere. At the same time, the failure to take into account society's changing needs and the insistence on a religious “primitivism” (Kairidis, 2008) runs counter to class on religion itself. It is commonly accepted, even by the Hierarchy of the Church of Greece, that the character of the RE “in the framework of the overall program of education should not be ‘catechetical,’ ‘confessional,’ or ‘religious studies’ in the absolute sense, nor should these exclusively define its content” (Anthimos, 2013).

Unsurprisingly, RE teachers have been divided into the supporters (progressives) and the non supporters (traditionalists) the new Curriculum. Trine Stauning Willert, with a long standing research on Greek Orthodox thought and society, notices that between theologians and RE teachers in Greece two views and types are identified: “The first used a traditionalist agenda envisioning Orthodoxy as the essence of Greek culture and a return to the ‘good old days’ through a revival of Orthodox values in education. The other took contemporary Greek society as a key point of reference advocating the Orthodox theology and Orthodox values are compatible with a contemporary outlook which can contribute to society as it really is today and not as it should be or as it, supposedly, was in ‘the good old days’” (Stauning Willert, 2014).

The issue remains open until now; the new Curriculum has not been implemented yet. With regard to political initiatives, which are constantly changing due to political uncertainty and political opportunism, this is a debate which has been underway since 2009 onwards and in which three tendencies can be observed relative to RE. The first is that of technocrats, who are skeptical about the usefulness of RE, and—in light of the general spirit of austerity—were inclined to cut the “unproductive” religion classes. This attitude characterizes also a portion of the anti-bailout (memorandum) politicians and citizens on the left, who display their ideological prejudices on the topic of religion. On the other end of the spectrum, we find a caustic ethno-religious rhetoric, which is supported by right-wing forces and groups of Christians, theologians, and others, including some leading ecclesiastical figures (Zoumboulakis, 2013). In the middle, there are a group of theologians, citizens, religious leaders, the Institute of Educational Policy and also a group of politicians who are trying, without exaggerating, to reshape RE in Greece and prevent social conflicts.

### Introducing Islamic RE in the Greek State Schools

In recent years (since 2013), a part of the current political leadership, i.e.: the General Secretary of Religious Affairs has seemed amenable toward the aforementioned changes, and is trying to reconcile all the various forces by preserving RE within the state school system while also updating it in the light of the new social challenges. The General Secretary of Religious Affairs of the Greek Ministry of Education has, also taken a step further with the initiative to introduce an optional Islamic RE in the Greek state schools of Western Thrace, where the Muslim minority of “old” Islam lives according to the Lausanne Treaty (1923). They are entitled to their bilingual educational system but as the Minority schools, especially High Schools, could not satisfy all the applications due to different reasons (big number of students, limited linguistics skills concerning the Greek language and societal reasons), an increasing number of Muslim adolescents register at Greek Secondary schools. Bearing in mind that situation someone could conclude that the initiatives above-and mainly with the introduction of Islamic RE in the state schools- are aimed primarily at safeguarding the non-instrumentalization of the minority by the Turkish policy through religion in the region and also to start preparing the field to the growing religious, political, and social needs of the Muslim immigrants, by creating an atmosphere within the state Greek school community that is friendly toward Islam and works against stereotypes and Islamophobia.

In order to move forward with this initiative, a committee, including Muslim citizens of Western Thrace, was appointed for the “improvement of the educational system of the religious (Muslim) minority of Thrace” with the main aim to investigate the ways of the best possible and most effective application of the provisions of Article 53, entitled “Teachers of religion of the Muslim minority of Thrace, and the improvement of education for Muslim children in the public schools of Thrace,” of

Law 4115/2013 (FEK 24/30-1-2013), which was composed by Ministerial Decree 27147/A3/27-02-2013. At the conclusion of its meetings in mid-November 2013, this Committee recommended to the Ministry of Education, among other things, the appointment of another special committee to write the textbooks for the Islamic RE. In accordance with the RE Curriculum, the Islamic RE will consist of two hours lessons per week. One hour of reading the Qur'anic texts in Arabic, and one hour devoted to the class on Islam in Greek. The issue of language has primarily led to debate and tension within a part of the Muslim community, which calls for the teaching to be in Turkish. But this would be a paradox for the Greek educational system, especially when there are already the so-called "minority schools" as well as two madrasas in the cities of Komotini and Echnos, where pupils enjoy the right to be taught specific lessons in the Turkish language, including the class on religion. Furthermore, after almost two years of inauguration and implementation of the optional Islamic RE, it is increasingly understood, by a large part of local population in Thrace, that the communication of religious diversity in a common language and school environment, may remove the perplexities and controversies, and lead to a constructive conversation within the public sphere (Ziaka, 2015)

Nevertheless, a part of the political left, specifically some components of the SYRIZA party do not support the introduction of the Islamic RE in the Greek public school system, as much as they generally oppose the teaching of religion in schools, prioritizing instead the safeguarding of human rights within the secular state. There is also a lively discussion about the identity of the Muslims of Thrace, the marking of multiple and often crossing identities (Sebba & Wooton, 1998)—specifically whether or not they are all purely Turkish—and their right to their mother tongue within Greece. Of course, the preservation of their "mother tongue" is guaranteed by the Lausanne Treaty (1923), but its teaching is implemented to the minority schools (Tsitselikis & Mavrommatis, 2003), with the Turkish language to be the predominant one in education and the expense of the two others non written languages (Pomak and Roma).

This why, the issues of minority education in Thrace are regulated under the provisions of the Treaty of Lausanne (Articles 40, 41, 45), which provides for the religious, linguistic, and educational freedom of religious minorities, both in Greece and Turkey. Issues regarding minority education are also dealt with by the Educational Protocol of 20.12.1968, which is still in effect. Essentially, this opened the way for the infusion of Turkish national identity into the Muslim minority of Western Thrace and its discussion until today (Trubeta, 2001, pp. 41-42; Trubeta, 2003). Since 1930, and particularly between 1950-1970, Turkey was directly involved in minority education, through the sending of books, funds for the construction of schools, teacher education, etc. The Greek-Turkish Agreement of 1951 (20 April) connected the minority even more with the Turkish state (Mavrommatis, 2006). The Treaty of Lausanne was further complemented by provisions in the Greek-Turkish Protocol of 1968 (Educational Protocol between Greece and Turkey, 1968), and the Agreement of 2000 (Ministerial Decree G2/933, 3.3.2000 [FEK B 372, 2000]: Timetable of forms A, B and C of Minority High Schools) (Tsitselikis & Mavrommatis, 2003, pp. 28-31). The Greek-Turkish educational protocol of 1968 included adjustments regarding the language of instruction, the Turkish language, audio-visual aids, school textbooks, etc.

On this legal basis, compulsory primary education is provided by the minority schools in a bilingual program (six years' duration, as in state education). In Greek, the students are taught history, environmental studies, geography, and the Greek language, while in Turkish they are taught the Turkish language, natural sciences, mathematics, and religion. When gymnastics, arts, and music are not taught by specialized teachers (as is the case, for example, in the small schools in the Rhodopes mountains), they are taught by the Muslim teacher. In the Rhodopes mountains, therefore, primary education takes place exclusively in the minority schools, as opposed to the urban areas, where the minority and state elementary schools coexist.

## Shifts in the number of minority elementary schools in Thrace

**Table 1**

Province	Xanthi	Rhodope	Evros	Total
Elementary Schools (2004 - 05) (Liazos, 2007)	76	135	21	232
Elementary Schools (2014) (Regional Directorate of Primary and Secondary Education/Eastern Macedonia and Thrace)	52	92	15	159

Minority Secondary education in Thrace operates, by law, with: one Gymnasium (3 years compulsory high school) and one Lyceum (an optional 3 years school after Gymnasium) (Cümülcine Celal Bayar Lises) in Komotini founded in 1952; one Gymnasium and one Lyceum (İskeçe Muzafeer Salioglu Azinlik Ortaokul ve Lises) in Xanthi founded in 1964; and two madrassas, one in Komotini, and one in Echinos of Xanthi. Since 1999, the madrassas in Komotini and Xanthi have moved from a five-year to a six-year program (Ministerial Decree G2/5560 of 25-11-1999). These madrassas follow the same program as the minority secondary schools, except that additional courses with religious content are taught, such as: Interpretation of the Qur'an, Arabic Language, Islamic History, Imamhat etc. (Ziaka 2009, pp. 168-171). Recently, the committee for the improvement of the educational system of the Muslim minority of Thrace proposed, among other things, the examination of the reform of the school schedule, with a RE specialized program of 17 or 18 hours for Gymnasium and the first grade of Lyceum, 14 hours for the second grade of Lyceum, and 9 hours for the third grade, for a total of 42 hours, based on the model of the state schools for fine arts, music, etc.

The minority secondary schools also follow a bilingual program. The courses taught in the Greek language are: Ancient and Modern Greek, History, Geography, and Civics ("theoretical" courses), while the other courses (the "positive" courses: Science, Mathematics, etc.), together with the Turkish language, are taught in Turkish. It is characteristic that, in the minority schools, apart from the general education courses, all the courses of the positive sciences as well as some technological education (Mathematics and Science) are taught in Turkish. Only theoretical courses—which are usually not an option for students, so they do not apply—and the rest of the technological education courses are taught in Greek.

In the completely Muslim mountain regions of Thrace, there are also five Gymnasias and one Lyceum, which fall into the general Curriculum (in Organi in Rhodope province, and in Xanthi province in Sminthi, where there is also Lyceuml, in Glafki, in Echino, and in Therma). The Muslim students in these schools are taught the course on religion in Turkish, the Qur'an in Arabic, and all the other courses in Greek (Liazos, 2007, p. 117). In the city of Xanthi, there is also a minority Vocational School. All these schools follow the curricula of the state schools.

Without engaging in ideological rivalries concerning the prevalence of the Turkish language in virtually all the minority it could be argued that much of this populace has not been sufficiently trained in the Greek language, which makes the relationship between the state and citizen much more difficult. The critical stance towards the largely outdated educational methodology of minority education that continues to exist in the Greece of the 21<sup>st</sup> century is inevitable, and also the consequences it has, both educationally and psychologically (Askouni, 2011). Indeed, these are some of the reasons that today there is an outflow of students from the Muslim minority schools and into Greek state schools. Particularly after 1996, the percentage of Muslim students who have continued and completed secondary education has greatly increased when compared to previous years. The special quota of 0.5% for the admission of minority pupils to higher education institutions has contributed to this increase. This is an important affirmative action measure for Thracian Muslim students, which essentially offers them an additional 350 positions at Greek universities (AEI) and higher technical institutes (TEI). A further reason for choosing Greek-language education is the prospect for continuing their studies at Greek universities (Ziaka, 2009, p. 170).

Towards this aim and during the past fifteen years, more attention has been given to minorities and the matter of their education than in the past. In addition to the positive contributions of the legal measures referred to above, the Greek Ministry of Education has also undertaken important initiatives, in collaboration with the Greek university community, to work out special professional development programs both for minority educators as well as for many other areas of Muslim education (Androussou, Askouni, Dragona, Frangoudaki, & Plexoussaki, 2011). The program for the education of Muslim children (1997-2008) concerned minority pupils (firstly, primary school level, and to a somewhat lesser extent, secondary-level). They were provided with a series of new books for learning Greek and to assist their integration into the wider environment, not only the Greek but also the European.

The attempt, however, to introduce an Islamic RE into the Greek state schools of Thrace raised many questions and posed several difficulties. The former pertain to conflicts within the Muslim community over the choice of language, i.e., Arabic for the Qur'an and Greek for teaching purposes. The latter relate to the Muslim RE teachers themselves and whether they are ready to teach the Qur'an and Islam in state schools in Arabic, with Greek as simply an auxiliary language, after training at the madrassas and a very brief introductory seminar, which was supported by Thessaloniki's School of Theology, as well as by doctors of Muslim theology and pedagogy, in late September and early October 2013. During this training seminar, personal research stressed that the Turkish language had been partly "sanctified" by the Muslim minority, and at the same time they felt comfortable with the rendering of Qur'anic terms into Turkish. Among the Muslims chosen by the Greek state

to become RE teachers in the state school system (20 during the first (2013) phase and 24 during the second (2014) phase), there is also a broad linguistic amalgam. Some speak Turkish well and know how to read Arabic, but are less adept at Greek, while others, and especially those graduate of the Special Pedagogical Academy (E.PA.TH.)—which aimed at the “education and training of native Muslim teachers,” according to its founding charter (PD 31/1969), but, for political reasons, was closed two years ago—have sufficient proficiency in both Greek and Turkish, but much less in Arabic, even though many of them are graduates of madrassas. Moreover, some Muslim members of the Greek Parliament object to the proposed model, since the creation of new teachers of religion and Imams, who will be educated by the Greek state, will probably cut into the influx of imams and preachers from Turkey but also from other parts of the Middle East, mainly from Saudi Arabia. Egypt used to be also a country of preference, until recently, but not anymore, because cannot provide scholarships as the other two states do. Also critical of the Greek state’s proposal are Muslims Muftis elected from a certain part of the minority, not those Muftis appointed and recognized by the Greek state. The elected Mufti of Xanthi, employing nationalistic rather than theological arguments, warned their fellow citizens who were appointed by the Greek state not to proceed with their jobs, since soon imams will appear without “circumcision” (Gündem newspaper January 16, 2014). Of course in Thrace sometimes the national and the religious compete, and sometimes the religious is identified with the national—such as in the case of the election or appointment of the Mufti and the great debate that began after 1980 about the application of Shari’a law and other, similar issues (Ziaka, 2013). Furthermore, there was a pedagogical view that has fostered debate on the reason Greek state established a confessional Islamic RE in Thrace when at the same time attempted to literally reform the RE in state schools to non-confessional (Koukounaras Liagkis, 2013b). At the same time, another debate has begun regarding the broader public sphere and the minority issues of Thrace. There are the voices of those who are critical of the “hegemonic elite” of the Greek state, and other agents at the region like the Media and the local “elites” (Gkintidis, 2013; Tsibiridou, 2006). There are also other voices who talk about taking responsibility for the teaching of RE within Greek state schools and within a frame of a broader national educational strategic. An initiative who can lead to a mutual understanding of religious “otherness” and non-religious voices, within the local and national context, without abandoning the religious education only to denominational/catechetical circles that they do not share, the most of the times, a public common space for dialogue and even progressive debate (Ziaka, 2015a).

The reality is that, of the 82 teachers of religion, 58 are serving the mosques as imams and the other 24, of which 23 are graduates of EPATH, entered the schools at the beginning of 2014. RE was chosen by the majority of the students, with few exceptions. At the same time a pioneering project entitled “Lifelong Learning Program for Christian and Muslim Theologians of Thrace on Issues Related to the Teaching of Religion, Religious Otherness and Intercultural Religious Education” has started and it is still in process until September 2015. The programme prioritizes, educationally, religious diversity in Thrace as a factor of peaceful coexistence and interaction in the public sphere. The programme was designed by the Aristotle University of Thessaloniki and the School of Theology by the Scientific Responsible Angeliki Ziaka and its aim is to teach religion as a catalyst for a harmonious and constructive coexistence, and not as a source of tensions. Therefore, meetings between Christian theologians-RE teachers in Secondary schools and Muslim RE teachers in Primary and Secondary schools have been held basically on the subject of ‘teaching of religion’, with the additional motive of promoting their acquaintance and mutual support in the public school environment. So far, there have been 390 hours of training in two phases of the program (1<sup>st</sup>: September 2014-December 2014 and 2<sup>nd</sup>: February 2015-April 2015), with interdisciplinary and interfaith approaches, for 65 RE teachers (of the total 90 appointees) and 82 imams and RE teachers of Islam. Already, 140 people have registered for the joint training for teachers of Christianity and Islam that will take place in September within the framework of the program and it admittedly would be the most interesting part for research and evaluation. From the program’s progress to this point, for the sake of discussion some issues would be addressed: The program a) has been welcomed by the educational communities of the aforementioned areas and particularly by our theologian colleagues in secondary education and the teachers of Islam. b) was a good beginning for communication and public debate on the needs and educational priorities both now and in the future on issues of religion and an intercultural approach to them, c) created an atmosphere of trust and communication in the broader public space. d) the optional Islamic RE in the Greek state school of Thrace has little or no drop-outs, and in this sense forms a safeguard for the state school system’s RE with a broader intercultural character not restricted to the narrow confines of emotional and region-based confessional approaches (catechism). The same is also true of the RE lessons in the broader Greek school system (Ziaka, 2015b).

## Discussion

In the light of the Greek situation, that is articulated above, the role of "public religion/s" (Casanova, 1994; Eickelman, 2002) seems more stable, and some understand the role of the religious leaders (Bishops and Muftis) as guarantors of social security within the public sphere of religiously "other" citizens. For still others, religious faith works not "as a means to bridge differences between them (Muslims) and the majority, but rather as a dividing chasm" (Trubeta, 2001, p. 245). Furthermore, secularism in Greece has had a dialectical stance with and dependence on religion/the Church (Kalaitzidis, 2012) in which relationship Islam also has a local presence, even though it has been on the margins of society for decades (Salvatore, 2006, p. 555).

The interplay between religion and the public space in Greece reveals the important assumption that the Greek constitution proclaims not only the principle of "religious tolerance," but also that of "religious freedom." In modern Greece, religion has never been absent from the public sphere, and there is a special relationship between the Church and the State. One of the bases for the relationship between the Church and the State is the Constitution of 1975, which was revised in 1986, 2001, and 2008. It is important to note that the non revised Article 13, paragraph 1, expressly establishes the right of "religious freedom". But as the Eastern Orthodox Church is established by the Greek constitution as the prevailing religion of Greece no one can deny that there are elements of legal agreements- which inevitably spawn interactions- between state and Church and furthermore between groups of citizen or religious communities in different areas. RE is inevitably a crucial factor in that case and therefore state recognition that trying to reform it and adjust it with the European environment- is not always successful. Obviously the question of RE and its role in pluralistic societies is dominant but at the core of the study, however, the question of symbiosis exists and how (some would argue if) religious and non religious people should believe, behave and belong independently and at the same time commonly within the public sphere. Of course European and Greek research examine and illuminate at the same time the inclusive view of religious freedom and the potential of RE.

In such environment, where religion in the public space raises tempers and engenders conflicts, examples of acceptance and respect for religious diversity within the country's academic institutions is of paramount and symbolic importance. The Theological School of Aristotle University of Thessaloniki has already played a leading role in this regard, having since 1970 granted a prayer room to the university's Muslim students guaranteeing safety to every Muslim who wished to pray.

The School of Theology in Thessaloniki, moreover, taking into account all the tension and debate in the public sphere concerning religion generally and Islam specifically, is also moving towards the creation of a research direction of Muslim Studies. The goal of the project is to open the doors to the study of the religion of Islam on an academic rather than confessional basis. In this vein, parallel to the purely Islamic courses (Qur'an, Sunna/Hadith, Tafsir, and Shari'a), there will also be courses on: Muslim tariqa, which has a rich history in the Balkan peninsula; the history of relations between Orthodox Christianity and Islam; and local expressions and understandings of Islam, all focusing on social and cultural relationships and mutual understanding between members of the two religious traditions. Such a project has the support of parts of the academic, political, and ecclesiastical establishments, but also has critics, who view such a project through an ideological spectrum and believe that such a project would open the doors to the Turkification and Islamization of Greece and Europe. Criticism is also voiced by Christian and Muslim citizens and representatives of Christian and Muslim associations about how it is possible for Christianity or Islam to be taught within the Universities without a confessional orientation.

The main question that remains is whether or not to disengage religion from state hegemony and religiously institutionalized hegemony, leaving it therefore with the ability to operate in the public sphere and in civil society, with freedom and creativity as a social and cultural agent. If secularism really exists to emancipate humans from religious authority, would not the words of Tocqueville, two centuries later, apply? "When there is no longer any principle of authority in religion any more than in politics, men are speedily frightened at the aspect of this unbounded independence. [...]" (Hervieu-Leger & Willaime, 2005, p. 74; Van de Putte, 2010, p. 487). Seeing now, however, the state of religion in the public sphere some two centuries later than Tocqueville, it can be concluded that religions will continue to be an integral part of societies. Whether or not the secular and religious institutions find a way to work together will be an indicator of whether democracy itself can continue to be sustained and survive. And, in this case, the relationship is not one-sided, but bilateral.

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## Integration of Science, Education and Industry in the Republic of Kazakhstan in the Context of the Development of New Educational Programs

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### Abstract

*After gaining the independence, the sovereign Kazakhstan has started to actively reform the education sector. Significantly expanding the international cooperation, Kazakhstan gratefully accepted assistance from the European Union and became one of the main participants of many projects aimed at the globalization of education (TEMPUS, ERASMUS MUNDUS, Erasmus +, etc.). After the twenty years of the reforms, the Republic of Kazakhstan has achieved the significant results. Retaining the education fundamentality constructed in the Soviet era, the multinational Asian country has adapted the old education system to the European standards. This is evidenced by the fact that more than 70% of the specialties of the leading universities of Kazakhstan have received an accreditation certificate from the European Union. In the paper, the aspects of the phased formation of a "new" education in the Republic of Kazakhstan are considered. Also, the issue of the integration of the education and the science in the industry is highlighted and the recommendations for the quality implementation of the integration process within the framework of higher and postgraduate education are given.*

### 1. Introduction

Unfortunately, the review of the Kazakhstan activity is poorly represented in the arena of the world publications. There are only individual researches on the demographic situation in the Republic of Kazakhstan ("Kazakhstan 1995", 1997) and on the protection of health (Martin, 1979), and the ethnonational studies of the countries of the former Soviet Union (Brubaker, 2011). Also, there are some articles on the education in Russia (Bittar and Ferreira, 2015; Kozar, 2015; Harris, Jones, Adams, Perera and Sharma, 2014), mentioning Kazakhstan. Sufficiently detailed information about the formation of Kazakhstan as an independent country is reflected in the book ("Kazakhstan. Transition", 1997).

It is necessary to emphasize the Kazakhstan colleagues' works covering the information on the modernization of the higher education in the country. For example, Maudarbekova and Kashkinbayeva (2014) highly detailed considered the issue of the international programs and projects which are implemented in the Republic of Kazakhstan. The importance and the necessity of the entry into the world educational environment were emphasized. Additionally, some recommendations to improve the educational process in Kazakhstan were given.

Aikenova (2014) in her work describes the history of the formation of the new phases of the education in the Republic of Kazakhstan. The processes of globalization caused Kazakhstan become a partner of a Bologna process in 2010 in order

to join the European education space. As a result, the old education system and educational policy in Kazakhstan met new changes: academic mobility of tutors and students, three-level education at universities.

There are articles covering the distance and e-learning education (Kenzhebayev and Dalayeva, 2014; Turumbetova, 2013). Also, some authors analyze the influence of the religion on the education in Kazakhstan (Erpay and Jandarbek, 2014).

In the works by Egamberdiyev (2014), the basic problems faced by Kazakhstan carrying out large scale educational reforms were studied. The result of modernization and the forecast were clearly formulated as well as the weak points of the new higher education were marked.

However, currently there is no data on how the programs of the integration of the science and the education in the industry are implemented. This article focuses on this aspect precisely.

## 2. Prerequisites

The necessity of the close cooperation between the education, the science and the industry is determined by the importance of the knowledge-based economy development. This is especially relevant for the contemporary world, where equipment and technology are updated every day.

To date, the Head of the State Nursultan Nazarbayev (2013) very clearly defines the educational strategy for the country, in which a close partnership of the three components of the economic growth (education, science and industry) is required. At present, in the Republic of Kazakhstan the great attention is paid to the innovative development, and in the conditions of the current global economic situation the factors constraining acceleration of the innovative and technological breakthroughs are primarily being identified. The necessary condition to the implementation of such a policy is the effective use of the intellectual property, especially scientific discoveries and inventions, to enhance the competitiveness and the effective economic development. The leading role in this process belongs to the educational system which must meet the demands of the market and production.

At this point, in the conditions of global economic instability, the necessity to exploit the potential of the production sector has arisen with a view to determine the intensive growth of the manufacturing sector by the education and the science. The implementation of such a process is not an easy task for universities, because the educational institution can use the manufacturing sector only in agreement of the necessary competencies which a graduate of the higher school must have in order to perform high-technology and science-intensive production tasks. The construction of the innovative educational system is the main task of the human capital formation. Such a system should ensure the generation of qualified professionals which are very susceptible to innovation, ready to create and implement the innovative projects, to implement the new ideas in the technological processes, and to easily carry out approbation of the new developments.

## 3. Development of educational programs

Speaking about the creation of a strong partnership of the science, the education and the industry, it is necessary, first of all, to consider the process of the developing the educational programs. Al-Farabi Kazakh National University, as the flagship of the Republic of Kazakhstan, has already started the process of the educational programs modernization in the framework of the integration of universities and research institutes. Since 2014, the KazNU has been implemented the new educational programs to the educational process for the master and PhD students. These programs contain the specially developed disciplines for teaching which the researchers and scientists have being attracted from the scientific research institutes. The present programs have been successfully implemented and come to fruition. The master and PhD students get acquainted with the recent research and developments on the spot and get the knowledge directly from the authors. It could be said that the process of the integration of the science and the education is successfully started. It should continue this trend and to develop the educational programs that would bring together science, industry and education.

It is necessary to conduct the continuation of the process of the establishing the close partnership of the science, the education and the industry, by the change of the educational programs for all levels of the education. It is proposed to change the goals and objectives of the industrial practice for bachelor, master and PhD students without violating the integrity and the fundamental orientation of the educational programs. For example, the formulation of the theme of the final bachelor and master theses for 50% of students should be done with the participation of the representatives from the manufacturing sector. World experience shows that only one expert of 10 students who have successfully passed industrial practice is really required in the production. In Kazakhstan, the shortage of epy qualified personnel is still there, but the employer is not willing to provide all students undergoing practical training with jobs. The special attention should be paid

to this problem while developing the educational programs. It is necessary to provide the student with the fundamental knowledge that will give the student the opportunity of the employment in the different spheres of the production. The view that it is necessary to involve the experts from the production to teaching in the universities, is often expressed. However, this can not be done ever, because this "teacher", as a technologist, will not be able to give the fundamental knowledge on which skills to work with technological tasks base. Undoubtedly, this specialist can give a very valuable knowledge on the process of the production of something or the technology of the process. But in the era when every day the technologies are changed, the information, the technical resources and the software are updated, and the general direction of the economy also can be changed, only the fundamental knowledge may be in the high value. Just the fundamental knowledge will allow the graduate in the case of the loss of the relevance of one production type to become specialist in another sector. Of course, the university should prepare specialists, focusing on the needs of the Kazakhstan market. However, this does not mean that the education and the science should be focused only on the tasks demanded in Kazakhstan. Under globalization, the world economic landmarks should be determined, the focus should be on the knowledge-based industries and the IT sector, and the economy development should march in unison with the advanced technologies, and it is all should be done without giving importance to the possibility of only one state. It should also pay particular attention to that the student should be able not only to develop something new and useful to the global economy, but also should be able to declare copyright and to obtain protective document. In this case, our country will begin receiving more recognition abroad.

At the same time, it is almost impossible for the university to work directly with the production sector, as it is quite difficult for the scientist to identify the range of the production problems that need to be immediately solved. The available experience of the scientific research institutes and the research centers on the definition of the class of the relevant to the country's economy trends of the development can help to attract the employees of the university to the realization of the manufacturing sector problems.

The scientific research institutes always have the close relationship with the industry, and the educational institutions are willing to cooperate with the research institutes. The work of the university through the scientific research institutions with the industrial enterprises and the large holdings will help to organize activities on the establishment of the strategic plans of the production development, to prepare the highly specialized staff at the national level, to increase the scale of the applied research, and to guide the development of the republic's economy.

This process is illustrated in fig. 1 which shows that the university does not have to directly carry out the work with the production organization, because this function should be performed by the scientific research centers. In the words of the Head of the State Nursultan Nazarbayev (2013), it is necessary to create independent centers of proficiency testing so that we produce the professionals which are in demand for the production. The aim of these centers will be to define the range of the problems which solution requires the scientific support and the involvement of the university employees and students to work on such projects. This connection, firstly, will save the important fundamental component of the education, and, secondly, will help to create the favorable environment for the integration of the science and the education in the industry. It is necessary to implement already now the development of the proposed partnership of the science, the education and the industry under the State program of the industrial-innovative development of the Republic of Kazakhstan for 2015 - 2019 years.

#### **4. Information and communication technologies**

Let us illustrate the relevance of the development of such programs by the example of the application of the educational technology in the field of the information and communication technologies (ICT). The development of information and communication technologies is one of the most important factors in improving the competitiveness of the Kazakhstan economy.

Modern information and communication technologies have completely changed the habitual way of the life of all mankind. The new markets and business models to support the input, storage, processing, analysis and presentation of information have appeared, and this process continues to evolve and expand at a rapid pace. The traditional economy based on the industry is now being transformed into the knowledge-based economy. The information technology began to be seen as a means to provide the improvements in the socio-economic conditions and as the tools to achieve the global goals.

The inherent for the sector speed of the development is a problematic point for the development of other sectors based on ICT. Today in Kazakhstan at the state level the great research and practical work on the implementation and development of ICT is realizing. Such transformations affect all sectors of the economy, including the education. For the development

and implementation of ICT, the need for highly qualified personnel appears. Nowadays it is one of the main issues that need to be solved. The sector of the information resources is highly dynamically developing, and requires the constant improvement of the professional skills. Therefore it is important to continuously ensure the advanced training of the personnel and training the specialists on the demanded professions in the higher and special secondary educational institutions.

Creating favorable conditions for the scientific research activities and the implementation of measures and tools for the commercialization of innovative ICT ideas is an important step in the achieving the results of the development of the ICT sector. All this indicates that the time has come for the training of the new format personnel: professionals who are able to create new technologies, based on the fundamental knowledge, to promote new ideas, thus developing IT sector of our country. The training specialists of such a profile is only possible on the basis of the master educational programs focused on obtaining both fundamental knowledge and knowledge of the most advanced ICT, the use of the high-performance systems, the nanotechnology, the new materials, the advanced software, the latest programming technologies, and much more.

Despite the significant scale of taken in recent years measures to support the ICT sector and the implementation of the specific projects and programs of the industrial development of the Republic of Kazakhstan, the following problems remain as the main problems for the training the ICT specialists:

1. the lack of the incentives for the young people to develop and introduce the new technologies;;
2. the dependence of the Kazakhstan ICT market on the foreign one;
3. the low awareness of the students in the secondary and higher educational institutions of the Republic of Kazakhstan on the possibility of the developments in the field of ICT;
4. the low level of the susceptibility of the Kazakhstan business to the technological innovations;
5. the lack of the incentives for the transfert of the advanced technologies;
6. ineffectiveness of the mechanisms for the solution and searching the priority technological problems of the enterprises and businesses;
7. the lack of close connection between the education and the business;
8. the lack of technological and managerial competencies;
9. the underdevelopment of the innovative technologies in the educational system;
10. the imperfection of the control system for the implementation of the innovative projects.

## 5. Acknowledgment

The article was prepared within the project of the government assignment of the Ministry of education and science of the Republic of Kazakhstan «Development of mechanisms to improve quality of postgraduate programs under university autonomy and integration with scientific research institutions in accordance with international qualification standards»

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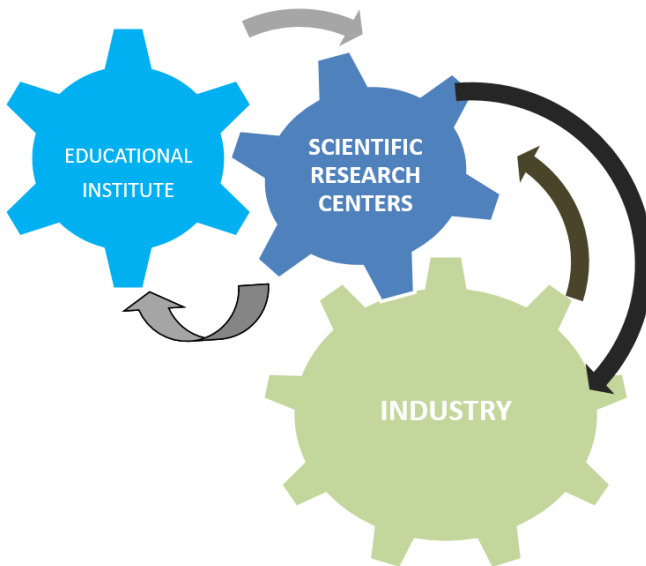
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**Fig. 1.** The connection of the science, the education and the industry

## The Importance of Automatic Thought's Evaluation Through cognitive – Behavioral Therapy in Patients with Generalized Anxiety Disorder

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### Abstract:

*This study will analyze the positive value of automatic thoughts' assessment in patients with Generalized Anxiety Disorder, to improve the symptoms associated with thinkings and emotions. For a disorder "unorganized" as Generalized Anxiety Disorder, where the patient feels anxious from almost any situation and knows not where and when to feel secure, the Cognitive – Behavioral Therapy chooses to use a more structured framework to put in front of reality's evidence. This therapy is considered as one of the most used and highly appropriate to treat Generalized Anxiety Disorder. One of the main principles of Cognitive-Behavioral Therapy is that patients learn to identify, evaluate and respond to their automatic thoughts and dysfunctional beliefs. The aim of this study is to show the importance of automatic thoughts's evaluation mode in patients with Generalized Anxiety Disorder. In this study will be provided essential elements for the selection of these thoughts, to indicate their nature. The research methodology is based on case study, where the basic datas are taken for 5 patients diagnosed with Generalized Anxiety Disorder and treated through Cognitive-Behavioral Therapy techniques. In conclusion it resulted that patients that properly examined the validity of an automatic thought, were able to understand the nature of their thoughts, if they were true or not.*

**Keywords:** Cognitive-Behavioral Therapy, Generalized Anxiety Disorder, automatic thoughts, cognitive conceptualization, adaptive response.

### 1. Introduction.

Anxiety is a special kind of fear. It is an emotional signal that we sense some type of threat. Generalized Anxiety Disorder (GAD) is a diagnosis that describes people who experience strong, persistent and damaging anxiety. While, everyone experiences some anxiety, GAD means that the anxiety has to some extent taken control of you (White, 1999)<sup>1</sup>. The term GAD first emerged with the publication of the DSM-III (American Psychiatric Association, 1980)<sup>2</sup>. At the time GAD was viewed essentially as a residual disorder because the diagnosis was not made if symptoms of panic disorder, obsessive-compulsive disorder, or phobia were present. The fundamental feature of the disorder was "persistent anxiety" for at least one month, with clients also required to endorse symptoms from three out of four categories, including motor tension, autonomic hyperactivity, apprehensive expectation and vigilance/scanning (Dugas; Robichaud, 2007)<sup>3</sup>.

The term GAD is used in the official psychiatric Diagnostic and Statistical Manual of Mental Disorders (DSM-5), where the following diagnostic criteria are outlined:

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).

B. The individual finds it difficult to control the worry.

C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months).

**Note:** Only one item is required in children.

(1) restlessness or feeling keyed up or on edge

(2) being easily fatigued

- (3) difficulty concentrating or mind going blank
- (4) irritability
- (5) muscle tension
- (6) sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)

D. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).

