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Dear WJEIS Readers,

WJEIS appears on your screen now as Volume 2, Number 4. In this issue it publishes 26 articles. 51 authors from 10 different countries contributed this issue. These countries are Brazil, Czech Republic, Iran, Japan, North Cyprus, Pakistan, Slovakia, Turkey, USA, and Zimbabwe.

Colleagues that are in editorial board worked hard to determine the articles of this issue. There are also some articles that were presented in “World Conference on Educational and Instructional Studies” that took place between 07-09 November 2012 with the contribution of 16 countries. Articles are evaluated by the referees that are either in editorial board or outside the board. According to the evaluations, some articles that were presented in “World Conference on Educational and Instructional” will also be published in our next issue.

Although WJEIS is a new journal, it has been welcomed with interest. A lot of journals from various universities are in the evaluation process. We would like to thank cordially our colleagues who work hard in editorial board to evaluate the articles, writers who contribute to our journal and all readers.

1st November, 2012

Best regards

Prof. Dr. Zeki Kaya
Prof. Dr. Uğur Demiray
LEARNING OBJECT TO TEACH THE INTERACTION BETWEEN TWO MAGNETICS USING AUGMENTED REALITY

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Abstract
This paper presents a Learning Object for teaching the interaction of magnetic fields between the two poles of different names developed in Augmented Reality environment. In the environment created in Augmented Reality there is the simultaneous presence of real and virtual objects. In this environment are shown the magnetic fields of two magnets, demonstrating their interaction. In this Learning Object, the student can see this interaction in 3D and interact with the fields. This work was based on the theory of Meaningful Learning, which, according to Ausubel, occurs when a concept is related in a substantive way and not arbitrary concepts with pre-existing in the cognitive structure of the individual. A test with a novel question was conducted to determine if there was a Meaningful Learning. Reviews and evaluations were done to complete the work, highlighting its advantages in the learning process.

Key Words: Magnetic fields, augmented reality, meaningful learning.

INTRODUCTION

The energy matrix of Brazil is based on the electricity. This electric energy, almost in its entirety, is obtained through a process of energy conversion mechanics associated with the winds, the waterfalls, gas turbines, oil, steam, and others. The conversion of mechanical energy into electricity is only possible thanks to interaction of magnetic fields whose scientific basis is electromagnetism. The industry uses the same principles to generate electricity from the movement, which becomes the subject of great importance in the career of an electrotechnical.

In technical courses of Electricity, the process of teaching-learning of Electromagnetism is very important because the understanding of electromagnetic phenomena is scientific basis to the study of Electrical Machines that are the fundamentals of energy conversion mechanical to electrical and vice versa. So, these are fundamental concepts in the development of this professional.

The difficulties of Electromagnetism learning content focuses on the impossibility of visualization of magnetic fields by students in three dimensional space. According to Paz (2007), the difficulties of Electromagnetism
studies focus on understanding the interactions and behavior of electromagnetic variables in three dimensional space.

In this work, a learning object based on Augmented Reality environment was developed. This will provide to the student the interactivity and 3D visualization of the interaction between magnetic fields of two magnets. In this learning object the student can view the phenomena of attraction between the poles of different names and repulsion between poles of the same name. According to Guillermo et al. (2005), the simulations have emerged as objects of great learning, especially in engineering area, or even the exact sciences. This goal will serve to expand the horizon of the student, allowing interaction with the physical phenomenon under study, causing it to view objects in the virtual world that human beings do not can view in the real world. The use of mechanisms that provide the interactive manipulation of virtual models with the aid of the computer allows educational institutions to experience situations that go beyond the traditional blackboard, and also the initial experience of computer-mediated education only mechanisms of reproduction of information (Matos, 2008).

In the study of the interaction between magnetic fields the figure 1 or similar is usually presented to the student, where people can visualize two-dimensional form of the interaction between these magnetic fields.

![Figure 1: Interaction between magnetic fields (Smith, John Davis)](image)

Note that this view is very rudimentary, mainly because presents a two-dimensional visualization and magnetic fields are three dimensional. In this sense, the computer can be a great ally of the teacher. According to Costa (2004), knowledge acquires new representations, either through simulations that allow for experience virtual mode situations, whose real way often do not realize. In many of the experiments that are done with computers in schools, the computer is used only as a breeder of traditional teaching methods.

With this learning object the student can visualize the interaction between the magnetic fields of two magnets as never experienced before. With the support of Augmented Reality the student can see in the third
dimension the interaction between magnetic fields of two magnets. This phenomenon can not be seen with the naked eye, because the magnetic fields are not visible to the human eye. In this sense, Augmented Reality will serve to broaden the horizon of the student, where he can view in three dimensions and also interact with magnetic fields studied. In other words, the student can see the invisible.

Although some proposals for the use of Augmented Reality in education are relatively new, this technology has been used successfully in several areas. Some proposals about the use of Augmented Reality in Education will be discussed as following. Buchau et al (2009), created three applications based on Augmented Reality to show the magnetic field of a magnet, the magnetic field solenoid and a magnetic field of an antenna.

These applications allow the student to visualize the magnetic fields in three dimensions. This work do not presents the results of use with students. Also using the Augmented Reality in education, Lemos and Carvalho (2010) created the SISEULER, which acts as learning object, where the student may have a better understanding of the Euler relation through visualization and manipulation of objects. This experiment was tested with a positive result with the teachers of basic education who are attending professional master’s degree in mathematics education. Macedo et al (2010) presented a method of teaching solids using Augmented Reality.

1. The experiment using augmented reality

This experiment was built in Augmented Reality environment, which can be defined as a system that supplements the real world with virtual objects generated by computer, with the impression of coexistence in the same space (Azuma, 2001). This learning object was designed using the tool SACRA (Collaborative Authoring System with Augmented Reality). The system SACRA was developed in 2008 by a graduate student named Rafael Santin under the guidance of Dr. Claudio Kirner. According Kirner (2010), from the difficulty that people had to work with ARTool Kit, this tool was developed to allow users not computer experts develop applications with a simpler tool. The SACRA is a collaborative authoring system for augmented reality, which incorporates technical authoring and collaboration of augmented reality interface for highly interactive, offering its users new ways of interaction for the construction of virtual environments (Santin, 2008).

Initially is presented the first marker that is found in figure 2 called “reference” in order to initiate the process.

![Figure 2: Bookmark "reference"](image)

The sphere comes presented in figure 3, corresponding to the marker shown. A second marker arises, called "inspection marker" which is found in figure 4, bringing a second ball. This should first be docked in order to give the sequence programming. When one ball is over the other, then there is the first magnet, as seen in figure 5.

Figure 3: Sphere

Figure 4: Approaching the second marker with the second sphere

Figure 5: Emergence of the first magnet
This magnet based in Augmented Reality environment can be manipulated freely by the user in the third dimension. Figures 6 and 7 show it in other positions.

Figure 6: Magnet in a second position

Figure 7: Magnet in a third position

There is the third marker, called "control", shown in figure 8, which will define the next actions to be triggered on schedule.

Figure 8: Magnet in a second position
The magnetic field arises from the first magnet, shown in figure 9, as was scheduled for action defined by the marker control.

This magnetic field also can be freely manipulated by the user as can be seen in figures 10 and 11.
The following is the label "control" in figure 12, again to the programming sequence.

Figure 12: Marker “control” being approached

When the label "control" is presented to the camera, it brings the image of the magnetic field of the magnet representing the repulsion that occurs between poles of the same name, as can be seen in figure 13.

Figure 13: Interaction between magnetic fields: repulsion

The figure 14 shows these magnetic fields in a second position, and there may be manipulation by the user.

Figure 14: Interaction between the magnetic fields in a second position
Continuing the experiment, the camera is shown on the label "control" again and the magnets are now with the poles of contrary names facing each other. Occurs then the attraction, as seen in figure 15.

Figure 15: Attraction between two magnets

The following label, named "control", appears again and also the interaction between the two magnets in figure 16. At this time, shows the formation of a field resulting from the attraction between them.

Figure 16: Magnetic field resulting from the attraction between two magnets

This experiment aimed to create an environment where students could see three-dimensional interaction between the magnetic fields of the magnets. It was also objective of this work to create a playful environment for the student.

THE PEDAGOGICAL EXPERIMENT

This pedagogical proposal is based on the Theory of Meaningful Learning proposed by David Ausubel. Meaningful Learning is a process in which a new information relates to an important aspect of the knowledge structure of individual (Moreira and Masini, 2001). This paper aims, from concepts already existing in the cognitive structure of the student of electricity, concepts such as current, voltage, the student uses them as subsumers underpin the new concepts to be learned, as the interaction between magnetic fields. According to Moreira (2006) the subsumers are a concept, an idea, a proposition in the existing cognitive structure that can serve as an 'anchor' to a new information. In this respect the concepts previously "anchored" in the student's
cognitive structure, such as voltage electricity and electric current, will serve as subsumers so that a new information is acquired by the student.

As new information, understand the concepts Electromagnetism required the teaching of Electrical Machines. Guimarães (2009) says that Meaningful Learning can be seen when is created a new situation that requires transformation of the original knowledge. In this experiment, Meaningful Learning was observed as follows: (a) was performed the experiment in Augmented Reality where the students could observe attraction and repulsion between the poles of two magnets. In this case the subsumers were concepts of voltage and current. (b) Subsequently, watched a video about the principle of operation of the electric motor. (c) Finally managed to write with their words using knowledge gained as new subsumers what had learned about attraction and repulsion of magnets.

A preliminary test was made in June 2011 with 58 students of Electrotechnical of Instituto Federal Fluminense, in Itaperuna city, state of Rio de Janeiro, Brazil, day shift, in their own classroom. Those students were divided in two groups: “A” Group, 44 students using Augmented Reality and “B” Group, 14 students who don’t.

The inedit question proposed for the observation of signs of Meaningful Learning was:
“From the figure 17, explain the operation of the elementary DC motor:”

Figure 17: Question proposed (http://www.walter-fendt.de/ph14e/)
The graphics 1 and 2 shows the results:

Graphic 1: Percentage of students who had correct answer – “A” Group

Graphic 2: Percentage of students who had correct answer – “B” Group

In this experiment was used a laptop with Webcam. Initially the students were able to observe the teacher and later each one could manipulate the experiment. This small test was conducted with the objective to enrichment of the learning object for later use as support in conventional classes. The results will be demonstrated and discussed below.

RESULTS AND DISCUSSION

In the test performed, the 58 students responded to a inedit question in order to observe indications of Meaningful Learning. In “A” group (students that used Augmented Reality) 84% gave the right answer to the inedit question, while in the “B” group, only 71% did.
The Learning Objects in Augmented Reality aimed to present to the students a way to interact and visualize in three dimensions the interaction between magnetic fields of two magnets, and can see the attraction and repulsion between them.

This work aims to propose a new way of teaching magnetic fields. With this experiment, students were able to visualize and interact with magnetic fields of two magnets using the Object Learning based on Augmented Reality.

**CONCLUSIONS**

From what was shown, students were able to actually visualize the 3D magnetic fields of two magnets and also could interact with these fields. Augmented Reality enabled the direct interaction between the real environment and virtual environment by improving the understanding of reality, since the magnetic fields are not visible to the human eye. The use of The Meaningful Learning Theory was successful. As shown with the statistics study, the group who used Augmented Reality had better performance than the other.

The environment in Augmented Reality allowed students to observe the interaction between the magnetic fields of two magnets, where it was possible to study the attraction and repulsion between them, which does not would be possible without the Augmented Reality. The use of the environment in Augmented Reality is very easy and inexpensive. This study used a laptop with webcam.

