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Message from the Editor-in-Chief

I am very pleased to publish second issue in 2012. As an editor of International Online Journal of Primary Education (IOJPE), this issue is the success of the reviewers, editorial board and the researchers. In this respect, I would like to thank to all reviewers, researchers and the editorial board. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to International Online Journal of Primary Education (IOJPE), For any suggestions and comments on IOJPE, please do not hesitate to send mail.

Prof. Dr. Teoman Kesercioğlu
Editor-in-Chief

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THE SOCIAL IMPACT OF TECHNOLOGY IN HUMAN LIFE: THE AWARENESS OF PRE-SERVICE TEACHERS

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ABSTRACT
The research aims to explore the impact of communication and information technology to the society structure and the human life regarding the perceptions and awareness of pre-service teachers. The human behaviours and features are changing in 21. Century and the adaptation become significant. Integrating technology to the human life provided advantages and disadvantages to our lives besides changing human behaviour. Although technology provided credible reflection to personal and professional effectiveness, it also reveals the health and safety problems to the human life. This research concentrated on qualitative research design and case study approach was employed to examine the perceptions and awareness of pre-service teachers in relation to research focus. In this respect, self-report was the data collection technique to explore human features and the social impact of technology (health, safety, personal and professional effectiveness, usability in education process). Regarding the content analysis of the findings as they were revealed from self-reports, pre-service teachers experienced and they are aware of the impact of technology to their lives with its advantages and disadvantages.
Keywords: case study, education, professional effectiveness, technology, social impact

INTRODUCTION

In the information society, an attempt to be technology-centric, technology adoption makes individual, social context, situated activities, and contextual resources in order to measure the information society within social theories. As exploring social theory as a framework for social and cultural measurements of the information society, information is referred to as "digital divide" and "information and communication technology (ICT)" (Qureshi, 2006).

There is a social exclusion, that how information and communication technology empowers socio-economic as opposed to technological processes, learning, cultural change, institutional reorganization, the use of ICT to respond to user needs and develop applications, transferring of experiences and best practice, public/private partnerships and regional partnerships, movement from a technical, technology-centered perspective to an applications- and users- oriented perspective, to support demand and the needs of users, pilot applications and supporting local initiatives and innovations, the integration of policy initiatives on the information system (Pruulmann-Vengerfeldt, 2006; Stephanidis, Salvendy, 1998).

Hence, information and communication technology has great impact on the information society, there are barriers in ICT which are availability, accessibility; affordability, awareness, appropriateness (Phipps, 2000). Technological revolutions shape information society by considering health and safety problems, personal and professional development and usability in education as the social impact of the technology and information, communication technology. Changes become apparent in information society through these aspects (Güneş, 2009).

The research study examines to reveal impacts of information technology on health, safety, psychological, physical, personal, and professional development and the usability in education. In this respect, features of people in information society are aimed to be examined in the research study. Therefore, following research questions are set to find out the impacts of information technology on health, safety, psychological, physical, personal, and professional development, and usability in education:

1. To what extend do pre service teachers have awareness on the features of human being in information society?
2. How do information technologies affect health and safety?
3. How do information technologies affect professional and personal development?
4. What is the role of technology in education?

2. METHODOLOGY

The research encompassed two steps that are training about the subject matter knowledge in relation to research focus and the data gathering process through self-reports in order to explore the impact of communication and information technology to human features and social lives in terms of health, safety, personal and professional development and usability in education and learning process.

In terms of training part of the research, 26 pre-service teachers were well informed and trained how technology effect human behaviours and features, also how technology effect health, safety, personal and professional development with its usability in education aspects. Therefore, this part of the research which took forty minutes presentation by instructor and twenty minutes discussion provided a ground for credible data gathering process. In other words, it is the milestone of this research for further steps.

The second part of the research covered data gathering and analysis process. Self-report which consisted of self-evaluation and reflection of 26 pre-service teachers about the human features in 21. century and social impact of technology in terms of health, safety, personal and professional effectiveness, usability in education was collected and analysed.

2.1. Research Design and Approach

This research is based on qualitative research design that meanings, perceptions and awareness of the prospective teachers have potential impact to retrieval the qualitative findings within an inductive process (Denzin, Lincoln, 2003).

As this research represents the qualitative inquiry tacked to thick descriptions of the participants, case study approach was chosen as an appropriate research approach to explore in-depth description of the particular case in relation to research focus and questions (Creswell, 2003). Although the research relies on a single case study, the in-depth exploration of the research bonds based on research questions provided overcoming the limitations of conducting a single case study approach.

2.2. Context and Participants

The 26 volunteer pre-service teachers who enrolled instructional technology and material development course in classroom teacher education programme became part of this research and reflected their experiences and perceptions through their self-report. Before requesting their self-report of the participants, the pre-service teachers became informed about features of human being in 21. century and dimensions of social impact of computer information technologies in our lives. In other words, orientation and the training were delivered to the pre-service teachers by the course instructor. In this respect, pre-service teachers became confident on subject and the research focus which this increased

the voluntarism to be part of the research process. Volunteer participation provided a ground for confidentiality and trustworthy within the process.

2.3. Data Collection and Analysis

The self report was the data collection technique in this research to explore the perceptions and the awareness of the pre-service teachers about the features of human being in 21. century and the impact of technology to the dimensions of social impacts which are health, safety, personal and professional development, usability in education as a result of information and communication technologies.

As self-report is well reflected document and formed by specific questions in relation to focus (Denzin, Lincoln, 2003), these included three broad categories for this research which are: a. Contributions of technology to the human life b. The self- evaluation on how technology affects features of human being c. The evaluation on how technology affects health, safety, personal and professional development, education as social impacts according to the result of information and communication technology. Before collecting self-reports which encapsulated their experiences and perceptions, pre-service teachers expressed that they were confident on the features of human being in 21. century and the effect of information technologies to the social aspects such as health, safety, personal and professional development, usability in education as a result of training in relation to subject matter knowledge.

Then, self-reports revealed how technology effects pre-service teachers' features in respect to internalizing being human in 21. century and experiencing health, safety problems, personal and professional developments, usability of technology in education regarding the impact of information and communication technology and its reflection to their lives. The in-depth qualitative data were gathered from self-reports and analyzed through thematic analysis according to three broad categories as mentioned above. Significantly, themes captured how pre-service teachers perceived their features as a result of information technology and its impact to their lives. Additionally, themes were formed based on the social dimensions which are health, safety, personal and professional development, usability in education as a result of communication and information technology. Therefore, themes were selected, coded and interpreted based on research questions of this research (Yıldırım, Şimsek, 2005).

3. FINDINGS

The qualitative data from self-reports within inductive process reflected credible findings regarding the impact of communication and information technology to human features and human life in terms of health, safety, personal and professional development, usability in education practices based on the experiences and perceptions of pre-service teachers (Veach, 2009). Being pre-service teachers in the information society and the social impact of technology in the information society were exhibited in respect to experiences of the participants. The research findings demonstrated that almost all pre-service teachers have awareness about the impact of technology to their changing features and their social life. Significantly, pre-service teachers reflected that in general communication and information technology develops their personal and professional effectiveness which it is significant to transfer abilities to the workplace. In addition, they reported that technology become crucial for their learning process and useful for their educational practices while studying their programme and undertaking instructional technology and material development course. However, pre-service teachers remarked that using technology effect health and safety issues. Significantly, they were no confident with sharing ideas and experiences within online platform and also, they believe physical and physiological problems arise as a result of using technology (Hinchliffe, 2004).

3.1. Being a Pre-Service Teacher in Information Society

Being a human and being a prospective teacher who will feed the generation of the society in information society is crucial and at the same time difficult. With the development of information and communication technologies, there is dramatically shift on the changes of human behaviours and features that technology reveals. In respect to 21. century revolution in every aspects of human life, features of the human being have been changed and more attention is drawn to being open to change and development, renewaling knowledge and ability, producing new knowledge and reaching out knowledge, having intellectual flexibility for social and technical problems, involving self-learning and development, being information literate, being computer and internet literate. As these human features listed, those who capture and internalize these features can become adaptable and successful in their life within information society (Earp, 2009). The self-report of 26 pre-service teachers exhibited variety responses and self-evaluations concerning the being human and pre-service teachers in information society. In addition, experiences and perceptions of prospective teachers highlighted how technology and living in information society reshape their self awareness and evaluation. Although almost all pre-service teachers considered technology as essential part of their life, they respond in a different way for their changing features in their self-evaluation through self-reports. Furthermore, almost all of them agreed that being capable to using technology is significant step for their professional practice and being aware of human features in information society is remarkable issue for the success in personal and professional life within the information society. Significantly as a being pre-service teacher and being a teacher, adaptation to the information society with all listed features is inevitable.

Considering the being open to change and development as one of the human feature in information society, almost all pre-service teachers evaluated themselves that they have difficulty to do this. In this respect, some of them (N=9) reflected that they are open to change and development. As renewaling knowledge and ability is the prerequisite feature of the human being in information society, it is also significant for the prospective teachers to internalize and transfer this feature to their personal and professional life. In respect to this, some of the pre-service teachers (N=11) reported in their self-evaluations that they are aware of renewaling knowledge and ability. At the same time, they have ability to renewal knowledge and ability. However, the almost all pre-service teachers (N=15) indicated difficulty to cope with renewaling knowledge and ability in their field and life.