F. The disturbance is not better explained by another mental disorder (e.g., anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive compulsive disorder, separation from attachment figures in separation anxiety disorder, reminders of traumatic events in posttraumatic stress disorder, gaining weight in anorexia nervosa, physical complaints in somatic symptom disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia, or delusional disorder) (DSM-5, 2013).<sup>4</sup>

Cognitive- Behavior Therapy has broad evidence as a powerful intervention for mental health problems in adults. Cognitive – behavior treatments have an empirical base and majority of practitioners, at least in North America, are trained in a scientist-practitioner model (Dobson, 2009).<sup>5</sup>

Automatic thoughts are a stream of thinking that coexists with a more manifest stream of thought (Beck, 2011).<sup>6</sup> These thoughts are not peculiar to people with psychological distress; they are an experience common to us all. Most of the time we are barely aware of these thoughts, although with just a little training we can easily bring these thoughts into consciousness. When we become aware of our thoughts, we may automatically do a reality check if we are not suffering from psychological dysfunction (Beck, 2011).<sup>7</sup>

It is very important distinguishing automatic thoughts from emotions. Many patients do not clearly understand the difference between their thoughts and their emotions. Emotions are of primary importance in cognitive- behavior therapy. People with psychological disorders, however, often misconstrue neutral or even positive situations and thus their automatic thoughts are biased. By critically examining their thoughts and correcting thinking errors, they often feel better (Beck, 2011).<sup>8</sup>

## 2. Understanding anxiety and thinking in GAD.

Anxiety is a prolonged complex emotional state that is often triggered by an initial fear. Fear is at the heart of all anxiety states. Fear is the underlying psychological state that drives the anxiety (Clark & Beck, 2012).<sup>9</sup>

To understand the anxiety it is important to know some of the common effects of anxiety:

### Psychical symptoms

- Increased heart rate, palpitations
- Shortness of breath, rapid breathing
- Chest pain or pressure
- Choking sensation
- Dizziness, lightheadedness
- Sweating, hot flashes, chills
- Nausea, upset stomach, diarrhea
- Trembling, shaking
- Tingling or numbness in arms, legs
- Weakness, unsteadiness, faintness
- Tense muscles, rigidity
- Dry mouth

### Cognitive symptoms

- Fear of losing control, being unable to cope
- Fear of physical injury or death
- Fear of “going crazy”
- Fear of negative evaluation by others
- Frightening thoughts, images, or memories
- Perceptions of unreality or detachment
- Poor concentration, confusion, distractibility
- Narrowing of attention, hypervigilance for threat
- Poor memory
- Difficulty in reasoning, loss of objectivity

### Behavioral symptoms

- Avoidance of threat cues or situations
- Escape, flight
- Pursuit of safety, reassurance
- Restlessness, agitation, pacing
- Hyperventilation
- Difficulty speaking

### Emotional symptoms

- Feeling nervous, tense, wound up
- Feeling frightened, fearful, terrified
- Being edgy, jumpy, jittery
- Being impatient, frustrated, (Clark&Beck, 2012).<sup>10</sup>

The common thinking errors in interpretation are : Catastrophizing, faulty estimates, gross generalizations, polarization, minimization. Catastrophizing is evident when the individual's thoughts focus exclusively on the worst possible outcomes of events. Faulty estimates are evident when the probability of danger is assessed at inaccurately high levels, particularly when the actual probability of danger is ambiguous. Gross generalizations are evident when the danger perceived in one event is applied to other events, without any differentiation between events. polarization is evident when are perceived in all-or-nothing terms of extreme danger or safety. Factors that indicate protection or safety may be minimized or ignored (Rygh&Sanderson, 2004).<sup>11</sup>

The cognitive component of GAD can be modulated with a wide variety of techniques. These techniques include psychoeducation, cognitive restructuring, hypothesis testing, positive imagery, worry exposure, improving problem orientation, cost-benefit analysis of coping and two cognitive response prevention techniques:scheduled worry time and worry-free zones. The cognitive components of GAD are: psychoeducation, cognitive restructuring, worry episode log, guided discovery, decatastrophizing, developing alternative viewpoints, hypothesis testing, positive imagery, worry exposure, improving problem orientation, cost-benefit analysis of coping, cognitive response prevention, scheduled worry time and worry-free zones (Rygh&Sanderson, 2004).<sup>12</sup>

People with GAD haveinconsistent thoughts and can not control them. Therefore, it is important to apply strategies to control thisthoughts. Most of the time, strategies used to control the thoughts from individuals themselves are not effective.

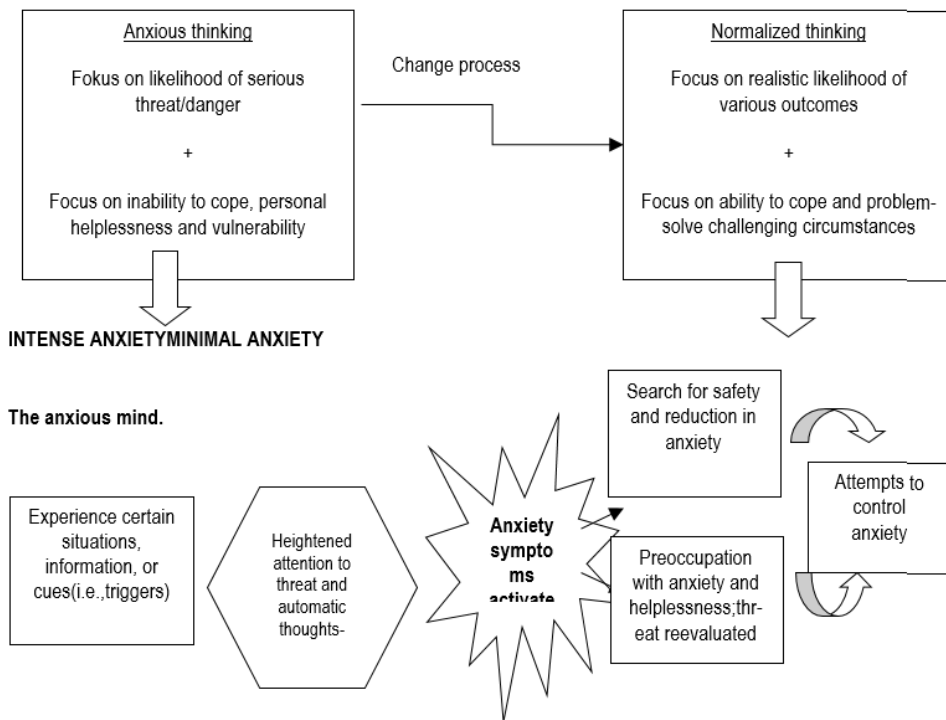
There is a little available research on the nature of thoughts control strategies used by individuals with GAD. However, evidence from other sources suggests that some such strategies may be ineffective and perhaps countproductive. Research with thought control Questionnaire suggests that worry and punishment, when conceptualized as thought control strategies, are associated with emotional disturbances (Heimberg&Turk&Mennin, 2004).<sup>13</sup>

The treatment of thinking through Cognitive-Behaviour Therapy (CBT), theoretical and practical models.

The majority of people experiencing GAD do not seek treatment. They tend to regard themselves as chronic worriers and assume that nothing can really help them. Untreated, GAD tends to last longer and impact a greater portion of a person's life. The traditional treatment stems from Freud's work and maintains that the cause of anxiety is usually rooted in childhood. It is believed that by returning to these earlier issues the client's fundamental conflict can be brought to the surface and resolved. The cognitive part of CBT refers to the power of our beliefs. What we believe about ourselves, our world and our future has a strong influence on what actually happens. The behavior part of CBT acknowledges that real change happens in our life only when we do things differently. There needs to be some kind of action that brings the new direction to life (White, 1999).<sup>14</sup>

One important step of CBT is to identify the negative thoughts. The clients must become aware of their thoughts, the act of metacognition. Some clients are quite "psychologically minded" and understand these ideas fairly quickly, whereas others struggle with some of these notions and exercises. Some clients may object to terms such as dysfunctional or distorted thoughts. The onus is on the therapist to find substitutions that have the same meaning but are more palatable to clients. For example, we may use the phrase "thoughts that make us feel bad" or "thoughts that lead to negative emotions" (Dobson, 2009).<sup>15</sup>

There are many techniques to change the anxiety thinking. From anxious thinking to normalized thinking we must use skills to understand the anxious mind. There are some diagrams to illustrate this shift in thinking (Clark & Beck, 2012).<sup>16</sup>



Exercise for thought monitoring (Clark & Beck, 2012).<sup>17</sup>

A two-step process for learning to catch core anxious thoughts:

- 1- Monitoring the anxious thoughts
- 2- Threat assessment diary.

## Anxiety work plan

Targeted anxiety symptoms	Interventions exercises	Self-help schedule	Outcome
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## PART I. ANXIETY TRIGGERS (situations, etc.)

1.			
2.			
3.			

From the Anxiety and worry workbook, Clark&Beck, 2012).<sup>18</sup>

### 3. The importance of evaluating Automatic Thoughts (AT).

Our thoughts are created by our mind, which is constantly helping us to interpret the world around us, describing what's happening, and trying to make sense of it by helping us interpret events, sights, sounds, smells, feelings. Automatic thoughts can be words, an image, a memory, a physical sensation, an imagined sound, or based on 'intuition' – a sense of just 'knowing'(Vivyan, 2009).<sup>19</sup>

Automatic thoughts seem to pop up spontaneously, they become fairly predictable once the patient's underlying beliefs are identified. Automatic thoughts are usually quite brief and patient are often more aware of the emotion they feel as a result of their thoughts than of the thoughts themselves. Automatic thoughts are often in "shorthand" form, but can be easily spelled out when the patient ask for the meaning of the thought. These can be evaluated according to their validity and their utility. To summarize, automatic thoughts coexist with a more manifest stream of thoughts, arise spontaneously and are not based on reflection or deliberation. People are usually more aware of the associated emotion, but with a little training, they can become aware of their thinking (Beck, 2011).<sup>20</sup>

To evaluate appropriately the automatic thoughts, the clinician first must learn the patient to identify them. There are some important steps to identify automatic thoughts and than to evaluate them.

Eliciting AT – how to identify steps:

1. Heightening the Emotional and Physiological response.
2. Eliciting a detailed description
3. Visualizing the situation.
4. Re- creating an interpersonal situation through role play.
5. Eliciting an image.
6. Suggesting an opposite thought.
7. Uncovering the meaning of the situation.
8. Phrasing the question differently (Beck, 2011).<sup>21</sup>

To conduct a correct automatic thought's evaluation, the clinician must know to identify additional AT, the problematic situation and to recognize the situations that can evoke AT. This could be able with the client's help.

### 4. Method.

The basic datas are taken for 5 patients diagnosed with Generalized Anxiety Disorder and treated through Cognitive-Behavioral Therapy techniques.

Table 1. Patients characteristics.

	All Patients (n = 5)	Treatment with CBT (n = 5)	Practice for AT evaluating (n=4)
Number female	4	3	3
Self anxiety measured	3	3	3
Stabilized on medication at start of treatment	2	1	1
Age	40	40	40
Additional diagnose except GAD Mood disorders	2	2	2

### Measures.

The Anxiety and Related Disorders Interview Schedule for DSM-5 (ADIS-5) - Adult and Lifetime Version (Timothy A. Brown and David H. Barlow, 2014), was used to determine current and lifetime DSM-5 diagnostic status (an abbreviated version focusing on current diagnoses was given for post- and follow-up assessments). The ARDIS-5 includes a clinical severity rating (CSR) for each diagnosis. All assessments were administered by clinic psychologists in their clinic practice.

To the five patient was applied the Self-Evaluation Questionnaire, STAI form Y-1 and Self-Evaluation Questionnaire, STAI form Y-2 (White 1999).<sup>22</sup>

With all the patient were used the techniques for AT evaluation. The questioning to help patients evaluate their thinking:

- Examine the validity of AT.
- Explore the possibility of other interpretations or viewpoints.
- Decatastrophize the problematic situation.
- Regognize the impact of believing the AT.
- Gain distance from the thought.
- Take steps to solve the problem.

The AT are collected by the patients in spontaneous way during the sessions. The important AT distinguished because are in a strong relation with the initial patient's complaint. Very important is to distinguish the true facts. The clinician has to keep in mind that AT are rarely completely erroneous. Usually they content a grain of truth (Beck, 2011).<sup>23</sup>

Example for one case, to see the way how the AT effect all the cognitive construct of the person.

Case 1, female, 38 years old.

AT identified – *"My husband is not interested for my career"*.

1. What is the evidence tha supports this idea?
2. *"He don't ask me what I do every day in my job."*
3. Is there an alternative explanation or viewpoint?
4. *"I don't think so."* – negative
5. What is the worst that could happen?
6. *"If my husband will not be worried if I let the job."*
7. What is the effect of my believing the AT?
8. *"I feel anxious and pessimist."*
9. What would I tell to a specific person?
10. *"I will tell to my husband that I don't care about him."*
11. What should I do?

*"I have to tell him that my career is very important for me."*

After has been seen how the AT effect the patient thinking and believing, the clinician must understand the difference between true or untrue AT. For this aim it can be used the version of A.T.Beck, for typical mistakes in thinking:

1. All-or-nothing (also called black and white, polarized or dichotomous thinking).
2. *Example case 1: "If my husband doesn't ask about my job, he doesn't love me."*
3. Catastrophizing (also called fortune-telling)
4. *Example case 1: "I will be so upset, I won't talk to my husband all day."*
5. Disqualifying or discounting the positive.
6. *Example case 1: "My husband call me many times a day, but he never ask me if I have any problem at job."*
7. Emotional reasoning.
8. *Example case 1: "I have a good relationship with my husband, but I still feel that I'm not very important for him."*
9. Labeling.
10. *Example case 1: "I'm upset, he is disgraceful."*
11. Magnification/minimization.
12. *Example case 1: "When he doesn't ask me about my career, makes me feel very worthless. Having good relationship with him, doesn't mean he's interested in me."*
13. Mental filter (also called selective abstraction).
14. *Example case 1: "Because he doesn't make me many questions about my job, it means he doesn't love me."*
15. Mind reading.
16. *Example case 1: "He think I'm not capable in my job."*
17. Overgeneralization.
18. *Example case 1: "These dissadisfaction can make unfavorable our relationship."*
19. Personalization.
20. *Example case 1: "He doesn't care about my career because I did something wrong."*
21. "Should and Must" statements (also called imperatives).
22. *Example case 1: "It's terrible for me if I don't have my husband's attention all the time."*
23. Tunnel vision.

*Example case 1: "My husband doesn't like my professionalism."*

**To registrate the AT is used the Thought record ( White, 1999):<sup>23</sup>**

Triggering situationAnxiety and other feelingsAutomatic thoughtsWorst outcomeRerate feelings and thoughts

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The uncertainty is one important causefor the appearance of AT. Acceptance of uncertainty can be addressed by working to do the following (William&Knaus, 2008):<sup>25</sup>

1. Accept facts and reality.
2. Accept that you can progressively master methods for overcoming uncertainty fears.
3. Accept that a prime solution involves for uncertainty may prove uncomfortable but is instrumental to positive change.
4. Accept that overpreparation, such as repeatedly going over every possible scenario, supports a misguided view that perfection is the solution for controlling tension.

## 5. Results.

After this process the patient were able to evaluate their AT. Not all of them were able initially to identify them, but after a guided help they could evaluate appropriately their AT. Evaluating the At was helpful for the identifying of emotions too. This was helpful too for the patient's interaction when they play themselves through role play. After identifying and evaluating AT, additional questioning brings to light other important thoughts. The patients, in addition, have other automatic thoughts not about the same situation itself, but about their reaction about that situation. They may perceive their emotion, behavior, or physiological reaction in a negative way.

Among this process it had been seen that the AT could appear before a situation, in anticipation of what might happen, during a situation and/or after a situation, reflecting on what had happened. In addition to being unable to identify automatic thoughts associated with a given emotion, patients have difficulty even identifying a particular situation or issue that is most troublesome to them. Many patient among this process reported interpretations, which may or may not reflect their actual thoughts. The best way in this cases is to guide the patients to report their thoughts. Patients often report thoughts that are not fully spelled out. It was difficult to evaluate a telegraphic thought, so the best way was to guide the patients to express the thoughts more fully. The patients had thoughts about their cognitions, their emotions, their behavior or their physiological or mental experiences. Any of these stimuli engendered initial AT followed by an initial emotional, behavioral, or physiological reaction.

To summarize, the patients was learned to identify their dysfunctional thinking, then to evaluate and modify it. The process started with the recognition of specific AT in specific situations and than evaluate the AT and situation itself.

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## The Attachment Relationship with the Mother and the Exploratory Behavior of the Children Aged 5-6

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### Abstract

*Attachment is the formation process of the emotional and stable relationship between a mother and her child. This emotional relationship starts to grow since the first days of the child's life. The healthy attachment of the child and his/her mother creates the most important bond in a way that the child can be safe, courageous and persistent in his/her behaviors. This study is supported by this kind of perception and it is conducted with children of the age 5-6. There is also presented information, quotes, researches and ideas from education and psychological field for this study. There also presented several behaviors with concrete facts, data, and different experiences from the research who involved a group of children of this age. The aim of this study consists in the fact which affects the child with his/her mother in his psychological formation and his exploratory behavior. The experiment through games was another way for the data collection of the exploratory behaviors of these children. After the collection of these data, their process was elaborated in order to have concrete conclusions for the study. Consequently, these data showed that the healthy attachment between a mother and her child affects positively in his/her social and psycho emotional formation. The relationship between a mother and her child plays a significant role in the multidimensional process of his/her formation. The attachment relationship determines the long-term impact on the psychological characteristics of the children by affecting their worldview and in their perception of social environments.*

**Keywords:** attachment, relationships, children, behavior, exploratory.

### Introduction

The attachment is a significant relationship of the child and his/her caretaker who is usually the mother. Pursuing this idea, every infant develops an attachment bond with the people who take care of it and try to see these people as a source of tranquility and security facing the challenges and threats that come from the environment. The presence of the attachment bond between a child and its caretaker should be universal. These relationships and their quality is affected by the individual differences that some people tend to demonstrate. According to Bowlby the infant builds an attachment bond with the caregiver as long as the person interacts with him and forms an attachment figure. Children will be unattached if they will not have a stable caregiver as in the case of institutionalized children (Cassidy. J., & Shaver.P.R, 2008, pg 78).

Through repeated interactions with the same adult the infant begins to know his/her caregiver and considers him as the primary caregiver. Bowlby and Ainsworth were the first who explicated intensively these early attachments and relationships. They described the infant as biologically predisposed to use the caregiver (usually the mother) as a "safety shelter" and as a "sure foundation" while he/she is exploring the environment. (Cassidy.J & Shaver.P.R, 2008, quoted by Ainsworth,1967; Ainsworth et, al 1978: Bowlby, 1969/1982). When the child feels the threat he/she requires care for protection and tranquility. In fact, Bowlby and Ainsworth the infants balance through exploration and research of attachment when the explorations turn threatening.

The confidence of a child against his care, induces the exploration and competence as a main notion in the attachment theory (Cassidy. J., & Shaver.P. R, 2008, quoted by Bowlby 1969/1982). During his growth the infant should balance the exploratory motivation with the appropriate fear against the danger and the new things, while he becomes acquainted with the new environments and develops new skills. The early childhood, the middle, and adolescence last much more comparing to the animals. Many human behaviours are just games. (Cassidy. J., & Shaver.P. R, 2008, quoted by Lorenz,1977, pg.147). The attachment period provides an intuition of what is necessary to make the child feel safe and without any tensions; an attached and protective figure who responds, who is also supportive, reliable, stronger and more intelligent. Through this kind of nourishing behavior the infant has the possibility to explore the world in a confident way, to

develop warm interactions with the others and to find commiseration to his caregiver ((Cassidy. J., & Shaver.P. R, 2008, quoted by Ainsworth, 1978).

The mother-child attachment is a vital process which establishes the foundation of verbal and nonverbal communication. The attachment is a peaceful and beautiful interaction between the mother and her child because it is the first social-emotional bond, that the child creates with the environment which surrounds it. In this process the child begins the connection with the life, with the people and anything else around. Some studies based on this subject present some information that the well-attached children are more sociable, more communicative, more collaborative and they are also exploratory in their behaviours. It is thought that those are children with a good development in both aspects physical aspect and linguistic, and emotional aspect.

Therefore, this is the reason that my research is focused on, so on the mother-child attachment. The main attention is on this important relationship during the childhood which still remains important even in the future. This attachment bond, in this study, is not observed as a unique issue, but it is closely linked with one aspect of children's development, exploration. Being exploratory, as it will be widely explained in this study, means to have self-confidence and it also means to be concentrated in what you are doing, to face and to be adapted with the familiar and unfamiliar situations. Moreover, you can have interactive skills, self-control and in the same time it is important to be autonomous. These and other features create the healthy attachment.

## 1- The purpose of the study

The purpose of this study is to observe closely and in a detailed way the children's behaviours, actions and interactions, communication, exploratory way in different situations and also the influence on the attachment bond of the child with its mother in their behaviours. My purpose is to explore their behaviours in the kindergarten's environment and to observe how the children create a relationship with the others, how close they are with the unknown people, how much they want to learn and how curious or persistent they are, in order to achieve their own goal.

This observation will be based on the exploratory features of the child, which are as following: stability, attention, curiosity, their way to face with the challenges and unfamiliar situations, reactions and interactions with the mother, with the friends of the group, teachers and with me. It will be also focused on the attachment features that the child has with the mother.

## 2- The objectives of this study

To evaluate the role and the importance of the mother-child attachment, in a real example with the children aged 5-6 years old.

To discover the attachment bond of the child with its exploratory behaviours.

To find out the causes and the reasons of the lack of exploratory behaviours of the children aged 5-6 years old.

To highlight the importance of gender roles in the development of exploratory behaviours of the children.

Furthermore, the objective of this study is not only the evidence of this bond or relationship, but it is also to create the way how it should be worked with the children who are not explorers and they have not developed this important behavioral system for their overall development and growth.

## 3- The research question

- Which is the role of the mother-child attachment in the development of exploratory behaviours of children aged 5-6 years old?
- How does the mother-child attachment influence on the child's psychological development?
- How do the gender roles affect on the exploratory behaviours of the children?

#### 4-The hypothesis

*Children who are well-attached with their mother have a good psycho-emotional development. They are also cooperative, exploratory in their behaviours, communicative, curious and courageous to discover the new things which surround them. (In this case, referring to children aged 5-6 years).*

#### 5-The methodology

In order to achieve the goal of this study, it is conducted a detailed observation in some behaviours, interactions, ways of how children react in different situations when they are in the kindergarten and their attachment bond with their mother. This observation will be based on the exploratory features of the children which are: stability, attention, curiosity, their way to face with the challenges and unfamiliar situations, reactions and interactions with the mother, with his group friends, teachers and with me at including also the attachment features that the child has with the mother by using effective methods which are described below.

Moreover, the objective of this study is not only to make an evidence of this bond, but it is also to find a way how it should be worked with the children who are not explorers and they have not developed this important behavioral system for their overall development.

There are applied all the ethical issues by providing the necessary permission from the child's parents and in collaboration with the teachers of their group. For the realization of this study, I am based on useful literature (literature for the explanation of the Keywords, as well as similar studies related to the issues of my research that support it). The study case is done by reviewing the child's documentation, the child's checklist completed by the mother as well as an interview, semi-structured with the mothers.

The checklist is an instrument that includes a list with topics, objectives, skills, and knowledge that each child will be observed. The main purpose of the checklist is to register a constant evaluation for the occurrences which are observed at the child by testifying and inferring how it completes his tasks or different kinds of objectives. (Mita, N "The instrumental measurements", Modul 2, pg 7). This checklist is also intended to observe and to measure the characteristics of child's behaviours associated with its exploration.

Based on the researches, which are conducted on this concept and features that create it, I am focused on some characteristics that I think are important, which are as following: **1. The stability of the child during his performance on an activity/game and during its interaction with the object/toy.** **2. Eye contact that the child makes with the object/toy that is playing with, or in the cases when another person is near it and suggests and instructs the child how to play.** **3. The child's skills and competences manifested in some behaviours that it develops (being self-confident).** **4. The interaction with his friends and reactions during several activities.** In the checklist these are specified as voices/items that reflect certain behaviours of the child who does them or not completely. Besides the specification of these behaviours, there is even a measuring scale which indicates the frequency of these behaviours performed by the child. There also some comments when it is necessary to specify a special characteristic that attracts attention. The semi-instructed interview.

This interview is one of the instruments that is being used in order to explore the attachment bond that the mother has with her child and her perspective on her motherhood experience. In this interview will be described the essential elements that express the mother attachment.

The questions, used in the interview, are structured in a such a way to provide a sufficient amount of information on mother's feelings from the moment of the detection of pregnancy until the child's actual age. Each of the questions follows a chronological line. They are encrypted in order to analyze the findings of the study. These filmings gave me the opportunity to process better the data received, to have more facts and I can also have more information about the verbal and nonverbal aspects, reactions, concentration, time of the activity, ways of interaction with me, and the eye contact that the child has with the toys and even with me. Moreover, what it's more important, to observe how they have changed their behaviours and reactions from the first to the last game. During the filming, children did not know that they were being filmed and the camera was put in a place where it could not be distinguished by the child's eyes. Games are played in one corner of the class, without the presence of other people, except me and the child. It was needed a circle table, two chairs and toys and items of the game.

I think that there are several factors that have influenced (positively/negatively) on the realization of the experiment which are as following: the child's desire and its pleasure that gets from these games; the change of their daily routine; the child's emotional state before the experiment; the sound/noise of children in the kindergarten, because it was impossible to completely isolate them.

The games were selected after a careful and constant observation of the children's preferences and also based on the information received from the teachers of the group, because they have more experience on working with them. For each of the games there are measured different elements that constitute the child's exploratory behaviour, as well as their application purpose was to bring a clearer profile for each children and a detailed description of their behaviours during the games which leads us to the analysis and conclusions related to the research question.

It is very important to emphasize that through this game, which is one of the activities that provides opportunities for the child to have fun and to learn in the same time, it can be explored more to obtain real and objective data. There are chosen the exact games to make the experiment real, by referring to various studies that have been presented in the literature review in the chapter 1.

## 6- The review of data, analysis

There are collected all the data from the checklists, the experiment and the interviews with mothers which were received from this study.

The checklist, this useful instrument divides the attachment in its four types and each of them has ten specific features. Its measurement scale is divided in two groups: Yes and No, if it is in this way or not for each child. The data accumulated and will be presented in the table for every child.

**Table, Nr.1.**

Nr of checklist	Positive answers (total)	Negative answers (total)
I	13	27
II	27	13
III	28	12
IV	13	27
V	14	26
VI	26	14

The table no.1 shows the total number of the answers (positive or negative answers) accumulated during the fulfillment from the children's mothers. The collection of all these answers create a general idea about the style of the attachment that these children have with their mothers. There will be a summary of the responses for every child in each category and put in the checklist, if they are positive or negative answers. The denomination of each checklist will be created on the basis of the numbers that they have in the table.

Referring to the given answers, it is confirmed that mothers were objective and they did not avoid the main goal of the study. This is evaluated by the time of the questions and this means that the answers were immediate and in a short time. These responses written above, are compatible with the results obtained from the checklist completed again from the mothers and from the observations that I have done during my stay in the kindergarten.

The interview was valid for a better understanding of the child's attachment with the mother and how it has influenced on the general growth of the child. Moreover, with this instrument (interview) it is also obtained the emotional aspect that the

mother presents during the interview. It was actually a fact how these important stages as a mother, are transmitted even to the child because some of the emotions distinguished to the child are quite compatible with the mother's emotions (for example: showing enthusiasm for new things, do not experience high levels of fear and better management of emotions in stressful situations).

The hypothesis set in the beginning of this study was reinforced and confirmed from all the data received. This instrument has enriched the study with real elements as expressions and emotions used by the mothers. This gives me further impetus to achieve new concrete conclusions. Working with children during this period, has made me think that there is a lot to discover and to learn about them because they are also selective when they choose what to show to the others. My goal was to see how it affects the mother-child attachment in order to reflect assurance and encouragement for interaction. I was also interested to explore their behaviour inside the kindergarten, how they could create relations with others, how to approach strangers, how much do they want to learn and how curious or persistent are they in order to achieve their own goal. The kindergarten is an environment that offers natural ways in order to see how these elements are combined to every child. However, there are differences among them because everyone is unique, everyone has his own individuality on how he behaves and reacts in different situations. Every child in this study presents his personal characteristics and how similar they look, but in fact they are so different from each other.

They are almost in the same age, are part of a group, can interact (some less and some more) with each other, they exchange their experiences and they also come from different family backgrounds, occurrences and dynamics. All these features have effected on the children's personalities and in what they present or show themselves. Remaining to family dynamics, one of the conclusions of this study is the potential that the family has in order to influence strongly on a child's life and which can alter his development.

In the cases that are presented in this study, two of the children who were not grown in the same way, as a result of the absence of one parent, manifested different characteristics from the other four children who live with both parents. If we relate this with the attachment, I would add that the absence of one very important figure (the father) and having another one as the primary attachment figure (the mother) complicates the child's life. This happens because the mother has too many responsibilities such as: to think and to earn the incomes, to take care for herself as a woman and she has also to think of her professional background. All these elements complicate more than healthy "survival" of the child and they do not give him the necessary safety to meet other development and needs. In this case these children used to show a lot of uncertainty and this reflects them on their behaviour.

Moreover, based on their behaviour it is easy to notice instability, fear, and hesitancy. The theory used for this study is based on the way how the attachment influences the child's life, starting from the detection of pregnancy from the mother to all stages of child's development. I decided to focus deeper to these two mothers, based on their interviews conducted with them and how they perceived their pregnancy (in fear and anxiety) and this also presents unhealthy attachment with their children. These two mothers felt scared and lonely as the result of the partner's absence because they could not have psychological support. Their young age and the economic uncertainty, which are part of a very important role, made these two concerned mothers to live with fear, anxiety and uncertainty that stage of life that is most beautiful experience for every woman. This anxiety is reflected during the growth of the child and her attachment bond with it.

As it was stated above, all these factors inevitably affect on the children's behaviour who have a huge differentiation from their peers. They are less interactive, not curious to explore the surrounding environment and they have difficulties in socializing. Consequently, they are also more unapproachable and more insecure. All these behaviours and all the methods I have used give a clear view in order to reach these findings. The children did not get the role of initiator at any moment during the activities, but they were acting more as observers and more passive. Uncertainty in themselves made them to have difficulties in getting the initiative, in facing the unknown situations and facing challenges. Their reactions are uncontrolled, full of confusion and they often react with anger. Their ongoing efforts to get the attention of the people who are around them, the attention that has been missing in their families, make them "unsocialable" and not active or interested in the activities.

Therefore, even in the reactions and relations with their peers these children emerge the above characteristics. During the games in groups, they show lack of exploratory skills because they get more confused, can not concentrate and they are not ready for cooperation with their peers. Furthermore, they have the tendency to follow the rules set by the others without negotiating before with them and without showing their interest and their preferences. This is even showed during the game

activities in groups because when they were assigned a role, they accepted it in silence without expressing their preferences. This shows the lack of exploratory skills of the child. Fear, uncertainty, not very high self-esteem and the lack of concentration make them to be less interested towards the new things. They feel intimidated for the new things and when their daily routine changes. I think that this happen because of the mother's early experiences. For instance, her fear during the pregnancy period and the fear that she felt and experienced during the growth of her child. An uncertain mother, who dedicates less time to her child, can not transmit certainty and confidence eventhough she would like to do it.

Below, there will be presented the dataobtained from each group of children and gender differences regarding the relevant exploratory skills. These data are accumulated according to the strategies and manners that the children used to meet with the *lego* game.

### ***The characteristics of girls:***

- Not very active with each-other, less focused on the game's elements, and more concentrated in secondary details.
- During the game activity, they show more verbal communication and express more enthusiasm.
- They are more persistent and have more patience in finding the solution to unify the parts of the game, so the lego parts.
- They maintain eye contact with each-other.
- They failed to finalize the game. They got involved in the game for 25 minutes and began to destract and wanted to leave.
- *During the game, two of the girls, who came from regular families, without social-economic problems, were more concentrated in the game whereas the girl who had divorced parents tended to communicate with me about the game and she asked frequently: "Will we make other games after this one?" The girls also refered to the game instructions, but they found it difficult to negotiate with each other for finding solutions.*

### ***The characteristics of boys:***

- Boys were more interactive and willing to help each other.
- They were concentrated in the activity that they were doing and persistent to find the solution.
- Boys had less verbal communication during the game and less eye contact with each other because they observe more the elements of the game.
- They built the lego for 30 minutes and they were very enthusiastic about it.

*Eventhough there are similar family dynamics, there are also some differences between the girls and boys' behaviour. What was observed during the game, was the lack of concentration and initiative that was more evident from the girls than from the boys. The girls were less persistent in achieving the good result and they got easily distracted from the enviromental stimulus. They girls were were more focused on talking with each other than on achieving the objective of the game. The boys had great exploratory skills, were more concentrated, maintained more eye contact with toys and they were not distracted from the environmental stimulus. This study can be enriched even with some other researches that can confirm or disprove its hypothesis.*

## **7- The study findings**

Based on the research we concluded that the mother-child attachment, or the attachment with another person who takes care of the child, is a significant process which effects on the child's psychosocial development. It was also found that in the process of the healthy attachment to the mother with the child, there are other factors which affect the emotional state of the mother. There are several social situations such as the economical situation, unemployment, divorce, difficult relations in the family which effect negatively and burden the mother's emotional state. All of these factors create an

unhealthy relation with the child. An insecure mother, without a regular or a normal family, without an economical support and the one who dedicates less time to her child, can not transmit certainty, confidence, love and warmth to her child.

Eventhough there are similar family dynamics, there are also some differences between the girls and boys' behaviour. What was observed during the game activity was the lack of concentration and initiative that were more evident from the girls than from the boys. The girls were less persistent in achieving the good result and they got easily distracted from the enviromental stimulus. They girls were more focused on talking with each other than on achieving the objective of the game. The boys had great exploratory skills, were more concentrated, maintained more eye contact with toys and they were not distracted from the environmental stimulus. This study can be enriched even with some other researches that can confirm or disprove its hypothesis.

The relation with the mother, which is founded since the conception of the child, is decisive for the development of the child and its perspective in the future. This relation, called attachment, means adaptation and emotional support of the mother for the child. Having a healthy relation with the mother gives to the child more capabilities and competencies in order to be an active agent in the environment that sorrounds the child. The healthy attachment of the child with the mother is an important factor in the formation of the child, to be more social and explorative in its behavior. From the study conducted in the preschool children we got the following conclusions:

Security and time dedicated (qualitative and quantitative) that mother invests in her child gives the child more self confidence, giving the possibility to live the new situations with enthusiasm, to accept them and get easily adapted.

Strengthening the capability of saying "I love you", "I want", "I do not like" is a clear indicator of a healthy child that has a high self confidence and self estimation.

Children that have poor attachment relations with the mother do not express curiosity in knowing and interacting with same age children and display behavior of distrust and unstable, expressing anger in specific situations.

The emotional state of the mother as well influences in the healthy attachment, security for life, her social and economic support.

In the explorative behaviours the gender roles of the children influence as well, bringing different features for the case studies, seeing that have a special influence in the development of the explorative behaviour of the children around the age of 5-6 years old.

During this study, it was found that children need the attachment bond with the mother or another caregiver, in order to have an easier communication with the world that sorrounds them, to be more explorative in their daily behavior. The social, economic or psychological problems that the mother or the caregiver of the child goes through, are emotionally transmitted to the child and negatively influence on the healthy attachment of the child with the mother. This situation brings problems and difficulties in the psycho-social development of the child, becoming a barrier for the explorative behaviors of the child, through which it knows and studies the world sorrounding it. Relations with the child can create it a "basis" with which it helps him explore the enviroment around. As Bowlby explains in his attachment theory regarding the relationship mother-child, in this occasion as well there cannot be a valid exploration if the child is not safe with the person that supports it. The child needs the initiative by simplifying the meeting point between its activity and the purpose of the adult; this way the probability for a good alliance with the child is increased. If it is the child who takes the initiative we will have a greater opportunity to achieve positive results because it will be interested in staying with us.

When we respond to the child's undertakings we will help it to develop the sense of security. The child who learns with us is a unique being that is in a very decisive moment of its cognitive, linguistical and affective development. The child's development moment is different from that of an adult and it is necessary to have a form of adaptation by both the parties in order to have an effective communication. It is necessary for the adult to detach from his adult-centralized vision and penetrate in the world of the child. To achieve this, we can get the help of the child and what we know about it. Children have difficulties in adapting to the adults and their world, therefore often they have the feeling of the uncomfortability. This thing was identified during the study in the creation of first relations among us, so it is required discretion and care in creating friendship with them so that they be as active as possible in their behavior.

## 9- Recommendations

Looking closer at the problems viewed regarding the attachment of the mother with the child and the huge role that this attachment plays in constructing the emotional world of the child in practicing the explorative behaviors which are necessary for its development and formation, we are giving the following recommendations:

- The attachment of the mother with the child needs to be done in adaptable psychosocial conditions from the mother or from the carer of the child.
- Sensibilization of the family with the importance of the healthy attachment process of the mother with the child.
- The mother should be aware of the importance that her communication has with the child, which starts since his conception.
- All the negative emotional loads shall be avoided during the communication of the mother with the child.
- Enough qualitative and quantitative time shall be devoted to the child. The figures attached with the child, who could be the family members, especially the mother, need to show love, affection and support for the child. During the time they stay together it is needed to be devoted to the child's desires, questions or looks.
- The physical contact, especially with the mother, needs to be present in the child's life. The mother needs to show love through hugs, touches, caresses, smiles, and support so that the child feels safe.
- Different conversations shall be conducted with the child regarding its daily activities with its friends, in the kindergarden or other environments. During the conversation shall be shown attention, devotion and love for the child.
- Cooperation with the child in different activities, games, visits in interesting places, sport activities to better discover the nature and the possible problems.
- We need to behave naturally with the child during the communication process or any type of relation it be.
- We shall support and encourage the children in their explorative behaviors, independently of the result that they achieve with their actions.