Students were able to interact with the environment in Augmented Reality too, and, therefore, with the magnets. Also, it can be concluded that the approach to this issue using Augmented Reality techniques can be very profitable for teaching.

**WJEIS’s Note:** This article was presented at World Conference on Educational and Instructional Studies - WCEIS, 07-09 November, 2012, Antalya-Turkey and was selected for publication for Volume 2 Number 4 of WJEIS 2012 by WJEIS Scientific Committee.

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QUALITATIVE PERSPECTIVES IN TEACHER EDUCATION

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Abstract
It is well known and acknowledged that qualitative perspectives in initial teacher education strongly benefit student teachers and help them develop deeper insights into the teaching profession. Adding a qualitative perspective to teacher education programs can equip student teachers with the necessary knowledge, skills and pedagogical abilities to understand human behaviour. Despite consensus that the qualitative approach should be a major part of teacher preparation, programs in Turkey do not seem to include this crucial component. The present study briefly examines some of the worldwide practices of qualitative approaches in teacher education and discusses their implications for teacher education programs in Turkey.

Key Words: Qualitative approach, initial teacher education, programs.

INTRODUCTION
Understanding the complexity of what goes on in the classroom is not an easy task for teachers since teaching is an occupation that operates in settings that have high levels of multidimensionality, immediacy and unpredictability (Hammersley, 2000). Teaching is usually characterized as being many-sided and multi-disciplined. An understanding of self from multiple perspectives is necessary for teachers to improve problematic aspects of the task of teaching. It is thus important that teachers watch themselves, step back and, distanced from immediate conflicts, gain a larger view of what is happening. During this reflection period, a certain distance is needed in order to consider carefully one’s own decisions and their role in practice (Tickle, 1991; Kansanen, 1999). Towards that end, initial teacher education that includes a curriculum governed by principles of research-based teaching is essential. Such a curriculum, designed to develop student teachers' research capabilities, would help them become “first and foremost effective researchers of their own practices”, which is a central asset to becoming an effective teacher (Tickle, 1991).

It is at this critical point that a qualitative research approach can strongly benefit teachers. It helps the teacher become a more astute observer of the whole school environment (Bogdan and Biklen, 2007), which is only possible by practicing two of the basic skills of qualitative researchers - observing and interviewing (Croker, 2009). Qualitative approaches stimulate soul-searching and enable teachers to learn to analyze the agencies and structures that they and their students have to face (Bogdan and Biklen, 2007).

As teachers, when we walk into the classroom each day, we often first look around the classroom and at our students, trying to develop a sense of the classroom atmosphere and the students that day. During or after the class, we might find ourselves talking to a few of the students, probing how they are and how they feel about the class, to help us better understand their behaviour and attitudes. As Ms Walker (a teacher quoted in Williams et al., 2008) states, we teachers not only teach but also have the equally important responsibility of getting to know our students, to understand what they need emotionally as well as academically. In doing so, we constantly hold a mirror up to the world, to the behaviours of our students, parents, colleagues, and others, problematizing the challenges we face every day in our classrooms and staffrooms. We also turn that mirror on to ourselves, trying to figure out our role and position in this culture.
Qualitative research fits the needs of practicing teachers perfectly. With its interest in providing a description, understanding and interpretation of human phenomena, human interaction or human discourse rather than in testing hypotheses (Lichtman, 2006), qualitative approaches help teachers develop deeper insights into their teaching practice and their classrooms. It encourages teachers to reflect on their professional needs, current understandings and complexities of the educational process. In other words, a qualitative dimension gives them “the freedom to continuously reinvent themselves via their research and knowledge production” (Kincheloe, 2003: 18).

Adding a qualitative perspective to teachers’ agenda does not mean that teachers are expected to keep detailed field notes every day or formally interview a large number of participants. Teaching is teachers’ primary responsibility, and research can be seen as a tool to help improve teaching practice. It offers teachers the capacity to act as researchers, as part of their teaching role. They can begin to take themselves less for granted, and see themselves more as a focus of their own reflection and observation as they go about teaching each day (Bogdan and Biklen, 2007). As Kincheloe (2003: 40) states, research for teachers is an “act which engages them in the dynamics of the educational process, as it brings to consciousness the creative tension between social and educational theory and classroom practice”.

To equip pre-service teachers with the necessary knowledge, skills and pedagogical abilities to understand human behaviour, it is essential that teacher education programs employ more qualitative approaches, as Bogdan and Biklen (2007: 245) suggest:
The qualitative approach requires researchers to develop empathy with people under study and to make concerted efforts to understand various points of view. Judgment is not the goal; rather, the goal is to understand the informants’ world and to determine how and with what criteria they judge it. This approach is useful in teacher-training programs because it offers prospective teachers the opportunity to explore the complex environment of schools and at the same time become more self-conscious about their own values and how these values influence their attitudes towards their students, principals, and others.

Today there is generally a greater understanding of the role and importance of including a research dimension in teacher education programs. It is now well established in theory that initial teacher education needs to acquaint student teachers with the nature of research, particularly qualitative methodologies. This will encourage pre-service teachers to view themselves as beginning teachers and view the school at which they start through a ‘teacher as researcher lens’ (Gray and Campbell-Evans, 2002; Kincheloe, 2003).

Despite the recognition it has received worldwide in the field of education, qualitative research is not often included in the curricula of teacher education programs. These programs continue to emphasize “learning how to teach” rather than “learning from teaching”; the latter refers to the idea that teachers integrate theory and experience together through reflection and critical analysis (Breidenstein et al., 2001). The European Commission report entitled Green Paper on Teacher Education in Europe (2000) suggests that the relationship between teacher education, the teaching profession and educational research and development needs to be redefined. The same report claims that student teachers are usually introduced to research that has no relevance to teaching and the teaching profession.

In his study on the perceptions of 21 graduate students of education about qualitative research methodology and its teaching, Saban (2007) identified five reasons why including qualitative research methodology courses in teacher education programs in Turkey is of great importance to student teachers:
1. Pre-service teachers should be urged to be researchers and, at the same time, to be able to read and understand research studies in education.
2. Pre-service teachers knowledgeable about qualitative research procedures could assess their practicum from a more rigorous point of view. Empowered with the appropriate skills to observe others, pre-service teachers could see the classroom atmosphere in a new light, discovering new aspects about the teaching context.
3. Qualitative research methodology helps teachers identify and resolve problems they face in the educational arena, by participating in some form of action research.
4. Courses on qualitative research methodology enable pre-service teachers to conduct research studies on their own, contributing to their professional development.

5. Knowledge of qualitative research techniques is especially useful for those who wish to carry out postgraduate studies.

Similarly, Selcuk (2000) highlights the importance of a qualitative perspective in teacher education, with special emphasis placed upon observation as a qualitative data collection tool to help develop an understanding of behaviour. Selcuk claims that teachers trained in observation skills can develop a better understanding of their classroom processes within a relatively short period. Purposeful and systematic observation enables teachers to stay in control of their classroom, which enhances the quality of learning and teaching. In addition, teachers who are familiar with observation processes can understand the behaviours of other teachers and principals from an open, inductive and holistic perspective. Selcuk further states that teachers can be encouraged to think about what they are trying to achieve through self-observation. This kind of self-reflection helps teachers become more aware of their strengths and weaknesses.

A QUICK LOOK AT SOME OF THE WORLDWIDE PRACTICES

The worldwide practice of including a qualitative dimension in teacher education programs is grounded in the idea of a spiral curriculum, in which research goes across the curriculum and is integrated with other studies. In Finland, for instance, the basic idea of teacher education is to develop the capacity for pedagogical thinking and argumentation, which is called research-based teacher education. It is assumed that all teaching is based on teacher research, and that the role of the student teacher is an active one. Three broad content areas, namely, pedagogical content knowledge, the theory of education and teaching practice, are in constant reciprocal interaction, with research-based thinking forming the connecting factor in this process. Overall, the Finnish approach resembles action research and is consistent with qualitative research (Kansanen, 1999; Jyrhama et al., 2008; Toom et al., 2008).

With the rapid growth of interest in qualitative research since the 1980s, the idea that student teachers conduct small-scale empirical studies as part of their professional development has gained considerable importance (Punch, 2009). A study conducted by Breidenstein et al. (2001) at Trinity University, Texas, represents one effective model for integrating a qualitative approach into teacher education courses through such projects. A research project in which student teachers designed, researched and wrote up a qualitative study was completed during the pedagogics course. The aim of the project was to develop and promote a reflective orientation toward teaching and learning using qualitative research as a tool. The outcomes of the student teachers’ qualitative research fell into four distinct categories: classroom inquiry, collegial inquiry, pedagogical inquiry and reflective inquiry. Although the research project initially engendered anxiety and resentment, it later turned out to be an important method to help develop reflective practitioners. One clear result was that it fostered the development of an inquiry-based stance toward teaching and professional activity.

More recently, Graziano (2011) worked with 16 student teachers in the United States to gather data from ESL learners at an elementary school using photovoice, a form of qualitative research that utilizes documentary photography and storytelling. The study attempted to explore the educational realities of ESL learners at this urban school in the Southwest. The student teachers were first trained in photovoice procedures; later, they provided their ESL learners with cameras and basic training on how to use them. These learners were encouraged to photograph images on campus and off campus at home and in their community. At the end of the study, student teachers asked ESL learners to tell their story for two of the photographs they had taken. On the last day of the class, all photographs were displayed in a public photo exhibit at the college. Overall, the student teachers were fascinated with photovoice and inquired during and after class on how it could be utilized as a teaching strategy. They appreciated the real-world application of the language acquisition course and ability to bridge theory to practice. Several student teachers reported their teaching skills and abilities were enhanced as a result of this empowering experience because they could understand learners’ needs better. They also stated that the experience helped them better understand the importance of culture, community and language in education.
A BRIEF OVERVIEW OF THE SITUATION IN TURKEY

Over the last two decades, teacher education programs in Turkey have undergone serious changes as part of major shifts and reforms in the educational arena evident throughout the world. In order to improve the pre-service education of teachers, the Turkish Higher Education Council has restructured the faculties of education, changing the composition of departments and revised the content of courses. The recent curriculum, which has been followed since the 2006-2007 academic year, offers new courses in addition to existing ones. These reform efforts have sought to provide uniformity and standardization among teacher education curricula followed by education faculties around the country. One of the basic changes in the programs has been an increased focus on teaching methodology, school experience and practice teaching (Taşkın, 2006; Grossman, Onkol, and Sands, 2007; Cosgun-Ogeyik, 2009).

Despite consensus and mounting evidence that the qualitative perspective should be a major component of teacher education, programs in Turkey are still not fully on the road to change. Not only courses on qualitative research methodology but also on research methodology in general are virtually non-existent in teacher education programs in the country. The few research courses that have been introduced to student teachers look far from being effective (Arıkan, 2004; Saban, 2007).

The two courses, namely School Experience and Practice Teaching are compulsory for senior student teachers. The purpose of the School Experience course is to introduce student teachers to the teaching profession and offer experience within primary or secondary schools. Observation, which is a difficult skill to do well, and which needs practice and rigour (Cowie, 2009), is the key element of the School Experience course. Yet, in this traditional model of practice, student teachers are allocated to schools with no on-campus preparation and support for this experience. It is generally the case that student teachers go to the practice school without knowing how to collect data, since they have not been trained beforehand on approaches to observation, making field notes, preparing checklists or using video, audio recordings and artefacts like photographs and organizational charts (Cowie, 2009). It is important that student teachers establish “the focus of the observations, selecting the cases for observation and as appropriate, selecting within cases for observation” (Punch, 2009).