Almost all pre-service teachers (N=23) remarked that technology provides a ground for reaching out knowledge and information immediately. However, some of them (N=3) considered that they are not confident to produce knowledge. Furthermore, Almost all pre-service teachers (N=24) through their self-report exhibited that they have no intellectual flexibility to solve social and technical problems within information society and they need further professional trainings to internalize intellectual flexibility ability. In here, it can be underlined that there is a question mark for the education system effectiveness and the enrolled programme and courses in respect to how teaching and learning process posses the ability of intellectual flexibility.

The motivation to learning is another important feature of the human in information society. The human being should look for possible learning environment to feed their subject knowledge and enrich professional experiences. In this respect, almost all pre-service teachers (N=25) highlighted that they have intrinsic motivation to learn beside the instructed learning process. Significantly, almost all pre-service teachers (N=23) paid attention that they are not aware of being information literate however they thought that they are computer and internet literate because of the impact of technology to their life.

Regarding the experiences and perceptions of the pre-service teachers, it is fundamental to internalize features of human being in information society and look for the possible solutions to enrich the abilities in order to transform and reflect these features in their future professional practice (Mackey,

Jacobson, 2005). Almost all pre-service teachers agreed that training session is the milestone to be aware of human being features in information society and it helps them think and evaluate their current abilities and subject matter knowledge to become better for further. However, some of the students (N=3) underlined that coping with those features with a self effort is not enough to be effective in the life, therefore they argued the lack of practice within the programme and courses as one of the expectation from the course and the instructor (Floridi, 2009, May, 2000).

3.2. Social Impacts of Technology in Information Society

Regarding how technology affect social life of the human being in terms of health, safety, personal and professional development and education aspects, 20 pre-service teachers highlighted that technology reveals health and safety problems as disadvantages. In addition, pre-service teachers reflected parity that technology promotes personal and professional development. Parallel to the development in personal and professional effectiveness, they proposed that technology is the fundamental part of the learning and teaching process in education practices. In this respect, research findings encompassed the impact of technology to the health, safety, personal and professional development, usability in education practices as the social impacts to the human life. Therefore, the following findings and discussion highlighted the experiences and perceptions of the pre-service teachers in four broad aspects: firstly, the impact of technology to the health (physical and psychological problems), then the impact of technology to the safety management (being confident in online technology and reflect ethical understanding), moreover the impact of technology to the personal and professional development, lastly the role of technology in education.

In respect to health problems which are the one of the social impact of the technology in human life, almost all pre-service teachers agreed that technology naturally posses physical and psychological problems. Significantly for the psychological problems, in particular, ST3 highlighted, “I feel isolated and alone while using technology”. In addition, ST12 underlined, “technology eliminates socialisation and communication link between individuals. Furthermore, ST20 stated, “technology causes dependency and directs our life”. Further to these, ST23 remarked, “technology affects human inspiration negatively”.

Additionally, physical problems are the part of the health issue in terms of social impact of the technology to human life. In this respect, ST6 stated, “using computer and internet in a long hours affect my body posture negatively”. Further to this, ST14 remarked, “engaging with technology long time period cause bonds pains”. Almost all pre-service teachers have awareness of that technology affect the health of human being in physical and psychological aspects.

Feeling in a safe and controlling safety is the crucial part of the safety management. All human being needs to feel confident and concern ethical understanding and behaviours in their lives. Integrating ICT to the human life causes ethical and safety problems as it is resulted in unexpected human behaviours. Regarding the experiences and perceptions of the pre-service teachers, almost all pre-service teachers agreed that technology may cause ethical and safety problems. However, they were not well informed about what safety management and ethical understanding is as limited responses revealed from their self-report of pre-service teachers.

Regarding the impact of technology to personal and professional development, pre-service teachers reflected parity and highlighted concrete examples from their experiences that technology has contributions to their personal and professional effectiveness. In terms of personal development and effectiveness, almost all pre-service teachers (N=23) reflected that engaging with ICT provides communication, negotiation, team work abilities especially in online platform. In addition, ICT promotes presentation and critical understanding abilities to become efficient in daily life. Pre-service teachers highlighted that ICT is the supplementary part of the human life which it could not be life itself.

Further to this, pre-service teachers agreed that ICT is the fundamental part of the professional effectiveness as well. Within a framework of professional development and effectiveness, pre-service teachers reported that ICT integrated classrooms enhance the teaching practice. In particular, practicing professionalism in teacher education field based on micro-teaching, they underlined that they internalized how technology support s their development on the road of the professionalism. Significantly, ST2 remarked, "using power point and ohp in micro teaching helped me deliver the course effectively". Further to this, ST12 highlighted, "using ICT in our teaching practice help us internalize how technology is significant in teaching". However, some of the pre-service teachers (N=3) reflected that technology is not effective for personal and professional developments.

Regarding the role of technology in education practices, almost all pre-service teachers (N=23) are aware of the importance and the impact of technology to learning and teaching process. Almost all of them reported that teaching and learning processes can be enriched by technology within the scope of instructional technology and material development spectrum. The pre-service teachers highlighted the role of technology in education practices in many ways:

"Technology fosters learning"
"Technology supports the instruction and teaching process"
"It has the facilitation role for the teaching"
"It provides exchange of ideas and knowledge"
"It fosters communication and collaboration"
"It supports concrete learning experiences and environment"
"Technology enhances meaningful learning and experiences"

Therefore, information technology and living in an information society also affect how we perceive and aware of the forthcoming issues in education and how we internalize and experience the new practices. In this respect, although each pre-service teacher has various experiences in information society, they almost agreed that technology could not be separate from human life with its all advantages and disadvantages (Floridi, 2009).

4. DISCUSSION AND CONCLUSION

Innovations of communication and information technology provide potential benefits on the practices of education and societal structure. The dynamic and interactive aspects of quality in education refer quality education. This is characterized by increased customer satisfaction through continuous improvement in which all employees and students actively participate. The continuous improvement by the dynamic and interactive aspects of quality in education relies on facilitating communication networks (Srikanthan, Dalrymple, 2004).

As learner satisfaction based on their active participation is one of the proposed instruments to catch the quality, it is crucial to examine satisfaction in by considering communication facilitation and information technology. In this respect, technology and its impacts plays important role for the changes in the teaching, and learning experiences. Increasingly, changes in information technology and communication make the clear stance of information society in both personal and professional development (Tynjala, Hakkinen, 2005).

21. century, information society promotes basic features for human being. Being adaptable to changes, being open to development, gaining new skills and knowledge, reaching out new information and construction of knowledge, thinking social, technical events, learning by self-intrinsic, being information literacy, being computer and internet literacy are the key features of human being in the information society (Güneş, 2009).

The framework of information society relies on social theory that social and cultural aspects reveals "digital divide" and "information and communication technology". In this respect, health, safety problems, personal and professional development, usability in education within information society are underlined in the research study that information technology has great impact for shaping both human being features and behaviors, significantly the pre-service teachers experienced and have awareness of this reality (Qureshi, 2006).

Although the study provided invaluable insights as regards the impact of technology to human life and social behaviours within education practices, more than one data collection techniques and mix approach could be better to explore the perceptions and awareness of pre-service teachers from different angles and larger perspective. In addition, this research revealed how technology was perceived in personal and professional experiences as accepted part of the life and the education field.

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THE EFFECT OF MUSIC TO THE EXAM SCORES IN MUSIC SUPPORTED TESTS MADE ABOUT SPECIAL-DEFINED FUNCTIONS, TRIGONOMETRY AND COMPLEX NUMBERS

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ABSTRACT
We as educators can benefit from various factors in order to let a person go away from his concerns. We may ask ourselves to this question: Is the music, which already exists in human nature, effective in this matter? the answer to this question makes explicit the thought of many families if they are right or not : "studying while listening to music affects the performance in a negative way" in this regard, the study of "The Mozart Effect" made in 1993 in order to research the relationship between music and education is a significant step. In this sense, the maths exams of the 1st. Grade 134 students of 2010-2011 Fall Term of the Mathematics Teaching for Primary School department of Buca Faculty of Education in Izmir Dokuz Eylül University were carried out accompanied by music in different categories. In a stage of the study, the effect of the music selected by students at the Özel Tanımlı Functions, Trigonometry, Complex Numbers subjects on their exam unpoints was analysed one by one. In the other stage, the effect of gender on their exam unpoints at the Özel Tanımlı Functions, Trigonometry, Complex Numbers subjects accompanied by music was analysed one by one. The results come up with these studies are thought to shape the related studies in future about music-aided mathematics teaching.
Keywords: mathematics teaching, music-aided mathematics, music, success

INTRODUCTION

If we have a look at the process of human life since the past, we witness the establishing contact among them from the struggle for survival to facilitating the living conditions. Namely, the humans' progression towards the social life slowly with the humans' starting to produce meaningless sounds, then transferring the meaning from ear to ear orally and then agreement by using symbols and texts, requires the transfer of information to be permanent and systematic. The information transfer's being permanent and systematic can only be the product of education. So, the education needs innovations in the changing and developing world in order to satisfy the

needs such as reducing the concerns encountered during the process, achieving the effective learning, answering the individual's needs.