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## Issues and Challenges in the Process of Assessment

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### Abstract

*Assessment is a broad concept which means it is part of the whole educational process of teaching and learning. The variety of methods that teachers use to evaluate and measure the student's learning progress and skill acquisition are referred by the term assessment. Assessment shapes how teachers teach and how students learn. The assessment of student's achievements is a pedagogical dialogue between teacher-student for the quality of teaching, learning and knowledge. Assessment especially continuous assessment is a very important tool that teachers should use in the classroom because by using it a wealth of information to guide classroom practice and to manage learning and learners can be provided. Assessment tells us the truth about an education system, then about the qualities of students and their work. It has an important role in education and it is necessary to help students learn, to help students become knowledgeable, to help students gain insight into their learning and understanding, to teach effectively etc. Since making assessment an integral part of daily instruction is a challenge, this paper examines the process of assessing student's knowledge, types of assessment and the assessment of L2 writing. It also focuses on the issues and challenges in the process of assessment.*

**Keywords:** assessment, reliability, validity, L2 assessment.

### Introduction

Assessing students' knowledge has a great pedagogical and social importance because through it we conclude how and in what way the purpose and the educational duties are built in a school, at what level the knowledge of students is increased, discover our weaknesses on a professional and on a methodical aspect, meanwhile overcoming our weaknesses at work as well.

Assessment of students' knowledge is one of the most difficult and serious activities for teachers in the teaching process. It is a process in which the teacher is tested for his/her attitude in assessment. During the learning process, assessment is done to give conclusions about the achievements of students, their progress and also to improve the learning experiences and outcomes of students.

The teacher must not use the grade to keep the class under control, on the contrary the grade should be an incentive educational tool and assessment must be objective, reasonable, public and with relevant arguments.

### The process of assessing students' knowledge

Assessment is a very delicate and very complicated process during which accurate information must be provided about what we want to assess (Zeneli, 2003).

According to Musai, 2002 assessment has to do with any kind of activity and instrument used to judge students' achievement. It is necessary for different purposes such as: to provide information about students' progress, to provide students with educational information, to motivate students, to mark the progress of students, to ensure the realization of the actual objectives, to assess students' readiness for future learning etc.

There are many techniques, instruments and procedures to carry out the measurement and assessment, among them special place occupy tests. The test consists of a system of tasks, questions, logically related issues, which relate to a particular area and which should be resolved and on the basis of those solutions the level and degree of certain occurrence is assessed (Salihi, Zabeli, Hoti, 2006).

Assessment should be viewed as a process of determining the nature and extent of learning in the development process of the student. According to Zeneli, 2003 assessment will be more effective if we apply these principles:

1. Defining the scope and priorities in the assessment process
2. Choosing appropriate assessment techniques consistent with the characteristics which need to be measured
3. Application of different assessment techniques
4. The weaknesses of assessment techniques
5. Assessment is a mean to an end, but not the end itself.

Two key terms in any assessment discussion are: reliability and validity.

By reliability is meant the stability of test scores which means they should be replicable, for example, from one test occasion to another or from one essay prompt to another. A test can not measure anything well unless it measures consistently. To have confidence in a measuring instrument, we would need to be assured that approximately the same results would be obtained. Nevertheless there are some problems with the expectation of reliability, the same person does not necessarily write equally well on different days or about different subject matter and teachers also are likely to vary from day to day, from subject to subject, they are likely to have preferences for certain kinds of ideas or structures or dislike for some choices of words or arguments.

By validity is meant that the test is based upon a proper analysis of the skill or skills we wish to measure and that the test scores correlate highly with actual ability in the skills area being tested. According to Hamp-Lyons, 1990 in Kroll, 2003 there are four kinds of validity: face validity- means that both the teacher and the student believe that the test measures what it claims to measure; content validity- means that the test measures a specific skill or the content of a particular course of study; criterion validity- means the measurable relationship between a particular test of writing and various other measures; and construct validity- means the arguments for including direct performances in any assessment.

### **Types of assessment**

Teachers at all levels of education except the use of the dominant type of assessment such as summative assessment should also practice diagnostic and formative assessment in assessing student's knowledge and achievements since they enable the creation of various functions to achieve the goals in the process of assessment (Osmani, 2008). Types of assessment are:

Standardized assessment: assesses students at a particular grade level who are required to take the same test;

Alternative assessment – assesses students' understanding of the material;

Diagnostic assessment – assesses what students already know about a topic, it means their current knowledge of a subject;

Formative assessment – assesses student's progress throughout the process of learning, it means while learning is taking place;

Summative assessment – assesses students at the end of the year or semester, it means after the learning has been completed.

However, besides assessment, the teacher should also use other means to motivate students to achieve results such as: encouragement, the success experience, gratitude, promise, praise, reward, gift, racing etc.

### **Assessment of L2 writing**

Assessing the writing skills involves having students write about a topic which provides information on student's progress and weaknesses. Assessment is an integral part of the curriculum and it should reflect the objectives of a course. Many

teachers think that their job is to teach well, that the assessment is not their concern and that it should be done by a special person who is responsible for testing.

However if teachers want to ensure that those they teach will be judged fairly, they must have some involvement with evaluation. When teacher plan writing tests, they should be aware of a variety of situations they are going to face: take part in a school-wide writing assessment, participate in decisions about what writing test to use for a specific purpose and talk to parents about the meaning and implications of tests their children are taking.

Scoring procedures for writing assessments are: Holistic, Analytic, primary trait scoring and multiple trait scoring.

Holistic scoring assesses the overall competence of a piece of writing but it neither diagnoses problems nor prescribes remedies for the writing.

Analytic scoring separates various factors and skills and so can be used by teachers and students to diagnose writing strengths and weaknesses. It assesses content, organization, vocabulary, language use and mechanics (sentence structure, grammar, vocabulary and so forth).

As a teacher I did analytic assessment with students of fourth and fifth grade. For content, the students had a theme they had to write about, like about fathers. Their particular theme was their own choice. We did the exercises in the book to build and activate background knowledge, and to give them ideas. Then we worked on the theme. After that, they wrote their essays. I paid attention to organization of ideas and whether what they wrote was relevant to their theme. My individual assessment of vocabulary, language use, grammar, etc. depended on the student, level, and where we were in the semester. For the first draft, I might just underline what needed to be fixed and use a symbol to indicate what the problem was, like "W" for word choice. When I didn't think they could figure out, I told them on the first draft. I made more corrections on the 2nd drafts, and by the time they wrote the 3rd drafts, the essays were good.

According to Lloyd-Jones, 1977 and Mullen, 1980 in Kroll, 2003 primary trait scoring involves deciding which one aspect of writing is the key to success on this task, developing a highly detailed set of descriptors for performance on that aspect and training teachers in its use.

Multiple trait scoring treats the construct of writing as complex and multifaceted, it allows teachers to identify the qualities of writing that are important in a particular context or task and to evaluate writing according to the salient traits in a specific context.

Personally, as a teacher I give tests over the material we had studied. When I taught in a secondary school, the department gave my students an evaluation form to fill out about my teaching. Then, the principal often came into the room and evaluated me (he had a form that he filled out), and then met with me to discuss what he saw. As a student, of course my teachers gave me tests over the material. I also had to take the comprehensive exam for the bachelor's degree.

There is a case for instance here in my country when students are in the ninth grade(they finish primary school), and in the twelfth or thirteenth grade (they finish high school),the state would give standardized tests to all students, all we teachers have to do is just be in the room and time the tests.

The most popular form of alternative writing assessment is portfolio assessment. According to Bridwell-Bowles, 1990; Lucas, 1992; Smit et al, 1991 in Reid, 1993 portfolio is a collection of texts produced over a defined period of time to the specification of a particular context. It has several advantages: it reinforces commitment to writing processes and multiple drafts; it establishes the course as developmental and sequential; and it establishes a classroom writing environment as the basis for effective writing.

According to Brossell, 1986 in Kroll, 2003 writing assessment should reflect our best knowledge of how writing occurs and how is best taught. That is, it ought to proceed from an understanding of writing as a complex process of discovering and conveying meaning, a process that involves rhetorical, structural and mechanical choices.

## Issues and challenges in assessment

Any well organized work, as well as the teaching and other educational activities during the implementation and completion must be verified to assess the level of achievement of the goals set. Therefore, the basic function of assessment is to improve the educational work. By assessing numerous teaching activities at the right time, feedback is provided on the results that the student and the teacher achieve in their work. Unfortunately, in today's Kosovo schools feedback often lacks to be given at the right time on the students' work and the results that they achieve in class. There are cases when a student by the end of class does not know what he has learned or what he has not managed to learn. On the other hand, the teacher does not have a clear picture of knowledge that students achieved in class, and in these situations, the teacher is not able to take appropriate corrective activities, nor can plan teaching in harmony with knowledge and skills that the students possess.

Regarding the new concept of assessment in the twentieth century, we can say that it has had a major impact in the American education system. The concept's characteristic is that the planning and organization of teaching must be initiated by the need of students, this means that instead of imposing from the outside, it should be started from what the students carry in themselves, instead of knowledge that will serve them in the future, the knowledge they will use now is needed, instead of passivity and formalism, activity and creativity should be possible, instead of the teacher to lead and guide, he/she should help and advise (Potkonjak, 1967, cited in Osmani 2010).

According to many sources, it is estimated that Rice is the first in contemporary assessment in the US who also used the knowledge tests. With the use of objective actions and instruments in assessing students' achievements, the use of traditional numerical grading ended. A great importance in the US has also been given to self-assessment. During the assessment we should take into consideration the needs of each individual for self-respect and cognition of their needs and develop positive personal needs and interests (Villutijević, 1992, cited in Osmani 2010).

Assessment policy and practice in schooling is being challenged to review the nature of the knowledge and skills being assessed. Also opening for review is the optimum range of contexts and conditions for collecting assessment information about how students work with and reconstitute knowledge. Based on my observations in class and conversations with teachers and students of the secondary schools in my region (Municipalities of Gjilan, Kamenica and Vitia), It has been identified that the most serious issues in the process of assessment are subjectivity, insufficient validity of assessment and grading, discontinuity of grading and lack of criteria for grading. During the assessment and grading only certain elements of what is defined as the object of assessment and grading are included, while the others are partially included or completely ignored. For example, little attention is paid to how students understand and analyze knowledge, how they explain it, comment it, connect it with other knowledge, think critically about it, exemplify it etc. Accordingly, the reason of ignoring the assessment and grading should be sought in the failure of teachers for not being permanently and completely trained to the demands of curriculum. They lack the knowledge about assessment processes, tools and models and so comes their inability to assess and grade students for something they have not learned.

## Conclusion

By the way of conclusion I think that assessment is every teacher's job, they must know enough about assessment practices to be able to look at the assessments being brought into their programs or being taken externally by their students and evaluate them. During students' assessment, different techniques are likely to be used to assess the knowledge, while the assessment through questions and answers impromptu must be avoided because the teacher can be influenced by subjective factors of assessment such as: the current mood of the teacher, the attitude of the teacher towards the assessment, the current health and emotional situation of the student, sympathy and antipathy of the student, and the random factor which is manifested precisely what the teacher assesses according to the system of 3-4 questions. Therefore, the use of modern techniques and instruments to assess the knowledge significantly improves the achievements of our schools. Only when acting like this, traditionalism can be extinguished in the process of assessing students' knowledge. It is considered that the poor success in our schools is because of using traditional methods in assessing students' knowledge, and this practice should be changed. Therefore a firm understanding of how assessment works, what it can do and what it can not do, is an essential tool for today's teachers.

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## Graph Coloring Problems in Modern Computer Science

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### Abstract

*Graph coloring is one of the most important concepts in graph theory and is used in many real time applications in computer science. The main aim of this paper is to present the importance of graph coloring ideas in various areas of compute applications for researches that they can use graph coloring concepts for the research. Graph coloring used in various research areas of computer science such data mining, image segmentation, clustering, image capturing, networking etc. This papers mainly focused on important applications such as Guarding an Art Gallery, Physical layout segmentation, Round-Robin Sports Scheduling, Aircraft scheduling, Biprocessor tasks, Frequency assignment, Final Exam Timetabling as a Grouping Problem, Map coloring and GSM mobile phone networks, and Student Time Table. In this paper we review several variants of graph colouring, such as precolouring extension, list colouring, multicolouring, minimum sum colouring, and discuss their applications in scheduling. A very important graph parameter is the chromatic number. Presently, graph coloring plays an important role in several real-world applications and still engages exciting research.*

**Keywords:** Graph theory, graph coloring, map coloring , scheduling problems, multicolouring.

### 1. INTRODUCTION

Nowadays the studies about the behavior of several graph parameters in product graphs have become into an interesting topic of research in graph theory. For instance, is it well known the Hedetniemi's coloring conjecture [16, 20] for the categorical product (or direct product), which states that the chromatic number of categorial product graphs is equal to the minimum value between the chromatic numbers of its factors. Also, one of the oldest open problems in domination in graphs is related with product graphs. The problem was presented first by Vizing [25] in 1963. After that he pointed out as a conjecture in [26]. The conjecture states that the domination number of Cartesian product graphs is greater than or equal to the product of the domination numbers of its factors.

Graph coloring especially used various in research areas of science such data mining, image segmentation, clustering, image capturing, networking etc., For example a data structure can be designed in the form of tree which in turn utilized vertices and edges.

Similarly modeling of network topologies can be done using graph concepts. In the same way the most important concept of graph coloring is utilized in resource allocation, scheduling. Also, paths, walks and circuits in graph theory are used in tremendous applications say traveling salesman problem, database design concepts, resource networking. This leads to the development of new algorithms and new theorems that can be used in tremendous applications. Graph coloring is one of the most important concepts in graph theory and is used in many real time applications in computer science. Various coloring methods are available and can be used on requirement basis. The proper coloring of a graph is the coloring of the vertices and edges with minimal number of colors such that no two vertices should have the same color. The minimum number of colors is called as the chromatic number and the graph is called properly colored graph .

## 2. GUARDING AN ART GALLERY

### 2.1 The Sunflower Art Gallery

Figure 2.1 shows the unusual floor plan of the Sunflower Art Gallery and the locations of four guards. Each guard is stationary but can rotate in place to scan the surroundings in all directions. Guards cannot see through walls or around corners. Every point in the gallery is visible to at least one guard, and theft of the artwork is prevented. Of course, it would be more economical to protect the gallery with fewer guards, if possible.

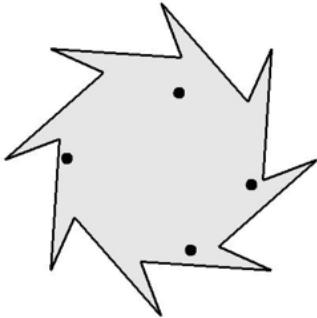


Figure 2.1: The Sunflower Art Gallery

### 2.2 Art Gallery Problems

Let us define our terms carefully. For our purposes, an art gallery is a polygon in the plane.<sup>2</sup> The polygon need not serve as the floor plan of any real-world art gallery. An art gallery includes the interior region as well as the boundary segments—the walls. We let  $G$  denote an arbitrary art gallery and write  $G_w$  for an art gallery with  $w$  walls.

Let  $p$  be any point in an art gallery. The point  $q$  is visible to  $p$  provided the line segment joining  $p$  and  $q$  does not exit the gallery. (We also assume that every point is visible to itself.) The segment represents the sight line of a guard. A set of guards protects an art gallery provided every point in the gallery is visible to at least one guard. Note that a guard at a corner protects the two adjacent walls.

Example 1. (a) The four guards in Figure 2.1 protect the Sunflower Art Gallery.

(b) The Sunflower Art Gallery is not protected by guards at the eight outer corners (Figure 2.2). Even though all of the walls are protected, a region in the center of the gallery remains invisible to all the guards.

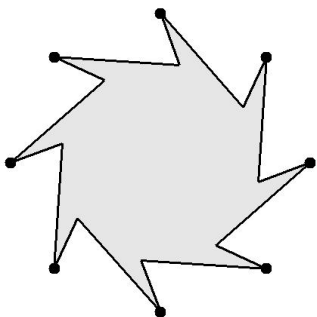


Figure 2.2: The eight guards protect the walls, but not the interior

(c) Each gallery in Figure 2.3 is protected by one or two guards, as shown.

An art gallery is convex provided every point in it is visible to every other point. A convex gallery is easy to guard; a guard can be posted anywhere in the gallery. Every triangle is convex, as are the first two galleries in the top row of Figure 2.3. The other galleries in the figure are nonconvex.

### Galleries in Particular

Our desire to post as few guards as possible raises two general problems about art galleries.

The first problem deals with specific galleries, and the second deals with all galleries with a fixed number of walls.

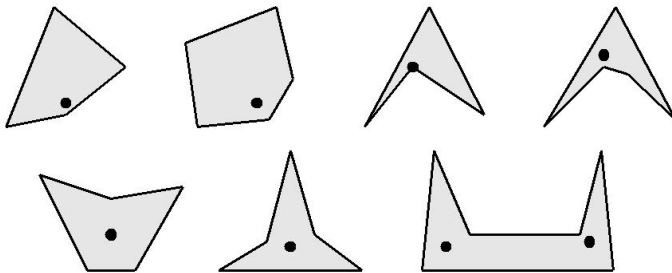


Figure 2.3: The first two galleries in the top row are convex

These are generalizations of the two questions we posed earlier. Let  $\text{guard}(G)$  = the minimum number of guards needed to protect the art gallery  $G$ .

**Gallery problem 1.** Find the value of  $\text{guard}(G)$  for every art gallery  $G$ . In other words, find the minimum number of guards needed to protect every art gallery.

**Example 2.** (a) A convex gallery  $G$  satisfies  $\text{guard}(G) = 1$ .

(b) We have seen that the Sunflower Art Gallery  $G_{16}$  satisfies  $\text{guard}(G_{16}) = 3$ .

To show that  $\text{guard}(G) = g$ , we must demonstrate two facts:

- The gallery  $G$  can be protected by  $g$  guards.
- The gallery  $G$  cannot be protected by fewer than  $g$  guards.

The first fact implies that  $\text{guard}(G) \leq g$ , while the second gives  $\text{guard}(G) \geq g$ . The second fact becomes increasingly difficult to demonstrate as the number of walls increases and the shape of the gallery becomes more complicated.

Ideally, we would have an efficient algorithm that takes an arbitrary gallery  $G$  as its input and produces the value of  $\text{guard}(G)$  as its output. Such an algorithm could be carried out by a computer (or a patient, careful person) to determine the minimum number of guards needed to protect any given gallery. Researchers in computational complexity, an advanced area of discrete mathematics, have strong evidence that we will never find an efficient algorithm of the desired type. The crux of the matter is that the number of essentially different guard configurations to examine increases exponentially as a function

of the number of walls. Any proposed general algorithm becomes effectively worthless, even with the fastest computers available. In this sense, gallery problem 1 remains unsolved.

### Galleries in General

Now suppose we know an art gallery has  $w$  walls, but we do not know its exact shape. Let  $g(w)$  = the maximum number of guards required among all art galleries with  $w$  walls. In other words,  $g(w)$  is the maximum value of  $\text{guard}(G_w)$  among all  $w$ -walled galleries  $G_w$ .

**Example 3.** (a) Any triangular art gallery can be protected with one guard. Therefore,  $g(3) = 1$ .

(b) The Sunflower Art Gallery has 16 walls and requires three guards. Therefore,  $g(16) \geq 3$ . We cannot conclude that  $g(16) = 3$  since there could be a 16-walled gallery that requires more than three guards. In fact, we will soon see a 16-walled gallery requiring five guards.

### 3. Physical Layout Segmentation

Automatic mail sorting machines of most recent systems process about 17 mail pieces per second. That requires a fast and precise OCR based recognition of the block-address. This recognition is mainly conditioned by a correct address lines organization. Once the envelope image has been acquired by a linear CCD camera, three principal

modules contribute to the task of the address-block localization: physical layout segmentation of envelope image, feature extraction and address-block identification. Every-day, the postal sorting systems diffuse several tons of mails. It is noted that the principal origin of mail rejection is related to the failure of address-block localization task, particularly, of the physical layout segmentation stage. The bottom-up and top-down segmentation methods bring different knowledge that should not be ignored when we need to increase the robustness. Hybrid methods combine the two strategies in order to take advantages of one strategy to the detriment of other. Starting from these remarks, our proposal makes use of a hybrid segmentation strategy more adapted to the postal mails. The high level stages are based on the hierarchical graphs coloring. Today, no other work in this context has make use of the powerfulness of this tool. The performance evaluation of our approach was tested on a corpus of 10000 envelope images. The processing times and the rejection rate were considerably reduced.

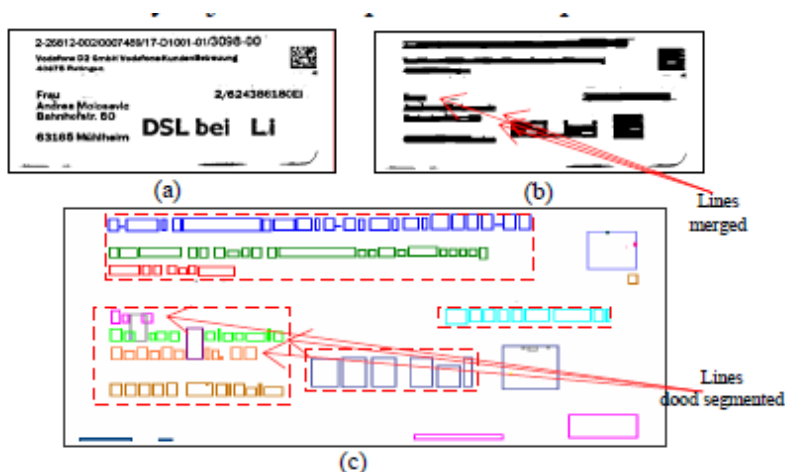


Figure 3.1 Noisy block address (a), emergence of the text lines

by the RLSA method (b), Perception of the text lines by hierarchical graph coloring (c).

The segmentation technique objective is based on its decision strategy which defines a best block extraction manner in order to recognize it by the block address recognition module. The segmentation techniques cannot systematically produce uniform and good located blocks in complex environments (difficult envelopes). Consequently, the knowledge delivered by the descriptors of non-homogeneous blocks (containing parasitic elements) is less discriminating.

In order to improve the robustness and exactness of segmentation, it has been necessary to choose an even more advanced tool. The idea is to use a hybrid strategy of segmentation using the richness of pyramidal structure. Our method is mainly based on the powerfulness of graph coloring to regroup correctly the connected components into text lines then the lines into blocks.

#### 4. Time table scheduling

Allocation of classes and subjects to the Teachers is one of the major issues if the constraints are complex. Graph theory plays an important role in this problem. For „t“ Teachers with „n“ subjects the available number of „p“ periods timetable has to be prepared. This is done as follows. A bipartite graph (or bigraph is a graph whose vertices can be divided into two disjoint sets  $U$  and  $V$  such that every edge connects a vertex in  $U$  to one in  $V$ ; that is,  $U$  and  $V$  are independent sets)  $G$  where the vertices are the number of Faculty say  $t_1, t_2, t_3, t_4, \dots, t_k$  and  $n$  number of subjects say  $n_1, n_2, n_3, n_4, \dots, n_m$  such that the vertices are connected by „pi“ edges. It is presumed that at any one period each Teacher can teach at most one subject and that each subject can be taught by maximum one Teacher. Consider the first period. The timetable for this single period corresponds to a matching in the graph and conversely, each matching corresponds to a possible assignment of Teacher to subjects taught during that period. So, the solution for the timetabling problem will be obtained by partitioning the edges of graph  $G$  into minimum number of matching. Also the edges have to be colored with minimum number of colors. This problem can also be solved by vertex coloring algorithm. “ The line graph  $L(G)$  of  $G$  has equal number of vertices and edges of  $G$  and two vertices in  $L(G)$  are connected by an edge iff the corresponding edges of  $G$  have a vertex in common. The line graph  $L(G)$  is a simple graph and a proper vertex coloring of  $L(G)$  gives a proper edge coloring of  $G$  by the same number of colors. So, the problem can be solved by finding minimum proper vertex coloring of  $L(G)$ .” For example, Consider there are 4 Teachers namely  $t_1, t_2, t_3, t_4$ , and 5 subjects say  $n_1, n_2, n_3, n_4, n_5$  to be taught. The teaching requirement matrix  $p = [p_{ij}]$  is given as.

P	$n_1$	$n_2$	$n_3$	$n_4$	$n_5$
$t_1$	2	0	1	1	0
$t_2$	0	1	0	1	0
$t_3$	0	1	1	1	0
$t_4$	0	0	0	1	1

Figure 4.1: The teaching requirement matrix for four Teachers and five subjects

The bipartite graph is constructed as follows.

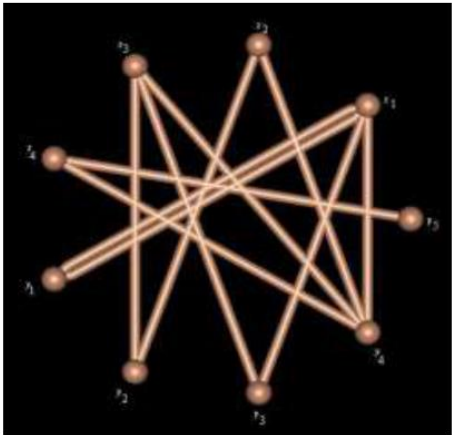


Figure 4.2. The bipartite multigraph  $G$

Finally, the authors found that proper coloring of the above mentioned graph can be done by 4 colors using the vertex coloring algorithm which leads to the edge coloring of the bipartite multigraph  $G$ . Four colors are interpreted to four periods.

...	1	2	3	4
$t_1$	$n_1$	$n_2$	$n_3$	$n_4$

Figure 4.3: The schedule for the four subjects

5. GSM Mobile Phone Networks

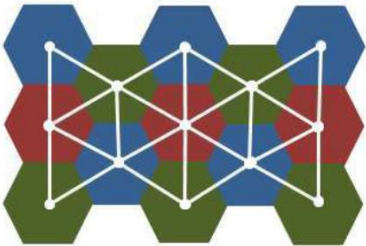


Figure 5 The cells of a GSM mobile phone network

The Groupe Spécial Mobile (GSM) was created in 1982 to provide a standard for a mobile telephone system. The first GSM network was launched in 1991 by Radiolinja in Finland with joint technical infrastructure maintenance from Ericsson. Today, GSM is the most popular standard for mobile phones in the world, used by over 2 billion people across more than 212 countries. GSM is a cellular network with its entire geographical range divided into hexagonal cells. Each cell has a communication tower which connects with mobile phones within the cell. All mobile phones connect to the GSM network by searching for cells in the immediate vicinity. GSM networks operate in only four different frequency ranges. The reason why only four different frequencies suffice is clear: the map of the cellular regions can be properly colored by using only four different colors! So, the vertex coloring algorithm may be used for assigning at most four different frequencies for any GSM mobile phone network, see figure 7 below.

## 6. Precoloring extension

In certain scheduling problems we do not have full control over the schedule, the assignments of certain jobs are already decided. In this case some of the vertices of the conflict graph has a preassigned color, and we have to solve the *precoloring extension* problem: extended the coloring of these vertices to the whole graph, using the minimum number of colors. Bir'o, Hujter and Tuza [7, 8, 9] started a systematic study of precoloring extension. In [7], the aircraft scheduling problem discussed in Section I. is extended. There is a maintenance period for each aircraft, during which it cannot fly. We can model these maintenance periods by adding a "dummy" flight for the maintenance period of each aircraft, and requiring that the maintenance period of the  $i$ th aircraft is assigned to the  $i$ th aircraft. Therefore we have to solve the precoloring extension problem on the conflict graph, which is an interval graph. It is shown in [7] that the precoloring extension problem is **NP**-complete for interval graphs, but it can be solved in polynomial time if every color is used only once in the precoloring, that is, if every aircraft has only one maintenance interval (the later result is generalized to chordal graphs in [10]).

## 7. List coloring

In the list coloring problem each vertex  $v$  has a list of available colors, and we have to find a coloring where the color of each vertex is taken from its list of available colors. List coloring can be used to model situations where a job can be processed only in certain time slots, or if it can be processed only by certain machines. Using standard dynamic programming techniques, list coloring can be solved in polynomial time on trees and partial  $k$ -trees [11]. By combining dynamic programming with a clever use matching, list coloring can be solved on the edges of trees as well [12]. The multicoloring concept introduced in Section II. can be applied for list colorings as well: each vertex has an integer demand  $x(v)$ , and vertex  $v$  has to receive a set of  $x(v)$  colors from its list of colors. The algorithm for list coloring trees and partial  $k$ -trees does not generalize for the multicoloring case, as the problem is **NP**-complete already for binary trees [13]. On the other hand, list *edge* multicoloring can be solved in polynomial time on trees: using standard techniques, the good characterization theorem of Marcotte and Seymour [14] can be turned into a polynomial time algorithm. This result is generalized in [15] to a slightly more general class of graphs, that includes odd cycles. Moreover, a randomized algorithm is given for an even more general class of graphs, including even cycles.

## 8. Minimum sum coloring

Besides minimizing the makespan, another well-studied goal in scheduling theory is to minimize the sum of completion times of the jobs, which is the same as minimizing the average completion time. The corresponding coloring problem is *minimum sum coloring*, introduced in [16]: we are looking for a coloring of the conflict graph such that the sum of the colors assigned to the vertices is minimal. Apart from trees, partial  $k$ -trees, and edges of trees, minimum sum coloring is **NP**-hard on most classes of graphs. On the other hand, it turns out that the sum of the coloring is easier to approximate than the makespan (see e.g. [17, 18] for approximation results). The reason for this is that the sum of the coloring and the makespan of the coloring behaves very differently when a small part of the graph is recolored. If we recolor a small part of the graph, then this change has only a small effect on the sum of the coloring, but it can change the makespan significantly. The multicoloring version of the problem can be used to model arbitrary length jobs. Since we want to minimize the sum of the completion times, the objective function of the coloring problem has to be defined as follows. The *finish time* of a vertex is

the largest color assigned to it, and the sum of a coloring is the sum of the finish times of the vertices. It is clear that the sum of the finishtimes in a multicoloring is equal to the sum of completion times in the corresponding schedule. This variant of multicoloring was introduced in [19], where approximation algorithms are given for various classes of graphs. The preemptive and non-preemptive versions of the problem can have very different complexity: while the non-preemptive version can be solved in polynomial time for trees [20], the preemptive version is **NP**-hard for binary trees [13], but has a polynomial time approximation scheme [20]. In [21] polynomial time approximation schemes are given for partial k-trees and planar graphs as

well. Unlike minimum sum coloring, the multicoloring version of the problem is **NP**-hard on the edges of trees. However, in this case the problem admits a polynomial time approximation scheme [22].

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## **Aggressiveness in Adolescents Aged 15-18 Years Old, Under the Influence of Social Environment and the Introduction of New Technologies in Every Day Life.**

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### **Objectives:**

- To collect data and facts about the aggressiveness expression of adolescents aged 15-18, under the influence of social environment and the introduction of new technologies in everyday life.
- To draw conclusions about the influence of the above factors.

**Hypothesis:** The inappropriate social environment and the presence of the new technology in everyday life influence on the expression of the aggression by the young people.

**The research question:** Which is the connection that exists between the expression of the aggression and the social and technological environment in everyday life of adolescents aged 15-18 years old.

### **Abstract**

Aggression is a difficult concept to define. It is used and misused widely (Scott 1975). People still argue about aggression. The social psychologist Robert Baron (1983), defines aggression as a behavior that intends to harm another who does not want to be harmed. The aggressive behavior can be in various forms. It can be a physical or verbal behavior such as threats and it can be an indirect action. Aggression is a behavior, but it can be accompanied with emotion (anger) and it is influenced by emotions. Roger Johnson (1972) claimed that aggression is a concept with many forms and it can be influenced by many factors. Aggressive behaviors are present in the adolescents' daily routines by becoming a cause for reducing the quality of life, for different conflicts in the society even for the disruption of the internal balance. All these problems created the idea of a study in order to observe closely and to find which the problems of this aggression are and how this phenomenon can be prevented to the youth. In order to find out how does the social and technological environment effects on the increase of aggression to young people. This study is focused on the adolescents aged 15-18 by observing their different problems related to the manifestations of aggressive behaviors. The study's results corroborate the hypothesis about the fact that the social and technological environment effects on the expression of aggression of the adolescents aged 15-18 (the sample of above study).

**Keywords:** Aggression, Influence, Adolescents, Social Environment, technology.

### Theoretical concepts.

Aggression is a behavior, but it can be accompanied with emotion( anger ) and it is influenced by emotions. Roger Johnson (1972) claimed that aggression is a concept with several dimensions and it can be influenced by many factors. Psychologist have studied the relation between the aggression and other factors such as: heredity, sex, territory, ecology, physiology, developments, learning and social organization. Theories about aggression. Aggression is studied in four perspectives: in the perspective of the theory instincts, frustration-aggression theory, social learning theory and the social cognitive theory. The oldest theory about aggression claims that humans are aggressive from their nature. Probably the wellknown supporter of the old theory was Sigmund Freud (1930) who argued that aggression is the result of the instinct of death where all humans are born. Freud laid the idea when the negative powers increase they must be released through aggressive behaviors.

### Main sources of aggression based on the concepts of Freud:

1) *Dehumanization on the process of production and consumption. The technical progress is equal to the disappearance of the largest initiative, expectations, tastes and personal needs by offering goods and services. This trend is liberating if the available sources and techniques are used to relieve the man from work and enjoyment which are required for replication of the existing institutions if they are parasitic, useless and inhuman in comparison with the existing and intellectual technical opportunities.*

2) *The conditions of the crowd, the noise and manifestation and the characteristics of the mass society. As it is stated by Rene Dubos, the needs for "peace, privacy, independence, and initiative, and for some free space" are not "whims or luxuries, but they present the real biological needs". Their absence damages the instinctual structure. Freud emphasized the "asocial" character of Eros, whereas the massive society reaches an "oversocialization" to which the individuals react "with all sorts of frustrations, oppression, aggression and fears".*

The social usage of aggression belongs to the historical structure of civilization and it has been a powerful developing tool. However, there has been a stage when the amount can be turned into quality and it might subvert the normal balance between two primary instincts in favor of destruction. In fact, the real risk of the abundant society is the possible reduction of labour until to the level when the human organism would not need to function as a working tool. In order to fight against the capitalist mode of production (and against all exploitative ways of production) is sufficient the reduction of power needs of human labor.

The system reacts by developing the production of goods and services that do not expand the individual consumption, or expand with luxury goods, or luxury of persistent poverty, but it is the necessary luxury in order to keep busy with work the necessary power to reproduce existent political and economical institutions. In the moment when this kind of employment seems superfluous, senseless and unnecessary, but at the same time it seems necessary to earn enough money to survive, frustration appears to the productivity of this society and in this way the aggression is activated.

According to the degree of the aggression that the societies, even in their structure, adopts even the mental structure of citizens: the individual becomes in the same time, more aggressive, more pliable because it submitted a society which with its vain quality and power satisfies his deepest instinctive needs (which are otherwise the most pressing). Preparing for a disaster make people more careless in spending money, more than if they were in the creation phase for constructive purposes. Why does this happen, I do not know, but I have noticed over a period in the Senat, that buying weapons to kill, to destroy things or cities and to wipe out cities has something that make people do not appreciate as it really is the dollar's value when they think for a new home or for the health care of human beings.

The most telling issue which distinguishes the new forms from the old ones, is that what is called aggression and technological fulfillment. The phenomena can be described shortly in this way: the act of aggression physically carried by a mechanism which has a high degree of automatization, with a bigger power of that of human who put

its in the right functions. The most extreme case are the rockets and missiles, the most ordinary case of automobiles. This means that the energy, the power which is activated and consumed by that of mechanical, electrical or nuclear of the "item" and not the electrical instinctive of human beings.

Therefore, the aggression will be transformed from the "subject to an object" or at least it will be "mediated" from the object and the target is destroyed by the item, not from the individual. This change in the relations between the human energy and that of material, physical part and that of human aggression (the man becomes the subject and the agent of aggression through his mental abilities more than physical ones) should also affect even the mental dynamics. I set a hypothesis which is suggested by the inner logic of the process: by "deputing" the destruction to an object or to a set of things, more or less automatic, instinctual satisfaction of human beings is "interrupted", reduced, frustrated or "over hardened".

All these kinds of frustrations bring repetition and escalation: increasing violence, speed and focus expansion. In the same time, the personal responsibility, awareness and the guilt feeble weaken or scatter, separate from the actual context where the aggression was created (for example, during the bombing) and it is set in a context more or less harmless (impolite behavior, sexual inadequacy etc). This reaction is due to a considerable weakening the sense of guilt, and even the defense (hatred or anger) is removed by the real responsible entity (the commanding officer, government) to a substitute person: therefore, I did not do it as an active individual (moral or physical) but the object, the machine. (Herbert Marcuse, 1967)

The machine: the word itself suggests that a device composed by human beings may be replaced from a mechanical device/apparatus: bureaucracy, administration, the party or organization is the responsible agent; whereas I, the individual person, was just the vehicle, object. An object also can not take responsibility, in any moral sense, or can not be guilty all the time. Therefore, another barrier to the aggression is eliminated and the civilization has raised a long process of discipline. Moreover, the expansion of advancing capitalism is included in a fateful dialectic decision that comes and pushes forward the economical and political dynamics: the more powerful and "technological" the aggression is, the less convenient it is to satisfy and pacify the primary impulse, the more it tends toward repetition and escalation.