In the last semester, student teachers are expected to satisfy a term-long practice teaching requirement. They are assigned to different public and private schools where they do their student experience program for one day a week, within the scope of the Practice Teaching course. Student teachers are encouraged to implement and apply the methods taught in their teacher education courses. Theoretically, the course content encourages trainee reflection and puts a stronger emphasis on “learning from teaching” than “learning how to teach” (Breidenstein et al., 2001). In practice, however, reflection is absent from many Practice Teaching courses. As passive receivers, many student teachers in Turkey still consider ‘seeing what to do’ is more important than ‘understanding why it is done’ (Peacock, 2009). Rarely are they provided with opportunities to reflect on their ideas relating to teaching in general or on their own teaching practice experiences (Atay, 2007). Even if such opportunities are created by some instructors, student teachers still need guided practice in order to integrate theory and experience together through reflection and critical analysis.

School Experience and Practice Teaching courses require student teachers to keep diaries and write student teaching portfolios in which they can record their thoughts and emotions as they experience the classroom. Such introspective techniques are valuable in providing insight into the thought processes of student teachers, and are suitable for gathering affective data for later reflection. However, keeping a diary or journal is not always an easy option for student teachers, who find the process burdensome and tiring (Wallace, 2002; Lee McKay, 2009). Therefore, it is important that student teachers have been made acquainted with such qualitative research techniques before they start using them in the final year of their training.
DISCUSSION AND IMPLICATIONS

We believe that it is possible to make five recommendations to more firmly integrate a qualitative perspective into teacher education programs in Turkey:

1. The practice teaching period is a very important component of teacher education programs since it has a profound effect on student teachers’ overall perception of the teaching profession. However, reflection, “a way to gain knowledge about one’s doings and about the interaction in the teaching-studying-learning process” (Kansanen, 1999: 136), is not encouraged enough within the Turkish context (see, for instance, Gürbüz, 2006; Atay, 2007; Coskun and Daloglu, 2010). In order to provide more space for reflection, student teachers can be asked to complete a number of investigative assignments such as a teacher and peer interview/observation, an administrator interview, an analysis of student metaphors about school and an analysis of a videotaped teaching lesson. Such assignments completed using qualitative tools such as interview and observation would encourage student teachers to reflect on their teaching experience, identify problems and discuss issues related to teaching (Gitlin et al., 1999; Akcan, 2010).

2. It seems essential that the School Experience course should be given more importance in teacher education programs in Turkey. As proposed by Coskun and Daloglu (2010), such a course should start earlier in the program and provide a wider range of experiences at different schools. More importantly, student teachers should be made familiar with observation, “the hallmark of qualitative methods” (Padgett, 2008) before beginning any fieldwork. In order to equip student teachers with observation skills, they should be given observation assignments not only in the last year but also throughout their study period. Only by having hands-on experience can student teachers learn how to do a more systematic, thorough and non-judgemental form of observation than the necessarily self-interested and selective observations done in daily life (Padgett, 2008).

3. It is unfortunately the case that courses in teacher education programs in Turkey are still offered using a traditional method of instruction that strongly emphasises theoretical knowledge. There are studies that have been conducted in Turkey (see, for example, Korkmaz, 2009a; Korkmaz, 2009b) which report that levels of critical thinking of teachers and student teachers are not extremely high, which is a disturbing result for education faculties. Therefore, more courses and practices that can contribute to the development of student teachers’ critical thinking skills should be integrated into teacher education programs soon. Critical thinking, as Pithers and Soden (2000) propose, includes such abilities and dispositions as the skill of argument; a spirit of inquiry; evaluation; clarifying and focusing the problem; and analysing, understanding and making use of inferences. Qualitative approaches can play an important role in teaching critical skills to student teachers and in helping them learn to think well and for themselves. As Kincheloe (2003: 19) claims, “questioning the unquestionable has never been a picnic in the park”. Yet, only critically minded teachers would dare to analyse education situations in order to increase the quality of teaching and learning.

4. Despite its unique potential as a component of teacher education programs, a qualitative perspective cannot be included properly in the absence of teacher educators who are interested in qualitative work. It is thus important that “the entire faculty of the higher education unit is committed to the same organizing theme and that they understand it in the same way” (Krokfors et al., 2011: 12). Integrating a qualitative approach into teacher education first requires that teacher educators appreciate this approach and its role in producing “pedagogically thinking teachers” (Krokfors et al., 2011: 3).

5. Despite the wealth of benefits the qualitative perspective offers to teacher education, great care should be taken to tailor it to teacher education programs. Qualitative research courses and/or projects should be introduced carefully to students, with careful and thoughtful reference to teachers’ everyday reality. In accordance with this pragmatic orientation, student teachers’ perceptions of everyday school practice should be taken into account. Besides, proper timing is very important when introducing student teachers to methods and methodology. It seems more reasonable to expose them to the more complicated and formal dimensions of qualitative work after they have developed a strong understanding of research in general. It should be noted that the aim is not to produce researchers, but rather to educate autonomous and reflective teachers who have a positive attitude towards research (Kansanen, 1999; Toom et al., 2008; Krokfors et al., 2011).
In conclusion, student teachers in Turkey need to develop a reflective orientation towards teaching and learning as early as possible through research courses and/or qualitative research projects that are systematically taught in an integrated curriculum. In addition to theoretically oriented method courses, student teachers really need to develop basic qualitative skills like observation, interview, introspection and retrospection. Although it is by no means the only way to develop reflective practitioners, qualitative research, with its “reflective capacity” (Hammersley, 2000), can help student teachers learn from their own teaching experiences (Breidenstein et al., 2001).

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FIELD TESTING THE COLLEGE STUDENT EXPERIENCES QUESTIONNAIRE IN TURKEY

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Abstract
The College Student Experiences Questionnaire – 4th edition (CSEQ) was field tested among 769 undergraduate students in Ankara, Turkey. Regarding psychometric properties, estimates of internal consistency and the factor structure of the Environment and Gains factors from the Turkish students approximated those of the U.S. based normative sample (4th edition, 2003). Regarding theory, blocked hierarchical regressions supported the college impress theoretical model as the instrument’s foundation. Difference tests compared mean scale scores of the Turkish students to the U.S. based doctoral extensive sample reported in the CSEQ norms manual. Salient findings were that the Turkish students reported higher engagement with the library, faculty, campus facilities, and clubs; lower engagement with course learning; and fewer gains in personal development. We concluded that the psychometric properties of the instrument and the theoretical model upon which the instrument is based transferred adequately to this Turkish population of students, allowing further comparisons of the college student experience.

Key Words: CSEQ; college impress model; college student experience; student engagement; gains and estimates.

INTRODUCTION

In the past decade assessing how much students learn or improve in college has gained considerable attention (Cheng, 2001). In the U.S., higher education institutions have developed performance indicator systems to demonstrate their accountability, effectiveness, and efficiency. Frequently adopted indicators include student aptitude scores, GPA’s, retention rates, persistence rates, and graduation rates. Although these indicators have
provided information about the effectiveness at the institution level, they remain limited to provide meaningful information on students’ intellectual and personal development as the outcomes of their collegiate experience. Consequently, more holistic approaches to monitoring student progress have provided more comprehensive information about the outcomes and benefits of a university education (Michael, Nadson, & Michael, 1983; Upcraft & Schuh, 1996). As globalization continues, interest in cross-cultural comparisons of a variety of phenomena has increased. Additionally, higher education administrators in countries beyond the U.S. have expressed a desire to use psychometrically credible measures for this type of work. Consequently, the purpose of our project was to field test the College Student Experiences Questionnaire (CSEQ; Pace & Kuh, 1998) in a sample of students at a large public university in Turkey. We anticipated that our results would (a) provide estimates of the CSEQ’s psychometric performance, (b) test the theoretical model underlying the CSEQ, and if the psychometric properties and theory were supported, (c) provide preliminary cross-cultural comparisons. In this introductory section, we briefly review the CSEQ and the theory upon which it is based, describe instances where it has been used in cultural comparisons, and review the current status of higher education in Turkey.

The College Student Experiences Questionnaire

The CSEQ is built on Pace’s (1982) college impress model. The theory behind this model is that success in college depends both on responsible student behavior and responsible institutions that promote active participation of students through programs and policies (Tam, 2002). Pace claimed that the amount and depth of learning that occurs in college depends heavily upon the extent, scope, and quality of effort or initiative expended by the student in educational process. In other words, the amount of gain from college depends on student effort and involvement in both academic and social activities. Examples of involvement include using the library, interacting with teachers and peers, and participating in extracurricular activities. Pace defined the investment of time and effort in college activities as quality of effort. Responsible student behavior, therefore, is characterized by the quality and amount of effort expended by a student to make the most of his/her college experience (Tam). Pace’s recognition of reciprocal two-way interaction between student effort and collegiate environment informed the development of the CSEQ (Pace & Kuh, 1998). This comprehensive instrument measures the quality of experience in college with reference to a number of very important dimensions of student involvement that indicate the amount and quality of students’ effort.

Since the publication of its second edition, the CSEQ has been completed by about 300,000 students at more than 400 different college and universities in the United States (Gonyea, Kish, Kuh, Muthiah, & Thomas, 2003). In addition to gathering background information about students, the CSEQ is used to estimate students’ engagement in learning activities; rate the characteristics of the learning environment; identify progress made toward learning goals, and measure level of satisfaction with the college.

Cross-Cultural and International Comparisons with the CSEQ

Comparative studies using the CSEQ have proven the useful in examining differences between student groups at similar types of institutions. For instance, Whitmire (1999) examined whether African-American and Caucasian students experience the academic library differently. Results revealed that both student groups measured their academic library experiences very similarly, however, African-American students used the library resources more frequently. Subsequently, Whitmire (2003) reported that engagement in writing and leisure reading was a stronger predictor of library than race/ethnicity.

Swigart and Murrell (2001) asserted that students’ unique cultural backgrounds provide them with a map of appropriate and inappropriate behaviors that may hinder or facilitate student involvement for certain social activities, therefore, “...when conceptualizing the influence of student involvement on college outcomes, students should not be treated as homogenous” (p. 298). Obviously, using samples of students of diverse backgrounds in a variety of college and university settings is needed to substantiate the degree of validity and reliability of the CSEQ.

To date, little research has been published to evaluate the reliability and validity of the CSEQ in languages other than English, or in other countries. Lin’s study (1997) with 631 Taiwanese college students provided evidence that student involvement theory can be applied to college students outside the United States. The data were collected by the five-year CSEQ, which was adapted from the 3rd edition of the CSEQ and Community CSQ.
Results supported the theory that the more effort students devoted to their college experience, the higher the gains they reported. In a recent cross-sectional study, Tam (2004) investigated the influence of university education on students’ academic, social, and personal growth in a local university in Hong Kong. The modified and shorter version of the original CSEQ was administered to 998 students in March 2000 and 912 students in April 2002. The comparison of two sets of data indicated an overall improvement in student progress as a function of time. The results also demonstrated that students reported significant growth in the intellectual and personal development dimensions rather than the vocational aspect. Additionally, students’ involvement in the university and interaction with the institutional environment were the most important predictors of student outcomes on a range of cognitive and affective attributes. Demographic characteristics contributed less to the prediction of the outcomes of the students’ university experience.

As we designed this project, we sought not only to provide an international comparison of students at a Turkish university with American students, but we sought to provide a psychometric evaluation of this widely-used U.S. instrument and a test of the college impress model that serves as its theoretical foundation.