Today's society needs individuals who overcome the problems and can solve problems, so we see that the place and the importance of Mathematics as a discipline found boring, unpopular, and abstract (difficult, nightmare in student's language) by the students gradually increasing (Nadide Yılmaz). People are concerned about obscurity and that they cannot understand (Liebeck, 1984:245). One of the characteristic features of Mathematics' being abstract (Baki and Bell, 1997:2.34) can be shown as a reason to the concern occurred in this field. In addition, the attitude of the family may affect the students. Because, the attitudes of the parents have a role in students' success (Jacobs and Bleeker, 2004). In this regard, the attitudes and concerns towards Mathematics may affect the success in Mathematics.

So we can develop different ideas to make the mathematics staying in the process of the education more pretty and understandable. The question "Wondering that, is the music existing in human nature effective in this matter?" may come to mind. Because the music is effective in mobilizing the people without reason, mathematics on the other hand is effective in mobilizing the nature (Winkel, 2000: 5). “Music is a training tool. Education with music gaining importance in the field of education, the concepts and the practices of education with music, basically originated from music' being an effective and efficient educational tool. It is known all along that, music is a tool facilitates or strengthens learning and teaching in various fields and levels of education. Music is way and method of education. Education through music having an important role in the field of education, the concepts and the practices of education in music, basically, originated from making music's being effective and efficient way of education. It is known all along that, music is a method providing, facilitating, and reinforcing particular learning and teaching (Uçan, 1994:13).”

Looking at the studies made in the field of education with music, in the study of Mozart Effect one of the most notable researches made by Frances Rauscher in 1993, the three-dimensional thinking test is applied to 38 students studying psychology at the United States after making them listen to Maj. Re Piano Sonata (K.V.448) written for two pianos by Mozart for 10 minutes. As a result, it is determined that the group listening to Mozart gained 8-9 more points when compared with the control group.

The theoretical physicist Gordon Shaw on the other hand, argued that Mozart's music provided brain gym and said as this “we believe that complex structured music facilitates the communication among specific complex neural organizations related to high level brain activities such as mathematics and chess. In contrast, we think that music which is simple and based on repetitions can create an opposite effect." In the study on this subject, the mice are made listen to Mozart's music for a long time and it is observed that they were more successful at solving labyrinth. It is determined that the increase in learning levels of the mice has been effective for 4 hours after the music was stopped.

Background music's effect on human's mental work was investigated in Günay's (1978) Ph.D. thesis "The effect of background music on human's work". In the study, a group from primary 4th grade students was chosen, the forms including four operation activities were applied to this group for 20 days, one day with accelerator the other day with steady making background music. Achievement levels of the students were introduced in the form of a chart and it was brought out that background music affected the mental work positively.

As Yavuz (2001: 200) stated in the subject of the use of music in learning environments; "The purpose in using musical-rhythmic intelligence in learning environments is not teaching musical skills to the students. Many teachers think that their musical experience is not enough and do not want to use music as an educational tool. The music skill or education is not necessary to use it as a tool in the classes." In this regard, using the music as an educational tool, using it as a background in the classes may be a useful method in terms of its educational function. The use of this method in the field of mathematics may be useful for reduction of anxiety, the end of nightmare, and the increase of success.

The Aim of the Study

In this study, it was tried to determine which direction is the effect of gender and the music preferred on the students' marks gained from the exams applied with music and based on the subjects Special Defined Functions, Trigonometry and Complex Numbers in.

METHOD

An experimental study creates the method part of the study. Two separate sections were created to perform the study. In the first section, the achievement scores of the students participated to the study were determined by applying exams based on Special Defined Functions, Trigonometry and Complex Numbers to them with different types of background music. In the second part on the other hand, the achievement scores were determined by applying exams based on Special Defined Functions, Trigonometry and Complex Numbers to the same group without music. The exam questions belonging to the subjects Special Defined Functions, Trigonometry and Complex Numbers in the scale applied as pre-test in the practicing process answered by 13 homogeneous groups, the scores of the exams were compared as with and without music according to the music preferences and gender by analyzing with the help of SPSS statistical program.

The Population and the Sample of the Study

The research was made with 134 of the freshmen in Izmir Dokuz Eylul University, Buca Faculty of Education, and the department of Elementary Mathematics Teaching in 2010-2011 in fall semester.

Data Gethering and Analysis

The students participating the research were divided in to 13 homogeneous groups before the application. These homogeneous groups took the exams applied at a particular time period with test-parallel-test method. The validity and the reliability of the test has calculated with SPSS statistical program and the reliability coefficient was 0,83. Correlation's being close to 1.00 means that the test is highly reliable (Tarman, 2002).

FINDINGS

Table 1. The results of the students' scores from the exams based on trigonometry with and without music

Groups	The Order of Music	The Type of Music in the	The Score taken with Music	The Score taken without
GROUP 1 (21 people)	5. Nature Music %43	Nature Music	50	49
GROUP 2 (10 people)	5. Classical Music %60	Classical Music	46	51.25
GROUP 3 (7 people)	1. Sufi Music %57	Sufi Music	32	48

As shown in table 1, the first group of students' average score was (50) from the exam they took with nature music which was the fifth preference of %43 of them in trigonometry subject, their average score from the one without music was (49), only 1 point higher. The second group of students' average score was (46) from the exam they took with classical music which was the fifth preference of %60 of them, their average score from the one without music was (51,25), 5,25 points less. The third group of students' average score was (32) from the exam they took with Sufi music which was the first preference of %57 of them, their average score from the one without music was (48), 16 points less. Nature music, in trigonometry subject, did not affect significantly the scores of the students taking the exam with the music which was their fifth preference. Classical music reduced the scores of the students taking the exam with this music which was their fifth preference. Sufi music significantly reduced the scores of the students taking the exam with this music which was their first preference.

Table 2. The results of the students' scores from the exams based on Special Defined Functions with and without music

Groups	The Order of Music	The Type of Music in the Exam	The Score taken with Music	The Score taken without Music
GROUP 4 (10 people)	5. Classical Music %50	Classical Music	45	32
GROUP 5 (10 people)	1. Pop Music %40	Pop Music	20	26
GROUP 6 (10 people)	5. Classical Music %40	Classical Music	37	23
GROUP 7 (9 people)	1. Soft Rock Music %33	Soft Rock Music	15	38

As shown in table 2, the 4th group of students' average score was (45) from the exam they took with classical music which was the fifth preference of %50 of them in Special Defined Functions subject, their average score form the one without music was (32), 13 points higher. The fifth group of students' average score was (20) from the exam they took with pop music which was the first preference of %40 of them, their average score from the one without music was (26), 6 points less. The 6th group of students' average score was (37) from the exam they took with classical music which was the fifth preference of %40 of them, their average score from the one without music was (23), 14 points higher. The 7th group of students' average score was (15) from the exam they took with Soft Rock music which was the first preference of %33 of them, their average score from the one without music was (38), 23 points less. Classical music increased the scores of the students taking the exam with this music which was their fifth preference. Pop music reduced the scores of the students taking the exam with their first preference of music. Soft rock music significantly reduced the scores of the students taking the exam with their first preference of music.

Table 3. The results of the students' scores from the exams based on Complex Numbers with and without music

Groups	The Order of Music	The Type of Music in the Exam	The Score taken with Music	The Score taken without Music
GROUP 8 (11 people)	1. Sufi Music %36	Sufi Music	56	47
GROUP 9 (9 people)	1. Soft Rock Music %55	Soft Rock Music	58	62
GROUP 10 (9 people)	5. Nature Music %55	Nature Music	82	62
GROUP 11 (9 people)	5. Classical Music %33	Classical Music	49	34
GROUP 12 (10 people)	5.Nature Music %40	Nature Music	46	32
GROUP 13 (9 people)	1. Nature Music %66	Nature Music	43	32

As shown in table 3, the 8th group of students' average score was (56) from the exam they took with Sufi music which was the first preference of %36 of them in Complex Numbers subject, their average score from the one without music was (47), 9 points higher. The 9th group of students' average score was (58) from the exam they took with soft rock music which was the first preference of %55 of them, their average score from the one without music was (62), 4 points less. The 10th group of students' average score was (82) from the exam they took with nature music which was the fifth preference of %55 of them, their average score from the one without music was (62), 20 points higher. The 11th group of students' average score was (49) from the exam they took with classical music which was the fifth preference of %33 of them, their average score from the one without music was (34), 15 points higher. The 12th group of students' average score was (46) from the exam they took with nature music which was the fifth preference of %40 of them, their average score from the one without music was (32), 14 points less. The 13th group of students' average score was (43) from the exam they took with nature music which was the first preference of %66 of them, their average score from the one without music was (32), 11 points higher.

Sufi music, in Complex Numbers subject, increased the scores of the students taking the exam with the music which was their first preference. Soft Rock music reduced the scores of the students taking the exam with this music which was their first preference. Nature music significantly increased the score of the students taking the exam with this music which was their fifth preference. Nature music significantly increased the scores of the students taking the exam with this music which was their first preference. Classical music significantly increased the scores of the students taking the exam with this music which was their fifth preference.

Table 4. The results of the male female students' scores from the exams based on Trigonometry with and without music

	N	Minimum	Maximum	Mean	Std. Deviation
Female's score without music	29	,00	88	51,34	20,51
Female's score with music	29	13	87	47	18,16
Male's score without music	9	25	50	41,66	8,84
Male's score with music	9	25	63	43,11	14,33

As shown in table 4, the female students' average score was (51,34) from the exam they took without music, their average score from the one with music was (47), 4,34 points higher. In trigonometry subject, the male students' average score was (43,11) from the exam they took with music, their average score from the one without music was (41,66), 1,44 points higher. Although music reduced the female students' test scores in trigonometry subject, did not significantly affect the male students'.