Naturally, the use of instruments of aggression is as old as the civilization itself, but there is a decisive difference between technological aggression and primitive forms. The latter were not quantitatively different (weaker): they required activation or engagement of the body to a much higher degree than the automated and semi-automated instruments of aggression. The "knife" the blunt instrument, even the revolver are far more part of the individual who uses them and they associate him more closely to his target. The technological aggression releases a mental dynamic which aggravates the destructive, anti-erotic tendencies of the puritan complex. The new ways of aggression destroy without getting the one's hands dirty, one's body soiled, one's mind incriminated. The killer remains clean physically and mentally. The purity of his deadly work obtains added sanction if it is directed against the national enemy in the national interest.

The encroachment of aggression on the domain of the life instincts and also devalues the aesthetic dimension. In *Eros and Civilization* I have tried to show the erotic component of this dimension. Nonfunctional, that is to say, not committed to the functioning of a repressive society, the aesthetic values have been strong protectors of Eros in civilization. Nature is part of this dimension. Eros seeks, in polymorphous forms, its own sensuous world of fulfillment, its own "natural" environment. But only in a protective world-protected from daily business, from noise, crowds, waste only thus can it satisfy the biological need for satisfaction (Herbert Marcuse, 1967). The aggressive business practices which turn even more of protective nature into a medium of commercial fulfillment or fun, thus do not merely offend beauty-they repress the biological necessities. Once we agree to discuss the hypothesis that, in advanced industrial society surplus-aggression is released in quite unsuspected and "normal" behavior, then we may see it even in areas which are removed from the more familiar manifestations of aggression, for instance the style of publicity and information practiced by mass media.

The characteristic is the permanent repetition: the same advertisement, with the same text or picture is broadcasted or televised again and again: the same phrases or clichés poured out by the purveyors and makers of information

repeatedly, the same programs and platforms professed by the politicians again and again. Freud created his concept of the death instinct in the context of his analysis of the "repetition compulsion": he associated this with the striving for a state of complete inertia, absence of tension, return to the womb and annihilation. Even in its less extreme use, constant repetition imposed upon more or less captive audiences, may be destructive: by destroying mental autonomy, freedom of thought, responsibility and conducive to inertia, submission, rejection of change. The established society which is the master of repetition becomes the great womb for the citizens. In order to be sure, this road to inertia and this reduction of tension is one of high and not satisfactory sublimation: it does not lead to an instinctual nirvana of satisfaction. However, it may well reduce the stress of intelligence, the pain and tension which accompany autonomous mental activity- thus it may be an effective aggression against the mind in its socially disturbing, critical functions.

Moreover, the psychological impacts and the adaptation with the environment are lead towards physical threats to environmental effects such as climate change due to global warming which are inherent to the adaption of people towards them. Societies and individuals are affected by environmental threats or by the physical effects of global climate because these two elements, thus humanity and the environment can not be separated from each other.

### The methodology:

Ky studim është bazuar në metoden sasiore për mbledhjen e të dhënave e faktëve nga kampioni i përfshirë në studim. Për realizimin e këtij studimi u përdorën instrumentet perkatese për mbledhjen e të dhënave rreth hipotezës ngritur në studim. Kështu u përdorën pyetësorë dhe intervista me kampionet e përzgjedhur në studim, dhe u siguruan një sërë të dhënash konkrete për temën e studimit. Me pas u realizua përlogaritja e tyre, duke dalë në përfundime e rezultate konkrete rreth studimit të kryer.

This study is based on the quantitative method for collecting the data and facts from the sample which is included in the study. For the realization of this study were used instruments for collecting relevant data about the hypothesis raised in the study. Therefore, there were used questionnaires and interviews with the selected study samples and provided a concrete number of data for the topic of the study. After that, it was calculation was conducted, by concluding the concrete results about the study.

Results of the study.

**Table 1.**

Adolescents aged 15-18	The expression of aggression	The level of concentration	The establishment of social relations and communication	Show anxious symptoms
Use with no criteria the technology in their everyday life.	60-70%	45-55%	40-50%	60%
Use of technology in controlled ways.	25-35%	70-75%	85-90%	20%
The influence of social environment on the behaviors of adolescents.	65%	70%	80%	40%

From the study it was found that the young people who use the new technology inappropriately by avoiding the natural pattern of human nature, present different problems in socialization, undermining the quality of daily life. These young people mostly manifest aggressive behaviors with their daily relationships; therefore they behave badly even with the people around them. They partially lose the verbal communication with the society and they have lack of concentration/focus on everyday problems, they lose interest of their tasks that they should complete. Some of them create a kind of dependency

on technology, whereas some others feel a kind of anxiety in order to be adapted with the new technologies which are present in their everyday life. A particular effect on their behaviors has even the social environment where adolescents live. From this study it was found that the inappropriate social environment influences 65% of aggressive behaviors to adolescents, 70% in the level of their concentration, 40% in emergence of anxiety symptoms and 80% in the establishment of social relations and communication. This study comes to conclusion that the social environment plays a special role in the adolescents' behaviors, creating social relationships between them and the environment that surrounds them. The inappropriate social environment brings the emergence of these bad and deviant behaviors to adolescents. Furthermore, the usage of new technologies without any criteria causes the emergence of aggressiveness, anxious, lack of verbal communication with the society etc. The new technologies should be seen as an aid to human life and to adapt gradually with the social environment where we live without creating independence, without losing the natural pattern of human life.

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## **The Prospect of Implementing Safety Education in Malaysian Primary Schools: from the Perspective of School Administrators**

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### **Abstract**

Despite of the various attempts to implement safety practices in school, there still many unresolved issues related to students' safety in schools. This study aimed to explore and examine current safety management practices in Malaysian primary schools and the type of safety management plans adopted by the administrators for ensuring students' safety. The sample of this study consisted of 141 School Headmasters and Deputy Headmasters (Administration and Curriculum, Student Affairs or Co-curriculum), randomly selected from 138 primary schools in Kuala Lumpur and Selangor, Malaysia. Quantitative methods were used and the data of school administrators' attitude and stances in implementation of safety management practices were gathered using a set questionnaire. The data was then tabulated, summarized and evaluated to draw conclusions from them, using the Statistical Package for the Social Science (SPSS). Results from the study indicated that there was a strong positive attitude among school administrators in relation to safety management plan and policy practices in school. Teachers' and staffs' participation and parental and community involvement are significantly and positively predicted by school administrators' commitment and communication; as well as safety education, training and campaign at schools. Some of the safety practices investigated in the study were not observed in schools due to increasing workload and responsibilities of teachers and their time availability. Safety practices at the schools mostly depended on the issues that are considered as important by the respective schools. As the implication of this study, some recommendations were made to help schools to improve safety practices at school and promote cooperation between school administrators, teachers, parents and community as a whole. The study also implied that implementation of safety management education in Malaysian primary school has a good prospect.

**Keywords:** safety management, safety practices, school safety

## Introduction

Children have little control over the environment surrounding them as it is getting more challenging. They must depend on adults to keep them safe and enable them to endure various kinds of risks. "Every year around the world, thousands of children die from injuries, while countless more are seriously hurt. Many of these injuries lead to permanent disability and brain damage. The most common injuries are caused by falls, burns, drowning and road accidents" (UNICEF Malaysia, 2012). A review of these situations reveals that most of these accidents and injuries happen in or near the home. In some instances, the accidents happen at school. Students might get injuries because they either get involved or become the victims of crime and violence. Despite these possible incidents the fact is that, almost all can be prevented.

Then, is it possible to provide every child a good start in life? Can school, parents, teachers and other stakeholders play their roles to ensure that every child is given the opportunity to have safe life and provide them with the services as well as supports that they need to thrive their full human potential? More importantly, as questioned by Kitamura (2014) "Do children have sufficient capabilities to respond to risks?" and "...if not, how can they acquire such capabilities?" Thus, safety is of paramount importance in school and safety education appears to be deemed vital.

In Malaysia, "schools have a legal responsibility to ensure the safety of students under the common law doctrine of *in loco parentis*" (Tie, 2014, p. 119). Traditionally, preventative measures were used to address negative behaviours and school circulars were disseminated by authorities (Ministry of Education, 1975). School rules are posted in every classroom, staff room and on school notice boards, and school bags, equipment and grounds checked by teachers and prefects. All teachers were required to recognize and understand the various ordinances and circulars related to school discipline. School rules were enforced using a system of surveillance, penalties and punishments (i. e. suspension, expulsion, alternative school placement and arrest) (Purkey, 1999), although fines were not imposed on parents or guardians.

The aim of this study is threefold: (1) To assess the attitudes of school administrators in relation to safety management plan and policy practices; (2) To investigate the school administrators' stances in the current implementation of safety management practices; and (3) To determine to what extent are the changes in (i) school teachers and staffs' participation; and (ii) parental and community involvement are predicted by (i) school administrators' commitment and communication; and (ii) safety education, training and campaign at schools.

## LITERATURE REVIEW

### Principles of Safety Management

Safety management refers to the actual practices, roles and functions associated with remaining safe (Kirwan, 1998 in Clarke & Cooper, 2004). Mearns, Whitaker and Flin (2003) identified three general themes in safety management which are: (i) genuine and consistent management commitment to safety involving personal attendance of managers at safety meetings and face-to-face meeting with employees; (ii) communication (formal and informal) about safety issues between management and subordinates at all level; and (iii) involvement of employees, including empowerment, and designation of responsibility for safety. Although their suggestions are for safety management in the offshore environments, they seem to be relevant in other settings like schools. In addition, it is also important to audit tools (Lutchman, Maharaj, & Ghanem, 2012), audit safe climate of the workforce and management practices (Lee & Harrison, 2000) to ensure effectiveness of safety management practices and to minimize safety issues in workplace.

While safety issues have been a concern in some fields, it should be an emphasis in any educational institution. Other researchers (Xaxx, 2010; Reeves, Kanan, & Plog 2010; Phipott & Kuenstle, 2007; Frumkin, Geller, & Rubin, 2006) are in agreement that at least four principles of a safety management system are important in school: (i) education for all staff and management to enable them to understand safety policies and standards practices to ensure effective safety management in school; (ii) site maintenance which include effective and regular maintenance and repair of tool and equipment so that they are in good conditions and good working order, and are able to be utilized by everyone when required; (iii) standard safety equipment which includes fire-extinguishers, fire-alarm, water dispenser, smoke detector, and bucket containing water and sand within compound; and (iv) communication between various levels in school in forms of verbal, information notices and regular staff meetings.

## Types of Safety Management

Although many types of management had been highlighted Lister's (2010) looked appropriate for educational institutions and settings. He proposed four types of safety management practices which are:

- (i) Work-centric safety management system - uses mechanism, tool improvement and careful adjustment of space to ensure that the environment is as safe as possible
- (ii) Worker-centric safety management system - focus on employee's behaviour to limit accidents and provide training to employees and involve them in develop safety guidelines and decision making.
- (iii) Autocratic safety management system - have top-down communication with staff and empowers supervisors and human resource manager to implement the principle of the safety management system especially in decision-making.
- (iv) Democratic safety management system - focuses on the distribution of authority, and empowers workers to shape safety policies

## Characteristic of Best Practice for School Safety System

Literatures have suggested an abundance of school safety management system and practices, and among them are Ohio Bureau of Workers' Compensation (2005). The Bureau outlines the following strategies: (i) management commitment (e. g. development of a comprehensive approach to safety that focused on both students and employees' safety in school; (ii) employees' participation and involvement in safety in school; (iii) communication of safety policy statement and safety responsibilities to all stakeholders; (iv) Providing safety education and training to ensure employees and students are not injured or made ill by the work and activities they do; (v) Injury reporting and treatment that occurred in school; (vi) Safety audits and inspections that focus on both unsafe conditions and unsafe behaviour; and (viii) Safety programs to promote safe school environment that is conducive for teaching process.

## Malaysian School Safety Program

The Malaysian Ministry of Education (MoE) Malaysia has established a system and policy on school safety measures. Directives are given to all Educational Departments Office and schools throughout the country in forms of circular letters in particular, "Ikhtisas" Circular Letters (*Surat Pekeliling Ikhtisas*). Four main major categories in Circular issued by the MoE Malaysia are curriculum, co-curriculum, administration and students affairs. The implementation of safety at school is put under students' affairs matters. Examples of the circulars are as follows:

- (i) Students Safety at School. vol. 8/1988 - reminds school administrators to be alert with any possibilities that can cause harm to students as well as to take preventive steps on it
- (ii) Students Safety When Coming to and Going Back From School. vol. 8/1999 - highlights the importance of establishing rules of safety to protect students from becoming criminal victim in or outside the school.
- (iii) Addressing Security Issues, Drugs, and Gangsterism. vol. 6/2000 - focuses on maintaining student safety and prevention of drugs, and other undesirable incidents such as threatening, kidnapping, rape, drugs abuse, and gangsterism or "triad society" in schools.
- (iv) Implementation on School Safety Program. vol. 4/2002 - provides guideline on creation of a situation where all school community will feel safe to carry out teaching and learning activities, as well as extracurricular activities without any interference from within or outside.
- (v) Safety Guideline for Attending activities and Program beyond school hours. vol. 8/2009 - emphasizes school's responsibility to ensure student safety during outdoor school activities.

(vi) *Students Safety Management at School*. vol. 8/2011 - reminds s school to act against anything that may threaten students' safety and creates awareness among school administrators to be more cautious with any possibilities that can cause harm to students and take an action on how to prevent it.

Apart from these circulars, there were many others which addresses specific issues related to safety management and practices such as reports of accidents at school, safety during sports education and co-curricular activities, health care, preparation for natural disaster, student safety during coming to school and back from school, fire prevention and fire drill.

### **Related Studies in Malaysia**

Despite an abundance of circulars that carried directives from the Ministry of Education Malaysia, it has been found that there is a lack of comprehensive coverage on studies and findings related to safety practices in primary schools in Malaysia. Available literatures are based on studies conducted from year of 2000 and above. Mahadi (2000) who examined perceptions and attitudes regarding school safety at two high-risk boys' school, Kuala Lumpur. The study also analyses the effect of fear of school crime and violence on victimized students toward their perceptions of personal safety. It was found that although school was perceived as a safe place, students are being physically victimized in their school. Victimized students were likely to have a fear of crime while in school and travelling to and from school. The result also indicates the prevalence of students carrying weapons to school for self-protection and gang-related, and the existence of gang members in the school. Most of students suggested that police and professional security personnel regularly patrolling schools might help to increase security and safety in the schools. With regard to school access safety, Suid (2004) suggested that the access in schools, there are certain guidelines such as appropriate width of main entrance and exit, proper pedestrian walkways with non-slippery material, suitable materials for signage and proper access to drop-off area and parking areas should be taken into consideration.

Studies on school safety management and practices have also been conducted on teachers and principals. Abdullah (2006) revealed that majority of the teachers have positive perceptions towards the principal's role in ensuring school safety as stipulated by the Safe School manual and Circular from the Ministry of Education regarding school safety. Security wise, Idris (2008) identified that students experienced emotional (e. g. smoking, gangsters, bully) and physical (vandalism, maintenance and classroom's conditions). About leadership of principals in implementing the school safety regulations, Norazlida Shamsuri (2008) reported that the principals have clear leadership roles in managing their school safety issues. Effectiveness of interventions had also been measured. In her experimental study on the effectiveness of awareness on CyberSAFE information program among pre-service teachers, Saarani (2014) conveyed improved attitudes, and increased knowledge among the teachers which indicated the effectiveness of programs and the importance of using technologies to promote and improve safety.

Indeed, there are a lot of suggestions on ways to enhance safety of school community especially the staff and students. Polices and implementation of good practices of school safety management are also abundant. Like other countries across the world, Malaysia never take the the safety of student especially in the school compound lightly. Despite many efforts that have been made by the Ministry of Education, the State and District Education Offices to ensure that schools have safe and conducive environment, although the rate was not high, unwanted incidents that have caused injuries happened at school. The disparity here is probably structured safety education has not been implemented. Are the school authorities ready and have adequate knowledge to implement safety education at school? This study was embarked to explore view of the school administrator on prospect of implementing safety education in Malaysian primary school by examining their attitudes on implementation of plan and policy practices of school safety management. Their stances in the existing implementation of safety management practices were also investigated. Findings on relationships between several variables in in safety management practices would also provide some insight on way to enhance the involvement of teachers, school staff, parents and community in safety education.

## METHODOLOGY

### Research Design

To undertake the objectives of this descriptive cross-sectional study, questionnaires were utilized to collect data of the school administrators' attitudes in relation to safety management plan and policy practices, and its implementation. The questionnaire was also used to obtain data of their stances in implementation of safety management practices in relation to commitment and communication; safety education, training and campaign at schools; school teachers and staffs' participation; parental and community involvement; safety audit, maintenance and inspections as well as injury reporting and treatment.

Survey research is utilized in this study to gain insight into the thoughts, ideas, opinions, and attitudes of a population. This method enable the researcher to describe and draw conclusions from frequency counts and other types of analysis. Although it is descriptive in nature, survey research may serve as a stimulus for more in-depth and analytical research such as correlational and causal-comparative studies (Salkind, 2010).

### Participants

#### Population

The research population is a group of individuals that shares the same characteristics from the different group of people (Creswell, 2012). The targeted population for this study comprises of 587 school administrators from the Malaysian national schools in Selangor (446) and Kuala Lumpur (141).

#### Sample and Sampling Procedure

Stratified random sampling technique was utilized in data collection as it can provide greater precision and requires a smaller sample. The researcher in this study stratified the sample to the specific characteristics and used random sampling to select the respondents. Stratified random sampling technique is usually used when researcher intentionally selects the individuals who can best give information and help the researcher understand the phenomenon (Gay & Airasian, 2014). Specifically, the research population was selected from National primary schools in Selangor and Kuala Lumpur excluding National Type (Chinese) Primary School (*Sekolah Rendah Jenis Kebangsaan Cina - SJKC*), and National Type (Tamil) Primary School (*Sekolah Rendah Jenis Kebangsaan Tamil - SJKt*). This is not an issue at all as in most schools in Malaysia, the administrators, teachers and students are multi-ethnic and multi-religion.

One of the main objectives of this study is to look at safety management practices in National primary schools in Malaysia. For the respondents, sample size was calculated using sample size calculator with 95% confidence level and below 10% margin error which amounted to 80 out of total 446 National primary schools in Selangor and 58 out of total 141. In sum, 58% of the samples were from Selangor and the rest (42%) were from Federal Territory of Kuala Lumpur.

### Instruments

One of the significant common types of instruments used for the quantitative research survey is questionnaire because it provides efficiency in collecting data and allows data collection from a large sample and requires less time, and less cost. Questionnaire can assure respondents' confidentiality and anonymity and hence, helps to gain more truthful response than face-to-face interviews (Gay, 1992).

The questionnaire was specially developed for the purpose of this study and examined for face and content validities by three experts in this field. It comprised of the following areas:

- (i) The attitudes of school administrators in relation to safety management plan and policy practices;
- (ii) The school administrators' stances in implementation of safety management practices

The questionnaire was constructed in two languages; English and Malay language to facilitate the Malaysian school administrators since using mother tongue language develops more sense and understanding.

### **Description of Instrument**

The questionnaire used for the school administrators consisted of 66 items in three major sections. Section (A) comprises of six items, which requested the respondents to provide their demographic information. The items included are gender, age, school area, years of working experience, current administrative post and school location.

Section (B) comprises of 12 items, which measured the safety management plan and policy practices in school. A Five-point Likert Scale measurement is used to identify level of agreement which rated responses from “strongly disagree”, “disagree”, “neutral/not sure”, “agree” to “strongly agree”. “Strongly disagree” is used in this study to describe that respondents are strongly unfavourable with the statements, while “disagree” describe that respondents are somewhat unfavourable with the statements. “Neutral/not sure” is used to describe that respondents are undecided, neither agree or disagree. “Agree” is used to describe that respondents are somewhat favourable with the statements, and “strongly agree” is to describe that respondents are strongly favourable with the statements.

Section (C) comprises of 48 items, which focus on safety management practices in school that covered six aspects as follows:

No	Aspects of Safety Management	Items	Total
i.	commitment and communication	1 – 10	10
ii.	safety education, training and campaign at schools	11 – 18	8
iii.	school teachers and staffs' participation	19 – 28	9
iv.	parental and community involvement	19 – 28	9
v.	parental and community involvement	29 – 34	5
vi.	safety audit, maintenance and inspections	35 – 42	7
vii.	injury reporting and treatment	43 - 48	6

A four-point Likert scale measurement from “not at all”, “very little”, “somewhat” to “to a great extent” was used to identify level of administrators' agreement on the statements. “Not at all” is used in this study to describe that such practices did not exist in schools, while “very little” describes that practices happen on some occasions. “Somewhat” is used to explain that safety practices exist commonly in schools. “To a great extent” is used to describe that practices exist often in school.

### **Data Collection Procedure**

As the instrument was specially developed for this study data was collected twice. The first was used to establish the reliability and validity of the instrument via pilot study. The second was for the actual study. Proposal for the study and the questionnaire were submitted to the Ministry of Education Malaysia for approval and endorsement to conduct the study. Upon approval, permission was obtained from the Department of Education Selangor and Department of Education Wilayah Persekutuan Kuala Lumpur.

### **Data Analysis**

The data were gathered using questionnaires, then tabulated, summarized and evaluated to draw conclusions from them, using the Statistical Package for the Social Science (SPSS). Simple frequency distribution and percentage was used to

present data in the responses. Means scores and standard deviation were acquired to assess the level of respondents' perception based on the class interval as given below.

Safety management practices in school are rated on four point of rating scale:

Means Interval	Degree of Implementation
1. 00 – 1. 49	Means that the implementation is rate on worst level
1. 50 – 2. 49	Means that the implementation is rate on poor level
2. 50 – 3. 49	Means that the implementation is rate on moderate level
3. 50 – 4. 00	Means that the implementation is rate on good / excellent level

Descriptive analyses i. e. frequency and percentage were obtained in order to assess the attitudes of school administrators in relation to safety management plan and policy practices and also to investigate the school administrators' stances in implementation of safety management practices. Simple linear regression were used to determine the extent of the changes in (i) school teachers and staffs' participation; and (ii) parental and community involvement were predicted by (i) school administrators' commitment and communication; and (ii) safety education, training and campaign at schools.

### Reliability and Validity of the Instruments

Psychometric properties, particularly reliability and validity of the instruments were established using data collected in pilot study. The questionnaire developed for this study was pilot-tested in which it was tried out with a small group who are familiar with the variables of the study and are in a position to make valid judgement about the items (Creswell, 2012; Wiersma, 1986). This pilot study involved 12 school administrators who were selected through purposive sampling method. Comments, feedback and recommendations on the items in questionnaire were noted and taken into consideration for correction and improvement. The result of the pilot study indicated that the reliability score for all items is Cronbach alpha ( $\alpha$ ) = 0. 945. Table 1 (Appendix) shows details of the reliability of the instruments used in this study.

Face validity and content validity were established by three experts in the Kulliyyah (Faculty) of Education who were in the areas of psychometric, educational psychology and counseling respectively to avoid any ambiguous words and to ensure the meaning of the questions could be understood by the participants. In addition, it is also to ensure that the questionnaires are able to answer the research questions. Normality assumption was tested through examination of the data distribution. To examine construct validity, bivariate analysis using Pearson two-tailed correlation coefficient was performed between the constructs. Positive significant correlation between  $r = .507$ ,  $p < .01$  and  $r = .702$ ,  $p < .01$  were demonstrated between the constructs. The moderate to moderately high correlation indicate that the construct are related to each other, share some common characteristics and measuring the similar domains which are school safety management and implementation. Nevertheless, multicollinearity does not exist as the constructs are not highly correlated. Hence construct validity of the instrument was established. Refer Table 2 (Appendix) for further details.

## RESULTS OF THE MAIN STUDY

### Respondent's Demographic Background

In this study, 41. 8% of the respondents are male and 58. 2% of the respondents are female respondents. Regarding the school area, 62. 4% are located in rural area and 37. 6% are located in urban area. As for the administrative position of respondents, 18. 4% were School Headmasters, 13. 5% were Deputy Headmaster (Administration & Curriculum), 61% were Deputy Headmaster (Student Affairs), and the rest 7. 1% were Deputy Headmaster (Co-curriculum). In terms of their ages, 0. 7% of the respondents were less than 30 years of age, 13. 5% were in the age range of between 30-39 years, 41. 8% were between 40-49 years, and 44% were between 50-60 years. In terms of working experience, 3. 5% of the respondents have an experience of less than 10 years, 29. 1% had working experience between 10-19 years, 36. 9% between 20-29 years, and 30. 5% between 30-40 years respectively. Finally, in terms of school location, 57. 4% of the respondents were representatives from primary schools in Selangor and 42. 6% while the rest were from primary schools

in Kuala Lumpur. The demographic data of the respondents are based on frequency and percentage as shown in Table 3 (Appendix).

### **Attitudes of School Administrators in Relation to Safety Management Plan and Policy Practices**

Data analysis on 12 items examining school administrators' attitudes in relation to school safety management plan and policy practices in ensuring school and students' safety revealed a positively skewed findings where most of the respondents reported their agreement with most of the items.

Results of the study indicated that the school administrators were in agreement ("agree" and "strongly agree") with the statements related to safety management plan and policy practices at school. For instance, 73. 8% respondents reported that their school safety plan and policies covered physical and psychological safety. Apart from that 65. 2% conveyed that their schools have "specific plan and policies on how to improve safety on school site such as school environment, school facilities, and school surrounding" and that the "safety plan and policies are reviewed annually and updated where necessary. " Item 1 "My school has an official written plan and policies that clearly define roles of each individual at school (e. g. administrators, teachers & etc. )" and Item 9 "The implementation of my school plan and policy is an order which directly comes from Minister of Education, State Educational Department, or Educational District Educational Office" received the highest "strongly agree" responses which were 56% and 55. 3% respectively. Interestingly however, almost half of the respondents (48. 9%) reported that they disagree that their school safety plan and policies at school level were decided only by school administrators without any interference from other parties such as teachers, staffs, or parents. Refer Table 4. 1 (Appendix) for details of the results.

### **The School Administrators' Stances in the Current Implementation of Safety Management Practices**

In measuring the above variable, the study was categorized into six indicators as presented below:

#### ***Management Commitment and Communication***

Descriptive analyses of school administrators' responses on the implementation of safety management practices in their school in relation to management commitment and communication (10 items) showed that the respondents conveyed that they "somewhat agree" and "agree to a great extent" with all statements and the percentages ranged between 87% to 99. 3%. Approximately 84% respondents agreed to a great extent that they consistently corrected and reminded students about risky behaviour and the importance of safety at school (Item 10) and 80% gave similar response that they played active roles in promoting and enhancing safety at school.

As stipulated in Table 4. 2 (Appendix) the result on school administrator' responses also indicated that "to a great extent" they have clearly defined the risky behaviours (70. 9%) and its consequences were explained to all teachers, staffs and students (73%). Interestingly however, the school administrators' responses showed that school "somewhat" set a benchmark and guidelines on safety performances as a mechanism to guide intervention, measurement and improvement for school safety practices (53. 2%), and schools have continuously made an effort through collecting data, making analysis, and developing new strategies to improve school safety plan and policies to build a conducive learning environment (54. 6%).

#### ***Safety Education, Training and Campaign at Schools***

With regard to the above aspect, between 78% to 98. 5% of school administrators reported their agreement ("somewhat agree" and "to a great extend agree") that safety education, training and campaign were carried out at schools. About 70% strongly agreed that "terms related with safety have been included in orientation program process for new students, new staffs and parents. " However, it is intriguing to note that between 40% to 52% reported that they moderately (somewhat) agree with seven of eight items. For instance, school administrators' perceived that schools "somewhat" considered safety training as one of the important in-service training method for staffs and teachers (49. 6%), and "somewhat" cooperate with authorities to conduct a safety forum to increase safety awareness, knowing the current safety issues and how it is addressed (49. 6%). The fact that about 21% of the school administrators reported that they have very little agreement or

do not quite agree that “school administrators and teachers need to attend a course on how to educate students, teachers and staffs to improve their safety concern at school” and that “teachers, staffs and students received fire extinguisher training” are important to note. These responses inferred the there were school administrators who might have thought that there was very little need that teachers and staff be sent to safety educational courses and there were also schools where the teachers, staff and students who rarely or probably never (1. 4%) receive training in handling fire extinguisher. Refer Table 4. 3 (Appendix) for full data.

### ***School Teachers and Staffs’ Participation***

The data obtained from the school administrators’ responses as stipulated in Table 4. 4 (Appendix) showed that 100% of teachers and staffs (78% “to a great extent” and 22% “somewhat”) always helped to support school administrators by monitoring students’ safety at school.

Referring to the descriptive analysis, more than 90% school administrators felt that they could obtain good cooperation in term of teachers and staff participation in implementation of safety education. For example, “to a great extent” 75. 9% saw that staffs or teachers are always available to supervise students during or beyond school hour activities or on weekend. However, with regard to outreach work such as publishing a safety newsletter and distribute to teachers, staffs and students observed a less encouraging view with 36. 9% responded “very little” and 39. 7% “somewhat “ agreements respectively. A rather moderate number (61. 7%) of the respondent somewhat agree that school safety committee always conducts meetings, prepare and post meeting minutes at school notice board.

### ***Parental and Community Involvement***

Almost 52% of the respondents “to a great extent” perceived that parents and community gave support, provided information about students’ movement, and made a close contact with school as a step to strengthen safety practices at school.

However, results of the study shows that they “somewhat” complied and (51. 8%), and that families were active participants in supporting safety education practices in school by gradually attending safety meeting and involve in any safety program at school (50. 4%). School administrators’ responses showed that schools “very little” (31. 9%) have visits from local public safety agencies like police and fire brigade to do a walk- through of the school to familiarize them with school layout. Based on the responses “somewhat agree” (41. 8%) it is indicated that at least one of the parents and a member of the community appointed as a member of school safety committee to determine safety plan and policies at school. Only 8. 5% of the respondents reported that community did not help school by patrolling and monitoring around school area at all. Table 4. 5 (Appendix) presents detail results.

### ***Safety Audit, Maintenance and Inspections***

The data obtained from the schools’ administrators’ responses as demonstrated in Table 4. 6 (Appendix) show that 67. 4% of them “to a great extent” had always ensured that regular areas used by staffs and students were regularly checked and well maintained. Results from the school administrators’ responses show that school “somewhat” (51. 8%) makes a comprehensive audit to all facilities every year. While “very little” (10. 6%) conducting inspections and patrolling after school hours conditions. “Not at all” (2. 1%) have made a monthly playground safety inspection.

### ***Injury Reporting and Treatment***

As demonstrated in Table 4. 7 (Appendix), 83% of the school administrators agreed to a great extent that any major or minor accidents and injuries were immediately reported to them and the authorities. They (67. 4%) also strongly agreed that the school provided a list of emergency numbers; such as for police, ambulance, and fire-brigade at places where students frequently gather. However, the respondents (45. 4%) moderately agrees that the schools formed accident-review team to make sure accident reports are filled completely, identify the cause factor analysis, and ensure proper follow-up action have been taken. They reported that they (30. 5%) rarely (“very little”) sent a representative to meet with medical panel to discuss about treatment procedures and ways to communicate about injury and treatment. About 16% indicated

that they had never ("not at all") invited selected panel to check medical facilities at school so that they are familiar with school's safety procedure and operation.

### ***Summary of the School Administrators' Stances in the Current Implementation of Safety Management Practices***

As demonstrated in Table 4. 8 (Appendix), school administrators were positive in their views in implementation of safety management practices. This is indicated by means of each sub-scale (in order from the highest to the lowest) management commitment and communication, safety audit, maintenance and inspection, school teachers and staffs participation, safety education, training and campaign, parental and community involvement and injury reporting and treatment.

### **Relationships between Variables**

In determining the extent of the changes in (i) school teachers and staffs' participation; and (ii) parental and community involvement are predicted by (i) school administrators' commitment and communication; and (ii) safety education, training and campaign at schools the two variables which are related to each other i. e. MCC and SECT ( $r = .691$ ,  $p < .01$ ) were combined to form an independent or determinant variable. The interaction between these two variables were anticipated to predict the (STSP) and also (PCI) in implementation of safety management practices in schools better. Results from linear regression analyses are presented in two subtopics as follows:

#### ***Effects of School Administrators' Commitment and Communication - Safety Education, Training and Campaign at Schools on School Teachers' and Staffs' Participation***

To test the effects of MACC and SETC combination (predictors) on perceived school teachers' participation, a linear regression analysis (one-way independent ANOVA) was performed. As shown in Table 4. 9 (Appendix) there is a moderately strong relationship between the predictors and dependent variables ( $R = .770$ ), and 59% of the variance in school and staff participation could be accounted by the management commitment and communication and also educational campaign and training provided. The variance explained was reported to be 59%. An analysis of variance showed that the effect of MCC and also ECT on SSP was significant, [ $F(2, 138) = 100.77$ ,  $p = 0.000$ ]. Analysis of MACC and SECT scores with a one-way independent ANOVA also demonstrated positive results. Management communication and commitment has a regression coefficient of 0.45 indication that as an increase of the variable in one unit will increase the participation by 0.45. It can be 95% confident that the population coefficient is between 0.31 and 0.60. The t-value is 6.10 with associate probability of 0.00, thus the regression coefficient is unlikely arisen by sampling error. On the other hand, a regression coefficient indicates that the increase of the educational campaign and training in school safety management by one unit effect the change of the teachers and staff participation by 0.34. The 95% confident interval infers that the population coefficient is between 0.21 and 0.47.

#### ***Effects of School Administrators' Commitment and Communication - Safety Education, Training and Campaign at Schools on Parental and Community Involvement***

The results of linear regression analysis showed that there is a moderately strong relationship between the predictors and dependent variables ( $R = .731$ ), and 53% of the variance in school and staff participation could be accounted by the management commitment and communication and also educational campaign and training provided. The variance explained was reported to be 53%. A one-way ANOVA was calculated on respondents' ratings of effect of management commitment and communication and also educational campaign and training on parents and community involvement. The analysis was significant, [ $F(2, 138) = 79.00$ ,  $p = 0.000$ ].

Management communication and commitment has a regression coefficient of 0.47 indicating that increase the participation of parents and community by 0.47 is caused by as an increase of the earlier variable in one unit. It can be 95% confident that the population coefficient is between 0.23 and 0.71. The t-value is 6.10 with associate probability of 0.00, thus the regression coefficient is unlikely arisen by sampling error. On the other hand, a regression coefficient indicates that the increase of the educational campaign and training in school safety management by one unit effect the change of the teachers and staff participation by 0.66. The 95% confident interval infers that the population coefficient is between 0.46 and 0.88. Refer Table 4. 10 (Appendix) for further details

## SUMMARY AND DISCUSSION

Ensuring safety in school becomes a priority nowadays. Although the occurrences of incidents in schools that cause injury or death might be small in this country, stake holders especially parents express that concerns about the need of an adequate safety practices to be implemented in schools to promote safe and conducive environment for their children. Despite the current safety management practices in educational settings which were well-stated and documented, this study was embarked to investigate the attitude of 341 school administrators in Selangor and Federal Territory of Kuala Lumpur primary schools towards safety management plan and policy practices. Other than that, their stances in implementation of safety management practices was also examined. The topic understudy also explored if school administrators commitment and communication, as well as safety education, training and campaign conducted by the schools have bearing on school teachers and staffs participations as well as parents and community involvements in school safety-related programs.

The results if descriptive analysis in this study revealed that the school administrators had positive attitudes in relation to school safety management plan and policy implementations especially in dealing with physical and psychological safety their students. They reported that the plans and policies contained clear and important characteristics of good safety planning and suitable with the necessary situations. Besides that, plan and policies on how to improve safety on school site such as school environment, school facilities, and school surrounding were outlined and annually reviewed. Roles of each individual at school were were also clearly defined. The school plan and policy is an order which directly comes from Minister of Education, State Educational Department, or Educational District Educational Office and not only solely decided by the schools or suggested by teachers, staff and parents. This practice indicates that school administrators in Selangor and Kuala Lumpur were in line with the directives extended by the Ministry of Education Malaysia through the many "Ikhtisas" circulars.