Field Testing the CSEQ in Turkey
In recent years, the number of universities, and consequently the number of undergraduate students in Turkey, has dramatically increased. In 2007, there were 1,566,653 undergraduate students in 115 universities (85 state and 30 private) in Turkey (The Higher Education General Directorate, n.d.). Higher education institutions in Turkey are under pressure to select the best students and increase student learning productivity. For this reason a need exists for a standardized tool such as CSEQ to provide in-depth descriptions of the processes most likely to result in students gaining the knowledge, values, attitudes, and competencies appropriate to university education. Thus, the purpose of this study was to field test the CSEQ with Turkish undergraduate students attending Middle East Technical University (METU). Initial analyses focused on the psychometric properties of the instrument with this new population of students. Second, the theoretical model underlying the CSEQ was evaluated. Given a demonstrated adequacy of the instrument and theoretical model, cross-national comparisons were planned between the Turkish students and a sample of U.S. based students whose data were recorded in the CSEQ norms manual (Gonyea et al., 2003).

METHOD

Instrument
With permission granted from its authors, the CSEQ was translated from English into Turkish, then back-translated (by someone other than the original translating team) into English. The resulting instrument contained 172 items. Consistent with the English-version CSEQ, 22 of the items gathered demographic information. This included such in-depth information as parents’ educational history, financial resources, current grades, and current employment status. The majority (115) of items assessed the students’ experiences with the institution in college activities. Grouped into categories (including experiences with libraries, computers/computer sciences, lessons, writing, instructors, the arts, campus facilities, clubs/organizations, personal lives, peer relationships, sciences, talking with others, and topics of conversations), these items were assessed on a four-point scale. Ten items assessed the psychological climate for learning on campus and 25 items asked students to estimate student gains on 25 higher education goals.

As noted in the CSEQ test manual (Gonyea, et al., 2003 [hereafter referenced as “CSEQ norms” with no citation]) the CSEQ has been long recognized a survey instrument with strong psychometric properties. Empirical studies involving the use of factor analysis of subscales and items within the CSEQ have provided dimensions consistent with logical groupings of scales or items within given sections of the measure (Michael, et al., 1983). In addition, data obtained from 127 undergraduates at a major state university demonstrated that the quality of effort scales display modest concurrent validity with the criterion measures regarding self perceptions of grades earned to date and of estimated gains in cognitive attainments (Michael, et al.). Boger (1986) replicated Pace’s work involving the quality of effort of college students with a sample from student teachers at Ohio University. The results indicated that the CSEQ has demonstrated test-retest reliability and construct validity when assessing the population of student teachers. The test manual (Gonyea, et al.) provides a comprehensive review of the instrument’s reliability, content validity, and construct validity. Additionally, the
test manual provides descriptive statistics and frequencies of responses for individual items, scale, and factor scores. The manual disaggregates these by year in college, age of student, and institutional type (doctoral extensive, doctoral intensive, masters, selective liberal arts, and general liberal arts). Because of METU's institutional characteristics, we used the composite of all-years-in-college/all-age-groups in the doctoral extensive category as the basis for comparing our results.

Procedures
Stratified random sampling from the five colleges and 37 departments at METU in Ankara, Turkey, was used to select a representative sample (1,200), out of 12,000 enrolled undergraduate students. The resulting list of student names along with questionnaire packets (including an informed consent form) were sent to each department's administrative office. In the announcement, the purpose of the study and sample selection procedure was explained. Students were asked to contact their departments' secretary to receive the CSEQ. Sixty-four percent of the solicited students completed the questionnaire and returned them to their departments' secretary's office.

Participants
Participants were 769 undergraduate students at METU. Students were asked to identify their age in the same categories as on the CSEQ. The majority were 19 or younger (56%) and 20 to 23 years old (39%). Nearly all of the students (97%) were unmarried. The majority lived with other students (73%) or alone (16%); either in on-campus housing (69%) or within walking (14%) or driving (17%) distance from the university. Students from 34 of METU's academic programs completed the instrument. Each of the academic classifications was well-represented (i.e., 20% freshman, 27% sophomores, 29% juniors, and 23% seniors).

As one of the most highly ranked universities in Turkey, METU attracts many students with different cultural background from different regions of the country (Köse, Balci, & Engin, 1995). Founded in 1956, the U.S. government and U.S. partner universities supported METU's early development and METU continues to follow Western/American Standards in education (METU, 2009). Instruction at METU is conducted in English and most textbooks are from the U.S.-based publishers. Entrance into this state-sponsored university is dependent upon achieving top scores on a national entrance exam. Thus, while the sample is large, it does not represent the undergraduate experience throughout the country.

RESULTS
Psychometric Properties
Preliminary analyses focused on the psychometric qualities of the CSEQ with the sample of Turkish students.

Internal consistency. Internal consistency estimates (i.e., alpha coefficients) provide an indication of the homogeneity of the specified scale (i.e., the degree to which individual items measure similar characteristics). For well-established scales, estimates above .70 are desirable. Table 5 lists individual alpha coefficients for each of the scale in our sample as well as from the CSEQ norms. We summarize only the highlights in this section of text. For the Quality of Effort Scales, alpha coefficients (reported in Table 5) ranged from .66 (Information in Conversations) to .85 (Computer and IT). This compares to ranges between .74 (Campus Facilities) and .92 (Science and Quantitative Experiences) for the CSEQ normative sample. Of the three Environment Factors, alphas were .45 (Personal Relations), .70 (Practical Factor), and .80 (Scholarly Factor) for the Turkish students. This compares to a range from .70 to .75 for the normative sample. Finally, for the Estimates of Gains factors, alphas for the Turkish students ranged from .75 (General Education) to .81 (Science and Technology). This compares to ranges of .78 (Vocational Preparation) to .87 (Science and Technology) in the norms group. Alphas for the Additional Indices ranged from .74 (Cooperation Among Students) to .86 (Capacity for Life-long Learning) for the Turkish students; no alphas for the normative sample were located in the CSEQ norms.

Factor structure of Environment and Gains scales. In a manner recommended (2001) and modeled (1993) by Byrne, both confirmatory (CFA) and exploratory (EFA) factor analytic techniques were used to explore CSEQ fit and dimensionality. Specifically, CFA procedures were first used to evaluate the fit of the items to the Environment and Gains portions of the CSEQ. A priori we hypothesized that (a) responses could be explained by
the three-factor (Environment; Figure 1) and five-factor (Gains; Figure 2) scales in the CSEQ norms; (b) each item would have non-zero loadings on the theorized factor and zero loadings on all other factors; (c) the theorized factors would be correlated; and (d) measurement terms would be uncorrelated. We used multiple criteria to evaluate model fit. These included (a) the $\chi^2$ likelihood ratio; (b) the Bentler revised norm fit indices (CFI); (c) the goodness-of-fit index (GFI); and (d) the parsimonious normed comparative fit index (PCFI). For both the CFI and GFI, values of .90 indicates a psychometrically acceptable fit to the data. For the PCFI, acceptable fit is often lower; in fact values in the .50s are not atypical (Byrne). Anticipating model misfit, we used modification indices (MIs; the expected decrease in $\chi^2$ when imposed constraints are relaxed), results from a follow-up EFA, and a priori theory determined from the CSEQ norms, in allowing additional covariances. We used the Byrne references in guiding our structural modeling decisions.

**Environment factors.** CFA fit for the three-factor environment scales was psychometrically acceptable with Model 1 (see Table 1 and Figure 1).

Table 1: Summary confirmatory factor analytic results related to fitting Environment and Gains factor structures

<table>
<thead>
<tr>
<th>Competing model</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>Model comparison</th>
<th>$\Delta\chi^2$</th>
<th>$\Delta df$</th>
<th>GFI</th>
<th>CFI</th>
<th>PCFI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environment (N = 758)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Initial</td>
<td>230.76</td>
<td>32</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>.94</td>
<td>.91</td>
<td>.65</td>
</tr>
<tr>
<td>2 M2 with correlated error between items 20 and 24 (M.I. 114.33)</td>
<td>1260.60</td>
<td>264</td>
<td>2 vs. 1</td>
<td>124.24</td>
<td>1</td>
<td>.87</td>
<td>.85</td>
<td>.75</td>
</tr>
<tr>
<td>3 M3 with correlated error between items 10 and 23 (M.I. 90.43)</td>
<td>1160.40</td>
<td>263</td>
<td>3 vs. 2</td>
<td>100.20</td>
<td>1</td>
<td>.88</td>
<td>.87</td>
<td>.76</td>
</tr>
<tr>
<td>4 M4 with correlated error between items 5 and 3 (M.I. 63.42)</td>
<td>1087.90</td>
<td>262</td>
<td>4 vs. 3</td>
<td>72.50</td>
<td>1</td>
<td>.89</td>
<td>.88</td>
<td>.77</td>
</tr>
<tr>
<td>5 M5 GNQUANT xload with INTELSK</td>
<td>1062.50</td>
<td>261</td>
<td>5 vs. 4</td>
<td>25.40</td>
<td>1</td>
<td>.89</td>
<td>.88</td>
<td>.77</td>
</tr>
<tr>
<td>6 M6 GNGENED xload with INTELSK &amp; PERSDEV</td>
<td>992.70</td>
<td>259</td>
<td>6 vs. 5</td>
<td>69.80</td>
<td>2</td>
<td>.90</td>
<td>.89</td>
<td>.716</td>
</tr>
</tbody>
</table>

*Note.* All $\Delta\chi^2$ values statistically significant at $p < .001$. 
CSEQ Environment Factors
Model 1
Model Specification

Figure 1
To follow-up the CFA, the dimensionality of the 10 Environment items was analyzed using maximum likelihood factor analysis. Prior to interpreting the EFA results we screened data by looking at standard indices that indicate the suitability of our dataset for EFA. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy represents the ratio of the squared correlation between variables to the squared partial correlation between variables (Field, 2005). KMO values range between 0 and 1. In general, the higher the value of the KMO, the more suitable it is for EFA. Minimally, a value of .5 is required. Our KMO value was .83. Barlett’s test of sphericity tests the null hypothesis that the original correlation matrix is an identity matrix. A statistically significant test indicates that the matrix is not an identity matrix and is suitable for analysis; our Bartlett’s \( p < .001 \). We performed an additional check of the data by evaluating the determinant of the \( R \)-matrix; this value should be greater than .00001. The determinant for our Environment items was .05.

Given these positive indicators of sampling adequacy, we proceeded with the EFA. Similar to the procedures reported in the CSEQ test manual, factors were extracted using principal components factoring with a direct oblimin (oblique) rotation. The scree plot suggested one interpretable solution; however, more consistent with the original solution, there were three eigenvalues greater-than-one (accounting for 61% of the variance). The rotated factor matrix is presented in Table 2. Oblique rotations produce two types of information on factor loadings. The pattern matrix provides the regression coefficients for each variable on each factor; the structure matrix provides the correlation coefficient between each variable and each factor. In our data (for both Environment and Gains items), both matrices were parallel to each other. For efficiency of space, and because we thought it easier to interpret, we present the structure matrix. To interpret the strength of the factor loading, we followed the guidelines presented in Stevens’ (1992) table of critical values against which factor loadings can be compared. Given that our sample size is larger than 600, factor loadings greater than .21 can be considered statistically meaningful.