Table 5. The results of the male female students' scores from the exams based on Special Defined Functions with and without music

	N	Minimum	Maximum	Mean	Std. Deviation
Female's score without music	32	,00	80	32,50	17,41
Female's score with music	32	,00	100	38,78	26,80
Male's score without music	7	,00	40	17,14	17,99
Male's score with music	7	,00	60	20,28	19,67

As shown in table 5, in Special Defined Functions subject, the female students' average scores was (38,78) from the exam they took with music, their average score from the one without music was (32,50), 6,28 points higher. In Special Defined Functions subject, the male students' average score was (20,28) from the exam they took with music, their average score from the one without music was (17,14), 3,14 points higher. Music increased both the male and female students' test scores in Special Defined Functions subject.

Table 6. The results of the male female students' scores from the exams based on Complex Numbers with and without music

	N	Minimum	Maximum	Mean	Std. Deviation
Female's score without music	45	,00	100	41,36	26,37
Female's score with music	45	,00	100	55,45	24,34
Male's score without music	12	20	100	41,81	28,91
Male's score with music	12	20	100	56,36	28,02

As shown in table 6, in Complex Numbers, the female students' average scores was (55,45) from the exam they took with music, their average score from the one without music was (41,36) 14,09 points higher. In Complex Numbers subject, the male students' average score was (56,36) from the exam they took with music, their average score from the one without was (41,81), 14,54 points higher. Music increased both the male and female students' test score in Complex Numbers with the same rate.

RESULTS AND SUGGESTIONS

RESULTS

In trigonometry subject, music reduced the test scores of the female students taking the exam with classical music which was their fifth preference and their scores from the exam with Sufi music. However, music did not affect both the test scores of the male students in trigonometry subject and the test scores of the students taking it with nature music which was their fifth preference. Music increased the test scores of the male and female students, the scores of the students taking the exam with their fifth preference classical or nature music, the scores of the students taking it with their first preference Sufi and nature music. In contrast, music reduced

the test scores of the students taking the exam with Soft Rock music which was their first preference. In Special Defined Functions subject, music increased the male and female students' test scores, the scores of the students taking the exam with their fifth preference classical music. However, music reduced the test scores of the students taking the exam with Soft rock music which was their first preference.

SUGGESTION

- ✓ We believe it provides advantages in answering the question correctly that the students whose first preference is soft Rock music should not solve problems with this music in Complex Numbers ans Special Defined Functions subjects.

- ✓ We think that the students' solving problems with nature music in trigonometry subject does not affect answering the questions correctly. However, in trigonometry subject, solving problems without Sufi and classical music may positively affect answering the question. At the same time, in trigonometry subject, the female students' solving problems without music may create advantages in answering the question correctly.

- ✓ We think that, in Complex Numbers subject, without regarding their first or fifth preference, solving problems with Sufi and classical music positively affects their answering the questions correctly.

- ✓ We believe that in special Defined Function subject, both female and male students' solving problems with music is useful for answering the questions correctly.

- ✓ We think that in Special Defined Functions subject, if the students whose first preference was pop or soft rock music solve problems with music it positively affect their answering the question correctly. However, the students' solving the problems with music which was their fifth preference creates benefits in answering the questions correctly.

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RELATIONSHIP BETWEEN INTELLIGENCE AREAS AND INTERPERSONAL PROBLEM SOLVING SKILLS ACCORDING TO MULTIPLE INTELLIGENCES THEORY

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ABSTRACT
The aim of this research is to analyse relationship between intelligence areas and problem solving skills of the students of Faculty of Education according to multiple intelligences theory of Gardner. Research sample is composed of 311 (64.3% female, 35.7% male) students who attended the Faculty of Education. Research data has been collected through "Multiple Intelligences Scale" developed by Yeşildere (2003) and "Problem Solving Inventory" developed by Heppner and Peterson (1982). It was determined that problem solving skill perception of the teacher candidates according to the gender differentiated meaningfully according to scores of mathematical, visual, kinesthetic intelligence areas. it was found that problem solving skills of the male teacher candidates are higher than the female teacher candidates. There is a negative meaningful relation among all intelligence areas and problem solving skill perception of the candidate teachers. There is a meaningful relationship in a positive aspect between problem solving skill and emotional intelligence.
Keywords: Problem solving skills,intelligence area, Faculty of Education,candidate teacher, multiple intelligence.

INTRODUCTION

What intelligent is and how to define intelligence has been an important question for many trainer. Gardner (1983) defined intelligence as "the ability to solve problems or to create products that are valued within one or more cultural settings". In arriving at his theory, Gardner combined the empirical findings of hundreds of studies from a variety of disciplines. He included psychometric and experimental psychology, and also encompasses cognitive and

developmental psychology, differential psychology, neuroscience, anthropology, and cultural studies (Gardner & Moran, 2006).

In his theory of Multiple Intelligences (MI), Gardner (1983), claims that intelligence is comprised of multiple modules or types, which are largely independent and functionally separate from each other. According to Brualdi (1998), using biological as well as cultural research, he formulated a list of seven intelligences. This new outlook on intelligence differs greatly from the traditional view which usually recognizes only two intelligences, verbal and computational. The seven intelligences Gardner defines are: linguistic intelligence; logical-mathematical intelligence; musical intelligence; bodily-kinesthetic intelligence; spatial intelligence; interpersonal intelligence; and intrapersonal intelligence. Gardner (1999, p.33-34) later defined intelligence as a "biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture". He introduced three new intelligences, although he noted that the strength of evidence for each one varies. He confirmed only one new intelligence, naturalistic intelligence, ability to recognize and classify species in the environment (Netto & Furnham, 2006). MI theory also stresses that the interaction among these intelligences is important for understanding how people's minds work (Gardner & Moran, 2006). Gardner claims that the seven intelligences very rarely operate independently. Rather, the intelligences are used concurrently and typically complement each other as individuals develop skills or solve problems (Brualdi, 1998).

Problem solving process is a complex process that requires cognitive, kinesthetic skills. By problem solving, functions such as reaching an exact aim, developing tools for reaching that aim, and while doing that overcoming obstacles have been done by individual (Ellis & Siegler, 1994). Problem solving is about individual's aims, needs, values, beliefs, skills, habits and attitudes. Problem solving is a process in which encountered problems are defeated while reaching an aim and this can be explained process of reaching solution by adding originality, creativity or imagination to this (Çam & Tümkaya, 2006). Problem solving has been learned from childhood, and problem solving skills are developed in school years (Miller & Nunn, 2003).

According to Heppner (1982) problem solving is synonymous with the concept of overcoming. Individuals who solve problem efficiently are stated that they are people who think independent and creative, who has social capability, who have self confidence and they can tolerate ambiguities (Dow & Mayer, 2004). It has been determined that people who perceive themselves capable in problem solving have more sociable, more positive self perception in interpersonal relations, and they present more suitable working methods and attitudes in academic aspects (Şahin, Şahin & Heppner, 1993). And it has been determined that those who evaluate themselves as ineffective in problem solving have more inner conflicts, extreme sensitive, depressive, and obsessive in interpersonal relations, and they presents unkind and negative behavior (Dixon, Heppner & Anderson, 1991).

The aim of this research is to analyze relationship between intelligence areas and problem solving skills of the students of Pre-school Teacher Education, Turkish Language Teaching, Guidance and Psychological Counseling, English Language Teaching departments at Education Faculty at Cyprus International University according to multiple intelligences theory of Gardner. In addition to this, whether a significant difference between intelligence areas and problem solving skills according to gender wants to determine as well.

Research Problem

What is the relationship (if so) between problem solving skill perception and intelligence areas of candidate teachers?

Sub Problems

Anwers to subquestions below are looked for through research problem.

- ✓ Is there a meaningful relationship between problem solving skill perception and intelligence areas of candidate teachers?
- ✓ Do problem solving skill perception and intelligence areas of the candidate teachers differentiate meaningfully according to gender variable?

METHOD

The research is a descriptive research towards to determine relationship between problem solving skills perception and intelligence areas of the students. Dependant variables of the research are problem solving skill perception and intelligence areas. Independent variable is gender.

Research Model

The present research used descriptive kind of general survey model with a quantitative method. Widely used descriptive approach aims to identify the condition of interest. Survey models refer to research approaches that aim to describe past or existing situation. The situation, event, individual or object related to the study is used to determine in their own terms (Karasar, 2009).

Population of the Research

Students of Education Faculty who are receiving training in the Academic Year of 2008-2009 constitute the sampling of this research. In the research, 311 students who receive training in the Faculty of Education are taken in to the research. 64.3% of the students in the sampling are female and 35.7% of them is male.

Data Collecting Instruments

“Multiple Intelligences Scale”, developed by Yeşildere (2003), whose Cronbach alpha coefficient is .93 was used in the research. In the inventory of multiple intelligence areas for academicians, between 0-7 refers to “not developed”, 8-15 refers to in the inventory of; "slightly developed", between 16-23 refers to "mid-level developed", 24-31 of the "developed" and between 32-40 "advanced" level. Also, “Problem Solving Inventory” (PSI) developed by Heppner and Peterson (1982) and adapted by Şahin, Şahin and Heppner (1993) was used. Cronbach alpha coefficient of the scale is .88. This scale is a Likert type of scale that consists of 35 items and it is scored between 1-6. Problem Solving Inventory is a self evaluation scale that measures individual’s self perception in problem solving skills. The highness of the scores, taken from the scale, shows that individuals perceive themselves inadequate.