It is also important to note that the findings of this study revealed the practice of the school administrators in Selangor and Kuala Lumpur were in congruent with Lister's (2010) work-centric safety management system as the schools have a specific safety plan and policies which cover the safety of personal and individuals which could be for assessed and improved. They agreed that safety education, training and campaign were carried out at schools, and the school safety plan and policies should be reviewed annually and updated when necessary to ensure they are suitable with the current situations(worker-centric safety management system). Apart from that, practices of autocratic safety management system were observed through the order by the top authority through "Ikhtisas" circular letter and administrators only have to implement them at school. In terms of decision making at schools, some schools practice demonstrate safety management system while others practice autocratic management system. Hence, result indicates that although some schools in Selangor and Kuala Lumpur practice autocratic safety management system in decision making, they still encourage teachers, parents and staff to participate by proposing additional ideas in order to enhance the schools administrators to decide safety plans and policies at school for the best interest of all the parties concerned.

This study need to acknowledge the works of previous researchers (e. g. Meams, Whitaker & Flin, 2003; Lutchman, Maharaj, & Ghanem, 2012; Xaxx, 2010; Reeves, Kanan, & Plog 2010; Phipott & Kuenstle, 2007; Frumkin, Geller, & Rubin, 2006) that have contributed to the initial draft of the instrument for this study. The best practices for school safety system propose by Ohio Bureau of Workers' Compensation (2005) had also been adopted and adapted in determining the sub-scales and development of items in the instrument.

This study also revealed interesting findings in relation to the their stances on the current implementation of safety management program. School administrators played active roles to promote and enhance safety at schools, developed an action plan with clear goals and objectives, conduct a safety meeting and distribute post minute meeting, set a benchmark and guideline of measurement (KPI), make an effort to improve schools' safety plan and policies. The results of the present study was in support of Shamsuri (2008) who notified that the principals has clear leadership roles in managing their school safety issues. Statistically,  $M = 3.514$ ,  $SD = 0.401$  conveys that the management commitment and communication was rated at good level. It also showed that school administrators are clear with their responsibilities in committing and communicating about safety in schools. They conformed the directive from MoE Malaysia (e. g. Students Safety at School. vol. 8/1988; Implementation on School Safety Program. vol. 4/2002) that school safety guidelines must be understood and adhered to by teachers, staff and parents and should be strictly conducted and implemented as a part of school rules and

regulations. Apart from that the circulars also convey that school administrators need to conduct a special briefing with community, government and non-government agencies to encourage their contribution in this program. In The similar result found by Shamsuri (2008) shows that the principals have clear leadership roles in managing their school safety issues.

Although the study revealed that safety education, training and campaign at school ( $M = 3.337$ ,  $SD 0.444$ ) were being carried out, there are schools that have never conducted training among teachers, staffs and students on how to use fire extinguisher nor educate their teachers and staff to recognize any situations that could endanger students. This conduct is not in compliance with Fire Prevention at School. vol. 7/2000 that talks and exhibitions on fire prevention programs which include fire extinguisher demonstration should be carried out. The school management should strongly consider to train teachers, staff and even students and their parents to operate fire extinguisher to prepare them for the unforeseen circumstances related to break of fire in or outside school. As reported by, Saarani (2014) pre-service teachers displayed improved attitudes, and increased knowledge after attending CyberSAFE information program effectiveness of programs and the importance of using technologies to promote and enhance safety.

School teachers and staff participation were considerably good ( $M = 3.446$ ,  $SD = 0.399$ ). It is also good recognize that teachers always helped to support school administrators by monitoring students' safety and were always available to supervise students during or beyond school hour activities such as sports and co-curricular programs as stated in MoE safety measures e. g. Sport Education and Co-Curricular Activities Inside and Outside of School. vol. 1/1995 and vol 9/2000; Students Safety When Coming to and Going Back From School. vol. 8/1999). This practice was in accord with Nevertheless, outreach work such as publishing a safety newsletter and distribute to teachers, staffs and students need to be improved as the results of this study observed a less encouraging view with regard to this statement. This finding nevertheless was incompatible with suggestion provided in the same circular that school should display posters and regulation charts to increase students' awareness on the importance of safety in all circumstances.

School administrators reported that they kept in touch with local safety mandate, state or other related agencies to develop safety program at school and they also received support from parents and community and they provided information to the school about students' movement This is in correspondence with a directive in Implementation on School Safety Program. vol. 4/2002 circular that suggest schools to establish a committee in school with representatives from school staffs, community, and government and non-government agencies to improve safety in schools.

In many schools families were active participants in supporting safety education practices in school by gradually attending safety meeting and involve in any safety program (50. 4%). However, it is essential to note that schools also received support from local public safety agencies like police and fire brigade to do a walk- through of the school to familiarize them with school layout. At outlined in Students Safety When Coming to and Going Back From School. vol. 8/1999, school needs to ensure students are aware and be concerned with any criminal possibility upon them, and to cooperate with police and parents to patrol high risk potential areas. Results of the study also the school involved parents and members of community in determining the school safety plan and policies. Probably, by utilizing school safety committee and Parent-Teacher Association (PIBG) the school cold include parents and community perspective in designing safety procedure in school.

In relation to safety audit, maintenance and inspections the school management reported that they always made sure that the areas frequented by staff and students were checked and maintained regularly checked. Regular monitoring of the blind spot areas in school and declaring grey areas as restricted areas for students has also been outlined in MOE Students Safety Management at School. vol. 8/2011 circular. Nonetheless, although the rate is very small, there were school administrators who admitted that they seldom conduct inspections and patrolling after school hours conditions among them, even a number had never conducted monthly playground safety inspection. This aspect is definitely need to be improved.

In compliance with MoE Malaysia circular (e. g. Students Safety at School. vol. 8/1988 and vol 8/2011; Report on Incident at Schools. vol. 4/199) almost all (98. 6%) of the school administrators strongly adhered that any major or minor accidents and injuries were immediately reported to them and the authorities. In strengthening the safety measures, the school provided a list of emergency numbers; such as for police, ambulance, and fire-brigade at places where students frequently gather. However, the school administrators (30. 5%) admitted that they rarely sent a representative to meet with medical panel from panel clinics or hospitals to discuss about injury treatment procedures. Surprisingly, about 16% indicated that

they had never invited selected panel to check medical facilities to familiarize them with school's safety procedure and operation. This factor needs appropriate attention from the school authorities.

Relationships between variables were also explored using linear regression analysis, specifically one-way independent ANOVA. Findings of this study revealed that school administrators' commitment and communication when combined with safety education, training and campaign at schools provide significant effect on teachers and staff participation in school safety management practices [ $F(2, 138) = 100.77, p = 0.000$ ]. Combination of the two variables also demonstrated significant effects on parental and community involvements [ $F(2, 138) = 79.00, p = 0.000$ ]. These results provide empirical evidences that the higher the commitment and the better communication strategies practised by the primary school administrators the better the participations and involvement of teachers, staff, parents and community were in school safety in the implementation of school safety management exercises.

## **SUGGESTIONS, IMPLICATIONS OF THE STUDY AND RECOMMENDATIONS FOR FUTURE RESEARCH**

The followings are recommendations to help schools to improve safety practices at school and promote cooperation between schools with teachers, parents, community, government and non-government agencies to increase their contribution on school safety.

(i) MoE Malaysia and schools as a whole should develop special KPI for safety practices at schools as a mechanism to standardize the practices, to gain data for analysis and as a method to find a solution on how to improve safety practices at schools. Special rewards could be given to schools with good initiatives and efforts

(ii) Safety Education modules need to be developed to provide adequate knowledge and skills for teachers to deliver them in classrooms. The modules could infused and integrated with curriculum and co-curricular activities.

(iii) School Safety Management Inventories should be developed to facilitate supervision, auditing and assessment of safety management implemented and practised schools. Hence school safety needs to be evaluated at least once a year.

(iv) Financial assistance and expert advice should be given to school to repair the wear and tear of equipment and advise on more efficient )and effective ways of safety management.

v) Brigade community approach by an be applied in school safety programs by involving relevant agencies within the community (e. g. fire department, police stations' clinics/hospitals) and community leaders as they can utilize their facilities in safety management education and interventions.

vi) Schools also must develop Standard operating procedure (SOP) in handling crisis situations like fire and natural disaster that probably happen in the environment such as land slide, earthquake, storm and flood. The SOP must be explained to staff and students, and exhibited on notice boards around school.

vii) School management can form a task-force committee to be in charge of school management plan, policy and procedure just like the disciplinary board and other committees.

## **RECOMMENDATIONS FOR FUTURE RESEARCH**

This study relates to safety practices among selected primary school students in Selangor and Kuala Lumpur. More research in this area will be helpful to schools and the country as a whole to tackle the problems of school safety as follows:

(i) Similar studies can be conducted in other educational settings such as preschools and secondary schools, various national types schools and also higher learning institutions in order to find safety types and practices at these schools and institutions so that improvements can be made.

(ii) Data were collected can be expended to other states to enable a broad coverage and produce better generalization of the study.

(iii) This study employed the survey method. Qualitative methods such as observation and personal interviews would be helpful in identifying and obtaining in-depth knowledge on safety management types, safety management practices and administrators' perception towards parents and teachers contribution in schools' safety program.

(iv) There is an urgent need to conduct more empirical research in schools in remote areas to understand cross-cultural differences about the safety management types and safety management practices in remote area schools.

(v) Further studies on school teachers, parents, community, and students' perceptions are also important to have an in-depth understanding of schools' safety management types and safety management practices to ensure awareness on the issues across the different hierarchies of the education system.

## CONCLUSION

In sum, despite some the result of this study discovered that school administrators were committed in implementing safety management practice. They defined clearly general knowledge and basic safety awareness to teachers and staffs, posted or made visible the safety rules, explained risky behaviours and their consequences to all teachers; staffs and students, and consistently correct and remind students about risky behaviour and the importance of safety at school that fulfils the best practices for school safety system in relation to communication categories. Despite some unaccomplished practices in several aspects, practices terms related with safety have been included in orientation programs and school have considered safety training as one of the important in-service training methods. School teachers and staff cooperation and support show their compliance on safety education and training implementation.

Nevertheless involvement of parent and community is still quite small that require schools to create roles for them probably through PTA. Thus their action and attitudes need to be improved. In term of audit, maintenance and inspections, as well as injury reporting and treatment, there are still areas to be improved. Random patrol on shift basis by the administrators around the school areas could give some effective results. Discussion with medical personnel and consultation with medical service providers might enhance prevention measures and enable immediate help in case of accidents the involved the school community.

Last but not least, what is the prospect of implementing safety education in Malaysian primary school? From the perspective of school administrators, it could be done. As indicated in this study, school administrators must be committed, and use good, effective and feasible strategies are essential in getting corporation and supports from stake holders for the benefit and betterment of students welfare especially in term of safety.

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## Appendix

**Table 1: Reliability of the Instruments by Sections**

Section	Title	Cronbach's Alpha ( $\alpha$ )
B	Safety Management Plan And Policy Practices	0. 761
	Safety Management Practices:	
	a) Management Commitment and Communication (MCC)	0. 798
	b) Safety Education, Training and Campaign at School (SETC)	0. 891
C	c) School Teachers and Staffs Participation (STSP)	0. 827
	d) Parental and Community Involvement (PCI)	0. 763
	e) Safety Audit, Maintenance and Inspections (SAMI)	0. 866
	f) Injury Reporting and Treatment (IRT)	0. 834

Table 2: Bivariate Correlation between Constructs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Plan & policy (1)	1	.668**	.552**	.579**	.552**	.527**	.510**
		.000	.000	.000	.000	.000	.000
	141	141	141	141	141	141	141
Commitment Communication (2)	.668**	1	.691**	.720**	.642**	.573**	.507**
	.000		.000	.000	.000	.000	.000
	141	141	141	141	141	141	141
Educational campaign/ training (3)	.552**	.691**	1	.696**	.696**	.561**	.544**
	.000	.000		.000	.000	.000	.000
	141	141	141	141	141	141	141
Teachers staffs involvement (4)	.579**	.720**	.696**	1	.705**	.721**	.578**
	.000	.000	.000		.000	.000	.000
	141	141	141	141	141	141	141
Parentn& community involvement (5)	.552**	.642**	.696**	.705**	1	.688**	.608**
	.000	.000	.000	.000		.000	.000
	141	141	141	141	141	141	141
Audit maintenance (6)	.527**	.573**	.561**	.721**	.688**	1	.534**
	.000	.000	.000	.000	.000		.000
	141	141	141	141	141	141	141
Injury Reporting (7)	.510**	.507**	.544**	.578**	.608**	.534**	1
	.000	.000	.000	.000	.000	.000	
	141	141	141	141	141	141	141

\*\* . Correlation is significant at the 0. 01 level (2-tailed).

Table 3: Demographic Profile of Respondents (n=141)

Demographic Characteristic	Frequency	Percentage (%)
Gender		
Male	59	41. 8
Female	82	58. 2
School Area		
Rural	88	62. 4
Urban	53	37. 6
Current Administrative Post		
Headmaster	26	18. 4
Deputy Headmaster (Administration & Curriculum)	19	13. 5
Deputy Headmaster (Students Affairs)	86	61
Deputy Headmaster (Co-curriculum)	10	7. 1
Age		
Less Than 30 Years	1	0. 7
30-39	19	13. 5
40-49	59	41. 8
50-60	62	44
Working Experience		
Less Than 10 Years	5	3. 5
10-19	41	29. 1
20-29	52	36. 9
30-40	43	30. 5
School Location		
Selangor	81	57. 4
Kuala Lumpur	60	42. 6

**Table 4. 1: School Administrators' Responses on Safety Management Plans and Policies Practices (n= 141)**

Plan and Policies Practices at School	Strongly Disagree N (%)	Disagree N (%)	Neutral / Not Sure N (%)	Agree N (%)	Strongly Agree N (%)
1. My school has an official written plan and policies that clearly define roles of each individual at school (e. g. administrators, teachers & etc).	0 (0)	1 (0. 7)	1 (0. 7)	60 (42. 6)	79 (56)
2. My school has a specific plan on how to respond and an immediate action should be taken during crisis regarding any dangerous or harmful incidents at school.	0 (0)	0 (0)	5 (3. 5)	71 (50. 4)	65 (46. 1)
3. My school has a safety plan and policies which cover physical and psychological safety.	0 (0)	4 (2. 8)	2 (1. 4)	104 (73. 8)	31 (22)
4. My school has a specific safety plan and policies which cover the safety on school site such as school environment, school facilities and school surrounding.	0 (0)	4 (2. 8)	4 (2. 8)	87 (61. 7)	46 (32. 6)
5. My school has a specific plan and policies on how to improve safety on school site such as school environment, school facilities, and school surrounding.	0 (0)	4 (2. 8)	6 (4. 3)	92 (65. 2)	39 (27. 7)
6. My school has a specific safety plan and policies that cover the safety of personal and individual such as school staffs, students and visitors started from their coming to and going back from school.	0 (0)	3 (2. 1)	9 (6. 4)	80 (56. 7)	49 (34. 8)
7. My school currently has a specific plan for assessing and improving safety plan and policies related to personal and individual safety at school.	0 (0)	7 (4. 9)	19 (13. 4)	88 (62. 4)	27 (19. 1)
8. My school safety plan and policies reviewed annually and updated where necessary.	0 (0)	2 (1. 4)	16 (11. 3)	92 (65. 2)	31 (22)
9. The implementation of my school plan and policy is an order which directly comes from Minister of Education, State Educational Department, or Educational District Educational Office.	0 (0)	2 (1. 4)	2 (1. 4)	59 (41. 8)	78 (55. 3)
10. My school safety plan and policies at school level are decisions made only by school administrators without any interference from other parties such as teachers, staffs, or parents.	15 (10. 6)	69 (48. 9)	6 (4. 3)	35 (24. 8)	16 (11. 3)
11. My school has developed a mechanism where staff and parents can express their ideas and contribute to develop a safety plan and policies at school.	0 (0)	3 (2. 1)	9 (6. 4)	79 (56)	50 (35. 5)
12. Any rational ideas and suggestions on safety plan and policies come from teachers, staffs and parents will always be accepted and considered by school administrators.	0 (0)	2 (1. 4)	5 (3. 5)	66 (46. 8)	68 (48. 2)

**Table 4. 2 School Administrators' Responses on Management Commitment and Communication (n=141)**

Management Commitment and Communication	Not at All N (%)	Very Little N (%)	Some-what N (%)	To a Great Extent N (%)
1. The school administrator plays an active role to promote and enhance safety at school.	0 (0)	1 (0. 7)	27 (19. 1)	113 (80. 1)
2. An action plan with clear goals and objectives has been developed to improve school safety.	0 (0)	4 (2. 8)	63 (44. 7)	74 (52. 5)
3. General knowledge and basic safety awareness has been defined clearly to teachers and staffs (e. g. meaning, goal, objective, the important of, and effect).	1 (0. 7)	10 (7. 1)	49 (34. 8)	81 (57. 4)
4. School administrator always conducts a safety meeting and distribute post minute meeting to everyone.	1 (0. 7)	17 (12. 1)	76 (53. 9)	47 (33. 3)
5. School has set a benchmark and guideline on safety performances as a mechanism to guide intervention, measurement and improvement for school safety practices. (e. g. KPI for safety management and practices at school)	3 (2. 1)	13 (9. 2)	75 (53. 2)	50 (35. 5)
6. School has continuously made an effort through collecting data, making analysis, and developing new strategies to improve school safety plan and policies to build a conducive learning environment.	3 (2. 1)	15 (10. 6)	77 (54. 6)	46 (32. 6)
7. Safety rules are posted or made visible in all school settings (e. g. hallways, classrooms, canteen).	0 (0)	5 (3. 5)	56 (39. 7)	80 (56. 7)
8. Risky behaviours are clearly defined and explained to all teachers, staffs and students.	0 (0)	4 (2. 8)	37 (26. 2)	100 (70. 9)
9. Consequences for risky behaviours are clearly defined and explained to all teachers, staffs and students.	0 (0)	3 (2. 1)	35 (24. 8)	103 (73)
10. School administrator and teachers consistently correct and remind students about risky behaviour and the importance of safety at school.	0 (0)	1 (0. 7)	21 (14. 9)	119 (84. 4)

**Table 4. 3 School Administrator Responses on Safety Education, Training and Campaign at School (n=141)**

Safety Education, Training and Campaign at School	Not at All N (%)	Very Little N (%)	Some-what N (%)	To a Great Extent N (%)
11. Terms related with safety have been included in orientation program process for new students, new staffs and parents.	0 (0)	3 (2. 1)	40 (28. 4)	98 (69. 5)
12. Consider safety training as one of the important in-service training methods for staffs and teachers.	0 (0)	2 (1. 4)	70 (49. 6)	69 (48. 9)
13. School administrators and teachers need to attend a course on how to educate students, teachers and staffs to improve their safety concern at school.	0 (0)	29 (20. 6)	73 (51. 8)	39 (27. 7)
14. There are campaigns to create safety awareness at school.	0 (0)	8 (5. 7)	56 (39. 7)	77 (54. 6)
15. Teachers, staffs and students received fire extinguisher training.	2 (1. 4)	29 (20. 6)	68 (48. 2)	42 (29. 8)
16. Teachers and staffs have been trained to recognize unhealthy activities (e. g. drug use, physical abuse, gang activity etc) among students.	2 (1. 4)	17 (12. 1)	65 (46. 1)	57 (40. 4)
17. Cooperate with authorities to conduct a safety forum to increase safety awareness, knowing the current safety issues and how it is addressed.	0 (0)	18 (12. 8)	70 (49. 6)	53 (37. 6)

18. Teachers, staffs and students receive proper training and information on how to react during emergency situation. (e. g. school on fire).	1 (0. 7)	5 (3. 5)	69 (48. 9)	66 (46. 8)
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**Table 4. 4: School Administrators' Responses on School Teachers and Staffs Participation (n=141)**

School Teachers and Staffs Participation	Not at All N (%)	Very Little N (%)	Some-what N (%)	To a Great Extent N (%)
19. Form school safety committee participated by school administrator, teachers and staffs to discuss matters related to safety plan, policies, education, and safety training at school.	0 (0)	6 (4. 3)	43 (30. 5)	92 (65. 2)
20. School safety committee always conducts meetings, prepare and post meeting minutes at school notice board.	1 (0. 7)	10 (7. 1)	87 (61. 7)	43 (30. 5)
21. Teachers and staffs support school administrator to ensure safety education, training and campaign are running smoothly and beneficially.	0 (0)	2 (1. 4)	55 (39)	84 (59. 6)
22. Teacher and staffs become active members to implement and promote safety practices at school.	0 (0)	3 (2. 1)	47 (33. 3)	91 (64. 5)
23. Teachers and staffs always help to support school administrators by monitoring students' safety at school.	0 (0)	0 (0)	31 (22)	110 (78)
24. Staffs or teachers are always available to supervise students during/beyond school hour activities or on weekend.	1 (0. 7)	2 (1. 4)	31 (22)	107 (75. 9)
25. Teachers and staffs conduct safety inspection or oversee the inspection process.	1 (0. 7)	4 (2. 8)	63 (43. 7)	73 (51. 8)
26. Teachers and staffs monitor the status of safety issues and safety-suggestion program, implement suggestion and provide feedback.	1 (0. 7)	5 (3. 5)	70 (49. 6)	65 (46. 1)
27. Teacher and staffs constantly communicate safety issues to top administrators to keep them informed, establish accountability and ensure timely completion of action items.	0 (0)	6 (4. 3)	52 (36. 9)	83 (58. 9)
28. Publish a safety newsletter and distribute to teachers, staffs and students.	18 (12. 8)	52 (36. 9)	56 (39. 7)	15 (10. 6)

**Table 4. 5: School Administrators' Responses on Parental and Community Involvement (n=141)**

Parental and Community Involvement	Not at All N (%)	Very Little N (%)	Some-what N (%)	To a Great Extent N (%)
29. Parents and community give support, provide information about students' movement, and make a close contact with school as a step to strengthen safety practice at school.	0 (0)	14 (9. 9)	54 (38. 3)	73 (51. 8)
30. At least one of parent and community people appointed as a member of school safety committee to determine safety plan and policies at school.	13 (9. 2)	21 (14. 9)	59 (41. 8)	48 (34)
31. Families are active participants in supporting safety education practices in school by gradual attending safety meeting and involve in	6 (4. 3)	30 (21. 3)	71 (50. 4)	34 (24.

any safety program at school.				1)
32. Community helps school by patrolling and monitoring around school area.	12 (8. 5)	45 (31. 9)	55 (39)	29 (20. 6)
33. Local public safety agencies like police and fire brigade do a walk-through of the school to familiarize them with school layout.	3 (2. 1)	45 (31. 9)	54 (38. 3)	39 (27. 7)
34. The school comply and keep in touch with local safety mandate, state or other related agencies to develop safety program at school.	1 (0. 7)	14 (9. 9)	73 (51. 8)	53 (37. 6)

**Table 4. 6 School Administrators' Responses on Safety Audit, Maintenance and Inspections (n=141)**

Safety Audit, Maintenance and Inspections	Not at All N (%)	Very Little N (%)	Some-what N (%)	To a Great Extent N (%)
35. School makes a comprehensive audit to all facilities every year.	0 (0)	10 (7. 1)	73 (51. 8)	58 (41. 1)
36. School has made a daily inspection on basic school facilities (e. g. class, chair, table, window)	0 (0)	5 (3. 5)	53 (37. 6)	83 (58. 9)
37. With the help of class teachers and staffs, school make its own classroom and office check list and self-audit.	0 (0)	4 (2. 8)	67 (47. 5)	70 (49. 6)
38. School has made a monthly playground safety inspection.	3 (2. 1)	12 (8. 5)	57 (40. 4)	69 (48. 9)
39. School has ensured all facilities related with safety concern (e. g. cctv, signage, fire extinguisher, night lighting) are regularly checked, well maintained and function properly.	0 (0)	2 (1. 4)	54 (38. 3)	85 (60. 3)
40. Always ensure regular areas used by staffs and students (e. g. classroom, office, toilet, library) are regularly checked and well maintained.	0 (0)	2 (1. 4)	44 (31. 2)	95 (67. 4)
41. School always conducts inspections and patrolling after school hours conditions.	1 (0. 7)	15 (10. 6)	68 (48. 2)	57 (40. 4)
42. School administrator always requests for maintenance work order.	0 (0)	11 (7. 8)	57 (40. 4)	73 (51. 8)

**Table 4. 7: School Administrators' Responses on Injury Reporting and Treatment (n=141)**

Injury Reporting and Treatment	Not at All N (%)	Very Little N (%)	Some-what N (%)	To a Great Extent N (%)
43. Any major or minor accidents and injuries immediately reported to school administrator and authorities.	0 (0)	2 (1. 4)	22 (15. 6)	117 (83)
44. School provides a list of emergency number (e. g. police, ambulance, fire-bridged) in places that students frequently gather around.	0 (0)	7 (5)	39 (27. 7)	95 (67. 4)
45. School has established a list (network) of preferred	20	27	57	37

medical panel (e. g. panel clinic and selected hospital) and always keeps in touch with them.	(14. 2)	(19. 1)	(40. 4)	(26. 2)
46. School sends a representative to meet with panel to discuss about treatment procedures and communication.	22 (15. 6)	43 (30. 5)	54 (38. 3)	22 (15. 6)
47. School has invited selected panel to check medical facilities at school so that they are familiar with school's safety procedure and operation.	23 (16. 3)	43 (30. 5)	49 (34. 8)	26 (18. 4)
48. School has form accident-review team (could be safety committee) to make sure accident reports are filled completely, identify the cause factor analysis, and ensure proper follow-up action are taken.	16 (11. 3)	33 (23. 4)	64 (45. 4)	28 (19. 9)

**Table 4. 8: Descriptive Statistics of School Administrators' Responses on Safety Management Practices at School**

School Administrator Agreement on Safety Management Practices	Mean	S. D
Management Commitment and Communication (MCC)	3. 5135	0. 401
Safety Education, Training and Campaign at School (SETC)	3. 3369	0. 444
School Teachers and Staffs Participation (STSP)	3. 4461	0. 399
Parental and Community Involvement (PCI)	3. 0437	0. 611
Safety Audit, Maintenance and Inspections (SAMI)	3. 4619	0. 411
Injury Reporting and Treatment (IRT)	3. 0095	0. 581

**Table 4. 9: Regression Analyses of Effects of School Administrators' Commitment and Communication - Safety Education, Training and Campaign at Schools on School Teachers' and Staffs' Participation**

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	. 770 <sup>a</sup>	. 594	. 588	. 25599

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95. 0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
1(Constant)	. 711	. 196		3. 636	. 000	. 325	1. 098			
Commitment & communication	. 455	. 075	. 458	6. 099	. 000	. 308	. 603	. 720	. 461	. 331
Educational campaign & training	. 340	. 067	. 379	5. 044	. 000	. 207	. 473	. 696	. 395	. 274

a. Dependent Variable: Teachers &amp; staff participation

ANOVA<sup>b</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	13.207	2	6.604	100.772	.000 <sup>a</sup>
Residual	9.043	138	.066		
Total	22.250	140			

a. Predictors: (Constant), Educational\_campaign &amp; training; Commitment\_&amp; communication

b. Dependent Variable: Teachers &amp; staff participations

**Table 4. 10: Regression Analyses of Effects of School Administrators' Commitment and Communication - Safety Education, Training and Campaign at Schools on Parents and Community Involvement**

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.731 <sup>a</sup>	.534	.527	.41995

ANOVA<sup>b</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	27.865	2	13.933	79.003	.000 <sup>a</sup>
Residual	24.337	138	.176		
Total	52.203	140			

a. Predictors: (Constant), Educational\_campaign &amp; training; Commitment\_&amp; communication

b. Dependent Variable: Parents &amp; community involvement

Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
1 (Constant)	-.819	.321		-2.553	.012	-1.454	-.185			
Commitment & communication	.469	.122	.308	3.833	.000	.227	.712	.642	.310	.223
Edu_campaign & training	.663	.111	.483	5.998	.000	.445	.882	.696	.455	.349

a. Dependent Variable: Parents &amp; community involvement

## The Albanian Adaptation of Physics Attitude Test: Validation with 10<sup>th</sup> Grade Students

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### Abstract

Attitude is an important factor in learning. The purpose of the study is to adopt a Turkish attitude test in Albanian language, to examine the secondary school students' attitude towards Newton's Laws of Motion, and to report the validity and reliability of the study. The sample was 387 secondary school students from five high schools in Albania. The original questionnaire measures five attitude components, which are enjoyment, self-efficacy, importance of physics, achievement-motivation, and interest related behavior. The data collected from five high schools was analyzed and similar factor structures were found as in the original questionnaire. Based on the principal component analysis five dimensions for learning physics were found. The Cronbach's alpha reliability was found to be .75. Physics Attitude Test, is a tool to assess secondary school students' attitude towards Newton's Laws of Motion. Keywords: Physics, Secondary School Science, Newton's Laws of Motion, Attitude, Education, Science, Assessment, Albanian, Fizika, Lëndet shkencore në shkollat e mesme, Ligjet e Njutonit, Qëndrim, Edukimi, Shkencë, Vlerësim, Shqip.

### Introduction and Literature Review

Physics, as a science, a tool for grasping better understanding of nature. The developments in physics during the last centuries not only effected the science and technology but also affected our lives. Educational sciences are also had their share. One of the major goals of researchers is to find an effective method in physics learning as researches indicate that physics achievement is less than other disciplines (Gok & Silay, Dieck, Rivard & Straw, Mattern & Schau, as cited in Kaya & Boyuk, 2011). Abak (2003) stated that %50 of the variance in learning outcomes can be explained by cognitive characteristics where %50 is undefined led researchers to focus on affective characteristics which may affect learning. The result of researches on these characteristics, the key affective components can be grouped under attitude and motivation (Gungor, Eryılmaz, & Fakioglu, 2007).

Although there are many definitions of attitude, according to Ajzen and Fishbein (1977) "a person's attitude represents his evaluation of the entity in question". Attitude is summation of someone's "inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any specified topic" (L. L. Thurstone, 1928). As cited in Tanrıverdi and Demirbaş (2012) attitude as the most important affective factor which influences learning, it has positive as well as negative effect on individuals learning (Yaşar & Anagün, 2008). Attitude is formed by organization of experiences and knowledge (Tavşancıl, 2002), and according to Ekici (2002) one of the best descriptors of behavior with cognitive, affective and psychomotor dimensions (as cited in Tanrıverdi & Demirbaş, 2012).

Gagne (1985) described attitude as interaction of cognitive, affective, and behavioral domains as a mental state where learners' behaviors effected while they make their choices (as cited in Olagunju & Zongo, 2011). According to Koballa and

Glynn (2007) attitude effects motivation and motivation effects learning. Attitude can also be defined as “tendency to respond positively or negatively to things, people, places, events or ideas” (Simpson, Koballa, Oliver and Crawley as cited in Tokgöz, 2007).

It is important to measure a construct like attitude as well to define it. It had been always assumed to be a complex process. L. L. Thurstone (1928) described this process as:

In devising a method of measuring attitude I have tried to get along with the fewest possible restrictions because sometimes one is tempted to disregard so many factors that the original problem disappears. I trust that I shall not be accused of throwing out the baby with its bath.

As stated by Kaya and Boyuk (2011) there are many scales developed to measure attitude. L. Thurstone and Chave (1929) developed an attitude scale. Later on Likert, Roslow, and Murphy (1934) utilized a simple and reliable method to score Thurstone Attitude Scales which is well-known and widely used even after 80 years.

One of the most challenging lessons for students from secondary school to university even for adults in graduate studies is physics (Erdemir, 2009). As cited in Erdemir (2009) learning environment and attitude towards it is also important factor though it should be also measured while measuring students' attitudes towards physics should take into account their attitudes towards the learning environment (Crawley & Black, 1992).

Basic objective of science learning should be increasing students' attitude towards physics as their attitude (feel) towards science influences their performance while research in the field showed that increase in students' science achievement can be possible with positive attitudes toward science (Cannon & Simpson, 1985; Simpson & Oliver, 1985; 1990, as cited in Tokgöz, 2007).

Researchers conducted abundant studies in order to find out the factors effecting the attitude towards science/physics based on the fact that the students do not like physics lessons as well as their physics teaches unless they have positive attitude towards physics (Erdemir, 2009).

The purpose of the study is to adopt a Turkish attitude test in Albanian language, to examine the secondary school students' attitude towards Newton's Laws of Motion, and to report the validity and reliability of the study.

The research question of the study as follows:

Is Physics Attitude Test (PATT) reliable to use into Albanian culture to measure 10<sup>th</sup> grade students' attitude towards Newton's Laws of Motion?

#### Rationale

It is not only important to sustain a classroom environment that increases students' attitudes towards physics to promote their learning, but also it requires full use of abilities and resources. As previous studies implied the effect of positive attitude increasing students' achievement, learning environments should be developed in order to escalate students' attitude towards physics. To achieve this goal attitude and its factors should be able to be investigated. Consequently, measuring students' attitude towards physics while adapting Physics Attitude Test into Albanian culture and classifying the factors are the main purpose of this study. The Physics Attitude Test aims to measure university students' 10<sup>th</sup> grade students' attitude towards Newton's Laws of Motion.

#### Method

The methods section consists of four parts where instrument, translation, sample, and data analysis will be explained briefly.

#### Instrument

The original test to measure the level of students' attitude towards Newton's Laws of Motion content was developed by Taşlıdere (2002) in Turkish, Küçüker (2004) modified by reversing five items to its negative form and changing two items to their new forms which are 23<sup>rd</sup> and 24<sup>th</sup> items (as cited in Serin, 2009). Both of the original tests were to measure students' attitude towards "simple electric circuits", which were replaced by "pressure" in order to be applied for pressure unit (Serin, 2009). Further versions of the attitude test applied to other topics like force and motion unit (Gökalp, 2011; Temizkan, 2003), growth in living things (Koksal & Berberoglu, 2014), Newton's Laws of Motion unit (Eryılmaz, 2004), etc.

PATT adopted from revised versions (Serin, 2009) into Albanian. As it is measuring students' attitude towards pressure content, "pressure" term in the test replaced with "Newton's Laws of Motion" terms. PATT measures 10<sup>th</sup> grade students' attitudes toward Newton's Laws of Motion. Newton's Laws of Motion covers the following content:

- Newton's First Law of Motion
- Newton's Second Law of Motion
- Velocity change with the effect of constant force
- Relation of acceleration with the magnitude of force
- Newton's Third Law of Motion

There are 24 questions (see appendix) rated on 5-point Likert scale. Responses are rated from strongly disagree to strongly agree and coded among one to five respectively. Hence, the score of students from this test may range from 24 to 120. Lower scores indicate negative, higher scores indicate positive attitude towards Newton's Laws of Motion content. PATT has five components that are enjoyment, self-efficacy, importance of physics, achievement-motivation, and interest related behavior. The items and the corresponding components of the attitude test (AT) in Taşlıdere's study (as cited in Serin, 2009) are given in Table 1. The Cronbach's alpha reliability coefficient of the test reported by Taşlıdere, Küçüker (as cited in Serin, 2009) and Serin (2009) where it was reported as 0.94, 0.83, and 0.91 respectively. The Cronbach's alpha reliability coefficient of PATT is 0.75, which means that at least 75% of the total score variance is due to true score variance.

#### Translation

In terms of validity, three independent bilingual researchers made Albanian translation individually then the inconsistencies were compared. Later on, back translation into English was made by other two researchers to check consistency. Before the final revision was administered to 387 high school students, the translated version is reviewed to check the face and content validity while administering to 17 high school students.

#### Sample

The sample of this study was 387 high school students from five different high schools in Albania. The test was administered during physics courses to 198 female students, 189 male students, and it has taken around fifteen minutes.

#### Data Analysis

The data collected from high school students analyzed via SPSS 21.0 for Windows. Students' response were coded according to their response strongly disagree (1), disagree (2), neutral (3), agree (4), strongly agree (5). The score range from minimum 24 to maximum 120. The reliability of the PATT was analyzed by internal consistency which is measured by Cronbach's alpha. For educational studies, the suggested alpha value should be at least .70 or preferably higher (Fraenkel & Wallen, 2003, p. 168). Kaya and Boyuk (2011) compared 20 research studies on students' attitudes towards science content and reported that the Cronbach-Alfa reliability coefficient was in range of 0.65 - 0.98.

#### Analysis and Results

The PATT items were subjected to principal component analysis (PCA) the Kaiser-Meyer-Olkin value was .879, expressing the suitability of data for factor analysis, exceed the recommended value of 0.6 (Field, 2000, as cited in Çetin-Dindar &

Geban, 2010). Additionally, Barlett's Test of Sphericity reach statistical significance supporting the factorability of the correlation matrix ( $\lambda = 2499.184$ ,  $df = 276$ ,  $0.000$ ). The factor analysis of pretest data yielded eight components where the eigen-values were greater than 1.000. Then, the analysis repeated by restricting the number of components to five. The eigen-values of five components are 4.579, 4.273, 2.996, 2.343, and 1.742 respectively. Eigenvalues and explained variance for the components of PATT are given in Table 2.