Table 2: Factor Loadings of Environmental Factors (Structure Matrix)

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV SCH (ENVSCH)</td>
<td></td>
<td>†.69</td>
<td>.43</td>
<td>.28</td>
</tr>
<tr>
<td>SCHOLAR Emphasizes the development of academic, intellectual and scientific qualities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENVESTH</td>
<td></td>
<td>†.77</td>
<td>.27</td>
<td>.30</td>
</tr>
<tr>
<td>SCHOLAR Emphasizes the development of creative and assertive qualities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENV CRIT (ENVCRT)</td>
<td></td>
<td>†.82</td>
<td>.35</td>
<td>.32</td>
</tr>
<tr>
<td>SCHOLAR Emphasizes critical thinking, evaluation and analysis.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENV DIV (ENVDIV)</td>
<td></td>
<td>.64</td>
<td>.32</td>
<td>.41</td>
</tr>
<tr>
<td>SCHOLAR Emphasizes respecting individual differences and the development of this notion.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENV INFO (ENVINF)</td>
<td></td>
<td>.46</td>
<td>†.48</td>
<td>.23</td>
</tr>
<tr>
<td>SCHOLAR Emphasizes the development of skills related to technology use (using computers or other information technologies).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENV VOC (ENVVOC)</td>
<td></td>
<td>.39</td>
<td>†.99</td>
<td>.29</td>
</tr>
<tr>
<td>VOCATIONAL Emphasizes the development of professional competency.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENV PRAC (ENVPRA)</td>
<td></td>
<td>.55</td>
<td>†.48</td>
<td>.39</td>
</tr>
<tr>
<td>VOCATIONAL Emphasizes that the lessons are directed towards individual interests and practice.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENV STU (ENVSTU)</td>
<td></td>
<td>.14</td>
<td>.06</td>
<td>#.11</td>
</tr>
<tr>
<td>SOCIAL Emphasizes relationships with other students.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENV ADM (ENVADM)</td>
<td></td>
<td>.31</td>
<td>.21</td>
<td>#.85</td>
</tr>
<tr>
<td>SOCIAL Emphasizes relationships with administrative stuff or other units.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENV FAC (ENVFAC)</td>
<td></td>
<td>.42</td>
<td>.30</td>
<td>#.61</td>
</tr>
<tr>
<td>SOCIAL Relationships with lectures, instructors.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Items listed are from the backtranslation from Turkish to English. Items in bold indicate the highest loading for the factor rotation with METU data. The following symbols denote the item membership from the CSEQ norms: †Scholarly & Intellectual Emphasis, ‡Vocational & Practical Emphasis, #Quality of Personal Relations.

As is illustrated in the table, factor loadings approximated those of the normative sample. While items tended to cluster according to the a priori structure, an item inquiring about respecting individual differences (ENV DIV) loaded more highly on the SCHOLAR factor than on the VOC PREP factor. In reverse, a VOC PREP item (ENV PRAC; inquiring about lessons directed toward individual interests and practices) loaded more highly on the SCHOLAR factor. We noticed, however, that for this item, factor loadings were strong on both factors. Finally, an item
inquiring about relationships with other students (ENVSTU) loaded highest with the items loading on the SCHOLAR factor. In this case, however, all of its loadings were quite low; the highest was .14.

**Gains factors.** CFA results for the initial five-factor model fell below psychometrically acceptable levels. Consequently, we used statistical information from the MIs and the EFA (complete EFA findings are listed below) to see if adequate fit might be obtained. Because relaxing constrains will inevitably improve fit, we limited the number and type of additional covariances to balance our competing goals for consistency with *a priori* theory and adequate fit. MIs suggested that allowing correlation between three sets of errors would improve fit. Results from our EFA indicated that allowing individual items to cross-load with multiple factors would improve the fit. As detailed in Table 1, we implemented these changes sequentially, evaluating fit at each step. Our sixth change (M6, illustrated in Figure 2) resulted in a GFI at .90. Acknowledging potentially problematic interpretations of correlated errors and cross-loaded items, we did not pursue additional model fit.

We conducted the EFA of the Gains items using the previously described procedures. With a KMO value of .90, a statistically significant Bartlett’s test (*p* < .001), and an *R*-matrix determinant of .00004, our data was deemed suitable for EFA. We requested a five-factor solution using principal components factoring with a direct oblimin (oblique) rotation. The scree plot for the items of the Gains Factors indicated a two-factor solution; however, five components met the eigenvalue-greater-than-one criteria (accounting for 57% of the variance). The structure matrix is presented in Table 3.
CSEQ Gains Factors
Model 6
Model Specification

Figure 2
<table>
<thead>
<tr>
<th>Items (from the backtranslation)</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>GNVOC Gaining the knowledge and the skills required in a specific profession (professional preparation)</td>
<td>.21</td>
</tr>
<tr>
<td>GNSPEC Gaining the essential knowledge that will form the basis of further education in academic, professional or scientific fields</td>
<td>.21</td>
</tr>
<tr>
<td>GNGENLED Getting general and extensive information about different topics</td>
<td>.38</td>
</tr>
<tr>
<td>GNARTS Enjoying music, art and drama and developing an attitude towards them</td>
<td>.44</td>
</tr>
<tr>
<td>GNHEALTH Developing the habit of health, living and physical dynamism</td>
<td>.44</td>
</tr>
<tr>
<td>GNLIT Developing an interest and familiarity in literature</td>
<td>.31</td>
</tr>
<tr>
<td>GNCAREER Getting information about your career</td>
<td>.27</td>
</tr>
<tr>
<td>GNCOMPTS Learning to use the computer and other information technologies</td>
<td>∗.46</td>
</tr>
<tr>
<td>GNCONSQ Realizing the consequences (gains, losses, dangers) of the new applications in science and technology</td>
<td>.38</td>
</tr>
<tr>
<td>GNAHIST Comprehending the importance of history in understanding the present as well as the past</td>
<td>.22</td>
</tr>
<tr>
<td>GNPHILS Realizing different philosophies, cultures and life styles</td>
<td>.54</td>
</tr>
<tr>
<td>GNVALUES Developing your own ethical standards and values</td>
<td>∗.65</td>
</tr>
<tr>
<td>GNANALY Learning to think analytically and logically</td>
<td>.43</td>
</tr>
<tr>
<td>GNSELF Understanding yourself, your interests, talents and personality</td>
<td>∗.72</td>
</tr>
<tr>
<td>GNWRITE Writing clearly and effectively</td>
<td>∗.50</td>
</tr>
<tr>
<td>GNSPEAK Transmitting the knowledge and ideas effectively while talking with others</td>
<td>∗.59</td>
</tr>
<tr>
<td>GNTECH Understanding the innovations in science and technology</td>
<td>∗.37</td>
</tr>
<tr>
<td>GNTECH Understanding the innovations in science and technology</td>
<td>∗.37</td>
</tr>
<tr>
<td>GNSCI Understanding the essence of Science and Experimentation</td>
<td>.33</td>
</tr>
<tr>
<td>GNANALY Learning to think analytically and logically</td>
<td>.38</td>
</tr>
</tbody>
</table>
The results for the Turkish students roughly approximated those reported in the test manual. Specifically, items for the factors PERSDEV and VOCPREP all loaded on single scales. However, half the items for the INTELSK factor loaded on its own scale; the remaining half loaded with the PERSDEV items. Three of the items for the SCITECH scale loaded on its own scale, its fourth item (GNQUANT; analyzing numerical problems) loaded with the INTELSK scale. Finally, one GENED item (GNGENLED; getting information about your career) had moderate loadings (.31 to .38) across four scales; loading highest with the SCITECH and INTELSK items.

Evaluation of the College Impress Theoretical Model

The CSEQ norms manual provides evidence supporting the college impress theoretical model through a series of blocked hierarchical regressions. With few exceptions, we replicated these analyses with the Turkish sample. Specifically, for each of the five gains factors, we entered the following blocks into the model: (a) student background variables, (b) environmental ratings, and (c) quality of effort scales and activities. We departed from the procedures outlined in the CSEQ norms manual in two ways. First, their second block of variables included institutional characteristics. Because our sample was from one university there was no variability in institutions characteristics, so we excluded it this block. Second, the variable READTEXT in the third regression (gains in general education) was not available in our dataset; consequently, this variable was not included in the block of variables assessing quality of effort in the Gains in General Education analysis.

Our results (see Table 4) were remarkably similar to those reported in the CSEQ norms. In our analyses, each block of variables continued to predict a significant proportion of variance. Final proportions of variance accounted for (i.e., $R^2$) ranged from .31 to .41 in our Turkish sample; this compares to a range of .32 to .45 in the CSEQ norms manual.
Table 4: Blocked Hierarchical Regression of Gains Factors for Turkish and CSEQ Normative Samples

<table>
<thead>
<tr>
<th>Factor/Blocks</th>
<th>Independent Variables</th>
<th>Turkish Sample</th>
<th>CSEQ Norms 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>R</td>
<td>R'</td>
</tr>
<tr>
<td>Gains in Personal Development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student background</td>
<td>Age, grades, residency, sex, class, transfer status</td>
<td>.31</td>
<td>.09</td>
</tr>
<tr>
<td>Institutional characteristic</td>
<td>Carnegie classification, selectivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>ENVPRAc, ENVSTU, OPINSCOR, ENVINFO, ENVVESTH</td>
<td>.44</td>
<td>.20</td>
</tr>
<tr>
<td>Quality of Effort</td>
<td>QECONINF, QEFACTIL, QEPERS, QECOURSE</td>
<td>.56</td>
<td>.31</td>
</tr>
<tr>
<td>Gains in Science &amp; Technology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student background</td>
<td>Age, grades, residency, sex, class, transfer status</td>
<td>.22</td>
<td>.05</td>
</tr>
<tr>
<td>Institutional characteristic</td>
<td>Carnegie classification, selectivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>ENVCRT, ENVINFO, ENVPRAC</td>
<td>.39</td>
<td>.15</td>
</tr>
<tr>
<td>Quality of Effort</td>
<td>QESCI, QECONTPS</td>
<td>.61</td>
<td>.38</td>
</tr>
<tr>
<td>Gains in General Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student background</td>
<td>Age, grades, residency, sex, class, transfer status</td>
<td>.25</td>
<td>.06</td>
</tr>
<tr>
<td>Institutional characteristic</td>
<td>Carnegie classification, selectivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>ENVVESTH, ENDIV, ENVFAC, OPINSCOR</td>
<td>.37</td>
<td>.13</td>
</tr>
<tr>
<td>Quality of Effort</td>
<td>QECONTPS, QEAMT, QELIB, READTEXT, QECONINF, QESCI, QESTACQ</td>
<td>.57</td>
<td>.33</td>
</tr>
<tr>
<td>Gains in Vocational Preparation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student background</td>
<td>Age, grades, residency, sex, class, transfer status</td>
<td>.39</td>
<td>.15</td>
</tr>
<tr>
<td>Institutional characteristic</td>
<td>Carnegie classification, selectivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>ENVPRAc, OPINSCOR, ENVVoC, ENVFAC, ENVCRIT</td>
<td>.58</td>
<td>.33</td>
</tr>
<tr>
<td>Quality of Effort</td>
<td>QECOURSE, QECLI, QECONINF</td>
<td>.63</td>
<td>.39</td>
</tr>
<tr>
<td>Gains in Intellectual Skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student background</td>
<td>Age, grades, residency, sex, class, transfer status</td>
<td>.30</td>
<td>.09</td>
</tr>
<tr>
<td>Institutional characteristic</td>
<td>Carnegie classification, selectivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>ENVINFO, ENVCRIT, OPINSCOR, ENVFAC, ENVPRAc</td>
<td>.53</td>
<td>.28</td>
</tr>
<tr>
<td>Quality of Effort</td>
<td>QECOURSE, QECONINF, QUEWRITE, QECOMPUT</td>
<td>.64</td>
<td>.41</td>
</tr>
</tbody>
</table>

Note. 1Given that only one institution was assessed in the Turkish sample, there was no block of Institutional Characteristics. 2This variable was not identified in the Turkish administration. 3The values in the CSEQ norms column were obtained from the test manual (Gonyea et al., 2003) and reprinted with permission from the authors.
Comparison of Turkish Students with CSEQ Norms

Twenty-six one-sample $t$ tests evaluated whether the mean scale score for the Turkish sample was significantly different from the mean score of the doctoral extensive sample in the CSEQ norms. Because of the large sample sizes, we were not surprised when 23 of the 26 comparisons were less than .001. To guide meaningful interpretation of results, we reported the 95% confidence interval of the mean difference scores and the $d$ statistic as a measure of effect. Absolute values of .2, .5, and .8 are interpreted as small, medium, and large. Results are presented in Table 5. Items denoted with † have moderate differences between samples; items denoted with ‡ have large differences.