Table : KMO and Bartlett's test of problem solving skill perception and intelligence areas

Scales	Item Number	Cronbach's Alpha	Kaiser-Meyer-Olkin KMO	Bartlett's Test of Sphericity		
				Approx. Chi-Square	df	Sig.
Multiple Intelligences Scale	80	.93	.684	10737.059	3160	.000**
Problem Solving Inventory	35	.88	.840	3659.119	496	.000**

Analysis of Data

In the research, test "t" is used in order to find if there is a difference according to sex variable on intelligence areas and problem solving skills of the students of the Faculty of Education. Relationship between intelligence areas and problem solving skills of the students are analyzed with Pearson Moment Correlation Coefficient. Importance level was taken as .05 in the research.

FINDINGS

Findings and comments about research problem and sub-problems take place in this part. The first sub-problem of the research was stated like this: "Do problem solving skill perception and intelligence areas of the candidate teachers differentiate meaningfully according to gender variable?"

Table 2: Descriptive statistics of problem solving skill perception and intelligence areas of the candidate teachers

DEPENDENT VARIABLES	GENDER	n	$\bar{x}$	SD
Problem Solving Skill	Female	200	94.590	18.059
	Male	111	90.099	18.165
Linguistic	Female	200	34.925	5.957
	Male	111	36.036	6.572
Mathematical	Female	200	34.385	5.637
	Male	111	36.009	5.786
Visual	Female	200	34.460	6.179
	Male	111	36.171	6.441
Musical	Female	200	32.560	6.510
	Male	111	33.603	5.142
Kinesthetic	Female	200	33.425	6.427
	Male	111	35.018	5.892
Interpersonal	Female	200	33.555	6.922
	Male	111	32.648	6.371
Intrapersonal	Female	200	32.875	5.835
	Male	111	32.756	6.291
Naturalistic	Female	200	34.510	5.782
	Male	111	34.774	5.311

Table 3: t value and p value of problem solving skill perception and intelligence areas of the candidate teachers

DEPENDANT VARIABLE	Levene's Test for Equality of Variance		t	SIG. (2-TAİLED)
	F	SIG.		
Problem Solving Skill	.710	.400	2.097	.037*
Linguistic	.213	.645	1.518	.130
Mathematical	.188	.665	2.411	.016*
Visual	1.577	.210	2.304	.022*
Musical	2.160	.136	1.455	.147
Kinesthetic	1.895	.170	2.156	.032*
Interpersonal	2.159	.143	1.138	.256
Intrapersonal	.041	.841	.166	.868
Naturalistic	.445	.505	.398	.691

Findings about problem solving skill perception and intelligence areas scores of the candidate teachers according to gender were determined by t-test. These findings are in Table 3. It was determined that Problem solving skill perception of the candidate teachers according to the gender differentiated meaningfully as statistical according to scores of mathematical, visual, kinesthetic intelligence areas. ($t_{\text{Problem Solving skills}}$=2.097 p<.037; $t_{\text{Mathematical intelligence}}$=2.411 p<.016; $t_{\text{visual intelligence}}$=2.304 p<.022; $t_{\text{kinesthetic intelligence}}$=2.156 p<.032).

As it is understood from the Table 3 statistical meaningful differentiation was determined among problem solving skill perception, scores of mathematical, visual, and kinesthetic intelligence areas according to the gender. It is determined that this differentiation in favor of male teacher candidates.

The second sub-problem of the research was stated like this: "Is there a meaningful relationship between problem solving skill perception and intelligence areas of candidate teachers?"

Findings about this sub-problem were determined by Pearson Moment Correlation Coefficient. As it is seen from Table 4, there is a negative meaningful relation among all intelligence areas and problem solving skill perception of the candidate teachers because higher problem solving skill perception shows negative perception, lower problem solving skill perception shows positive perception.

Table 4. Pearson correlation test results between problem solving skill perception and multiple ıntelligences areas of the candidate teachers

Dependent Variables			
Problem Solving Skill	Linguistic	Pearson Correlation	-.304(**)
		Sig. (2-tailed)	.000
		N	*311*
Problem Solving Skill	Mathematical	Pearson Correlation	-.287(**)
		Sig. (2-tailed)	.000
		N	*311*
Problem Solving Skill	Visual	Pearson Correlation	-.264(**)
		Sig. (2-tailed)	.000
		N	*311*
Problem Solving Skill	Musical	Pearson Correlation	-.179(**)
		Sig. (2-tailed)	.002
		N	*311*
Problem Solving Skill	Kinesthetic	Pearson Correlation	-.239(**)
		Sig. (2-tailed)	.000
		N	*311*
Problem Solving Skill	Interpersonal	Pearson Correlation	-.134(*)
		Sig. (2-tailed)	.018
		N	*311*
Problem Solving Skill	Intrapersonal	Pearson Correlation	-.229(**)
		Sig. (2-tailed)	.000
		N	*311*
Problem Solving Skill	Naturalistic	Pearson Correlation	-.307(**)
		Sig. (2-tailed)	.000
		N	*311*

** Correlation is significant at the .01 level (2-tailed).
* Correlation is significant at the .05 level (2-tailed).

In this situation, how much the problem solving skill perception of candidate teachers is higher, parallel to this their intelligence areas' scores increase. Generally, if it is summarized, it can be said that candidate teachers who perceive their problem solving positive can develop their all intelligence areas.

DISCUSSION AND CONCLUSION

As a result of the research, it was found that score difference in mathematical, visual, kinesthetic intelligence areas are in favor of male teacher candidates. Finding of the research in hand can be said that it is parallel to the research results that are conducted by Baran (2000), Oklan Elibol (2000), Durmaz and Özyıldırım (2005), Öztürkmen (2006), Özdemir (2006), Abacı and Baran (2007), Hoşgörür and Katrancı (2007), Taş (2007), Doğan and Alkış (2007), Serin (2008), Koray and Azar (2008), on university students, Güllü and Tekin (2009) lise öğrencilerinin and towards multiple intelligence areas are influenced by gender variable. However, it was determined that research result in hand is contradictory with the study conducted by Tümkaya and İflazoğlu (2000), Bilge and Arslan (2000) and Berkant and Ekici (2007) on teachers. Kuru (2001) noted that while accelerator effects that play a major role in the development of the intelligence have a positive contributions to the development of intelligence of individuals, blunt experiences effect intelligence development of the individuals in a negative way. Therefore, intelligence areas of students who graduated from different school types can develop differently according to education that they got. In this situation analyzing highschool types can give more clues about the reasons of this differentiation. The result that male students' mathematical and kinesthetic intelligence areas are higher than female students can derive since they graduate from science department and they do sports more than females.

Meaningful differentiation was found among score means of the problem solving skill perception according to the gender of candidate teachers (t=2.097, p<.05). According to this, it was found that problem solving skills of the male teacher candidates are higher than the female teacher candidates. Parallel to the research results, in his research conducted on university students Akbağ (2000) stated that males tend to problem-focused dealing much more. Meaningfull differences were found between problem solving skill perception and gender in the studies of Serin (2006). Similarly, Bozkurt, Serin and Erman (2004) found a meaningful difference among problem solving skill perception according to the gender in their research that was conducted on primary education teachers. The finding of this study is different from the study result of Heppner and Peterson (1982); Çam (1997); Saracaloğlu, Serin and Bozkurt (2005). Positive perception of problem solving skills of male students can derive since they have more chance of experience than female students in our society; frequency of facing negative and positive events; parents contribute their problem solving skills development. This can be interpreted as a result of developing more effective attitudes toward problems in the life process.

Similar to research result in hand, İşmen (2001) also stated in his study, called "Emotional Intelligence and Problem Solving", conducted with university students that there is a meaningful relationship in a positive aspect between problem solving skill and emotional intelligence.

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ASSESSMENT OF HEARING IMPAIRED STUDENTS' PARENTS' LIFE QUALITY

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ABSTRACT
20 women, who are 35.25±3.62 years old and have hearing impaired children, joined this study voluntarily that was done to assess life quality of hearing impaired students' parents. To assess life quality of participants, Life Quality Survey (SF-36) was used. As a result of study, it was found that emotional role, general health and dynamism scores of parents are lower than general scores and, although mental health, physical role and social function scores are higher than emotional role, general health and dynamism scores,they are lower than general scores. In parents' physical function scores, it was found a result that is close to general scores. It can be said that having a hearing impaired child effects the life quality of parents negatively.
Keywords: Hearing impairment, life quality, parent

INTRODUCTION

Hearing loss is a case that hearing sensibility can not fulfill completely its tasks in adaptation,developing, especially communication (Atay, 2007). Hear impairment means that .audio stimulus is not enough for receiving information. To regard a student as hear impaired, hear loss must effect the educational performance. Degree of hear impairment determine the physical movements they do. children they have hear impairment that can't be improved need for special interest and care. %20-30 of hear impaired children show behavior disorders. This rate is %7-10 in normal children. It is thought that this situation arises from children don't know how they behave exactly (Özer, 2001).