The reliability coefficient for the test estimated by Cronbach's alpha was 0.75, indicating satisfactory internal consistency. Guttman split-half coefficient is 0.66 which is also acceptable. The five components explained a total of 66.388% of the variance, with component interest related behavior explaining 19.081%, component self-efficacy explaining 17.803%, component achievement-motivation explaining 12.482%, component importance of physics explaining 9.764%, and component enjoyment explaining 7.258% (see Table 2).

Self-efficacy, interest related behavior and achievement motivation are almost identical, only item 24 was loaded to achievement motivation. Other components are also has similar loaded items. One item from enjoyment component was loaded to self-efficacy component, one item from enjoyment component was loaded to importance of physics component, one item from interest related behavior was loaded to achievement-motivation component and two components from importance of physics component were loaded to interest related behavior component. Factor analysis results of the PATT are given in **Error! Reference source not found.** and component loadings of items to the components are given in Table 4.

### Conclusions and Implications

Attitude is not a variable which can be observed and measured directly because of that it had been accepted as a latent variable. Latent variables as they are not easy to measure and interpret they were rarely being included in research studies (Çetin-Dindar & Geban, 2010). Based on the findings of the study which aimed to measure students' attitudes towards Newton's Laws of Motion content showed that the adopted version of AT is a valid and reliable tool in Albanian context including the components of interest related behavior, self-efficacy, achievement-motivation, importance of physics, and enjoyment.

As the literature on similar studies mentioned that it is important to measure students' attitudes in order to sustain effective learning. The study will contribute to the literature for the researchers and teachers in order to measure student's attitudes towards a specific content as well as Newton's Laws of Motion content. The researchers and teachers who wants to use PATT for different contents may use it while changing "Newton's Laws of Motion" terms with the respective terms that they want to measure attitude towards that content. As a result it can be also recommended that researchers, instructors, etc. can use AT to evaluate students' attitude towards specific content in secondary school courses.

The results of the study is encouraging to translate the AT to other language settings as it is also valid and reliable in Albanian culture, it might be translated and used in other languages after proper validity and reliability measures taken into account. Additionally, the similar versions of this test could be adapted to the other disciplines like chemistry, mathematics or biology. The test also can be used in other environmental settings such as essays, interviews, case studies, and other qualitative methods to obtain new data.

Further studies may include gender differences, learning environments where technology and/or hands on activities involved, learning in native language, teacher specifications, socioeconomic status, teaching methods and other variables which may affect student's attitude.

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## Tables

**Table 1 - Items and the respective components of the AT given in Taşlıdere's study**

<b>Components</b>	<b>Item numbers</b>
Enjoyment	1, 2, 16, 17, 23
Self-efficacy	9, 10, 11, 18, 21
Importance of	3, 4, 5, 13, 14
Achievement-	6, 7, 8, 12
Interest related	15, 19, 20, 22, 24

**Table 2 - Eigenvalues and explained variance for the components**

<b>Components</b>	<b>Eigen Values</b>	<b>% Variance explained</b>
1 interest related behavior	4.579	19.081
2 self-efficacy	4.273	17.803
3 achievement-motivation	2.996	12.482
4 importance of physics	2.343	9.764
5 enjoyment	1.742	7.258
Total variance		66.388
Cronbach's alpha		.75

**Table 3 - Factor analysis of the PATT**

<b>Components</b>	<b>Item numbers</b>
5 Enjoyment	<b>16*, 17, 23*</b>
2 Self-efficacy	<b>9, 10, 11, 18, 21, 1</b>
4 Importance of physics	<b>3, 4, 14*, 2</b>
3 Achievement-motivation	<b>6, 7, 8, 12, 24</b>
1 Interest related behavior	<b>15*, 19, 20, 22, 5, 13</b>

Bold items are same as AT in Taşlıdere's study (as cited in Serin, 2009). Starred items are also loaded to other components.

**Table 4 - Loading of items to the components**

<b>Items</b>	<b>Components</b>					
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
	<b>Interest related behavior</b>	<b>Self-efficacy</b>	<b>Achievement-motivation</b>	<b>Importance of physics</b>	<b>Enjoyment</b>	
PATT20	.828					
PATT19	.780					
PATT22	.697					
PATT13	.680					
PATT14	.633*			.410*		
PATT23	.614*				.422*	
PATT05	.577					

PATT16	. 410*			. 314*
PATT10		. 855		
PATT11		. 785		
PATT18		. 761		
PATT09		. 705		
PATT21		. 687		
PATT01		. 476		
PATT06			. 762	
PATT07			. 716	
PATT08			. 653	
PATT12			. 629	
PATT24			. 557	
PATT04				. 793
PATT02				. 626
PATT03				. 617
PATT17				. 762
PATT15	. 518*			. 532*

Bold items are same as AT in Taşlıdere's study (as cited in Serin, 2009). Stared items are also loaded to other components.

## Appendix

ATTENTION! The "Newton's Laws of Motion" (NLoM) chapter covers:

- Newton's First Law of Motion
- Newton's Second Law of Motion
- Velocity change with the effect of constant force
- Relation of acceleration with the magnitude of force
- Newton's Third Law of Motion sections.

KUJDES! Ligjet e Njutonit (LN) përfshijne temat:

- Ligji i parë i levizjes i Njutonit
- Ligji i dytë i levizjes i Njutonit
- Ndryshimet e shpejtësisë nën ndikimin e një force konstante
- Ndryshimi i nxitimit në varesi të magnitudës së forcës
- Ligji i tretë i Njutonit

1 I like the "Newton's Laws of Motion" chapter.  
Mua më pëlqejnë temat e kapitullit Ligjet e Njutonit.

2 I have positive feelings about the NLoM chapter.  
Unë kam mendim pozitiv për temat e kapitullit LN.

3 I believe that what I've learned from the NLoM chapter will make my life easier.  
Unë besoj se përvetësimi i temave të kapitullit LN do të më lehtësojë jetën e përditshme.

4 I don't believe that the NLoM chapter will gain more importance in the future.  
Unë nuk besoj se rëndësia e temave LN do të vijë duke u rritur në të ardhmen.

- 5 I believe that the NLoM chapter will be beneficial for my further studies.  
Unë besoj se studimi i temave të kapitullit LN do të më shërbejë në studimet e mia të ardhshme.
- 6 I will do my best to be successful at the NLoM chapter.  
Unë bëj çfarë është e mundur për të qenë i suksesshëm në kapitullin LN
- 7 I will try my best for the NLoM chapter.  
Unë mundohem të bëj më të mirën e mundshme për të qenë i suksesshëm në kapitullin LN.
- 8 I will not try harder if I do not succeed in the NLoM chapter.  
Unë nuk do të bëj përpjekje të tjera nëse nuk arrij rezultate të kënaqshme në kapitullin LN.
- 9 I am sure that I can learn the NLoM chapter.  
Unë jam i/e sigurt se do të arrij t'i përvetësoj temat e kapitullit LN.
- 10 I am sure that I can succeed in the NLoM chapter.  
Unë jam i/e sigurt se do të jem i suksesshëm në përvetësimin e temave të kapitullit LN.
- 11 I am sure that I can solve the hard problems of the NLoM chapter.  
Unë jam i/e sigurt se do të jem i suksesshëm në zgjidhjen e problemave dhe ushtrimeve të vështira të kapitullit LN.
- 12 I will try my best to solve the problems related to the NLoM chapter no matter how difficult they are.  
Unë do të bëj më mirën e mundshme për të zgjidhur të gjithë problemat dhe ushtrimet e kapitullit LN.
- 13 I don't think that the NLoM chapter will have any importance in my prospective vocational life.  
Unë nuk mendoj se temat e kapitullit LN do të më shërbejnë në jetën time profesionale.
- 14 I believe that what I've learned in the NLoM chapter will be useful in my daily life.  
Temat e kapitullit Ligjet e levizjes së Njutonit do të më ndihmojnë mua në veprimtaritë e jetës së përditshme.
- 15 I like reading books about the NLoM chapter and its applications in technology.  
Mua më pëlqen të lexoj libra që tregojnë dhe shpjegojnë zbatimet e temave të kapitullit LN në teknologji.
- 16 The NLoM chapter is entertaining for me.  
Temat e kapitullit LN janë zbavitëse.
- 17 I don't like studying on the NLoM chapter at school.  
Mua nuk më pëlqen të mësoj temat e kapitullit LN në shkollë.
- 18 I believe I can cope with harder problems of the NLoM chapter.  
Unë jam i sigurt se mund të zgjidh problema shumë të vështira nga kapitulli LN.
- 19 Talking with my friends about the NLoM after school is enjoyable.  
Mua më pëlqen të flas me shokët pas mësimit për tema që kanë lidhje me kapitullin LN.
- 20 I would like to be given books and tools related with the NLoM chapter as gifts.  
Mua më pëlqen të më bëjnë dhuratë libra apo materiale të tjera në lidhje me temat e kapitullit LN.
- 21 I believe I can solve the hardest problems of NLoM chapter if I have enough time.  
Unë jam i/e sigurt se do të mund të zgjidh problemat e vështira të kapitullit LN nëse do të kem kohë të mjaftueshme.

22 I like talking about the NLoM chapter or its applications in technology.

Mua më pëlqen të flas me shokët për temat e kapitullit LN dhe aplikimet e tyre në teknologji.

23 The NLoM chapter is effective in improving my manual skills.

Temat e kapitullit LN ndikojnë në zhvillimin e aftësive të mia praktike.

24 I don't want to have more lesson hours for the NLoM chapter.

Unë nuk do të doja që kapitulli i LN të zhvillohej në më shumë orë mësimore se sa tani.

## Relationship of Emotional Intelligence and Emotional and Behavior Problems Scales of Children 10-12 Years Old – Parents Report

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### Abstract

The present study aimed at investigating the correlation of emotional intelligence total score and three broad band of emotional and behavior problems at 10-12 years old children. It was hypothesized that there will be negative relationship between scales. The sample included 236 children (123 or 52. 1% boys and 113 or 47. 9% girls), with a mean age of 11 years (SD. 835) (range: 10-12 years). 236 parents participated in the study, 92 of them or 39. 0 % were mothers, while only 144 of them or 61. 0 % were fathers. In the chi-square test, there were important differences reported in the distribution of the percentages of parent's gender and their employment rates. The TEIQue-Child Form questionnaire, contains 75 items responded to on a 5-point scale and measures five distinct facets. Also the CBCL 6-18 years, was used emotional and behavior problems. Descriptive statistics, chi-square test, Pearson correlation, and T-test, were used to explore and analyse the correlations of interest variables in the study on total EI and EB broad band scales. Correlation analysis mostly indicated low and negative but non-significant relationship between EI and EB scales, for all children and by gender. We did not found gender significant differences on EI total scores and EB broad band scale scores.

**Keywords:** relationship, children, differences, gender, emotional intelligence, emotional and problem behavior, parent.

### Introduction

The ability to recognize and moderate one's own and others' emotions, while simultaneously processing the information in order to make an informed decision about the present situation, can be defined as emotional intelligence (Mayer & Salovey, 1993; Salovey & Mayer, 1990). Mayer et al. (1999) defined emotional intelligence using a theoretical model focusing on emotional skills that can be developed through learning and experience. Mayer et al. (1999) posited that emotional intelligence is comprised of three central abilities: 1) perceiving (i. e. the entering of affective information into one's perception), 2) understanding (i. e. the act of processing affective information), and 3) managing emotions (i. e. regulation and expression of emotions. )

Research has shown emotional intelligence to be related to mental, social, and physical health. It has also been associated with stress (Mikolajczak et al., 2008), and life satisfaction (Ciarrochi, Chan, & Caputi, 2000).

Regarding the emotional and behavior problems, research generally suggests two key entry points in the development of behavioral problems – early childhood and early adolescence with potentially different risk factors associated with each of them (Lahey, Waldman, McBurnett, 1999). Several international longitudinal studies have provided a picture of the changing forms of behavioral problems from early childhood through to adolescence. Adolescence is a key stage of life development when children require an understanding of the life challenges they face and need to develop basic skills to cope with difficult emotions. It is a time of increased risk of poor mental health with anxiety, depression, psychosis, eating disorders, and substance misuse becoming more prevalent as well as an increasing risk of deliberate self-harm and suicidal behavior (Department of Health & Children, 2006). Some young people begin to exhibit problem behaviors during early adolescence. In such cases, entry into conduct problems generally occurs through associations with peers.

Externalizing behavior problems can intensify during this period when peer influences can lead to rule breaking behavior such as delinquent and antisocial behaviors, substance use, and in some cases, gang involvement and drug dealing (Hann & Borek, 2001). Research suggests, that, in isolation, risk factors may make relatively little contribution to the development of behavioral problems, whereas such factors in combination may be powerful determinants of negative outcomes (Klein & Forehand, 2000; Kolvin et al., 1990). Problems result from interactions between characteristics of the child and situations within the family, peer group, school and community. Therefore, it can be expected that families with multiple risk factors experience more problems and thus also a greater need for support. Cummins and McMaster's study (2006) found that children who screened positive for mental health difficulties were more socially disadvantaged, had more behavioral difficulties and adaptive behavior problems, more physical health problems, more family problems, more life stress and poorer coping skills.

Several studies have shown that emotional abilities are of particular relevance to psychological health and wellbeing. In addition, it has been found that emotional problems are related to the tendency to get involved in deviant behavior and self-destructive.

Our study aimed to: (1) to test the relationships of emotional intelligence total score and emotional and problems behavior broad band scales, and (2) to test the differences in such variables regarding the gender of children. It was hypothesized that there will be differences between girls and boys and there will be negative relationship between scales.

## METHODOLOGY

### The study sample

The sample included 236 children (123 or 52.1% boys and 113 or 47.9% girls), with a mean age of 11 years (SD. 835) (range: 10-12 years). 86 of them (36.4%) were in the fourth grade; 72 of them (30.5%) were in the fifth grade and 78 or 33.1% from the total number of children were in the sixth grade. In the chi-square test, no important differences were reported in the distribution of the percentages of gender and grade representation in this study.

From 236 parents participated in the study, 92 of them or 39.0% were mothers, while only 144 of them or 61.0% were fathers. In the chi-square test, there were important differences reported in the distribution of the percentages of parent's gender. The parents voluntarily completed the questionnaire.

Table 1

*Descriptive data for children by gender, grade, and by gender for parents.*

	<i>Valid Nr.</i>	<i>Percentile</i>	<i>Chi-square test</i>
<i>Male</i>	123	52.1	$\chi^2 (1) = .424, p = .515$
<i>Female</i>	113	47.9	
<i>Grade 4</i>	86	36.4	$\chi^2 (2) = 1.254, p = .534$
<i>Grade 5</i>	72	30.5	
<i>Grade 6</i>	78	33.1	
<i>Fathers</i>	144	61.0	$\chi^2 (1) = 11.458, p = .001$
<i>Mothers</i>	92	39.0	

Table 2

*Mean and Standard Deviation for Parents Age and Level of Education and Childrens Age.*

	Mean	SD
Children Age	10. 97	. 835
Parents age	40. 36	5. 89
Fathers education level	12. 76	2. 50
Mothers education level	11. 61	2. 81

### Instruments and data collection

The TEIQue-Child Form questionnaire, contains 75 items responded to on a 5-point scale (1 = *strongly disagree*; 2 = *disagree*; 3 = *neither*; 4= *Agree*; 5=*strongly agree*), and measures nine distinct facets (Mavroveli, Petrides, Shove, & Whitehead, 2008). For our study we used the total score of EI. The Child Form that has been specifically developed for children aged between 8 and 12 years. The TEIQue scales have been shown to have a consistency of .760. The CBCL the 2001 edition (Achenbach & Rescorla, 2001) contains 118 items items rated 0-1-2 (0 = *not true (as far as you know)*; 1 = *somewhat or sometimes true*; or 2 = *very true or often true*) plus 1 open-ended problem items, that describe the behaviour of children and adolescents between the ages of 6 and 18 years. It is self-administered, and it takes about 30 minutes to complete. By summing the scores three broad band scales are measured (the Internalizing scale is made up of: Withdrawn, Somatic Complaints and Anxious/Depressed scales; the Externalizing scale is made up of Aggressive Behaviour and Delinquent Behaviour scales, and Total problems score. A higher score represents a higher severity. The CBCL scales have been shown to have a consistency of .946

### The procedure of data analysis

The statistical package SPSS for Windows, version 19 was used to analyse the quantitative data collected. During the analysis a specific code was used for the identification of information for each child and parent. Descriptive statistics, chi-square test, Pearson correlation, and T-test, were used to explore and analyse the differences, correlations of interest variables in the study on total EI and EB broad band scales.

## RESULTS

To characterize the sample population, the outcome variable was stratified by demographic variable. Table 3 shows the difference in number, mean scores and standard deviations by gender and for all children.

Table 3

*Number, Mean scores and standard deviations for EI and EB scales by gender.*

		Total children		
	Gender	N	MA	SD
Internalizing	F	113	7. 47	6. 85
	M	123	5. 82	6. 73
	F+M	236	6. 61	6. 82
Externalizing	F	113	3. 73	4. 06
	M	123	3. 52	4. 17
	F+M	236	3. 62	4. 11
Total Problems	F	113	17. 43	16. 71
	M	123	15. 17	16. 58

Total EI	F+M	236	16. 25	16. 64
	F	113	263. 54	19. 85
	M	123	264. 72	21. 48
	F+M	236	264. 16	20. 68

Table 4

*The inter correlation between EI and EB scales*

		Total EI	Total problem	Externalizing	Internalizing
Total EI	Pearson Correlation				
	Sig. (2-tailed)				
Total problem	Pearson Correlation	. 036			
	Sig. (2-tailed)	. 584			
Externalizing	Pearson Correlation	-. 027	. 900**		
	Sig. (2-tailed)	. 680	. 000		
Internalizing	Pearson Correlation	. 075	. 942**	. 796**	
	Sig. (2-tailed)	. 249	. 000	. 000	
	N	236	236	236	236

\*\* . Correlation is significant at the 0. 01 level (2-tailed).

Table 5

*The inter Correlation Between EI and EB Scales by Gender*

gender			Total EI	Total Problems	Externalizing
Male Female	Total Problems	Pearson Correlation	-. 057		
		Sig. (2-tailed)	. 528		
	Externalizing	Pearson Correlation	-. 145	. 889**	
		Sig. (2-tailed)	. 110	. 000	
	INTER	Pearson Correlation	. 000	. 950**	. 798**
		Sig. (2-tailed)	. 999	. 000	. 000
	Total Problems	Pearson Correlation	. 150		
		Sig. (2-tailed)	. 114		
	Externalizing	Pearson Correlation	. 117	. 915**	
		Sig. (2-tailed)	. 216	. 000	
Internalizing	Internalizing	Pearson Correlation	. 171	. 936**	. 801**
		Sig. (2-tailed)	. 070	. 000	. 000

The Pearson correlations analysis did not revealed significant relationships between in EI and EB scales. The results obtained indicated low and negative relationships, but without the statistical significance.

The t-test analysis did not revealed differences in EI and EB broad band scales regarding the gender

## DISCUSSION

The main aim of this study was to test the relationships of emotional intelligence total score and emotional and problems behavior broad band scales, and to test the differences in such variables regarding the gender of children. It was hypothesized that there will be differences between girls and boys and there will be negative relationship between scales.

Our results did not show statistical differences between boys and girls of the total EI scores and Total problem, internalizing and externalizing at children 10-12 years old. From the results obtained from the correlations analyses, there was no statistical significance. It is clear that the low values are the result of weak associations between the constructs themselves.

It was expected that the variables of emotional intelligence and behavior problems have a strong effect on each other in a way that the higher emotional intelligence will expect lower problem behaviors. There are a lot of studies revealed that EI is negatively related to several indices of psychopathology (Malterer, Glass, & Newman, 2008) such as personality disorders (Petrides, Pérez-González, et al., 2007) and anxiety disorders (Summerfeldt, et al., 2011) as well as self-harm (Mikolajczak, Petrides, & Hurry, 2009) and externalizing behaviors in adolescents (Downey, Johnston, Hansen, Birney, & Stough, 2010).

Considering the present study results, there is not statistical relationship between our interest variables, which is inconsistent with the findings of Taghavi et al. (1999); Cicchetti & Toth (1998); Schmidt & Andrykowski (2004); Brackett, Mayer, & Warner, (2004). Since emotional intelligence has been proposed as a construct that predicts adolescent' adjustment and behavior, there is a need for further studies involving cultural variables in order to explore more in depth the issue.

## ACKNOWLEDGEMENTS

The author gratefully acknowledges the participants in the study.

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## The Didactic of Sustainable Development Terms in Science Education

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### Abstract

Nowadays, sustainable development is frequently recited in science education also. There are various definitions which are distilled and extracted from educational research. However, the definitions are ambiguous and somehow contrary to each other. Generally, sustainable development was settled on the triangle of ecology, economy and society. Additionally, it has participation with biodiversity, energy resources, recycling and clean environment. Beside these, socioeconomic issues are one of the functional part of it. Here, it is handled with didactic perspective for incorporation to educational program. And it is concluded that sustainable development has participatory democratic structure. And it opens a new road in decision making.

**Keywords:** Sustainability, ecology, energy, society, development, educational program.

### 1. Introduction

Various environmental problems have arisen due to industrial development, waste amount, rapid population increase, technological advances, urbanization increasing with migration from rural area to urbans, and skyscrapers. Competition between the countries in terms of technologic information and economy has led to the development of trade and resulted in crossing the national borders. This has deteriorated the resource and needs analysis, and efforts to reach social welfare have begun to pose a threat for the future of people (Sewilam, McCormack, Mader & Raouf, 2015). While fulfilling the needs in terms of individuals, communities and countries, pressure on the nature has increased and ecological carrying capacity of the world has been exceeded. People still assume that natural and available resources are limitless (Ruff & Olson, 2009). Countries that developed rapidly in 1900 and afterwards had used the natural resources for economic development and they had provided the economic development. Natural resources were used inefficiently so as to increase the welfare level, and natural balance had continuously changed through advancing technology. Using the resources continuously and changing the environment with the aim of raising the welfare level had caused it to reach a level posing a risk for the future of all living creatures. However, as the natural resources are limited and the number of living creatures is constantly decreasing, resource consumption, environmental degradation and pollution have arisen (Tıraş, 2012). In this period, natural environment issues have stayed in the background for the countries that provided economic development. Ecological problems are regarded as the issues that will be addressed after economic development and industrialization processes are completed. According to this understanding, the development will be provided and solutions for the pollution arising from the development will be searched after they arise (Appleton, 2006). However, ever-increasing ecological problems have become the most important agenda of modern societies. Developing and implementing actions for problem

solutions will be possible with the cooperation of all the countries. This, considering the future of the world, should be the primary target of all the modern societies (Akıllı, Kemahlı, Okudan, & Polat, 2008). Ecological problems have already crossed the country borders and it has become a global problem which will influence the lives of next generations. Ever-increasing ecological problems have become the most important agenda of modern societies. Sensitivity to the problems that will influence the world and lives of all the living creatures is of high importance (Aydın & Ünalı, 2013). In line with the common goals of the countries, people have been in the search of maintaining the natural balance since 1970s. It has led to the dilemma of: Economic development? Or maintenance and development of ecological balance? Instead of solely economic development understanding involving production and consumption, an understanding that states production takes place in a limited ecosystem and that emphasizes the importance of environmental protection should be adopted. The term of "Sustainable Development" has been coined to overcome climate and ecology problems (Dixon & Carrie, 2016).

The term of "Sustainability" has been used in English recently. In addition, this term was defined and it became an English word in 1987. However, the word "sustain" has been used since 1250s. Traditionally, the word "sustain" was derived from "sustenance". It means "sustaining life". Furthermore, "sustentation" means the activeness of life through vital processes (Appleton, 2006).

As sustainable development is an interdisciplinary term and it is associated with each discipline, individuals have defined and interpreted this term in accordance with their priorities. The term of sustainable has been regarded as an economy-prioritized field and it has been assessed by focusing on the first economic development size. When the increased ecological problems are addressed as a priority, sustainable development has become a central issue as an ecological dimension and assessed accordingly. No matter in which period, sustainability is a term that involves economic, social and ecological fields, that is in interaction with each other and that has various dimensions (Özgenç, 2015).

## 2. Sustainable Development

While definition of sustainable development is used by many stakeholders, definitions and interpretations may vary. Because structures and conditions of each country, society and individual are different. Therefore, the need for a new "Sustainable Development" definition, which is based on integration, has arisen (Summers, Corney & Childs, 2004). Sustainability means the endurance of a thing. When considered as a term of time, it is a term which covers both present and future time. Sustainable development understanding focuses on human. (Karabıçak & Özdemir, 2015). In scientific terms, sustainability is to ensure diversity and productivity of the systems (Aliyev & Aslanlı 2015).

Although the essentials of sustainable development dates back to 19<sup>th</sup> century, the term first came to be known with Brundtland Report of United Nations World Commission on Environment and Development that was organized in 1987. In 1987, Sustainable Development was defined in "Brundtland Report", also known as "Our Common Future". According to this report, sustainable development is: "the development that meets the needs of the present without compromising the ability of future generations to meet their own need." (WCED, 1987). Nowadays, various definitions are made while the definition of "Sustainable Development" is difficult and its content is continuously improving (Kilinc & Aydın, 2013).

Definitions of sustainable development included in different studies are as follows:

It is a system which stipulates that natural and cultural resources be consumed by taking the needs of next generations into consideration while fulfilling the economic and social needs of the population (Tıraş, 2012). Primary subject of sustainable development is to enhance the quality of life and to ensure the continuous protection of environment with the quality of human life while increasing the social welfare and economic growth (Aliyev & Aslanlı, 2015). It considers the production values by maintaining the natural resources, and it is based on the utilization through the process of resources (Öztürk Demirbaş, 2015). In another definition, it is described as the use of world resources without consuming them, which redresses a balance between the current human needs and the ecosystem, and as a term which has environmental, institutional and social indicators and which enables next generations to meet their own needs (Demirci Güler, 2013). It is sustainable development when human activities are included in nature's carrying capacity in relation to a population or the natural environment in which this population lives or maintains their lives (Keleş, 2010). These various different definitions have created a need for a new definition based on global integration.

"Sustainable Development" is the increasing production of new resources by using the available ones in an efficient and productive way so as to ensure that a system or an entity proceeds without being interrupted; the maintenance of natural balance while realizing this function; and a term which directs the system that supports the improvement and reinforcement of generational and intergenerational life standards, social solidarity and the increase of equality of opportunity.

## 2.1 Dimension of Sustainable Development

It is described in Brundtland Report that Sustainable Development has, in general terms, three dimensions. These dimensions are Economy, Ecology and Society. Although it is unlikely to distinguish these three dimensions, some countries attach importance to economic dimension considering their own production and consumption while some other countries place emphasis on environmental dimension as species are becoming extinct and they try to save these species (Alkış, 2007). According to World Commission on Economic Development, we should coordinately adopt environment, economy and social principles so as to ensure sustainable development (Sarıkaya & Kara, 2007). Sustainable Development reaches both social, economic and environmental dimensions, and the dimensions of global responsibility and political participation (Alkış, 2007). Dimensions of sustainable development are demonstrated in Figure 1 (Benli Özdemir & Arık, 2013).

Figure 1: Dimensions of sustainable development are demonstrated



According to Figure 1, economic dimension of sustainable developments involves the use of resources. At this point, economic dimension covers the issues such as fulfillment of individuals' basic needs, financially fair share, savings, profits, economic growth and research and development. Economic sustainability covers the sustainability of the nature as well. The goal of economic development is to ensure that all individuals have employment opportunities and to improve the life standards. For some countries, it means the consumption of more natural resources while for others it means solidarity and life styles protecting the new resources (Alkış, 2007). The environment should be considered as the overall factors that have influence on the lives of living creatures. (Tıraş, 2012). Environmental dimension means effective and economical use of natural resources; prevention of air, soil and water pollution; ecological capacity; biological production and environmental management. Social dimension of sustainable development covers the issues such as cultural diversity, social sustainability, social justice, increase of participation, equality of opportunity and education. Social sustainability means equal living chance for everybody (Barbier, 1987).

## 2.2. History of Sustainable Development

The term sustainable development was coined in late 1980s. World Commission on Environment and Development supported the creation of this term. The term of sustainable development first defined in Our Common Future Report (Brundtland Report) by United Nations World Commission on Environment and Development that was organized in 1987. Before the creation of this term, environment and development trainers had concerns at two levels. First one was to support the development and the second one was to protect the environment (Kilinc & Aydın, 2013). Before this report, Club of

Rome 33 had prepared a report called "Secrets of Development" in 1972. According to this report, the world would reach "the limits of growth". United Nations Conference on Environment and Development was organized in Brazil, Rio De Janerio in 1992. Primary agenda topic of that conference was "Sustainable Development". In that conference, poverty took an important place and it was stated that poverty should be eradicated so as to ensure a sustainable development. Sustainable development focused on human, and it was agreed that people spend nature compatible, healthy and productive lives (UNESCO, 2010). The World Summit on Sustainable Development was organized in The Republic of South Africa, Johannesburg in 2002. In that world summit; Sustainable Development, social development and environmental protection were declared in local, national, regional and global terms, and it was decided that this term would be popularized at social development level and in terms of environmental protection (Kilinc & Aydin, 2013). The conference involves an implementation plan and a political notification signed by heads of states and governments. Water and public health, energy, health, agriculture and biological diversity were the issues that became priority during the conference (Uçak, 2010).

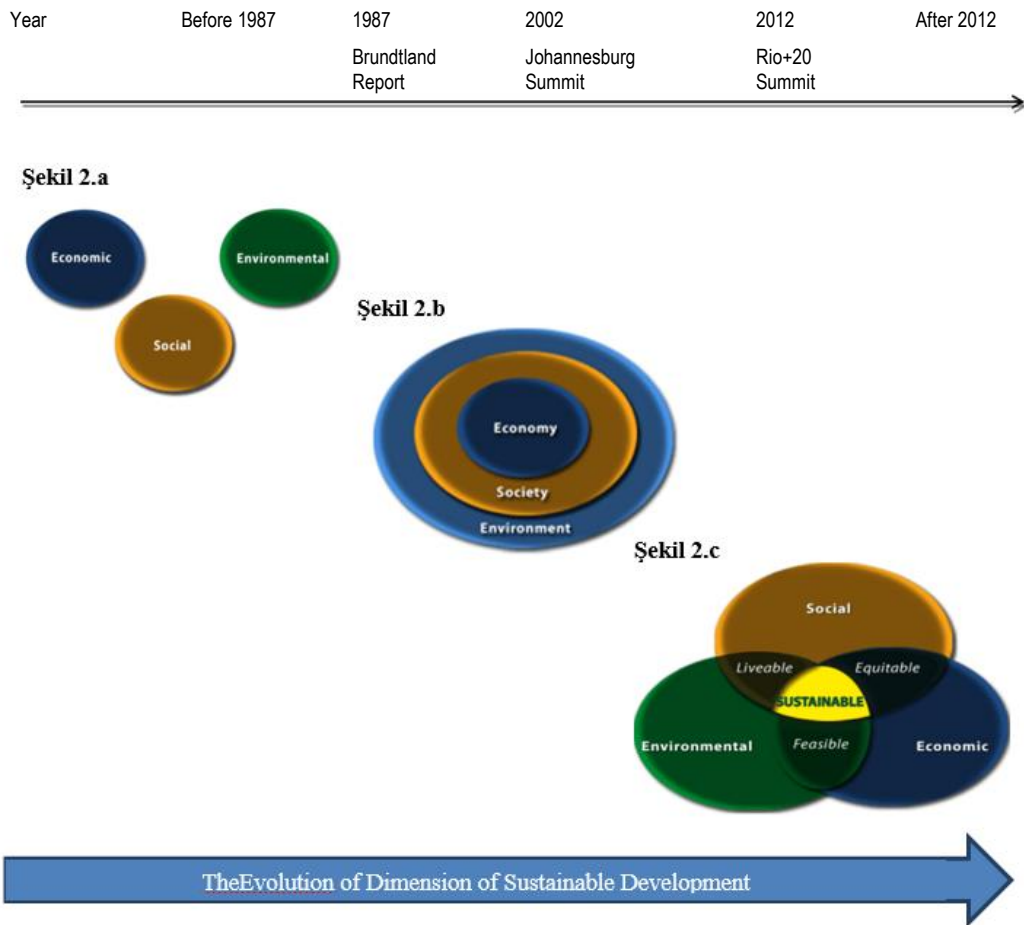
The goals of the abovementioned implementation plan can be summarized as (MFA, 2002):

- To reduce the number of people who are not provided with clean and waste water services by 2015.
- To reduce the loss of biological diversity by 2015.
- To reach the highest productivity level in the field of fishery by 2015.
- To improve the access to the shelters, territories and lands as well as other issues so as to ensure that lives of minimum 100 million people who live in unfavorable conditions are improved, and, to that end, to ensure that local authorities implement programs by 2020.
- To provide 2 billion people, who still do not have access to the energy, with energy and to increase the share of renewable energy resources.
- To reduce adverse effects of use and production of chemicals on human health and environment by 2020.
- To develop a cooperation so as to reduce air pollution at international, regional and national levels and to encourage countries to approve Kyoto Protocol.
- To support mechanisms that bring innovation in terms of addressing debt problems of countries in the development process comprehensively.

United Nations Conference on Sustainable Development (Rio+20) entitled "The future We Want" was organized in Brazil, Rio De Janerio in 2012. The previous notification was strengthened during that conference. The primary goal of the conference was to address sustainable development with economic, ecological and social dimensions, and the conference had emphasized that each country could adopt different approaches in accordance with their national conditions and priorities. Eradication of poverty, achievement of economic growth, reinforcement of social content, improvement of human welfare level and contribution to create employment opportunities for everybody and esteemed employment chances were adopted (UNCSD, 2012).

Many steps were taken for sustainable development in international arena. From the emergence of the term of sustainable development in the international arena until now, dimensions of sustainable development have changed and developed. The diagram which demonstrates the relationship between the steps of sustainable development that were taken in the international arena and its dimensions is stated below in Figure 2.

Figure 2. The Evolution of Dimension of Sustainable Development



Before 1987 Brundtland report, three dimensions of sustainable development - ecology, economy and society - were considered independent of each other (Figure 2.a). In the aftermath of Brundtland report, dimension of sustainable development were improved and categorized. First of them is also known as "Russian Doll" diagram (Figure 2.b). According to this diagram, even though economic dimension seems to be at the center, it is actually dependent on the society and the environment. The environment covers the dimensions of economy and society, and it can continue its existence independently, without economy and society. The diagram demonstrating the coordination of dimensions of sustainable development is the most sought-after (Figure 2.c). In this model, it is stated that sustainable development can be ensured with coordinated implementation of its three dimensions. It is also known as the most-adopted model (Wu, Liou, & Su, 2014)

### 3. Sustainable Development in Science Education

In 21<sup>st</sup> century, people encounter social, economic and environmental problems. A livable world cannot be ensured only with measures taken in the field of technology, law, policy and economy. People should change their life styles for a sustainable life, too. These changes can only be ensured through education (Allen, Emery, Nailon, Dyment, Getenet,

McCrea & Davis, 2014). For Sustainable Development, education should start at preschool level and should continue for a lifetime. It should have a quality to transform the education provided to the individuals into a behavior. Awareness, approaches and values of individuals that can be transformed into behavior for a sustainable life and world can be turned into a life style (Öztürk Demirbaş, 2015). Even though education alone is not adequate, it is a primary obligation in achieving a sustainable universe. It is expected that people take actions for a more sustainable world in a system that is created with the contributions of educators from all over the world (UNESCO, 2010).

Education given to individuals is a must for people to absorb the achievements regarding their concerns on sustainable development. It has been stated that education is a must for changing life styles and value judgments that can meet the sustainable development needs of individuals who will be a model and guide for next generations, and that it is possible to realize this change in the educational institutions (Keleş, Uzun & Özsoy, 2008; Burmeister & Eilks, 2013). In this sense, it is not possible that science education is not included in the education of tomorrow's citizens for the future of the world. Science education is based on the creation of information society, industrial production and technological developments. Science plays a key role in protection of human life, economic development and natural balance, in other words sustainable development. Therefore, science education and sustainable development are complementary elements (Birdsall, 2013).