Unlike the CSEQ norms, we reported the means, standard deviations, and results of the one-sample $t$ tests in terms of the relative scale score rather than the raw scores. We do this for two reasons. First, knowing the value of the scaled score (ranging from 1 to 4 for the Quality of Effort and Estimated Gains scales and from 1 to 7 for the University Environment scales) assists in interpretability. Second, two items (one item from the QE Library Experiences scale and one item from the Clubs and Organizations scale) were inadvertently left off of the instrument. By dividing the CSEQ norms means and standard deviations by their respective number of items (and doing the same for the METU CSEQ administration) we were able to compare the relative scale score.

Table 5: Results of One-sample $t$ tests comparing METU and CSEQ Normative Samples

<table>
<thead>
<tr>
<th>Scale or Factor</th>
<th>Turkish sample</th>
<th>CSEQ Norms*</th>
<th>One-sample $t$ test Results</th>
<th>95% CI of the Difference of Means</th>
<th>$d$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality of Effort Scales (4 = Very often, 1 = Never)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library Experiences*</td>
<td>.71</td>
<td>2.98</td>
<td>.52</td>
<td>.80</td>
<td>2.09</td>
</tr>
<tr>
<td>Computer and IT</td>
<td>.85</td>
<td>2.62</td>
<td>.61</td>
<td>.78</td>
<td>2.60</td>
</tr>
<tr>
<td>Course</td>
<td>.81</td>
<td>2.47</td>
<td>.51</td>
<td>.83</td>
<td>2.93</td>
</tr>
<tr>
<td>Writing Experiences</td>
<td>.73</td>
<td>2.74</td>
<td>.53</td>
<td>.78</td>
<td>2.57</td>
</tr>
<tr>
<td>Library Experiences with Faculty</td>
<td>.78</td>
<td>3.19</td>
<td>.58</td>
<td>.88</td>
<td>2.09</td>
</tr>
<tr>
<td>Art, Music, Theater</td>
<td>.84</td>
<td>2.76</td>
<td>.59</td>
<td>.86</td>
<td>2.20</td>
</tr>
<tr>
<td>Campus Facilities</td>
<td>.69</td>
<td>2.87</td>
<td>.59</td>
<td>.74</td>
<td>2.24</td>
</tr>
<tr>
<td>Clubs and Organizations*</td>
<td>.83</td>
<td>3.31</td>
<td>.73</td>
<td>.83</td>
<td>1.88</td>
</tr>
<tr>
<td>Personal Experiences</td>
<td>.71</td>
<td>2.68</td>
<td>.54</td>
<td>.84</td>
<td>2.50</td>
</tr>
<tr>
<td>Student</td>
<td>.68</td>
<td>2.88</td>
<td>.53</td>
<td>.91</td>
<td>2.72</td>
</tr>
<tr>
<td>Acquaintances Science and Quantitative Experiences</td>
<td>.81</td>
<td>2.91</td>
<td>.56</td>
<td>.92</td>
<td>2.29</td>
</tr>
<tr>
<td>Topics of Conversation</td>
<td>.72</td>
<td>2.41</td>
<td>.50</td>
<td>.87</td>
<td>2.51</td>
</tr>
<tr>
<td>Information in Conversations</td>
<td>.66</td>
<td>2.58</td>
<td>.41</td>
<td>.86</td>
<td>2.59</td>
</tr>
</tbody>
</table>

| Environmental Factors (7 = strong emphasis, 1 = weak emphasis) | | | | | |
| Scholarly | .80 | 4.88 | 1.31 | .75 | 5.33 | 1.04 | -9.41 | 765 | .000 | -.45 | -.54 | -.35 | -.43 |
| Personal Relations | .45 | 4.35 | 1.14 | .70 | 5.11 | 1.15 | -13.74 | 766 | .000 | -.57 | -.65 | -.49 | -.49‡ |
| Practical Factor | .70 | 4.76 | 1.11 | .75 | 4.92 | 1.13 | -8.75 | 765 | .000 | -.35 | -.43 | -.27 | -.31 |
### Personal Development and Technology

<table>
<thead>
<tr>
<th>Scale</th>
<th>Coefficients</th>
<th>Mean Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science and Technology</td>
<td>.77 2.06 .63</td>
<td>.83 3.52 .77</td>
</tr>
<tr>
<td></td>
<td>-.63.23</td>
<td>.755 .000</td>
</tr>
<tr>
<td></td>
<td>-.146 -1.50</td>
<td>-1.41</td>
</tr>
<tr>
<td></td>
<td>-1.89†</td>
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### General Education

<table>
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<tr>
<th>Scale</th>
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<th>Mean Differences</th>
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<tbody>
<tr>
<td></td>
<td>.75 2.62 .64</td>
<td>.81 2.45 .68</td>
</tr>
<tr>
<td></td>
<td>.717</td>
<td>.758 .000</td>
</tr>
<tr>
<td></td>
<td>.17 .12 .21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.25</td>
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### Vocational Preparation

<table>
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<tr>
<th>Scale</th>
<th>Coefficients</th>
<th>Mean Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.78 2.34 .74</td>
<td>.78 2.79 .73</td>
</tr>
<tr>
<td></td>
<td>-.16.70</td>
<td>.757 .000</td>
</tr>
<tr>
<td></td>
<td>-.45 -.50</td>
<td>-.39</td>
</tr>
<tr>
<td></td>
<td>-.61†</td>
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</tr>
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</table>

### Intellectual Skills

<table>
<thead>
<tr>
<th>Scale</th>
<th>Coefficients</th>
<th>Mean Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.78 2.16 .57</td>
<td>.81 2.53 .53</td>
</tr>
<tr>
<td></td>
<td>-.17.64</td>
<td>.756 .000</td>
</tr>
<tr>
<td></td>
<td>-.37 -.41</td>
<td>-.32</td>
</tr>
<tr>
<td></td>
<td>-.69†</td>
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</table>

### Additional Indices

<table>
<thead>
<tr>
<th>Scale</th>
<th>Coefficients</th>
<th>Mean Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.86 2.13 .53</td>
<td>.34 .55</td>
</tr>
<tr>
<td></td>
<td>-.40.34</td>
<td>.756 .000</td>
</tr>
<tr>
<td></td>
<td>-.78 -.81</td>
<td>-.74</td>
</tr>
<tr>
<td></td>
<td>-1.41‡</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scale</th>
<th>Coefficients</th>
<th>Mean Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.74 2.53 .51</td>
<td>2.73 .56</td>
</tr>
<tr>
<td></td>
<td>-.10.96</td>
<td>.766 .000</td>
</tr>
<tr>
<td></td>
<td>-.20 -.24</td>
<td>-.17</td>
</tr>
<tr>
<td></td>
<td>-.36</td>
<td></td>
</tr>
</tbody>
</table>

### Experiences with Diversity*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Coefficients</th>
<th>Mean Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.65 2.67 .46</td>
<td>2.69 .61</td>
</tr>
<tr>
<td></td>
<td>-.12.4</td>
<td>.756 .216</td>
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<tr>
<td></td>
<td>-.02 -.05</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>-.03</td>
<td></td>
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</tbody>
</table>

### Student-Faculty Interaction Good Practices

<table>
<thead>
<tr>
<th>Scale</th>
<th>Coefficients</th>
<th>Mean Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.80 3.26 .52</td>
<td>2.02 .56</td>
</tr>
<tr>
<td></td>
<td>66.47</td>
<td>.767 .000</td>
</tr>
<tr>
<td></td>
<td>1.24 1.20</td>
<td>1.27</td>
</tr>
<tr>
<td></td>
<td>2.21‡</td>
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### Additional Indices

<table>
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<th>Scale</th>
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<th>Mean Differences</th>
</tr>
</thead>
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<td></td>
<td>.82 1.42 .35</td>
<td>2.50 .45</td>
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<tr>
<td></td>
<td>-.84.02</td>
<td>.756 .000</td>
</tr>
<tr>
<td></td>
<td>-.108 -1.10</td>
<td>-1.05</td>
</tr>
<tr>
<td></td>
<td>-2.39‡</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** *Indicates that the scale used at METU had one item less than the CSEQ. †denotes a moderate level of difference; ‡ a large difference. The values in the CSEQ norms column were obtained from the test manual (Gonyea et al., 2003) and reprinted with permission from the authors. No values were available for the Additional Indices.

### DISCUSSION

Field testing the CSEQ in Turkey provided strong support for the instrument’s psychometric properties and the college impress theoretical model. Additionally, cross-cultural comparative data provided information about similarities and differences between Turkish and American students. Given the translation/back translation procedure as well as the difference in nationality and culture, the stability of the instrument and the theory is impressive. In many cases the alpha coefficients met (and some exceeded) those of the normative sample and the factor structure of the Environment and Gains factors from the Turkish students approximated those reported in the test manual. Moreover, the strength of proportion of variance in student gains (predicted by student background variables, perceptions of the university environment, and quality of effort) was strong. One explanation is that the participants were from a highly ranked large urban university whose educational standards are similar to those in American universities and the medium of instruction is English. Similarly, in this Turkish sample where individualistic and collectivist values coexist, the lifestyle and values of METU...
students appears to be more close to individualism, and thus, to the Western cultures (Karakitapoğlu-Aygün & İmamoğlu, 2002) where the CSEQ was developed. Consequently, the psychometric similarities might not be replicated with student samples from universities in different regions of Turkey where have educational standards and practices may be less Western in orientation.

Among the Quality of Effort scales, students in the Turkish sample reported higher levels (effect sizes were large) of engagement and involvement in with the library, faculty, campus facilities, and clubs and organizations. They reported lower levels of engagement in course learning. The higher engagement of students with campus facilities, clubs and organizations could be explained by the nation wide university entrance exam and facilities at METU. A competitive nation wide university exam held in Turkey requires intensive, long term preparation and usually does not leave room for high school students to participate in leisure activities. We could speculate that students who pass the entrance exam and become a student at METU, a university with its modern campus equipped with fitness facilities, cultural activities, and student clubs that provide plenty of opportunities for students, may have higher levels of in involvement with campus facilities and activities.

In terms of Gains Estimates, the Turkish students reported significantly lower gains in personal development. This finding is in an expected direction because the Turkish education system puts more emphasis on intellectual development rather than holistic student development. Regarding the objectives of Turkish primary and secondary education, Öner (1994) noted that school learning and achievement are two major objectives of formal learning in Turkey. Personal and social development of students are not emphasized and are expected to develop naturally when the academic achievement is attained. In a similar vein, Demir and Aydın (1997) stated that no matter how strongly the aim of whole student development is promoted through laws and regulations, the Turkish higher education system continues to emphasize intellectual development over and above other developmental domains.

Finally, among the Additional Indices, the sample of Turkish students had lower scores in active learning and in developing a capacity for life-long learning; higher scores were evidenced in student-faculty interactions. The finding regarding student engagement, active learning, and life-long learning may result from the dominant paradigm of the Turkish educational system which focuses on what students know rather than how they use that knowledge. This encourages the use of deductive approaches such as lecturing and recitation in autocratic classrooms. Faculty provide little opportunity, if any, for developing essential participatory skills, such as problem-solving, critical and creative thinking, and cooperation (Önür & Engin, 1996). Another contributing factor might be specific to METU. English is the language of instruction at METU. As the findings of a previous study has indicated (Gizir, 1998) METU students seem to experience difficulties in learning and actively participating to class due to the English-language medium.