It is predicted that %0,6 of world population has hear Children who have hear impairment have more negative things compared to normal children in terms of motor, mental, social and emotional aspects. Among disabled people, the most problem group is children who have hear impaired (Yılmaz and Arıkan, 2008). Having a disabled child may effect the life, emotion, thoughts and behaviours of parents negatively (Küçüker, 1993). Having a disabled child creates stress and anxiety on parents in terms of future worries, health problems, not able to give enough education, spending more time compared to other children (Özşenol and Işıkhan, 2003). These kinds of cases effect parents' life qualities.Because life quality is effected by physical health, psychological situation, independent level and social relations.

METHOD

Mothers of secondary shool students, who continues their education at hear impaired people rehabilitation center in Afyonkarahisar, joined to this study voluntarily. To determine life quality, survey (SF-36) method was used. Life quality scale is a survey that has an international validity. Survey has 8 sub-dimensions. These sub-dimensions are Physical Function, Physical Role, Body Pain,

General Health, Dynamism, Social Function, Emotional Role, Mental Health. Data was calculated and assessed by SPSS 18 package programme

FINDINGS

20 women who are 35.25±3.62 years old, their Body Mass Index (BMI) is 25.46 ± 3.06 and have hear impaired children joined this study voluntarily. People's,,who joined to the study, avarage of physical function score 78.75±27.28, avarage of physical role score 51.25±46.92, avarage of body pain score 13.5± 20.07, avarage of general health score 42.50± 9.38, avarage of dynamism score 47.00 ± 8.49, avarage of social function score 50.62 ± 13.73, avarage of emotional role score 45.00 ±12.21, avarage of mental health score 50.60 ± 7.14 were found. As a result of study, it was found that emotional role, general health and dynamism scores of parents are lower than general scores and, although mental health, physical role and social function scores are higher than emotional role, general health and dynamism scores,they are lower than general scores. In parents' physical function scores, it was found a result that is close to general scores.

DISCUSSION AND CONCLUSION

Family is an institution that lives together and have relations between members. So, if a family member has a disability, this effects other family members' life (Taaniala, Syrjala, Kokkoken, & Jarvelin, 2002).

Mostly, mothers look after the disabled child. This case effects mother's business and social life. So, mother's psychological balance is effected by this case (Midence, 1994). Having a disabled child cause parents to worry about their futures. Especially, fear of "after they die, who will look after their child" increases worries(10). Mothers who have disabled children are sad because of this situation (Özşenol, Ünay, Aydın, Akın, & Gökçay, 2002). Low level of dynamism, mental health and emotional scores that take place in our study can be explained as having a disabled child, relationships with social environment and mother's worries about child's future,

No matter what the disability is, families that have disabled individuals are effected psychologically. Concretely, they have difficulties in child care and education.In families that have disabled child, changing occus in their life style and their relations with environment are effected negatively (Özşenol, Işıkhan, Ünay, Aydın, Akın, & Gökçay, 2003). Families that have a disabled child spend less time for joining entertainment environment, spending less time with social environment and travelling. Families don't want to meet because of society's view to disabled individual. This situation effects the social life of parents who have disabled child (Çavuşoğlu, 2002). Low level of the social function, physical role scores which take place in our study can be explained with reasons above. Parents of hear impaired children bear several problems that arise from having a disabled child. These problems effects the life quality of parents negatively.

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THE ROLE OF PROBLEM POSING MATERIALS IN STUDENT'S SELF-EFFICACY BELIEFS

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ABSTRACT
The aim of this study is to analyze the effect of problem posing materials on students self efficacy beliefs. The reason why we make a research on this study is really specially designed materials used during the lessons have positive effect on students' beliefs or not. One of the study to test the other two groups formed the control group used the method of experimental study. There are 20 questions in the self-efficacy test whose first category, second category, third category are respectively affirmative, cognitive and conative. First of all, pilot study was conducted with 128 students from 9th grade students to measure the validity and reliabilty of the test. Data was obtained from experimental school students and reliability of the test was measureb by using SPSS statistical program as .85. The results of the research showed that there is positive correlation between used problem posing materials and self efficacy beliefs of the students'affective, cognitive and conative domains.
Key Words: Self-efficacy, affirmative, cognitive, conative, problem posing**.**

INTRODUCTION

Self efficacy is mostly defined as the one's belief in his/her capabilities to achieve a goal or an outcome and to produce different level of performances (Bandura, 1991). Motivation, cognitive, affective and selection are the parts of self-efficacy. How people feel themselves, how they see the life and how they think toward the events is determined by self-efficacy. Self-efficacious students are motivated by themselves and at least they reach their goals. And students with low self efficacy are not motivated easily and they think that they have negative tendencies to achieve a goal (Bandura, 1995; Margolis & McCabe, 2006). Bandura (1989a) has identified factors that are likely to reduce students' feelings of positive self-efficacy:
1. Instruction that is an important reason for people to gain positive or negative self-efficacy. Teaching strategies used in the classroom can yield a difference to students' self-efficacy (Fencl & Scheel, 2005).
2. Practices is performed in competitive way has an negative effect on self-efficacy
3. Sometimes teachers or instructors categorize the students according to their abilities that make negative effect on self efficacy. Students gain self-efficacy in different situations such as while they solve questions, observing a friend who is solving questions or doing any activity, During the interaction or dialogue with the teachers and mostly the emotional directions driven by themselves.

Schunk (1989) has some approaches about doing any activity with the children regularly that is correct way of self-efficacy ,the students develop or gain many mathematical skills and verbal abilities that increases perceptions on self efficacy helping learners set specific, attainable goals;
1. During the dialogue with the students teachers approach is very important to shape self-efficacy. The behavior of the teachers may give positive or negative self-efficacy. Teachers conduct useful communications with students may change negative self-efficacy to positive direction.

2. Schunk advises that teachers should motivate the students to express their feelings in order to understand the beliefs correctly.
3. Tasks should be designed for the students to have positive usable ways that foster the cognitive processes.
4. Most preconceptions and anxieties, fears are quickly to be removed by instructors during any social interactions.

Bandura (1991) states that type of learning environment and teaching method can improve self efficacy during any educational activity in the classroom. Research was conducted by Fencl and Scheel have similar results. People's beliefs in their efficacy are developed by four main sources of influence.

- Mastery experiences,
- Observing people similar to oneself manage task demands successfully,
- Social persuasion that one has the capabilities to succeed in given activities,
- Resulting from physical and emotional conditions.

Studies show that teachers who have more self-efficacy on their teaching may easily motivate their students and empower the students' cognitive development. The teachers after that use many ways to improve and enhance the students' beliefs. On the other hand the teachers with low self-efficacy have negative effects on the development on students' self-efficacy (Woolfolk Hoy, 2004). The importance of tasks on the development of beliefs of students is another factor that if the tasks are more difficult, the students will have anxiety about achievement of the course or if the tasks are too easy, the students are bored during the lessons.

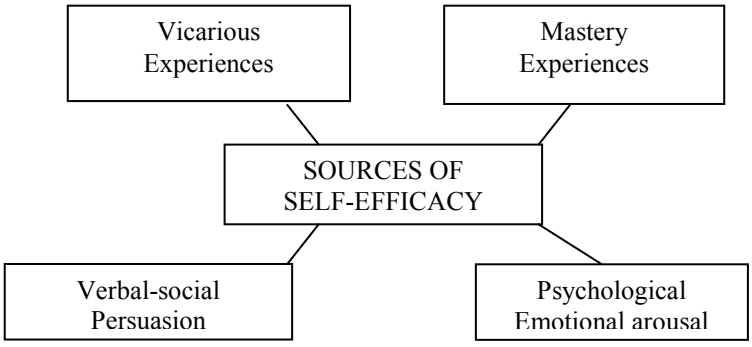

Figure 1: Sources of Self-Efficacy, (Bandura, 1997)

Mathematics self-efficacy has been considered as an important factor for students' judgments of their capabilities to solve specific math problems, perform math-related tasks, or succeed in math related courses (Betz & Hackett, 1989). Zimmerman (2000) indicates that self-efficacy beliefs are more important factor that any other factors in mathematics education. It determines achievement, attitudes and future careers of the students. Confidence of the students through the process of learning mathematics is considered as a future predictor of mathemetics performance (Hackett, 1985). Students with high self-efficacy are better on mathematics performance than on general mental ability (Pajares & Kranzler, 1995). According to studies, self efficacy beliefs especially in problem-solving are a stronger predictor of mathematics performance (Pajares & Graham, 1999). Collins (1982) found that students who have high self-efficacy on working with difficult tasks are more resistive than the students who have low self-efficacy. Pajares and Kranzler (1995) found that the influence of self-efficacy on math performance was as strong as was that of general mental ability. Across ability levels, students whose self efficacy is higher are more accurate in their mathematics computation and show greater persistence on difficult items than do students whose selfefficacy is low (Collins, 1982).

The correlation between self efficacy and motivation is high on the performance of Mathematics (Pintrich, 1999) since students with high level of SE are motivated and they achieve better than others. Results of many researches also indicate that there is a positive correlation between self efficacy beliefs and mathematical abilities and negative correlation between math anxiety and self efficacy (Fennema & Sherman, 1978). Self efficacy beliefs are also more affected by mathematics instruction. Students with low efficacy don't want to participate the math or math related lessons (Galassi, 1984). Many researchers indicate that self efficacy beliefs are one of the reasons of motivation that has a positive effect on mathematics achievement. Bandura and Schunk (1981) showed that there is a high correlation between self efficacy beliefs and school tasks performances. But According to Bandura this is not similar with the self-concept that is formed as a result of experiences or as a result of evaluation of others.