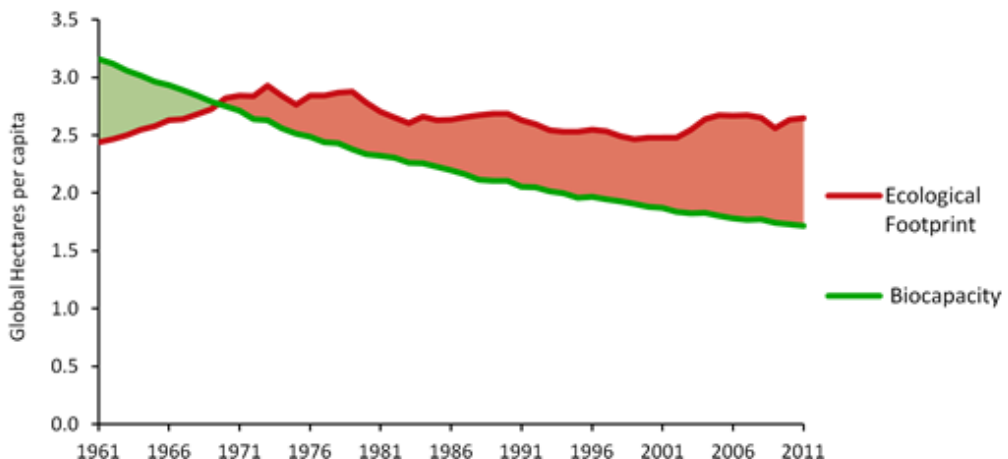
A significant science education has the quality to guide us in philosophical thinking, logical and model thinking, behavior and actions. Students' problem solving, decision-making, questioning, critical thinking, development of high cognitive skills are important elements of sustainable development, and they are directly connected to the science. People who face various complicated problems in the world encounter decision-making mechanisms to solve these problems. They may not respond to these duties excluding cognitive ones (Zoller, 2012). Science education may help individuals in giving the right decision in such socio-scientific issues as reduction in the biological diversity, consumption of energy resources, recycling and clean environment. Although science education helps individuals make decisions on sustainable development, sustainability is still a difficult term. Even though science education is an auxiliary element in realizing sustainable development, it remains insufficient. In addition to science education, economic and financial structuring is required. Considering sustainability for science education, we see that socio-scientific issues such as biological diversity, energy resources, recycling and clean environment dominate. As well as being interrelated, these issues are related to the dimensions of economy, culture and policy (Bögeholz & Barkmann, 2014). Individuals' attitude and behaviors in these issues can only be changed through science education that is provided in a qualified way (Eilks & Hofstein, 2014). As an efficient education system provided in line with the goals of Sustainable Development ensures individual and collective responsibility and provides behavioral changes, it has an important role in understanding and interpreting sustainable development (Tanrıverdi, 2009; Mills and Tomas, 2013). Education given to individuals is a must for people to absorb the achievements regarding their concerns on sustainable development. It has been stated that education is a must for changing life styles and value judgements that can meet the sustainable development needs of individuals who will be a model and guide for next generations, and that it is possible to realize this change in the educational institutions (Keleş, Uzun ve Özsoy, 2008; Burmeister & Eilks, 2013). In this sense, it is not possible that science education is not included in the education of tomorrow's citizens for the future of the world. Science education is based on the creation of information society, industrial production and technological developments. Science education plays a key role in protection of human life, economic development and natural balance, in other words sustainable development. Therefore, science education and sustainable development are complementary elements (Birdsall, 2013). The term sustainable development lies behind how students should take responsibility for the society they live in now and in the future. The question here is: "How do people from every walk of life or individuals receiving education at school absorb the understanding of sustainable development?" The answer is hidden in an education program servings as a model for sustainable development within the scope of science education (Mogensena, F., & Schnack, K, 2010). Biological diversity, energy resources, recycling and clean environment - the primary subjects of sustainable development - are included in the subjects of this model program. The education to be provided to the individuals should be in line with constructivist approach, which enables students to absorb sustainable development and to transform it into a behavior. The individuals absorbing sustainable development have more qualified cognitive, emotional and psychomotor skills and they transform these skills into a behavior in their normal lives. When all the individuals absorb sustainable development, the world will reach a more livable and sustainable level (Armstrong, 2011).

#### 4. Discussion and Conclusions

Negative effects of people on the nature are increasing day by day. There are three negative and critical factors which people have on the nature. These factors are industrialization, urbanization and rapid population growth. Especially growth of human population and thereby fast consumption and production has posed a threat for the future of the world (Chivu, 2015). However, people still assume that natural and available resources are limitless (Ruff & Olson, 2009). Countries gave priority to economic development and completed their industrialization especially during and after Second World War. In that period, world production had increased in early 1900s. Therefore, some countries become rich very quickly. As a result, use of natural resources had exceeded the replacement capacity, and serious problems such as forest destruction, reduction in the biological diversity and climate change had arisen (Appleton, 2006). In that period, priority was given to the economic development such as fast development, prevention of unemployment and control of inflation, and creation of environmental consciousness was delayed (Lupan, & Cozorici, 2015). Ecological problems have already crossed the country borders and it has become a global problem which will influence the lives of next generations. Ever-increasing ecological problems have become the most important agenda of modern societies. Thus, the term of "Sustainable Development" has been coined to overcome ecological problems. According to understanding of sustainable development; economic, social and environmental development should be advanced coordinately. However, economic development and growth was aimed in the traditional understanding and social and environmental dimensions were ignored. However, it caused overconsumption of resources, the widened gap between the rich and the poor, pollution of available resources, meaningless competition and tension between people and gaining momentum in the global warming (Aliyev & Aslanlı 2015). Researches have showed that more and more biologically productive fields are used as the development level of the counties increases. Overconsumption has risen with the enrichment of the countries and increase of their income level. Depending on the consumption; more energy was used, much more environmental pollution occurred and natural balance was upset (Akıllı, Kemahlı, Okudan & Polat, 2008). The below graphic (Figure 3) shows the biological capacity of the world and ecological footprints of individuals per capita, in other words the environmental damages (GFN, 2012).

Figure 3: Biological capacity of the world and ecological footprints of individuals per capita.

#### World



As understood from the graphic, people have exceeded the biological carrying capacity of the world. This poses a risk for the future of the universe. Countries should adopt the sustainable development understanding so as to make the world a more livable place. There are two aspects of sustainable development: strong and weak sustainability. According to strong sustainability, world resources can be protected with the use of renewable resources only and, thereby, resources can be

transferred to the next generations. In other words, non-renewable energy resources will lead to the decrease in the number of natural resources and they will disappear quickly. Weak sustainability argues that use of natural resources by the present generation is a right and that the capital to emerge as a result of its use will offer different alternatives (Kılıç, 2012). Developed countries have completed their industrialization, and thereby the environment has been polluted and its solution has been sought in "sustainable development". In addition to this, an environmental conference was organized with the participation of various countries under the leadership of developed countries and under the roof of United Nations, and certain decision were made. However, sustainable development understanding can be considered as an obstacle for less developed or developing countries in terms of their own development. Because basic needs of individuals in the countries having low national income should be met and their economic welfare level should be improved in order to carry their lives to a livable level. Industrial production and modernization of agriculture will be a prerequisite for development and modernization. While doing it, the waste will be a problem. When considering development and environmental pollution together, we will see that there is a paradox (Tıraş, 2012).

It may not be correct to say that low-income individuals are environmentally less conscious. The reason is that food and shelter, which are the basic needs of low-income individuals, are more prioritized than environmental pollution. As the development levels of the countries increase, productivity of the firms and personal income will increase, too. When the basic needs are met, individuals will become more sensitive to different fields. People will tend to demand products that will harm the environment less. However, less demand for products that will harm the environment more and more demand for environment friendly products will decrease the pollutants and environment friendly companies will carry on their production (Alagöz, 2007). Eradication of poverty is the biggest global challenge and it is an indispensable requirement of sustainable development (UNCSD, 2012). An industrial structure walking hand in hand with the natural environment is a must for all developed and developing countries. While developing economically, it should be an obligation that we raise awareness on the environmental risks for the world and next generations (Karabıçak & Özdemir 2015). Efficient use of international investment and financial mechanisms in the transfer and dissemination of new environment friendly technologies in developing countries is important (Aliyev & Aslanlı 2015). Another principle of sustainable development includes a common but differential responsibility principle. Thus, it imposes various obligations for all participants. In this sense, sustainable development may result in taking unintended decisions. Sustainable development has a democratic structure, too. If sustainable development does not have a democratic structure, it will be dogmatic and moralistic (Mogensena & Schnack, 2010).

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## Herzberg's Motivation- Hygiene Theory Applied to High School Teachers in Turkey

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### Abstract

The authors of this study sought to examine the job satisfaction and motivational level of high school teachers regarding the Hygiene and Motivator factors as identified by Herzberg and to find out the effect of fulfillment of Hygiene and Motivator factors on motivation of high school teachers. A questionnaire titled the quantitative data from Lester's (1987) TJSQ assessment of teacher job satisfaction and Hoy et al. 's (1991) OCDQ-RS assessment of school climate were used to collect data for the study. While the data for the study was analyzed using multiple statistical procedures: mean point value, standard deviation, and variance, t-test of significance and One-way-analysis of variance (ANOVA). A paper survey has been distributed to 198 respondents who are all actively involved in high school teaching in Isparta, Turkey. However, Frederick Herzberg's theory which states that what he terms hygiene (job context) factors contribute to dissatisfaction while motivator (job content) factors relate to satisfaction, the study indicates that both hygiene factors and motivation factors contribute to satisfaction and especially, hygiene factors were more satisfying factors in the high school teachers group.

**Keywords:** hygiene factors, motivation factors, job satisfaction, high school teachers

### Introduction

Teachers are noticeably the most important group of professionals as teachers run within the social life of a school and teaching is an inspiring occupation for all the nation and also they focus on the development of children. Much of teaching and learning is about somewhat routine communications but truly high-quality learning comes through the kind of encouraging pedagogic arrangement and it cannot always be shaped by regulation. Hence, it would be disappointing to find that many of today's teachers were demotivated or unsatisfied with their jobs (Brundrett, 2006).

The most commonly-used definition of job satisfaction is as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976). Gruneberg (1976) defined job satisfaction as the total cluster of emotional state an individual who had about his occupation or job. Moreover he interpreted that the nature of the job itself, the pay, the work environment, etc. were all important variables that led to a feeling of job satisfaction.

Neff (1968) reported that the ordinary individual spends two-thirds of his/her life engaged in a work. Most of proportion of our lives is spent in the work, thus it is a fundamental issue to study the "job satisfaction". It is a worthwhile concept and it is influenced by, and influences other variables. Schultz (1982) defined job satisfaction that is "the psychological disposition of people toward their work". Thus, as with Gruenberg's (1976) definition, job satisfaction is not limited to a single factor but it is dependent on a collection of work related tasks or activities. Okafor (1985) described job satisfaction is the worker's

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criticism of the extent to which the work environment fulfills his or her desires, however job dissatisfaction is a negative feeling toward individual's job that can be associated with outcomes.

In spite of being several definitions which are related to job satisfaction have been suggested, many theories have been developed to clarify why people differ in respect to satisfaction with their jobs. Job satisfaction is not of course synonymous with motivation, motivation is a process and leads to job satisfaction. One of the most important theories about motivation is Herzberg and his friends' theory. Herzberg, Mausner, and Snyderman (1959) developed the two-factor theory of job satisfaction. According to this theory, the main factors of satisfaction are the intrinsic aspects of the job (motivators; e. g. recognition, promotions, etc. ), while the main factors of job dissatisfaction are the extrinsic factors (hygienes; e. g. salary, working conditions, etc. ). Various workplace factors (supportive principals, focus on academic excellence, morale) were important determinants of job satisfaction among the teachers (Baughman, 1996). Similarly, Perie and Baker (1997) stated that administrative support (among other extrinsic factors) led to teachers' feelings of job satisfaction. Job satisfaction results when intrinsic aspects of work encourage feelings of happiness in the worker, and job dissatisfaction results when the extrinsic factors are considered. Yet the same factors can be source both satisfaction and dissatisfaction (Brunetti, 2001). Thus, as our research indicated that a single variable alone cannot be a predictor of job satisfaction or dissatisfaction.

Teacher job satisfaction or motivation has been identified as being a determinant of teacher retention, teacher commitment and school effectiveness. Numerous causes have approved as being related to teacher job satisfaction in Western developed countries, such as role overload, leadership, teacher autonomy, salary, parent support, student behavior and school climate (Young, 2000). Besides, studies have confirmed that country and culture can be a source of worker job satisfaction (Saari and Erez, 2002). Thus, the relationship between intrinsic job characteristics and job satisfaction can be experienced by national prosperity and culture (Huang and Van De Vliert, 2003).

There have been many studies about teacher motivation factors and job satisfaction in the developed countries (Young 2000). On the other hand only some research on teacher job satisfaction and motivation factors that lead job satisfaction have been conducted in developing countries. Furthermore, very few studies have been compared between developing countries and developed countries in terms of sources of teacher job satisfaction. In the study of Liu and Onwuegbuzie (2014) suggested that teachers who participated in a survey in China indicated that the teachers were motivated by both intrinsic (motivation factors) and extrinsic factors (hygiene factors). Furthermore, it showed that teachers who were more intrinsically motivated to enter the teaching profession reported a higher level of job satisfaction. While in developed countries and in more individualistic countries, motivational factors were more intensely related to job satisfaction (Huang 2001). In another study, most of the teachers were satisfied with their job, only some of them were reported dissatisfaction with their jobs (Sweney, 1981). In his survey, Heller (1992) reported that only 58% of the teachers was satisfied with their job, while Moore (1987), reported that more than half of the teachers in her study was dissatisfied with the choice of teaching as a profession. In their studies the reasons which lead to dissatisfaction included were status, pay, and recognition.

As stated by 2014 the Turkish national education statistics figures (2015) that total number of high school students was 5 million 690 thousand and there were 250 thousand high school teachers in Turkey. Regardless of considerable number, research into teacher job satisfaction is still at an early stage, with few studies have been conducted and previous works have been focused on mostly primary schools.

### Herzberg's Theory

Frederick Herzberg's motivation-hygiene theory on job satisfaction is considered to be one of the most revolutionary research in this arena. Unlike Maslow's theory, Herzberg's motivation-hygiene theory claims that job satisfaction and job dissatisfaction result from different causes. According to Herzberg, satisfaction depends on motivators, while dissatisfaction is the result of hygiene factors. While he defined motivators as intrinsic to the job, he defined hygiene factors as extrinsic to the job. He briefly created a distinction between satisfaction and dissatisfaction as well (Locke, 1976).

Herzberg (1971) had conducted a study with two hundred engineers and accountants in the state of Pittsburgh, then modeled the basis of his motivation-hygiene theory. In the study, Herzberg and his friends had questioned the employees about events at work which had either led to remarkable improvement or decrease in their level of job satisfaction. Based on the results of his study (1971), there are five factors that work as strong determiners of job satisfaction. These factors

have an improving effect on the employees' job satisfaction and they are effective in motivating individuals to higher job performance. Therefore, Herzberg names these factors as motivation factors.

Motivation factors, which are the drivers of human behavior related to the intrinsic nature of the work, but not necessarily to the surrounding circumstances or environment, are achievement, recognition, work itself, responsibility and advancement. Achievement factor refers to successful performance of individual's work tasks, solving problems, justification and seeing the results of one's work. Recognition relies on notice, praise and criticism received from colleagues or management and it mainly means getting recognition due to achievement in tasks. Work itself describes the actual content of one's job, basically meaning the tasks of the job. Responsibility means the sense of responsibility given to an employee for his/her own work or being given new responsibilities. Lastly, advancement refers to a change in one's position at work and, therefore, involves the concept of promotion (Herzberg, 1967,1971).

Meanwhile, the hygiene factors, which are contingent factors may demotivate but cannot themselves provide lasting motivation, company policy and administration, supervision, salary, interpersonal relations and working conditions (Herzberg 1971). Company policy and administration relate specifically to organization management at workplaces and they also require personnel policies. Supervision, on the other hand, refers to the actual behavior of managers towards employees, for example how fair or unfair they are and how willing they are to envoy responsibilities. Salary is economic benefit for work. Interpersonal relations refer to the social interactions between colleagues and between workers and their supervisors. Working conditions require the physical environment of working and especially the available facilities with all their space and tools, for instance (Herzberg, 1967).

**Table 1.** Summary of job-attitude factors by Herzberg et al. (1959)

<i>Motivators (intrinsic) factors    Hygiene (contingent) factors</i>	
1. Recognition	1. Salary
2. Achievement	2. Interpersonal relations
3. Possibility of growth	3. Supervision
4. Advancement	4. Company policy/administration
5. Responsibility	5. Working conditions
6. Work itself	6. Personal life
	7. Status
	8. Job security

Some of the studies that used Herzberg's original methodology have replicated his results. For instance, Myers (1964) interviewed scientists, engineers, supervisors, technicians and hourly-paid assemblers. In the study, Herzberg's two factor theory was supported for all five groups of Myer's population, though differences in the modeling of factors occurred. Myers indicated that "workers become dissatisfied" when their "opportunities for meaningful achievement are ignored and they become informed to their environment and begin to find fault". This suggests that although the reported determinants of dissatisfaction are hygiene factors, the cause of dissatisfaction lies in the motivators. Another study supported Herzberg's theory which Schwartz (1959) used a questionnaire was parallel to Herzberg's (1959) interview schedule, on 373 third-level supervisors. He found that the factors most significantly related to satisfaction were achievement, and recognition of achievement (motivators); company policy and administration (hygiene factor) was found to be the basic reason for dissatisfaction.

In the study of Weissenberg and Gruenfeld (1968) whereas both hygiene factors and motivators contributed to civil service supervisors overall satisfaction, it was mostly motivators that did so. However, the relationship of motivators and hygiene factors to dissatisfaction was not reported.

According to Wall (1970) most of the studies strongly suggest that the research results upon which Herzberg's theory is based on a function of "social desirability". Individuals with a strong need for social approval, or individuals in a situation requiring highly socially acceptable responses, were shown to give results highly reliable with the two-factor theory. However, individuals with a lesser need for social approval, or in a situation which did not necessarily demand socially acceptable responses, gave results which were much less consistent with the two-factor theory. Furthermore, it was found that the use of a long-lasting recall period tended to maximize the relationship between social desirability and the two-factor theory. Consequently, as a description of the structure of job attitudes and of the determinants of satisfaction and dissatisfaction, the two-factor theory is not acceptable.

Experimental tests of hypotheses derived from the two-factor theory have produced contradictory results, this conflict may, to some extent, be due to the differing interpretations which have been placed upon the theory. However, it is noticeable that those studies which support the two-factor theory tend to use a methodology very similar to that use in the study upon which the two-factor theory is based. Research which refutes the two-factor theory has tended to use different methodologies. It is suggested that the extent to which research supports or negates the two-factor theory is a function of the degree to which socially desirable responses have been encouraged by the methodology employed (Wall, 1970).

## Method

This study was a descriptive survey type; the researchers used survey method to collect relevant information from high school teachers who were working in public sector schools of Isparta province, Turkey. All the teachers working at the 9-12 grades of public high schools and teaching social studies and science studies teachers constitute the population of the study. The random sample method was used. All the sampled high school teachers were visited and the questionnaires were distributed for ourselves.

One hundred ninety-eight high school teachers were surveyed using Lester's (1987) TJSQ assessment of teacher job satisfaction and Hoy et al. 's (1991) OCDQ-RS assessment of school climate were used to collect data for the study. The research participants in the current study were qualified teachers. A total of 250 questionnaires were distributed however 52 of these were rejected. This resulted in response data of 198 (79. 2%) completed the survey. The Lester's (1987) instrument to measure job satisfaction as an instrument uses supervision, colleagues, working conditions, pay, responsibility, work itself, advancement, security, and recognition as factors of an educator's job satisfaction. Job satisfaction is defined as the extent to which a teacher perceives and values various factors including evaluation, responsibility, and recognition.

The instrument was comprised of 45 items in five-point Likert scale format ( strongly disagree, disagree, undecided, agree, strongly agree). Participants respond, one to five, whether they agree or disagree with each item on the scale.

The questionnaire involved of two parts. In the first part demographical information was obtained gender, teaching experience years and lesson branches (social studies and science). The questions were asked related to their current level of motivation. The datasets were analyzed in relation to Herzberg *et al.* 's (1959) two-factor theory. This part contained questions mainly on extrinsic motivating factors such as supervision, colleagues, working conditions, pay factor. And also, it was tried to stimulate respondents' attitudes towards the intrinsic factors such as responsibility, advancement, recognition, work itself that keep them motivated. In this part we tried to investigate which intrinsic factors mostly motivate high school teachers. For the statistical analysis of the data was used the statistical package for the social sciences (SPSS) 20 program. The total scale Alpha coefficient of the sample (N = 198) was 0. 81.

## Data Analysis and Results

In the eight high schools, 198 teachers responded to questionnaires. Of these, 38,4% were female, and 61,6% male taught in high schools in Isparta. As for number of years teaching, 3,5 % reported between 0 and 5 years' experience, 7,1 %

reported between 6 and 9 years, 16,2 % reported between 10 and 14, 29,3 % reported between 15 and 19 years, 23,2 % reported between 20 and 24 years, 20,7% reported 25 and over teaching experience. 32,3% were science teachers and 64,6% were social science teachers who constituted the study.

**Table 2.** Effect of Teaching Experience Years on Motivation Factors

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
<i>Between Groups</i>	241,269	5	48,254	1,065	.381
<i>Within Groups</i>	8701,822	192	45,322		
<i>Total</i>	8943,091	197			

A one-way between-groups analysis of variance was conducted to explore impact the years of teaching experience on levels of motivation factors and hygiene factors as measured by the tests. Participants were divided into six groups according to their teaching experience years (Group 1: 0-5 years; Group 2: 6-9 years; Group 3: 10-14 years; Group 4: 15-19 years; Group 5: 20-24 years and Group 6: 25 years and above). There was not a statistically significant difference among the mean scores on motivation factors  $p < .05$  level in the test scores for the six groups of teaching experience:  $F(5, 192) = 1.0$ ,  $p = .381$ .

**Table 3:** Effect of Teaching Experience Years on Hygiene Factors

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
<i>Between Groups</i>	2491,993	5	498,399	3,767	.003
<i>Within Groups</i>	25400,962	192	132,297		
<i>Total</i>	27892,955	197			

There was a statistically significant difference among the mean scores on hygiene factors for six groups. Group 3, group 4 and group 6 were statistically significantly different from one another. That is 10-14, 15-19, 25+ experience years groups different significantly in terms of hygiene factor scores. The effect size, calculated using eta squared, was .03. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 3 ( $M = -7.58$ ,  $SD = 2.53$ ), Group 4 ( $M = 7.58$ ,  $SD = 2.53$ ) and Group 6 ( $M = -7.85$ ,  $SD = 2.34$ ) were significantly different from one another.

**Table 4:** Robust Test of Equality of Means

	<i>Statistic</i>	<i>df1</i>	<i>df2</i>	<i>Sig.</i>
<i>Welch</i>	3,545	5	42,236	.009
<i>Brown-Forsythe</i>	4,066	5	99,618	.002

An independent-samples t-test was conducted to compare the unsatisfying factor ( hygiene ) scores for males and females. There was a significant difference in scores for males ( $M = 80.36$ ,  $SD = 12.53$ ) and females ( $M = 87.27$ ,  $SD = 9.41$ ;  $t(189.14) = 4.41$ ,  $p = .000$ , two-tailed). The magnitude of the differences in the means (mean difference = 6.91, 95% CI: 3.82 to 10.0) was moderate effect (eta squared = .09). The guidelines (proposed by Cohen 1988, pp. 284–7) for interpreting this value are:

.01=small effect

.06=moderate effect

#### . 14=large effect Job Description

An independent-samples t-test was also conducted to compare the satisfying factor (motivation factor) scores for females and males. There was a significant difference in scores for females ( $M = 67.36$ ,  $SD = 5.25$ ) and males ( $M = 65.34$ ,  $SD = 7.42$ ;  $t(192.75) = 2.41$ ,  $p = .026$ , two-tailed). The magnitude of the differences in the means (mean difference =  $2.02$ , 95% CI:  $2.24$  to  $3.80$ ) was small size effect ( $\eta^2 = .002$ ).

An independent-samples t-test was conducted to compare the satisfying factor (motivation factor) scores for science teachers and social science teachers. The value was above .05, so there was not a statistically significant difference in the mean the satisfying factor (motivation factor) scores for science teachers and social science teachers. For science teachers ( $M = 66.07$ ,  $SD = 6.77$ ) and social science teachers ( $M = 66.05$ ,  $SD = 6.83$ ;  $t(190) = .022$ ,  $p = .982$ , two-tailed).

An independent-samples t-test was conducted to compare the satisfying factor (hygiene factor) scores for science teachers and social science teachers. The value was above .05, so there was not a statistically significant difference in the mean the hygiene factor scores for science teachers and social science teachers. For science teachers ( $M = 83.07$ ,  $SD = 12.34$ ) and social science teachers ( $M = 82.84$ ,  $SD = 11.84$ ;  $t(190) = .127$ ,  $p = .283$ , two-tailed). The test indicated that there was not a statistically significant difference in the mean the satisfying factor (motivation factor) scores and the unsatisfying factor (hygiene) scores for science teachers and social science teachers.

Frederick Herzberg's theory which states that what he terms hygiene (job context) factors contribute to dissatisfaction while motivator (job content) factors relate to satisfaction, the study indicates that both hygiene factors and motivation factors contribute to satisfaction and especially, hygiene factors were more satisfying factors in the high school teachers group. Hygiene factors were more effective satisfying factors on female teachers than male. And also, motivator factors were almost same satisfying effect on male and female high school teachers.

The eight schools were demographically and academically very similar, they had similar levels of job satisfaction and school climate. The job satisfaction and school climate levels were significantly higher at the schools.

Although there was a statistically significant difference among the mean scores on hygiene factors for group 3, group 4 and group 6, we may conclude that there was not enough important difference to justify to data.

Moreover there was not a statistically significant difference in the mean the satisfying factor (motivation factor) scores and the unsatisfying factor (hygiene) scores for science teachers and social science teachers. It was notable that responsibility factor ( $M=26.4$ ,  $SD=3.3$ ), supervision factor ( $M=26.3$ ,  $SD=6.06$ ), colleagues factors ( $M=25.1$ ,  $SD=3.2$ ), were rated highest factors and the other motivation and hygiene factors such as working conditions factor ( $M=17.5$ ,  $SD=2.6$ ), pay factor ( $M=10.9$ ,  $SD=3.3$ ), advancement factor ( $M=9.1$ ,  $SD=2.5$ ), recognition factor ( $M=5.1$ ,  $SD=1.5$ ), and security factor ( $M=2.9$ ,  $SD=1.1$ ) followed.

## Conclusion and Discussion

Confidently, there are many ways to justify the theory of Herzberg. The defenders who support the motivation-hygiene theory may fail to defend the theory if do not use the methodology which Herzberg used. Now and then the researchers used the Herzberg's same methodology of getting the data although they failed to find same results (Gardner, 1970).

It is obvious that the two-factor theory is a controversial issue so differing interpretations have been engaged and the validity of these interpretations has itself become a subject of controversy. French and his friends (1973) stated that in the most of the studies, only few interview method of data collection and unstructured approach were used. And also few studies used the critical incident technique as a means of data reduction, though a variety of data analysis techniques were employed. The recent studies have used as Herzberg's methodology and acquired results supportive of the theory. Others who applied different methodologies, either in terms of data collection, reduction or analysis, failed to obtain results supportive of the two-factor theory. The main polemic of this research has been that Herzberg can be replicated when certain key factors in the experimental process are held constant. In this case it was possible to obtain statistically similar results using oral and

written data collection techniques. It is clear that researches in this area become increasingly aware of these difficulties and control them.

Majority of the teachers of high schools in district Isparta, in their overall response to hygiene variables, realized their satisfaction with Hygiene factors on their jobs. Their feeling of satisfaction with Hygiene factors was the disapproval of Motivation-Hygiene theory in respect of hygiene factors, because Herzberg's theory regarded satisfaction at workplace is the outcome of motivators, not of hygiene factors.

The research reveals that high school teachers' motivation was mostly dependent on both the fulfillment of Hygiene and Motivator factors. Nevertheless high school teachers' motivation was more at the mercy of Hygiene factors rather than motivator factors. According to the research of Wall (1970) on university teachers, strong significant relationships were found between the satisfaction of Hygiene and Motivator.

The high school teachers were satisfied with the hygiene factors such as relation with administration or supervision, relation with colleagues, pay factor or salary and security and also they were very pleased with motivation factors such as responsibility, advancement, recognition and work itself. We can conclude that the high school teachers' motivation was relied on both the fulfillment of hygiene and motivator factors and the teachers' job satisfaction and school climate levels were significantly higher.

The development of effective and planned teacher policies in Turkey depends upon careful consideration of the motivational factors and hygiene factors involved in engagement an upon close hearing to the voices of the teachers.

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## Predictors of School Safety Awareness Among Malaysian Primary School Teachers

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### Abstract

*With rising incidents of school violence worldwide, educators and researchers are trying to understand and find ways to enhance the safety of children at school. The purpose of this study was to investigate the extent to which the demographic variables of gender, age, length of service, position, academic qualification, and school location predicted teachers' awareness about school safety practices in Malaysian primary schools. A stratified random sample of 380 teachers was selected in the central Malaysian states of Kuala Lumpur and Selangor. Multiple regression analysis revealed that none of the factors was a good predictor of awareness about school safety training, delivery methods of school safety information, and available school safety programs. Awareness about school safety activities was significantly predicted by school location (whether the school was located in a rural or urban area). While these results may reflect a general lack of awareness about school safety among primary school teachers in the selected locations, a national study needs to be conducted for the whole country.*

**Keywords:** School Safety Awareness, Predictors of School Safety, Multiple Regression analysis, Malaysian Primary Schools

### Introduction

The world has recently witnessed increasing incidences of school violence. In Malaysia, UNICEF Malaysia reported that 16% of Malaysian kids were out of school due to violence (UNICEF Malaysia, 2014). Violence in school includes bullying and others. Moreover, 8,015 arrests that were made in 2014, including 12 years-old children involved in criminal activities such as drug abuse, gambling and social problems. In 2013, 7,816 juvenile cases were recorded, mostly involving school students (Royal Malaysian Police Statistics, 2014).

Among the public, there is a growing perception that schools are not as safe as they were before (The Star, 2000). A review of the literature in Malaysia reveals a dearth of in-depth research on the topic of this study. Nevertheless, one study on "Gangsterism in day school" done by the Education Ministry indicates that 30% of secondary schools in Malaysia are threatened by gangsters. Out of 1641 schools, 459 have been classified as high-risk with Penang being the worst affected state (Simrit Kaur, 2000).

### The Need for School Safety

The idea of a positive and safe learning environment is necessary for students to learn (Reeves, Kanan & Plog, 2010). A well-functioning school is not only a school that promotes learning, but also attends to safety and teaches socially appropriate behaviour. Reeves, Kanan & Plog (2010) also listed safe school characteristics including balance between physical and psychological safety to create and maintain safe and positive environment.

Giving another concept on school safety, Mastura (2013) defined safety as "the behaviours and practices that protect children and adults from risk or injury" (p.11). She suggested safety of young children is of special concern because they have no sense of danger and the consequences of their action. Mastura (2013) also affirmed that school's environments or school's climate or have a direct impact on students' well-being. Similar concept on school's environment have effect on

students' well-being found in Simmons (1999) whom defined safety as a concern about physical or emotional security. It is a preference for social and physical settings that provide protection and minimize the chances of being attack or hurt.

As from the school's context, safety is perceived as a school environment where children are safe from all types of hazards and risk (UNESCO, 2012). Carbino (2010) set out a safe school is one, where teachers can teach and students can learn in a warm, encouraging, and nurturing environment without the threat and resulting fear of violence occurring at any moment. This is also to say that safe, caring, participatory and responsive school climate fosters greater attachment to school and provides the optimal foundation for social, emotional and academic learning (Osterman, 2000; Blum, McNeely & Rinehart, 2002).

Although there is not one list of factors that shape the quality and character of school's life, virtually all researchers agree that there are four major areas that clearly shape school climate: safety, relationships, teaching and learning, and the (external) environment. Over the last three decades, educators and researchers have recognized that complex sets of elements make up school climate. There is not one commonly accepted "list" of the essential dimensions that colour and shape school climate. A review of research, practitioner, and scholarly writings suggests that there are four major aspects of school life that colour and shape school climate including safety, teaching and learning, relationships and environmental-structural (Cohen, 2006; Freiberg, 1999).

A growing body of research has indicated that a positive school climate is a critical dimension linked to effective risk prevention and health promotion efforts as well as teaching and learning (Cohen, 2001; Juvonen, Le Kaganoff, Augustine & Constant, 2004; Najaka, Gottfredson & Wilson, 2002; Wang, Heartel & Walberg, 1993). Previous research also found a safe, caring, participatory and responsive school climate fosters greater attachment to school and provides the optimal foundation for social, emotional and academic learning (Blum, McNeely & Rinehart, 2002; Osterman, 2000).

The search for tools of psychological resistance and the conditions that reduce threats and mitigate the risk of safety inhibition is not only a social need in modern conditions but also the task of special studies. In the psychological context the search for tools and conditions for studying the perception, cognition and assessment of the educational environment for the development of students and teachers is progressive.

Teaching and learning cannot take place in an unsafe environment. The art of creating a peaceful school environment poses great challenges to school management. It is stipulated in the Bill of Right (Act No.108 of 1996), Section [24]) that every person has the right to an environment that is not detrimental to his health or well-being. This right also applies to learners, and in principle protects them from being exposed to harmful environments, including the school. The educator, in addition to this duty to teach and educate, is also required to provide education, physical and mental safety to learners (Oosthuizen, et al, 1994).

Further, many researchers agree that physical and psychosocial environment is significantly correlated in which it gives impact on students' achievement and well-being, affect teaching (American Association of University Women & Lewis Harris Associates, 1993; American Association of University Women & Lewis Harris Associates, 2001; Center for Mental Health in Schools at UCLA, 2004; Prothrow-Stith & Quaday, 1995) and creates barriers to learning (Edmondson et.al, 2009).

### ***The Role of Teachers' Perceptions***

Teachers are on the frontlines when it comes to issues of school safety. They interact with the children on a day-to-day basis and they are the first to know of any acts of violence at school. Brand, Felner, Seitsinger, Burns, and Bolton, (2008) found in a large-scale study that teachers were not only acutely aware of what was going on in terms of school safety, but also that their perceptions positively correlated with students' perceptions, behaviors, and outcomes.

McElearney & Stead (2011) studied 50 participants including teachers, classroom assistants and allied health professional working in mainstream primary and special schools in the Ballymena District Council area. Focus group discussion was conducted to explore the views and experience of participants and valuable insight into the barriers and facilitative factors to teach "keeping safe" message in primary schools in Northern Ireland. Teachers reported varied states of readiness with the development and teaching of "keeping safe" message through preventive education in primary schools. Teachers and other school staff also have varied practices in how they currently taught "keeping safe" message. The special school sector

reported teaching more sensitive message for example appropriate and inappropriate touch. In contrary with teachers from integrated and Catholic Maintained schools, teaching are focus on accident, prevention, internet safety, bullying and stranger danger.

The study also found that teachers varied in their attitudes on expressing their role in safeguarding the welfare of children in schools. Minority of participants expressed reluctance for schools and teachers to take on the responsibility for teaching keeping safe message. However, all teachers, classroom assistants and allied health professionals working in special school acknowledged that they had a role to play in teaching keeping safe messages to children.

In addition to the findings, participants highlighted the opportunity presented by the revised curriculum to embed the teaching of keeping safe message within primary schools. They were clear that any approach to development in this area should include integration across all aspects of the school, the role of the teacher and the training, development and support needs of school staff in teaching keeping safe message (Stephenson, P., McElearney, A., & Stead, J. 2011).

## **The Present Study**

The previous studies discussed in the foregoing paragraphs, as well as other researchers, including Douglas, Warwick, Kemp, and Whitty, G. (1997); Maxwell (2000); Bradshaw, Sawyer, and O'Brennan (2007); Astor, and Meyer (1999); Stockdale, Saidou Hangaduambo, David Duys, Karl Larson, and Paul D. Sarvela (2002); Behre, Astor, and Meyer, (2001); Price and Everett (1997); and Cothran, and Ennis, (1997), have found teachers' perceptions to play a major role in their commitment to creating a positive school climate and in promoting safe school practices. What is not generally highlighted in these studies however, is the extent to which teachers' perceptions and actions could be influenced by important background variables. Drawing from teacher behavior research, we hypothesized that teachers' perceptions about school safety practices could be influenced by the key demographic variables of gender, age, length of service, position, academic qualification, and school location. As Malaysia is grappling with the increasing incidences of school safety breaches, we hoped that this could add important insights on future strategies for dealing with this problem.