LIMITATIONS

A primary limitation of this field test was that the test was conducted at METU, an English-medium university that was founded and organized around American educational practices. There is always a tradeoff between internal and external validity. In this case, we believe that our narrow and selective sampling strategy provided some statistical leverage (e.g., increased homogeneity within the sample) to provide strong support for the instrument and the theoretical model. Because of such strong research evidence, researchers are now better positioned to sample and test the instrument and its theoretical model in a sample that is more representative of higher education in the country at large.

While the psychometric properties seemed reasonable, future researchers may consider two research strategies. If cross-cultural comparison is the research goal, CSEQ researchers may re-examine, amend, and re-test the Gains items where factor loadings contradicted the a priori structure. This line of research, however, assumes that the dimensionality of Gains is stable across cultures. Alternatively, if the goal is to use the CSEQ to better understand the college experience of Turkish students and researchers are confident that the Turkish translation is adequate, researchers may investigate an alternative factor structure.
To conclude, findings of this study provide valuable information about college experiences of Turkish students compared with norms developed in a Western country.

REFERENCES


THE ROLE OF EDUCATION IN THE SOCIETAL DEVELOPMENT

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Abstract
The aim of this study is to explain the role of education on social development and progress, individual development and progress and to explain the dynamic relationships among these concepts. Education is not only an institution but also a procedure taken place in society. If these concepts are ordered in terms of their functions, the society is aim, and the education is an avoidable tool to make this aim come true. Development and improvement are based on socio economic decisions of the politicians to improve the welfare of individuals. At the present day, development and improvement, not only on people's material needs, the development of their social conditions, is related to the realization of their hopes. In developed countries, the knowledge generated through research and education, used not only to realization social and economic objectives, as well as the use of the realization the individual's personal development is observed.

To understand the relationship between education and society in a healthy way and to explain the highly dynamic structure of education is not a routine process that affects every level of society as an social institution, political authority needs to be imposed that to build a prosperous society that education and knowledge are provision.

Key Words: Education, Society, Social, relationship between Education and Society, Social Development, Functions of Education.

INTRODUCTION

Human beings are to educate and to be educated. The primary aim of education is to sustain individual and societal improvement. This process contains both tangible and moral dimensions. Educational programs and policies play a pivotal role in these social and individual progress. Social progress clearly indicates a general development in the community in terms of economic, social and cultural aspects. In sociological terminology, social development is used for a concept displaying all positive developments in the social construct. To put it differently, this is to state a society which is considered to be progressing and changing from a fairly less decent situation to a favorably better conditions with respect to economic, social and political issues. The main difference between the living and the non-living is that the former always renews itself. One of the mechanisms which provides and maintain this renewal is education. Thus, the comprehension and explanation of the role of education in this social development is of paramount importance so as to understand the previously stated progress and change.

EDUCATION AND SOCIETY

Societal and natural conditions determine the role and the function of education. Within the relationship between education and society, the most salient feature of education is its communal side. The social context is imperative for education to function well. Society and education complete each other. Society cannot carry on without education and vice versa. Education affects not only the person being educated but also the whole community by starting from his/her family. In other words, raising sufficient number of efficient people for more prosperous society is the duty of education and educational institutions which have certain functions in the community. Each educational institution establishes relationships throughout mutual interactions.
Education, as a phenomenon, is both a social foundation and a process occurring in the society. If established a prior and hierarchical sequence, society can be regarded as the objective and the education can be considered as the indispensible means of this objective. In this respect, to research into the functional relationship between education and society and its other institutions is of great importance for community development.

COMMUNITY DEVELOPMENT AND CHANGE

Development and progress are to change the structure of a community by following the socio-economic policies in order to improve the prosperity levels of individuals. From this perspective, development is both an economic and an educational process. Social development is to satisfy substantial and moral needs in a balanced and humanistic fashion. Furthermore, social development is a concept indicating the increasing level of communities in terms of knowledge, mentality and life.

Development and progress also means a constituent which emerges and develops on its own. Development in every field within the social structure is a part of a general community development and change and is closely related with other institutional structures in the community. Development and change does not merely indicate either a substantial or economic development and change. Accordingly, development and change today is a situation related to the improvement of social conditions and expectations.

COMMUNITY DEVELOPMENT AND EDUCATION

Community development is an overall development. In this respect, educational system and economy are two closely related social institutions. Schools as an important component of educational system provide instruction and personality formation which enables economic progress and community development. Community development and change is particularly related to the education and instruction that social problems are identified and citizens are informed about these matters in a democratic way.

Educational facilities are important due to two reasons: First, it is to prevent people from falling behind changing social and economic conditions. Second, it is to develop and change the community by restraining these conditions. The main duty of institutions in almost every community is to sustain the existence and maintenance by regulating the relations. While determining the educational objectives, it is crucial to pay attention to individual and socio-cultural aspects and to take social efficiency criteria into consideration.

The coordination of all actions having already been proceeded or to be proceeded are imperative for development. To actualize community development, it is necessary to organize shared educational activities in order to familiarize the society with working in groups. In this respect, the importance of educational institutions should not be disregarded.

It does not seem to be possible to become successful for a community producing projects contributing community development and change without knowing the relational and value system of the community and the groups. In cases where socio-cultural elements are neglected in development and change, the failure will be inevitable. For instance, prior to initiating an action for development in a lazy and impassive social structure, it is somewhat essential to infuse the instinct of promise into the members of this society. As stated by Frank Tyger (1929-2011), development cannot be provided with self-satisfied people. Development and change start with awakening the sense of capability. Undoubtedly, in this process, composing and infusing this sense and coordinating every detail will be the most important role of educational institutions.

Community development is human development, as well. The pattern of human qualifications are attributed firmly in action plans and programs of developed and developing countries in the world. From a sociological perspective, it is assumed that there is a great relationship between educational policies and social expectations and ideals. If the idea that a community cannot improve its well-fare degree without raising its mental level is a sociological fact, in accordance with this fact, mental improvement should be directed from
traditional and local ideas toward a modern fashion. The only way to accomplish this fact is education. As revealed by Paul Valery (1871-1945), today’s problem is that future is not as it is before. This implies that it is crucial to establish an educational system which does not stay opposed to the spirit of today in order to have a voice in such a future that will never become as it is before. Otherwise, generations that never contribute to the community development despite having a continuous education will be inevitably raised.

In determining the status of communities across the world, knowledge is a significant criterion. Knowledge is a mental product of mind operations and is obtained via observation, research, education and instruction. In this vein, knowledge comprises of exploring new rules or discovering and presenting old rules again based on research. Education has an economic value as it proposes a certain approach to cognitive problems. Knowledge is not a product or a process that is acquired on one’s own. To illustrate, the concept of community beyond industry means that a community is to be better than other communities in terms of following points:

a. Handling the humanistic, social and global foundations by adopting a pedagogic and systematic approach.

b. Investing a lot upon scientific research.

c. Organizing and using the produced knowledge to actualize the communal objectives.

Undoubtedly, knowledge and education are important and inevitable aspects to proceed a further phase.

Communities that desire to develop, change and become an information society should invest more on education because they cannot survive and develop during long years with present knowledge. Moreover, producing knowledge is not enough to become a developed country. In doing so, it is vital to utilize the produced knowledge to reach at political, social and economic objectives. Produced knowledge should not be left on the shelf, yet it is to be used to actualize the social objectives. At that time, it will be possible to get over long way towards community development and change. Communities that want to develop and change should produce new knowledge and follow novelties continuously. The mere power which will endure this continuity is, of course, education.

RESULT

Education involves all experiences that an individual acquires inside or outside the school. In this respect, education is a quite significant process generating the basic foundations of socio-economic development. It is not sufficient to evaluate the value of education in terms of vocational knowledge and skill. The economic value of education relies upon attitudes, values, social and communicative skills rather than productive norms and technical knowledge. No matter whether it is national or local, any project regarding social development is to be considered within the framework of social relationships.

Resource budgeted for education is not an expenditure but a crucial and profitable investment. All developed countries in today’s world try their best to attract well-qualified labour force. Undoubtedly, carrying societal development provided with education to a more advanced level is possible by creating an attraction center for educated people.

Definitely, education does not contribute to economic development and productivity. The most important contribution of education is not only to upgrade the living standards of citizens but also to enable them to become better citizens. In addition to being a human right, education today is a prerequisite for development and also an effective means for both taking knowledge-based decisions and improving democracy. Education improves and strengthens developmental capacities of individuals, communities, groups, institutions, and countries. However, as Roosevelt’s saying ‘trying to educate a person mentally without educating morally is to bring a menace into the society’ indicated, this is possible via educating people to become supporters of each other but not enemies at all. In this vein, education can create a safer, healthier and more prosperous world and enhance the living standards by changing the visions and perspectives of individuals.
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**REFERENCES**


STUDENTS' ATTITUDES AND PERFORMANCE ON PORTFOLIOS

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Abstract
Formally and informally, for individuals and for groups of students, teachers continually assess their students’ progress and achievements. Teachers report accomplishment to the students, their parents and the school system by means of grades and comments written on assignments, conversations, classroom discussions, parent-teacher conferences and casual chats, and report cards. Testing is no longer considered as an adequate measure of students’ learning nor a sufficient reason for students to invest effort in schoolwork. New methods of assessment that provide multidimensional and longitudinal portraits of students’ strengths and weaknesses are required to provide developmental benchmarks of learning. One such alternative method capable of bridging quantitative and qualitative data is portfolio assessment as one of its benefits is the promotion of learner reflection. Accordingly, this study aims to inspect what teachers think about their students’ attitudes and performance on portfolios and portfolio tasks.

Key Words: Alternative assessment, portfolio assessment, performance assessment.

INTRODUCTION
Globalization, rapid technological developments and the rate of growth in knowledge call for better curriculum, assessment, and pedagogical decisions and practices. Lawton (1998) has indicated that a curriculum for the twenty-first century requires a shift from content and objectives to skills and processes. Other features of this curriculum include a focus on the creation of new knowledge, an emphasis on the interdependence of knowledge areas and on the relevance of school knowledge to everyday problems.

Evaluation in such programmes that are designed for learners include assessments that attend to individual needs as well as their accomplishments. Standardized tests, which are often norm-referenced, multiple-choice and machine-scorable instruments, cannot on their own tell teachers much about how learners are acquiring academic contents. These instruments may generate faulty results (Barootchi & Keshavarz, 2002).

Testing is no longer an adequate measure of students’ learning nor a sufficient reason for students to invest effort in schoolwork. New methods of assessment that provide multidimensional and longitudinal portraits of students’ strengths and weaknesses are required to provide developmental benchmarks of learning. These new forms of assessment provide longitudinal evidence and personal stories of individuals’ learning and development, not just snapshots of test scores, grades and comments on report cards. (Paris & Ayres, 1994).

The multiple measures that teachers take across time such as tests and assignments, observations of progress as students work individually and collectively at different tasks and in different settings, provide detailed evidence for judgments of achievement. This strong evidentiary base can yield more valid inferences of student achievement than standardized tests yield. Understanding terms, principles, and options is important for teachers and for the measurement professionals whose work should support them. Teachers are increasingly expected to develop new assessment methods and to select assessment materials skillfully. (Mabry, 1999)

Assessment has an impact on everything and everyone in the educational system. A change can have an outsized impact because of the interconnectedness of educational entities and ideas (Mabry, 1999). In an educational context, assessment has become the engine and the odometer of reform. Increasingly, assessment...
is being used not only to monitor student achievement but also to evaluate the competence of educators and the quality of educational systems. Education is dynamic and ongoing, so our thinking about measurement should not be static. Assessment paradigms and practices should not be rigid.