Meanwhile self concepts are general areas and more specific areas according to Shavelson (1983) model. According to result of Brahm Norwich (1987) prior task attainment could be a source of self-efficacy the research also shows that there is no significant relation between self-concept and self efficacy. This finding is similar with the Bandura' view that is self concept variables is not strongly predictive of future self efficacy.

Self-efficacy can be defined as "one's belief that he/she is able to organize and apply plans in order to achieve a certain task" Bandura (1997). Self-efficacy beliefs in problem posing have positive effect on students' mathematics performance (Pajares & Miller, 1995). National Curriculum and Evaluation Standars for School for Mathematics (NTCM, 1989) expilictly states that "students should have some experince recognizing and formulating their own problems, an activity that is the heart of doing mathematics". It also states that importance duty of the mathematics teachers are to provide opportunities for students to pose their own problems: "Students should be given opportunities to formulate problems from given situations and create new problems by modifying the conditions of a given problem". The statements indicates that problem posing in mathematics teaching and learning is nearly similar meaning of constructing knowledge by yourself that fosters self efficacy. While problem posing enriches the students'ability to pose problems, self efficacy is gained by the students at the same time. Self-efficacybeliefs that are constructed through problem posing instruction also increases mathematics achievement (Bandura & Locke, 2003). The correlation between self efficacy and motivation is high on the performance of Mathematics (Pintrich, 1999). Problem posing increases motivation and optimism (Brown & Walter, 1983). If you combine these two statements, you can say that problem posing has a positive influence on self efficacy. Moreover problem posing reduces anxiety that is a negative factor on self efficacy beliefs. Problem posing which gives students more freedom and dialogue with the teachers provides a good development for self efficacy. Kliman and Richards (1992) accepted that problem posing enlarges the inner control of the students. Inner control is an effective component of self efficacy construction.

METHOD

Research Design

For research two classes were formed one experimental class and another control class. According to data obtained before and after study experimantal research methodology is used. Pre test and post test control grouped experimantal research design is also used. In this kind of design experimental and control group exists and the method is called quasi experimental design (Gronlund, 2000). The method is aimed to compare the varibles of the study of which they are gathered by quantitively and the results can be discovered by cause effect relationship. This method can also be called as non-equivalent control grouped design. Participants of mathematical power Scale.There were (N=58) students in the study and all of them girls from Girls College. Two classes were formed from the students randomly. 28 students from 8A is experimental class and 30 students from 8B were the control group students. Participants in the case study. Participants of the study were selected among five classes according to

their last year mathematical average scores. Two classes were formed because their mathematical school documents nearly have the same value (3.83 and 3.79) out of 5.

Instruments

Mathematics efficacy scale that was adapted from Tanner and Jones (2003) includes 20 statements which were sorted into three domains such as affirmative, cognitive and conative. Affect is a student's internal belief system (Fennema, 1989). The affective domain includes students' "beliefs about themselves and their capacity to learn mathematics; their self esteem and their perceived status as learners; their beliefs about the nature of mathematical understanding; and their potential to succeed in the subject" (Tanner & Jones, 2003). Questions from 1 to 8 covers from affective domain, questions from 9 to 15 from cognitive domain and questions from 16 to 20 from conative domain. Each domain includes positive and negative questions. The cognitive domain considers students' awareness of their own mathematical knowledge: their strengths and weaknesses; their abstraction and reification of processes; and their development of links between aspects of the subject (Tanner and Jones, 2000). Cognition refers to the process of coming to know and understand; the process of storing, processing, and retrieving information. The cognitive factor describes thinking processes and the use of knowledge, such as, associating, reasoning, or evaluating. Conation refers to the act of striving, of focusing attention and energy, and purposeful actions. Conation is about staying power, and survival. The conative domain includes students' intentions and dispositions to learn, their approach to monitoring their own learning and to self-assessment. Conation includes students' dispositions to strive to learn and the strategies they employ in support of their learning. It includes their inclination to plan, monitor, and evaluate their work and their predilection to mindfulness and reflection. The reliability of the test that was found by using SPSS.16 was .89 To evaluate the reliability we use five Likert scale shown below. Before we apply the scale experimental and control groups, the test was applied to 9^{th} grades in the same school and the data was analyzed and Cronbach's Alpha was calculated as .89 Three different categories were used in the scale as affective, cognitive and conative.

Data collection

Before we construct the groups an efficacy scale was applied to both groups. The data was obtained according to points that were gathered by students. And for each domain of the scale was considered separately. For example the results of the students according to affective domain were group and divided by two equal averages and the same methods for the other domains were repeated. Our aim is to construct the groups at an equal rate before study. Moreover the points were given to the students according to their activities during the lesson. The activities were problem posing tasks that were prepared for this study. When we construct the groups, we consider the average scores of the self efficacy scale in order to equate the students.

Data analysis

Data was analyzed by following way; the points that students collected during lessons in experimental group and the self efficacy evaluation scores of the same students were the post test results. For control groups just post self–efficacy results were considered. The post test and pre test results of both groups were analyzed by SPSS.16 statistical program.

FINDINGS AND RESULTS

Table 1: The Results of Pre-Test for Control and Experimental Group

	N	Mean	Std. Deviation	Std. Error Mean
Control	58	3.0690	1.09002	.14313
Experimental	58	3.0862	.90388	.11869

At the beginning of the study both groups control and experimental shows the nearly similar averages such as control group has an average of 3.06 and experimental group has an average of 3.08. And the averages after problem posing tools used in experimental group has increased 3.9 meanwhile the average for control group is 3.2. So we can say that problem posing tools were used in experimental group has changed the self efficacy beliefs of the experimental groups study.

Table 2: Independent t-Values for Pre-Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Control	21.442	58	.000	3.06897 (this is mean not mean difference)	2.7824	3.3556
Experimental	26.003	58	.000	3.08621	2.8485	3.3239

As it was shown that the mean values of self efficacy scores of both groups were 3.06 and 3.08 before the study was started. The experimental and control groups were constructed randomly. Their mathematical marks in their school documents were nearly equal average. T value is not significant. That means there are not significant differences between students in control and experimental groups. This was before application of problem posing tools in experimental groups.

Table 3: The Results of Post Test for Both Groups

	N	Mean	Std. Deviation	Std. Error Mean
Control	58	3.2586	1.06886	.14035
Experimental	58	3.9310	.87584	.11500

Table 3 shows the mean of the self efficacy scores for 3 categories that were affective, cognitive and conative questions. The mean for experimental group after application of problem posing materials during the teaching mathematical concepts was increased from 3.23 to 3.93. That means the effect of tools designed by problem posing plays an important role on the self efficacy beliefs for the students. But the mean of control group that were taught mathematical concepts by traditional ways increased from 3.06 to 3.25. The change of mean in experimental group was 0.85 while in control group was 0.19.

Table 4: Independent t-Values for Post Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Control	23.218	57	.000	3.25862	2.9776	3.5397
Experimental	34.182	57	.000	3.93103	3.7007	4.1613

Table 4 shows that t-test is significant and there are a differences in mean scores of experimental groups students that had problem posing materials during the teaching of mathematical concepts. Post test results also indicated that self efficacy beliefs were directly related the lesson materials that were

used during mathematical lessons. The strategy of problem posing lesson designs empowered by posed mathematical tools had very effective in increase of students motivation and interest toward to mathematical lessons. Performance of experimental group students has improved from pre to post test. So Methods of tools based on problem posing techniques were very effective in order to increase students' self efficacy beliefs.

CONCLUSIONS AND RECOMMENDATIONS

The results of the study show that the self efficacy beliefs were affected mostly from the tools that were used in the activity of teaching and learning process. The number of students (n=12) answered the question "There is no capability in me to try in mathematics." was high in pretest. But when we compare the post test especially students from experimental group changed their beliefs about this question after learning the math concepts by problem posing activities that provides the students more participation and freedom to express their ideas easily. Another belief in affective domain that we compared before and after study was the question of "Some people are naturally good at mathematics." Really considerable number of students in pre test believed that mathematics can't be taught but it was inherent. Here the difficulty of the materials that were used by teachers was important. Because some teachers used to teach mathematical concepts by starting difficult tasks that were very difficult to understand for students. Because of this reason students develop such a kind of belief that mathematics cannot be learned easily but it was natural or more and more study required to understand.

Post test results indicated that the students changed this belief in experimental group after studying problem posing activities. The tools prepared as problem posing techniques foster the students cognitive domain in a way of more diverse, a flexible thinking and enhances problem solving skills. This is not only for students but also for students. This idea is similar to (Brown and Walter 1993; English, 1996) that also recommends to the teachers that teachers can prepare lesson materials based on problem posing activities which directly affect the students' understandings of mathematical concepts in the problem posed and solving process. If teachers remember their students' case, they can understand their self efficacy beliefs that were formed basically during the class. Not only to increase the students motivation or interest, was it also a way of effective teaching and learning of mathematics. Bandura (1977) believed that self efficacy beliefs were the combination of three psychological domains that were affective, cognitive and conative. Our self efficacy scale was based on this idea and how we can function three components by using problem posing tools during the mathematical lessons. That's why teachers should not avoid preparing the lesson materials that foster these three components. Flexibility fosters cognitive component and understanding the problem fosters the affective domain.