## **Method**

This study was conducted using the survey method. A stratified random sample of 378 teachers was selected in the central Malaysian states of Kuala Lumpur and Selangor. A survey instrument was created based on the work of Steve Balen, John Dively, Ronald Ellis, Sanford Farkash, Marilyn Holt, John Hunt, Micheal Kotner, Carroll Phelps, Peter Renfroe, Joseph Saban, Lisa Stewart and Don Strom (1999). In this analysis, 26 items were utilised, divided into four dimensions as shown in Table 1. The reliability coefficients ranged between .35 and .886.

## **Results and Discussion**

### ***Teachers' Perceptions of School Safety Practices***

In general, the sample had average perceptions about school safety practices in Malaysian schools. On a 5-point likert scale, the mean responses ranged between 2.3 (awareness of delivery methods) and 2.5 (awareness of training programs).

### ***Predictors of Teachers' Perceptions about school Safety***

In order to test the hypothesis regarding the demographic predictors of teachers' awareness about school safety practices in Malaysian primary schools, the researchers used multiple regression analysis (MRA). Below is a summary of the results of the regression analysis.

**Awareness of Training Programs.** The regression equation was not significant ( $F(8,370) = 1.09, p > .05$ ) with an  $R^2$  of .023. None of the independent variables (gender, age, length of service, position, academic qualification, and school location) was a significant predictor of teachers' awareness of school safety training programs.

**Awareness of Delivery Methods.** The regression equation was not significant ( $F(8,370) = 1.57, p > .05$ ) with an  $R^2$  of .033. None of the independent variables (gender, age, length of service, position, academic qualification, and school location) was a significant predictor of teachers' awareness of school safety delivery methods.

**Awareness of Safety Programs.** The regression equation was not significant ( $F(8,370) = 1.57, p > .05$ ) with an  $R^2$  of .035. None of the independent variables (gender, age, length of service, position, academic qualification, and school location) was a significant predictor of teachers' awareness of school safety programs.

**Awareness of Safety Activities.** Standard Multiple regression was used to test the demographic predictors of Malaysian teachers' awareness of safety activities at their respective schools. Overall, the model significantly predicted teachers' awareness of safety activities,  $R^2 = .048, R^2_{adj} = .027, F(8,370) = 2.335, p < .05$ . This model accounts for about 5% of the variance in Social Adjustment (a small effect according to Cohen, 1988). Of the six independent variables only School Location significantly contributed to the model (Table 2).

While we would predict variables like gender to play a major role, it was quite surprising to find that none of them was actually significant. This shows that teachers' perceptions on most aspects of safety were quite similar. The only difference we found was regarding their awareness about school safety activities where location emerged as a significant predictor. Teachers from rural areas had slightly lower means for perceptions of school safety activities (mean=2.5) compared to their urban counterparts (mean=2.7). In general, however, the overall perceptions about school safety practices were low, indicating that more concrete steps need to be taken to reassure the teachers.

## Conclusion

What is presented here is a preliminary analysis of results from a large study. While these results indicate a low rating for perceptions of school safety practices among teachers, they are not conclusive. Further research needs to be conducted to fully understand the mechanism involved.

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## Tables

Table 1.

Dimensions and reliability of the instrument

Dimension	No. of items	Chronbach alpha
Awareness of Training Programs	7	.88
Awareness of Delivery Methods	3	.35
Awareness of Safety Programs	3	.72
Awareness of Safety Activities	3	.886

Table 2

Model coefficients for Awareness about School Safety Activities

	<i>B</i>	$\beta$	<i>t</i>	<i>p</i>
Gender	-.373	-.062	-1.181	.238
Age	-.282	-.089	-1.144	.254
Length of Service	-.025	-.008	-.105	.916
Position	-.044	-.009	-.158	.874
Acad. qualification	-.299	-.064	-.810	.418
School Location	1.075	.209	3.288	.001

## Developmental Patterns in the Interlanguage Research

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### Abstract

*Interlanguage, defined as a dynamic language system created by the second language learners, can be studied by observing how the language of the learner develops over time. It is argued that interlanguage develops in a regular, predictable way. The regularity of interlanguage development can be confirmed by studying the order or the sequence of the acquisition of a certain structure. The former is studied by choosing one of the grammatical structures (i.e. plural-s), followed by collecting interlanguage samples to determine how often a certain structure is used and finally ranking the structure according to accuracy criteria. The latter deals with the detailed investigation of a certain feature (i.e. interrogatives) to show the sequence of stages through which a learner passes in his/her attempt to arrive at the target language. By studying syntactic structures, such as negatives and interrogatives, the regularities of the acquisition stages are most evident. The regularities have been found across many languages, in particular, English and German. To demonstrate that German language develops in a regular fashion, Processability Theory was proposed stating that L2 learners can produce only those L2 structures which they can process at any given point in time emphasizing thus the fact that developmental stages cannot be skipped. Furthermore, developmental patterns can also be studied by applying obligatory occasion, target-like or frequency analysis. Both obligatory occasion and target-like analysis compare the learner's and the target language, whereas frequency analysis lists various linguistic devices used by the learner to express a certain grammatical structure and then shows the frequency of using a certain linguistic device.*

**Keywords:** developmental patterns, order of acquisition, sequence of acquisition, Processability Theory, frequency analysis, obligatory occasion analysis, target-like analysis

### 1. Introduction

Interlanguage is a theoretical construct, empirically confirmed, created as a result of a cognitive approach to languages where primary importance is given to the internal cognitive processes of a learner, and his/her active contribution to the process of learning which results in different learning strategies. Latent language structures (Lenneberg, 1967) and latent psychological structures (Selinker, 1972), activated when one attempts to learn a second language, determine the interlanguage path. In the past, interlanguage was studied by analysing errors a learner makes at a certain point in time. Since error analysis failed to provide a complete interlanguage picture, because the focus was only on counting and detecting errors, a need to show the development of interlanguage over time was recognized. As interlanguages show deviances in a structured way, they are determined by the rules which can be predicted in advance. The systematic nature of interlanguage can be thus studied by following developmental patterns applying obligatory occasion, target-like, frequency or emergence analysis. Emergence analysis, proposed by Pienemann (1998), reveals that structures emerge in a predicted way and that developmental stages cannot be skipped. It is therefore important to introduce teachers to the notion of interlanguage due to the fact that they are then able to understand better the process of learning, and the fact that the stages of acquisition cannot be skipped through formal education. Instruction is thus only helpful if it focuses on structures from the next stage.

## 2. Interlanguage research

Error analysis, one of the methods of studying interlanguage, was popular in the 1970s when the focus was on counting and classifying errors and the attempts were made to correct them as it was believed that learners would make progress if they are aware of their errors. Corder (1967) emphasized the importance of errors because they show insight into the way of learning and acquiring the language and display strategies a learner uses on his/her way of discovering the language. Although error analysis received criticism, as it showed very static insight into the way a language is acquired, errors are still taken into account when describing the learner's interlanguage. Common European Framework of Reference for Languages (CEFL) still describes requirements for grammatical accuracy with a constant emphasis on the number and a type of errors neglecting thus the development of grammar (Pallotti, 2010). In order to move away from counting errors, Pienemann (1998) proposes factorization as a way of dissolving different factors bundled together in the second language which can lead to errors. A learner may create an interlanguage system where just one of such factors governs a set of form-function associations and they should be described separately, regardless of the fact that they form structures not allowed by the second language rules. For example, in German language adjectives may be inflected based on a variety of factors, such as number, gender, case. A learner who connects one inflectional morpheme with one of these factors will produce a lot of non-target language forms, but will still follow a specific interlanguage rule.

Furthermore, complete picture of learner's interlanguage can be obtained by studying the way language is used in communication. Pragmatics focuses on what is being said in a particular moment and how it is said. Most of the works so far have focused on the analysis of specific illocutionary acts. The learners have to learn when it is appropriate to use a certain structure and how to encode it, which may lead to various problems. Sociopragmatic failure may be distinguished from pragmatic failure. The former happens when learners display socially inappropriate behavior and the latter happens when learners do not express themselves in a linguistically appropriate way (Thomas, 1983 in Ellis, 1994).

Learner's interlanguage can also be described by observing how learners change their language depending on the occasion. Variability of the learner's interlanguage is mostly systematic because learners change their linguistic forms based on a different linguistic or situational context. It is likely that learners will use target-like forms in formal environment, while their own forms, susceptible to changes, will be used in informal environment. Tarone (1983) has attempted to explain systematic variability by suggesting that second language learners have a series of overlapping mental grammars, which correspond to different contexts in which the second language is used. At one extreme learners have a grammar for informal or vernacular second language use (e.g. in spontaneous casual conversation). At the other extreme learners have a grammar for formal or careful use of the second language (e.g. in writing or classroom use of the second language). Between these extremes, there are mental grammars for different levels of formality of use. Tarone (1983) refers to this set of overlapping styles as the interlanguage capability continuum. Learners acquire grammars on the continuum through exposure to the second language in contexts of different levels of formality. Non-systematic variability is thus created when new forms are received, but are still not a part of the learner's form-function system. Systematic variability is created when new forms are accepted from the learner's existing form-function system. Ortega (2014) emphasizes two approaches to the analysis of interlanguage variability: socio-linguistic approach to variability (Berdan, 1996 in Ortega, 2014) and dynamic approach (Verspoor et al, 2008 in Ortega, 2014). The analysis of negation in English has shown that in any analysis that seeks to explain temporality there is a risk of finding random variability which cannot be traced and, therefore, evidence of learning is missing. On the other hand, the dynamic system perspective has shown that individual ways of acquiring language are still not known and their development might be missed if variability is ignored. The study of this kind of variability is qualitative and can only be conducted over time on an individual basis. Ortega (2014) states that variability studies that focused on the acquisition of negation lack wider socio-linguistic level, proposed by Tarone and Liu (1995 in Ortega, 2014), which includes variability originating from social interactions.

### 2.1. Developmental patterns in the interlanguage research

Since error analysis was abandoned due to the fact that interlanguage was observed as a collection of errors, the need to study the whole process of creating interlanguage at different stages of development was recognized. The conclusion that interlanguage develops in a regular, predictable way was reached. The universal criteria that researches have used in constituting evidence for developmental patterns are the following (Ellis, 1994):

- The existence of developmental patterns can be determined by studying the order of acquisition of different second language structures or by following sequence of stages through which a learner passes on his/her way of mastering the second language. When studying the order of acquisition, a researcher determines grammatical structures that will be the object of the research (i.e. auxiliary *be*, plural-*s*), then he/she collects samples of the learner's interlanguage to determine how often a specific structure is used by different learners and finally structures are ranked according to accuracy criteria. When observing sequence of stages, very often the so called U-shaped behavior can be noticed. For instance, in the beginning, the learners are unable to mark Past Simple of the verb *to eat*; then they start using correct form of the verb *to eat*, i.e. *ate*. Afterwards, the learners overgeneralize the rules for Past Simple Tense, i.e. the form *eated* is used and finally they go back to the correct form of the Past Simple Tense of the aforementioned verb (Ellis, 1997).
- When describing transitional structures, a developmental stage is said to consist of a period during which learners systematically use a particular form or structure, even though it does not exclude the usage of other forms or structures.
- The forms and structures used by learners at different time periods during the process of second language acquisition can be ordered in a way that one form or structure always precedes another.
- By acquiring some forms or structures of a target language earlier and some later, learners progress step by step along an order or a sequence of acquisition.
- Strong evidence for developmental patterns appear when it is possible to show that an order or a sequence of acquisition is universal (can be applied to different second languages and to all learners). Weak evidence can be found when an order or a sequence of acquisition is only applied to specific languages or specific groups of learners.

Pallotti (2010) emphasizes the fact that studies of acquisition orders should set explicit acquisition criteria that clearly show which conditions should be met to conclude that a specific structure is acquired.

Lowie & Verspoor (2015) advocate a dynamic explanation where each step of the development can be ascribed to the dynamic interaction of all processes included in the development, whereby the dynamic process cannot be predicted in advance and it is not invariable. Furthermore, they state that developmental stage studies try to reach conclusions which are applicable on a group, but are insignificant on an individual level. If the obtained results are to be applied on a large population of learners, group studies with representative samples using Gaussian statistics based on the normal distribution should be conducted. However, if we want to follow the development of an individual as a result of changing variables in a variable context, longitudinal studies and nonlinear methods of analysis should be applied (Lowie & Verspoor, 2015).

## 2.2. Methods of investigating developmental patterns

There are various methods which can be used when investigating developmental patterns. One of the methods is to study errors made by the learners and to determine if they change and how they change over time. Furthermore, developmental patterns can also be studied by collecting samples of the learner's language over a period of time in order to determine which linguistic feature emerges and when in the learner's language. According to this approach, acquisition is defined as first occurrence (Wells, 1985). This method is common for the first language acquisition research, but is also proposed as a method of investigating second language acquisition (Pienemann, 1984).

The usual method for the description of developmental patterns is obligatory occasion analysis. The method was clearly described by Brown (1973), and the procedure is as follows: first, samples of a learner language are collected in the natural environment; second, obligatory occasions for the use of specific target language forms are identified. While using the second language, learners create occasions in which it is necessary to use a specific form of the target language, even though they do not always use it correctly. For instance, a learner can say utterances such as *I watched a good film yesterday* and *He come late for the show yesterday\**. In both sentences, an occasion for the usage of Past Simple was created, although a learner has made a mistake in the second sentence. Afterwards, the percentage of accurate use of a specific form is calculated in order to determine if the needed form is used in all required contexts. Finally, level of accuracy of a specific form is determined. The level is usually set at 80-90% considering the fact that not even native speakers are able to provide all correct forms. According to Brown (1973), if a certain structure is acquired, it will be a constant part of the learner's interlanguage system, even at higher developmental stages. Vainikka & Young-Scholten (1994, in Pallotti,

2007) consider a certain structure acquired if it is correctly used in 60% of the cases, Ellis (1988, in Pallotti, 2007) requires 75% accuracy, Andersen (1978, in Pallotti, 2007) 80%, and Dulay & Burt (1974) set the accuracy level at 90%. The problem which emerges when using this method is that it takes no account of when the same form is used in a non-obligatory context. For example, a learner overgeneralizes Past Simple in the sentence *I watched a good film yesterday and now I remembered all details from the film* because he/she uses Past Simple in both cases. A procedure called target-like use analysis was proposed as a way of dealing with the overgeneralization and incorrect usage of a certain form. Pica (1983) reached a conclusion that relevant differences in the assessment of a learner's ability depend on whether an obligatory occasion or a target-like use analysis is employed. Both methods compare the learner's interlanguage with the target language. Bley-Vroman (1983) warned that it may lead to comparative fallacy which could appear if the fact that learners form their own rule systems in the process of acquiring second language is neglected. Selinker (2014) talks about deep interlanguage semantics as a way of dealing with comparative fallacy.<sup>1</sup> Target-like use analysis cannot be used for the description of a system that is created by the learners in the process of learning, since it only provides information up to which level the learner's interlanguage has come closer to the target language. Another problem is the question of the target language norm that should be followed as a basis for the comparison of the learner's language. Norms also differ according to different dialogues spoken in the target language community, and it is difficult to determine if all the target language learners want to follow the standard dialect.

One of the ways of overcoming these problems is to list various linguistic devices used by the learners in order to express a specific grammatical structure (such as questions) and then to calculate the frequency of usage of a specific device at different points in the learners' development (Cazden et al, 1975, as cited in Ellis, 1994). This method is called frequency analysis and it is very useful in disclosing vertical variations in the interlanguage development. By applying this method it is possible to show the prominence of different elements at different developmental stages. Many of the above mentioned studies are longitudinal, i.e. the data are collected over the period of a few months or years. On the other hand, there are cross-sectional studies which are used to collect the data at a single point in time. The method often applied in cross-sectional studies is implicational scaling which focuses on the changes in the learner's interlanguage in order to find out which form different learners have acquired and to arrange specific forms into a hierarchy (Decamp, 1971).

### 2.2.1. Processability Theory (PT)

For the analysis of the learner's interlanguage, Pienemann (1998) uses emergence analysis in order to describe the beginning in the process of the acquisition of a specific structure in oral production. First, data are collected using oral interviews with the interlocutor. In order to exclude formulae, Pienemann (1998) proposes checking of lexical/grammatical variations (for example, usage of the same morpheme with different words and the same word with different morphemes). Interpretation of the collected data depends on acquisition criteria being used. Pienemann (1998) states that accuracy criteria are arbitrary. Figure 1 shows different developmental trajectories of specific grammatical structures, i.e. different learners will use differently the same grammatical structure in an obligatory context. Obviously, three different paths have different gradients. The order of acquisition can thus be  $c > b > a$  using a 50% criterion or  $c > a > b$  using a 100% criterion. Pienemann (1998) therefore proposed the emergence criterion which is not arbitrary. The first step of the emergence analysis is distributional analysis or qualitative representation of different structures in a sample which keeps track of the frequency of tokens and determines if a specific form is mapped onto specific structure. The second step is separation of productive forms from formulae. Productivity is measured by the number of tokens and the systematic use of lexical/morphological varieties of these tokens. The third step of the emergence analysis is implicational scaling; each rule is presented in the form of a developmental stage, that is, a rule formed later implies the presence of the earlier acquired rules.

<sup>1</sup> Selinker (2014) advocates the notion of searching for universal and idiosyncratic interlanguage logical propositions, explained within a deep interlanguage semantics.

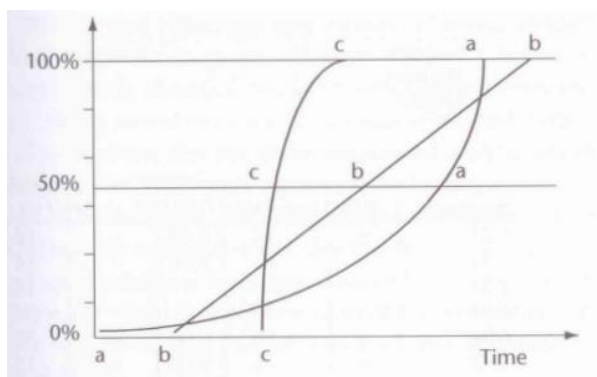


Figure 1. Accuracy and developmental trajectories. "Processability theory" by M. Pienemann and J-U. K    ler, 2012. p. 237.

The core of the PT lies in the fact that learners can produce only those forms which they can process at any given point in time, which means that they cannot be taught structures from higher developmental stages that cannot be processed by their language processor. Pienemann (1998) claims that English morphology and syntax develop in six stages presented in Table 1.

Table 1. Developmental stages for English morphology and syntax (Pienemann, 2005b, p. 24)

Stage	Processing Procedure	L2 process	Morphology	Syntax
6	Subordinate clause procedure	Main and subordinate clause		Cancel inversion
5	Sentence procedure	Inter-phrasal agreement	Subject-Verb agreement (3 <sup>rd</sup> person singular -s)	Do2nd, Aux2nd
4	Verb phrase procedure	Inter-phrasal agreement	Tense agreement	Y/N inversion, copula inversion
3	Noun phrase procedure	Phrasal information	Noun phrase agreement, Negation+Verb	Adverb fronting, Do-fronting
2	Category procedure	Lexical morphology Possessive pronouns	Plural	Canonical word order
1	Word/lemma	Noun procedure	Invariant forms	Single constituents

The elements presented in Table 1 form a hierarchy; the element of a lower stage is a prerequisite for other elements of higher stages, making it impossible for the stages to be skipped. Although the acquisition path can be predicted in advance, as it includes developmental stages, there is a variable dimension which accounts for the individual differences between two different developmental trajectories presented in Figure 2. Two different developmental trajectories are based on developmental stages (marked with the dotted horizontal lines), while the differences are observable in different interlanguage varieties which are developed at each stage (marked with vertical lines in Figure 2). It is important to note that for every process of learning there is a limited number of variable solutions. During second language development, the learner accumulates grammatical rules and their variations which help him/her to develop his/her own developmental path while at the same time adhering to the general developmental order. In that way, two-dimensional space for the formation of a certain hypothesis is defined within the PT. Both dimensions of this space are constrained by the processing hierarchy which can be applied to any other language.

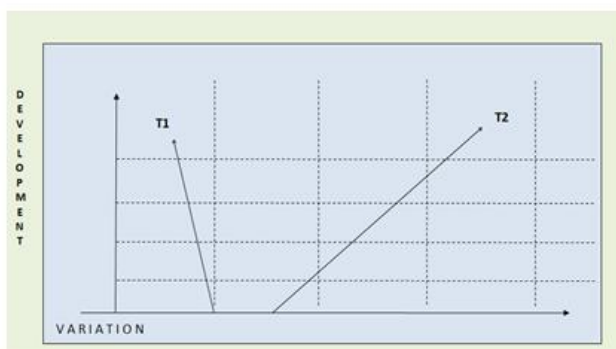


Figure 2. Two different developmental trajectories. "Processability theory" by M. Pienemann and J-U. Keßler, 2012. p. 230.

According to the PT, all the variable solutions used by the learner are located within language processing, which means that the PT contains two dimensions: development of processing capacity and individual variations chosen by the learner as a solution for each stage. Those dimensions are shown in Figure 3.

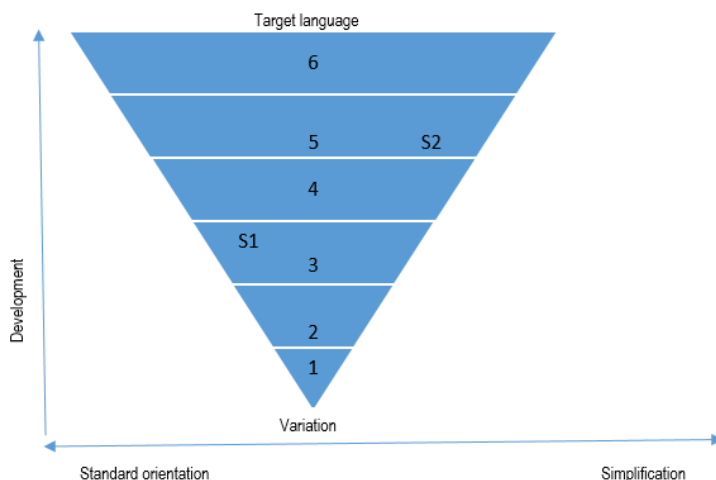


Figure 3. Hypothesis Space. "Studying Processability theory: An introductory textbook" by M. Pienemann and J-U Keßler, 2011, p. 38.

Figure 3 shows development stages vertically and variable solutions horizontally. S1 and S2 in the Figure represent the learner's possible grammars. The variation shows simplifications of solutions on the right and the standard oriented solutions on the left. Considering that Hypothesis Space enables a unique, individual developmental path determined by the chosen solutions that the learner finds in each stage within the entire system, it is possible to show the dynamics of interlanguage grammars and its development (Pienemann, 2005b). Variable solutions chosen by the learner at each level of development have an effect on a later development, considering that the learner's choices accumulate along with the development of the learner's interlanguage. According to Pienemann (1998) learner's interlanguage stabilizes if the learner makes a large number of bad choices. Also, it is not simple for second language learners to make the shift from simplification to using standard orientation and vice versa.

Pienemann (1998) also states that despite the permanent hierarchy of processing, the learners will develop their own interlanguage; he also explains that the variations between learners and different final outcomes are due to differences in their development dynamics. The generative entrenchment model<sup>1</sup> influenced the construction of development dynamics in the PT. Pienemann (1998) understands development as a process in which the development of more complex structures happens gradually, beginning with the lowest number of structural properties, to which other properties are added through development (Figure 4). The key explanation of this model resides in the fact that structural choices in the development path need not repeat every time the structure changes. Initial structural patterns spread in the development system and form the final structure. However, when a certain development path is chosen, it is very difficult to change its direction.

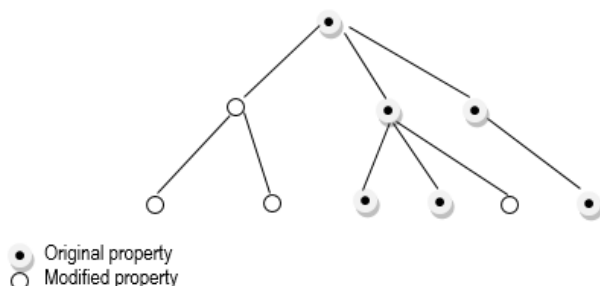


Figure 4. Generative entrenchment. "Language processing and second language development: Processability theory. Studies in Bilingualism" by M. Pienemann, 1998, p. 317.

Pienemann and Kefßler (2012) point out the following important factors in their explanation of the Processability Theory:

- a) Second language development progresses according to universal stages which are limited by the language processing hierarchy.
- b) Variability of interlanguage is limited and regular, and the limitations and regularities happen according to the language processing hierarchy.
- c) Transfer from the first language is limited by the ability to process a certain structure, that is, the forms from the first language can be transferred to the second language only when those forms can be processed within the system of the second language that is being developed.
- d) Differences in tasks are limited by the language processing hierarchy. This assertion results in the Steadiness Hypothesis<sup>2</sup> which claims that a certain interlanguage structure will be placed on the same developmental stage within different tasks as long as they relate to the same language processing ability level within language production.
- e) Acquisition of both the first and second language is limited by the language processing hierarchy. However, both forms of acquisition may be related to different development paths.
- f) Bilingual language development can be universally compared for different languages using the language processing hierarchy described in the PT.

<sup>1</sup> The stated model comes from biology and philosophy and it was formed by Wimsatt (1986, 1991 in Pienemann, 1998) with its application to embryonic development of animals. Pienemann (1998) took it from biology and applied it to the development of language. The same way that the early development of an embryo is very important, early decisions in acquiring language are equally important, considering that they influence final development. It is very difficult, almost impossible, to change the development path after a decision has been made.

<sup>2</sup> To confirm the predictions stated in the Steadiness Hypothesis, Pienemann (1998) tested the interlanguage of six subjects by using the emergence criterion in morphology and syntax. All interlanguage patterns displayed perfect consistency for syntax, while the consistency of 99.1% was proven for morphology. Consistency is very important because of the testing for levels of processing and variability within grammatical principles. If the grammatical settings were to change depending on the situation, it would be impossible to test the predictions set out in PT.

These statements are based on the language processing hierarchy, which is based on the universal system of processing tools that can be explained using lexical functional grammar and Hypothesis Space, which is based on the assertion that the structures which can be processed are limited on any level by the available processing tools.

The limitations of Hypothesis Space imposed by the PT concern the age differences in the process of second language acquisition. The basic question is what causes those differences, and if they are caused by two different acquisition processes, what is the true nature of those processes. Pieneman (1998) considers that Clahsen's (1985 in Pienemann, 1998) proposal is the most useful, which assumes that children have access to universal grammar and second language learners do not. According to Clahsen, the latter group uses language processing strategies instead of universal grammar.

Pienemann (1998) considers that grammar coding architecture must be constructed equally by children as well as second language learners, although he points out that there is a different development path for the acquisition of the first and the second language. There is no reason to believe that different language processing procedures are used by children and by second language learners. However, the claim that the PT can explain the direction of language acquisition in children and adults leaves many unanswered questions, primarily the following:

- 1) What is the basis for creating hypotheses in the first and the second language?
- 2) Which mechanisms affect the development of structures in the student's language?

These questions can be related to the point of view held by Clahsen and Meisel (1991, in Pienemann, 1998), which says that first language learners create more effective hypotheses than second language students and are more successful in controlling them.

The following Tables (2 and 3) provide the complete overview of interlanguage research based on Processability Theory.

*Table 2.* Overview of the interlanguage researches based on Processability Theory from 1996 to 2004 (according to Pienemann, 2005b:61-65)

Researcher/Year	Language	Structure	Results
Fetter (1996)	English	Morphosyntax	Does not confirm PT as there are a lot of patterns missing in the implicational scaling
Pienemann & Hakansson (1999)	Swedish	Morphosyntax	Confirmation of PT
Bartning (2000)	French	Morphology and syntax	Morphology is more systematic and develops in a predictable way, unlike syntax
Mansouri (2000, in Pienemann, 2005b)	Arabic	Morphology and syntax	Confirmation of PT
Devaele & Veronique (2001)	French	French adjectives in gender assignment	PT is not suitable for this kind of research
Glahn et al (2001)	Scandinavian languages	Morphology Syntax	Confirmation of PT
Hakansson, Salameh & Nettelblatt (2003)	Swedish and French acquisition in bilingual children	Morphology	Confirmation of PT
Di Biase & Kawaguchi (2002)	Japanese Italian	Morphosyntax	Confirmation of PT
Iwasaki (2003, in Pienemann, 2005b)	Japanese	Morphosyntax	Confirmation of PT

Gao (2004, in Pienemann, 2005b)	Mandarin	Key grammatical morphemes	Confirmation of PT; Firm empirical evidence against transfer in initial stages of acquisition
Harada (2004, in Pienemann, 2005b)	English	Acquisition of modality	In the early stages of learning, only lexical modality appears, whereas the appearance of modal verbs is in accordance with the appearance of a verb phrase
Ozdemir (2004, in Pienemann, 2005b)	Turkish, German and English acquisition in trilingual children	/	Confirmation of PT
Taylor (2004, in Pienemann, 2005b)	Spanish	Sentence structure	Confirmation of PT

Table 2 shows that recent research confirmed the PT; in other words, certain structures appear in the predicted order. The research of agreement in French adjectives focusing on levels of accuracy in grammatical gender is the exception, because according to lexical-functional grammar, the grammatical gender is a lexical feature and must be acquired individually for each lexical item, therefore, the ability to transfer grammatical information at the PT level can only be tested if the grammatical gender is determined for each unit in the learner's lexicon. Fetter's (1996) research also does not confirm the PT, because it concludes that implicational scaling lacks certain patterns.

Table 3. The latest interlanguage researches based on Processability Theory

Researcher/Year	Language	Structure	Results
Kawaguchi (2005)	Japanese	Syntax	Confirmation of PT
Mansouri (2005)	Arabic	Morphology and syntax	Confirmation of PT
Zhang (2005)	Chinese	5 grammatical morphemes	Morphemes are acquired in a predicted order proposed by PT
Mansouri & Duffy (2005)	English	Syntax	Confirmation of PT - research of syntax in English as the second language shows that learners exposed to instruction in accordance with the developmental order predicted in PT produce the target language structures with a higher grammatical accuracy than those exposed to the reversed order
Dao (2007, in Charters, Dao & Jansen)	English	Inflections in lexical and phrasal contexts	As opposed to PT, inflexions emerge in phrasal contexts prior to inflexions in lexical contexts
Hakansson & Norrby (2007, in Hakansson, 2013)	Swedish	Written and oral production	Confirmation of PT
Philipsson (2007)	Swedish	Questions and verb morphology	Grammaticality judgement tests show that the structures testing declarative knowledge, unlike procedural, are not acquired according to the predictions of PT
Ellis (2008)	English	Grammatical structures	Grammaticality judgement tests show that the structures testing declarative knowledge, unlike procedural, are not acquired according to the predictions of PT
Jansen (2008)	German	Cross-sectional study of the German word order	Confirmation of PT
Rahkonen & Hakansson (2008,	Swedish	Lexical morphology, Phrasal morphology,	The structures emerge according to the predicted order; lexical and phrasal morphology emerge first, followed by

in Hakansson, 2013)		Inter-phrasal morphology, Inversion in main clauses, Cancel inversion in subordinate clauses, Pre-verbal negation in subordinate clauses	the word order in subordinate clause
Sakai (2008)	English	Questions, word order, negation	Confirmation of PT
Alhawary (2009, as cited in Bonilla, 2012)	Arabic	Morphosyntax	L2 learners of Arabic with L1 English and French learning Arabic as a foreign language in their home countries did not show simultaneous emergence of stage 4 (gender and verb agreement)
Heinonen (2009) Researcher/Year	Swedish Language	Morphosyntax Structure	Confirmation of PT Results
Dyson (2009)	English	Morphology and syntax	The study found the acquisition of structures both predicted and not predicted by PT (acquisition of morphology, and syntax varies with learner orientation)
Medojević (2009)	Serbian	Morphology and syntax	Confirmation of PT
Dyson (2011)	English	Morphology and syntax	Confirmation of PT
Hakansson & Norrby (2010)	Swedish	Grammar, pragmatics, lexicon	Confirmation of PT
Schönström (2010, in Hakansson, 2013)	Swedish	Written production of deaf learners; Lexical, phrasal and inter-phrasal structures	Confirmation of PT
Zhang & Widyastuti (2010)	English	Morphology	Confirmation of PT
Baten (2011)	German	German case system	Confirmation of PT
Charters, Dao & Jansen (2011)	English	Plural marking	The study shows certain flaws of PT, as it is based on implicit assumptions which cannot be applied to some other first or second languages and, therefore, lead to wrong predictions; transfer from the first language is in accordance with the developmentally moderated transfer <sup>1</sup> explained in the PT
Itani-Adams (2011, in Pienemann and Keßler, 2011)	Japanese; English	Morphology and syntax	Both languages developed in a predicted order proposed by PT, but not simultaneously; both languages had their own, individual path
Spinner (2011)	English	Morphosyntax in productive tasks	Implicational scaling based on the <i>Rapid Profile</i> software showed that structures are acquired according to predictions presented in PT
Doman (2012)	English	Syntax (relative clauses)	Confirmation of Pienemann's Teachability Hypothesis
Bonilla (2012)	Spanish	Morphology and syntax	Confirmation of PT; The results question the main claim of the Teachability Hypothesis that instruction only focused on the next stage can accelerate the natural acquisition process – the

<sup>1</sup> Pienemann (2005b) states that transfer from the first language is developmentally moderated, meaning that it will occur when the structure to be transferred is processable within the developing system of the second language.

Bonilla (2014)	Spanish	Morphology and syntax	results showed that learners were able to acquire not only the next stage, but the following stage too Confirmation of PT
Tang & Zhang (2015)	English	Written and oral production	Confirmation of PT; learners are more successful in written than in oral testing
Researcher/Year	Language	Structure	Results
Zhang & Lantolf (2015)	Chinese	Topicalization in the Chinese language	It is possible to artificially construct a developmental route different from the one predicted by natural developmental sequences

Table 3 shows that most of the structures are acquired according to the schedule predicted by the PT, aside from the tests where the criteria are implicit<sup>1</sup> (procedural) and explicit<sup>2</sup> (declarative) knowledge (Philipsson, 2007; Ellis, 2008). The tests that measured implicit knowledge showed in both cases that the structures are acquired according to implicational scaling elaborated in the PT, while the grammatical assessment tests that measured explicit knowledge showed that acquisition does not take place according to the predicted schedule. Research done by Dao (2007) also does not confirm the PT because contrary to the PT, inflections emerge first in phrasal and then in lexical contexts. Dyson's (2009) research partly disproves the PT, considering that stages 3 and 4 developed before morphology in syntax. Dyson uses the fact that the properties of universal grammar encourage syntactic development in stages, which is interacting with the morphological properties proposed in the PT, to explain this. The application of the PT to the Arabic language did not answer the question why students acquire different structures at a different pace if the structures can be processed (Alhawary 2009, in Bonilla, 2012). Research by Charters, Dao, and Jansen (2011) confirms the PT in the part concerning transfer from the first language, which develops according to the developmentally moderated transfer hypothesis, but it also shows certain deficiencies in the PT, considering that it is based on implicit assumptions which may not be valid for some first or second languages and because of that they result in incorrect predictions. It is interesting that Medojević (2009) worked on the application of the PT on the Serbian language, which is actually the first time it was applied on any Slavic language. She applied the stated theory by testing three teenagers who live in Australia and speak Serbian at home. Her research confirmed the PT. Therefore, the stated theory can also be applied to the Serbian Language.

As is evident from tables 2 and 3 it is possible to predict the second language path by applying PT not only to English, but to other languages too.

## Conclusion

By investigating developmental patterns, one can get a closer insight into the development of the learner's interlanguage. Since developmental stages can be predicted in advance, a conclusion that interlanguage develops in a regular, predictable way can be drawn. However, it is important to describe and determine developmental stages in advance in order to adjust teaching to the learner's present developmental stage. It is therefore important to introduce the teachers to the notion of interlanguage and developmental stages in order to observe the factors that hinder or facilitate their learner's progress applying an individualized approach to each learner while at the same time observing the changes in the learner's interlanguage on his/her way of mastering the second language. Observing the developmental path of the student's interlanguage removes thus the focus from describing and counting errors and makes us understand that errors are to be

<sup>1</sup> Ellis (2008) defines implicit knowledge as intuitive, procedural, systematic, receptive to changes, automatic, and therefore available for fluid, unplanned use of language. It is not receptive to verbalization. It is considered that it can be learned only until the critical period (puberty).

<sup>2</sup> According to Ellis (2008) explicit knowledge is conscious, declarative, irregular, and inconsistent, and it can only be accessed through controlled processing and planned use of language. It can be verbalised and in that case it includes technical metalanguage. It can be learned at any age.

expected in the development of the learner's second language and that they are, in fact, indicators of progress, so interlanguage should be viewed as the linguistic potential that needs to be additionally explored and utilised in the future.

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