The results of the study also showed that in affective domain some negative self efficacy beliefs changed because of the effect of tools based on problem posing. The problem posing activities that profits to the students enjoyment, motivation and tendency in the area of interest. These are also components of attitude and self efficacy. In conclusion, what kind of materials which were used to change either positive or negative direction of self efficacy beliefs of the students were many important. Self efficacy beliefs in problem posing should be a part of mathematics teaching and learning. Learning the mathematical concepts to the students, according to study, was directly proportional with self efficacy beliefs that constitute motivation and enjoyment. Also the materials used in problem posing plays an important role not only in cognitive domain of the students but also affective and conative domains were also affected more. To increase the students' affective, cognitive and conative domains of the students, the teachers should increase the interest of the students to mathematics lessons especially during the lecture and problem solving periods. Because research indicated that the students had less interest to the lessons, they have low achievement and low self-efficacy. Moreover students accept that you are good at what you like and you like what you are good

at. The materials designed from teachers were very important in order to increase the motivation and interest for the students. Even if the teachers should be careful to use the first examples just after they finished the subject matter area. The real life examples mostly used in problem posing situations also have positive effects to increase the students' interest. Another thing that teachers should carefully consider that there were some students that have mathematical potential but they don't want to use it during the lessons, this point may be used in group studies if this kind of students get some responsibilities.

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THE ECCLECTIC STRUCTURE OF ART EDUCATION AND IDENTITY PROBLEM OF ARTISTIC PRODUCTION IN EASTERN SOCIETIES

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"We the periphery people live in the time of contradictions between different knowledge blocks. We have fallen into the crack between incoherent worlds which push each other and deform mutually. When adopted with conscious and without revenge this bilateralism may enrich us, improve knowledge registers, however when excluded from the critical area of the knowledge, the same bilateralism may cause discontinuation, disables the perspective and just like in a broken mirror, deforms the reality of the world and moral images." Shayegan (1991).

The art and culture of today is produced in an environment in which cultural dimensions of postmodern process, advance technology and communication era is experienced in Western societies and problems within modern art education developed depending on cultural parameters of the time and the way of thinking and practice methods are studied. However in Eastern societies which are about to complete their modernization process, this process develops within a complex structuring in which traditional cultural structure and western cultural impacts are included. Traditional cultures like us who regard modernization as westernization and therefore naturally cannot internalize; despite the costs which cause loss of memory for keep up with modern world, may have difficulty in regenerating their own identities which are to be formed for the current time. It seems that integrating tradition (east) with modern – in other words west- is complex and difficult.

In fact, as Shayegan has expressed, East and West are societies which have different structure that are hard to blend with each other yet progressive time and conditions obliged these two cultures to live within each other; these inevitable unions and experiences obligated new organization in cultural sense. Europe is struggling with these problems and in the agenda of European Community, it is tried to form cultural communication policies in which "others" within or around the community are approached more mercifully and the dose of pride towards east is decreased. Inviting art and culture activities of the community can be regarded as kind extensions of this search. Artistic and cultural activities are used as fields on which these problems are discussed in detail; therefore the agenda seems quite suitable for the environment of political, interrogate and integrating postmodern art.

When we determine the frame of general situation with these definitions, cultural and artistic environment of eastern societies which try to be modernized and at the same time have to jump into post modern environment of the current time are influenced by the rapid shifts of this historical process and ambiguous conditions. Although conditions of artistic production and education are within the extension of this ambiguity, the most successful and real layers of integration process can be formed due to fresh nature of the art.

In the field of art, the word 'eclectic' is used as a definition about architectural structure or artistic works in which different styles are used together. Philosophically it means 'selective' and means that prominent

theme and styles of various thinking systems are chosen to form a structure. There is no integrity in the in eclectic perception and fiction in the field of art, on the contrary eclectic points at a structure which has partial, incomplete style ambiguity according to classical aesthetic standards. This partial structure in fact is quite coherent with the partial thinking and articulation nature of art and thinking. At the same time, it can be used as quite ironic but real definition for the situation of eastern thinking which tries to be articulated to West.

Therefore while the word eclectic points at insufficient, incomplete structure when it is considered through modern perspective, under postmodern conditions of today eclectic structure has become an indispensable process and compulsory nature of today's artistic production and education; has gained operability as a redemptive thinking and practice method for integrating cultural communication and different structures.

Art Education:

Since the classical art education has western-oriented history in the field of plastic art, artistic culture and education has partial and eclectic structure in traditional societies. Knowledge and usage of an art history that is not lived is not chronological and consecutive.

For example, Education of Fine Arts in Turkey starts with a pattern and painting education based on mimesis-imitation aesthetics through examples of classical Greek and antique sculpture art and experts of painting art in Europe Renaissance and ends while reaching at the final trends of today's art. One of the main tasks of a fine arts student is generally to copy a Renaissance painting which is full of Mary and child Jesus from the Bible. He tries to learn the form by observing at which hand the copy of an antique Greek sculpture was done or by copying it again; through the eyes of a Western artist, learn the ways of reflecting a perspective corresponds to middle age, an image which is based on a stable perspective to the surface. In a way, the student is in the act of temporal and spatial flight and translocation fictionally; falls into fiction and perception of a spatial reality whose logical coordinates and conditions he cannot comprehend. Through target art history education and practice, European culture and art composed of five-six century is taught through selected techniques and examples.

These long time intervals show that artistic practice techniques and most importantly artistic thought and perception have changed and transformed with great differences. Mentioned structure of eclectic education inevitably is formed in order to give these methods simultaneously during education.

Then what is the method of simplifying problem that is eclectic, partial structure? One of the methods can be to separate types of art education and transform them into departments where different time and styles are specified. (A department for classical art education can be formed or school of conceptual art, school of modern design etc. there are examples of this separation in the West).

It should not be ignored in the education that the spatial interval in the education of plastic arts is related with the change of thought and sensations about reality perception of different style and practices.
I think this is a problem of predetermining theoretical values criteria of the basic time intervals within the scope of aesthetic and art philosophy in the art education of twenty-first century and it is being discussed in pioneer countries and in the West, and tried to be reformed with perspective coherent with the requirements of the era. Countries which take western art as reference in artistic production and education are parts of this structure.

Identity problem:

Globalization creates a dominant culture which has definite boundary throughout the world; this prototype acculturation disables localities which cannot establish bonds with the modern world and causes a lost cultural non-structure which is not formed in a way and does not have a belonging and brings out the problem of cultural identity. Traditional societies which try to become westernized suffer identity deformation within this strong stream. Artificial social cultural identities and imitation artistic conceptions which have indefinite belonging and origin are formed; art environment of these societies are distracted with cultural agenda determined by dominant economies.

On the process of globalization, cultural and artistic productions become standardized. In this sense, the problem of 'identity' should be evaluated in details in the artistic education and artistic production. While local and universal elements in modern art education heads towards a common discourse in the world art depending on the common ground of classical and contemporary art, the issue of identity shall be discussed.

A great part of this restructure includes globalization and results of moving from partial national identity and locality towards a common life culture. In the environment of internet culture and communication, media; in the technology era the world is like a monolithic community which breathes at the same time.
On the other hand, it must be understood that world communities are altogether in the search of common language and cultural environment as perfectly communicating and lonely person-people community created by communication technologies. While localities are about to disappear, while social structures suggested by dominant cultures are being formed; the spell is being broken just as in Babel parable or maybe these are the suffering s of creating a common language.

As an antidote to the nationalization created by the globalization and as a compensation for standardization and anomy caused by global networks; there is a rebellious regionalism which addresses to emotional belonging and local significance destroyed by the logic of globalization in Europe. This new regionalism values to the difference and variety of identities in Europe and tries to protect and sustain this variety in cultural, regional and national heritage.

(Morley and Robins, 1997: 38) insist on contributing to the unity and difference of local and regional cultures against deterritorialisation and homogenization threats of media in the name of establishing bonds between media and locality. Protection of local cultures is on the agenda of European community. Globalization processes and American culture and threat of "Americanization" are problems which the East has always been struggling and they pose a great identity crisis and problem for Europe as well. Globalization and disintegration which are named together with the effort of forming European community, Europe of culture, creates an artificial, administrative- bureaucratic internationalization in which national cultures are suppressed and protected (Morley and Robins, 1997: 68).

Harvey who thinks that history can no longer be equivalent with pedigree and imperial conquers of the West, and that the entire history of humanity is a kind of an ontological imperialism regarded from the perspective of West and Europe, defend post modernism in this context as "a range of reactions towards Europe losing its central position; living in a world which is no longer subject to European hegemony".
David Morley and Kevin Robins explains that traditionally West is put on par with modernity and East is put on par with exotic (yet less developed) history, but has fallen into depression in the new scenario, because dynamic core of the world economy has shifted towards East and especially Japan has become a problem and have threatening position for the West.

Western thinkers settle accounts with the issue of culture imperialism between West and Others and make their self-criticism. In this sense, the history of future will be written by oriental others.

RESULTS

In an artistic education which is carried out by continuous replication of artistic works and concepts, the greatest problem is the problem of identity. The dominant art history is managed and generated by western societies. Participation of eastern societies in this process is as much as the western criteria owners. Moving away from not only replication of images but also thoughts requires revealing our own identity on the lands we live, no matter how complex it is; in order to achieve this, we must first of all built the broken memory, remember the things we have forgotten during trauma and carry along past experiences, traditional rituals, local characters suitable to the conditions of current time. Cultural memory of the societies is inherited from generation to generation through science and art, collective arts and artist of today, thinker and scientist would be the people who discuss identity therapy and these problems in detail.

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