Whether the implications are good or bad, assessment remains an integral part of both the teacher and student experience in the classroom. Good assessment and evaluation practices can help to expose effective from ineffective teaching and sufficient from insufficient curricula. (Van Duinen, 2005) Assessment has been largely influenced by various paradigms and school of thoughts. It has also been shaped by sociopolitical pressures in the school culture. This is especially true in the elementary and secondary school environments where interacting events are intricately related and often unpredictable (Suleiman and Moore, 1998). The search for alternatives to traditional types of assessment that primarily rely on pencil and paper tests has generated several innovative approaches to assessment having names like performance assessment, alternative assessment and authentic assessment (Hart, 1994). Similar, as noted by Garcia and Pearson (1994), a wide variety of terms, including performance assessment, alternative assessment, authentic assessment, portfolio assessment, and dynamic assessment, have been used by educators to label assessment methods not associated with formal standardised testing.

Moreover, alternative assessment can be referred to as a non-traditional assessment type with forms of performance observation and portfolios that outline a detailed picture of student performance in line with curricular goals (Erice, 2009). Proponents of alternative assessment argue that it integrates classroom instruction and evaluation procedures (Shepard et al., 1996), provides evaluation techniques that are relevant to students (Travis, 1996), encourages students to take responsibility for their own work (Maeroff, 1991) and results in an ongoing, holistic picture of student performance (Shepard et al., 1996).

The perspectives of teacher knowledge and its effects on the instructional practices are imperative if changes in assessment programs are to reflect changes in instruction as well (Allington, 1994). Thus, for educators, the question is more of whether alternative assessment programs can be successfully implemented within current systems of curricular and instructional goals. (Culbertson and Yan, 2003) On the other side, the use of portfolios for learning and assessment is becoming internationally popular (Klenowski, 2003). A portfolio of work can be used for development and assessment of subject knowledge, acquisition of teaching skills and reflective practice, professional and vocational preparation and employment.

In recent years there has been a virtual explosion of interest in portfolios. Boyle (1994) sums up the appeal of this assessment approach: The portfolio, as an element of authentic assessment, has captured the interest of many instructors who want a more comprehensive way to assess their students’ knowledge and skills, to have students actively participate in the evaluation process, and to simultaneously develop students’ skills of reflective thinking. These latter features make portfolios an attractive alternative to summative testing.

Portfolios are rich, contextual, highly personalized documentaries of one’s learning journey. They contain purposefully organized documentation that clearly demonstrates specific knowledge, skills, dispositions and accomplishments achieved over time. Portfolios represent connections made between actions and beliefs, thinking and doing, and evidence and criteria. They are a medium for reflection through which the builder constructs meaning, makes the learning process transparent and learning visible, crystallizes insights, and anticipates future direction (Jones and Shelton, 2006). In this respect, this study aims to provide information about the attitudes and performances of the students on portfolio tasks.

After designing a new program for primary schools in 2005, the Constructivist Approach was taken into consideration. Among many of them, a prominent change in the new curricula was the approach taken towards the assessment of learning. More emphasis was given to process evaluation rather than product evaluation. Also, instead of using just tests and exams, such tools as portfolios, projects, group works were used in assessment of student’s learning. Accordingly, portfolios represent both an expression of Constructivist learning and a vehicle for Constructivist practice. The process learners experience in developing portfolios, and the products that result, allow them to show their cognitive, social and affective skills. In a way, portfolios are mirrors of their builders.
METHOD

The study was conducted with the primary school teachers in Sereflikoçhisar. Sereflikochisar is a rural district of Ankara, which is 148 kilometers away. This district was selected using convenience sampling. The reason for utilizing convenience sampling was that the researcher working in this district. Şereflikoçhisar is one of the obligatory service districts of Ankara for teachers. The circulation of teachers is very high, since most teachers work for short periods and try to move to other cities. Of the 24 primary schools of the district, 23 of them are public, one of them is private. There are 245 teachers working in these schools according to the data provided by the National Education Directorate of Şereflikoçhisar.

The instrument was adapted from a questionnaire which was developed by Brian M. Stecher, Acting Director of RAND Corporation in the USA and conducted to evaluate the Vermont portfolio assessment program in 1992 and 1993. Upon the permission of Brian Stecher, the questionnaire was examined and revised. The data, which were collected through the questionnaires, were analysed by means of descriptive statistics. The Likert scale type questions were analyzed by using frequencies and percentages using SPSS.

FINDINGS

The research question was “What do teachers think about students' attitudes and performance on portfolios and portfolio tasks?” In order to answer this research question; firstly, questions about students’ portfolio performances were asked and then a final question which compares student performance and teacher expectations was implemented. In order to depict the reactions of students to the portfolios and portfolio tasks, firstly the students were divided into three groups as low achieving, average achieving and high achieving, following this, participants were questioned accordingly. Table 1 shows the reactions of low achieving students.

Table 1: Reactions of low achieving students to the portfolios and portfolio tasks

<table>
<thead>
<tr>
<th></th>
<th>Almost None (f - %)</th>
<th>A Few (f - %)</th>
<th>About One Half (f - %)</th>
<th>Most (f - %)</th>
<th>Almost All (f - %)</th>
<th>Total (f - %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoy doing portfolio tasks more than regular activities</td>
<td>10</td>
<td>6.5</td>
<td>39</td>
<td>65</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>20.8</td>
<td>25.3</td>
<td>42.2</td>
<td>5.2</td>
<td>154</td>
</tr>
<tr>
<td>Like the portfolios better than regular assignments</td>
<td>12</td>
<td>7.8</td>
<td>40</td>
<td>34.4</td>
<td>8</td>
<td>154</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>26</td>
<td>26.6</td>
<td>34.4</td>
<td>5.2</td>
<td>100</td>
</tr>
<tr>
<td>Learn more owing to the portfolios</td>
<td>7</td>
<td>4.5</td>
<td>42</td>
<td>41</td>
<td>5</td>
<td>154</td>
</tr>
<tr>
<td></td>
<td>59</td>
<td>38.3</td>
<td>27.3</td>
<td>36.7</td>
<td>3.2</td>
<td>100</td>
</tr>
<tr>
<td>Find portfolio tasks easier than traditional assignments</td>
<td>15</td>
<td>9.7</td>
<td>49</td>
<td>28</td>
<td>4</td>
<td>154</td>
</tr>
<tr>
<td></td>
<td>58</td>
<td>37.7</td>
<td>27.3</td>
<td>36.7</td>
<td>2.6</td>
<td>100</td>
</tr>
<tr>
<td>Portfolio tasks do not reflect his/her ability</td>
<td>8</td>
<td>11.9</td>
<td>49</td>
<td>30</td>
<td>-</td>
<td>151</td>
</tr>
<tr>
<td></td>
<td>54</td>
<td>35.8</td>
<td>32.5</td>
<td>19.9</td>
<td>-</td>
<td>100</td>
</tr>
</tbody>
</table>

The participants were requested to give their opinions about students’ portfolio related performances with the frame of five sentences. Participants believed that most of the low achieving students enjoyed doing portfolio tasks more than regular activities with 42.2 % (f = 65). Next, it was slightly agreed that most students liked the portfolios better than regular assignments with the percentage of 34.4 % (f = 53). However, 38.3 % (f = 59) accepted that a few of the low achieving students learned more owing to the portfolios. Similarly, 37.7 % (f = 58) affirmed that a few of the low achieving students found portfolio tasks easier than traditional assignments. Finally, 35.8 % (f = 54) thought portfolio tasks did not reflect their abilities. Next, reactions of the average achieving students were explained as in Table 2.
Table 2: Reactions of average achieving students to the portfolios and portfolio tasks

<table>
<thead>
<tr>
<th>Statement</th>
<th>Almost None (f - %)</th>
<th>A Few (f - %)</th>
<th>About One Half (f - %)</th>
<th>Most (f - %)</th>
<th>Almost All (f - %)</th>
<th>Total (f - %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoy doing portfolio tasks more than regular activities</td>
<td>-</td>
<td>15</td>
<td>51</td>
<td>77</td>
<td>7</td>
<td>150</td>
</tr>
<tr>
<td>Like the portfolios better than regular assignments</td>
<td>-</td>
<td>10</td>
<td>34</td>
<td>51.3</td>
<td>4.7</td>
<td>100</td>
</tr>
<tr>
<td>Learn more owing to the portfolios</td>
<td>2</td>
<td>19</td>
<td>55</td>
<td>65</td>
<td>9</td>
<td>150</td>
</tr>
<tr>
<td>Find portfolio tasks easier than traditional assignments</td>
<td>3.4</td>
<td>12.8</td>
<td>36.7</td>
<td>43.3</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Portfolio tasks do not reflect his/her ability</td>
<td>6</td>
<td>34.7</td>
<td>37.4</td>
<td>21.1</td>
<td>2.7</td>
<td>100</td>
</tr>
</tbody>
</table>

Regarding average achieving students, more than half of the participants believed that most of the average achieving students enjoyed doing portfolio tasks more than regular activities with 51.3 % (f = 77). Nearly half of the participants affirmed that most students liked the portfolios better than regular assignments with the percentage of 49 (f = 73). Following this, 43.3 % (f = 65) of participants stated that most average achieving students learned more owing to the portfolios. Furthermore, 41.1 % (f = 62) thought most of the average achieving students found portfolio tasks easier than traditional assignments. Lastly, 37.4 % (f = 55) declared portfolio tasks did not reflect nearly half of the students’ abilities. Finally, reactions of high achieving students were presented as in Table 3.

Table 3: Reactions of high achieving students to the portfolios and portfolio tasks

<table>
<thead>
<tr>
<th>Statement</th>
<th>Almost None (f - %)</th>
<th>A Few (f - %)</th>
<th>About One Half (f - %)</th>
<th>Most (f - %)</th>
<th>Almost All (f - %)</th>
<th>Total (f - %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoy doing portfolio tasks more than regular activities</td>
<td>4</td>
<td>7</td>
<td>29</td>
<td>72</td>
<td>38</td>
<td>150</td>
</tr>
<tr>
<td>Like the portfolios better than regular assignments</td>
<td>2.7</td>
<td>4.7</td>
<td>19.3</td>
<td>48</td>
<td>25.3</td>
<td>100</td>
</tr>
<tr>
<td>Learn more owing to the portfolios</td>
<td>3</td>
<td>13</td>
<td>32</td>
<td>66</td>
<td>35</td>
<td>149</td>
</tr>
<tr>
<td>Find portfolio tasks easier than traditional assignments</td>
<td>3.7</td>
<td>10.1</td>
<td>26.2</td>
<td>42.3</td>
<td>18.8</td>
<td>100</td>
</tr>
<tr>
<td>Portfolio tasks do not reflect his/her ability</td>
<td>11</td>
<td>54</td>
<td>39</td>
<td>31</td>
<td>12</td>
<td>147</td>
</tr>
</tbody>
</table>

Dealing with the case of high achieving students, 48 % (f = 72) thought most of the high achieving students enjoyed doing portfolio tasks more than regular activities. In addition, 50 % (f = 75) assured most high achieving students liked the portfolios better than regular assignments. In accordance with the first two items, 44.3 % (f = 66) confirmed most high achieving students learned more owing to the portfolios. Additionally, 42.3 % (f = 63) believed most of the high achieving students found portfolio tasks easier than traditional assignments. In
conclusion, 36.7 % (f = 54) pointed out portfolio tasks did not reflect a few of the high achieving students’ ability.

For the last question, participants were inquired to share their opinions about the contribution of portfolios to the learning processes of students which was illustrated in Table 4.

Table 4: The contribution of portfolios to the learning process of students

<table>
<thead>
<tr>
<th></th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>much less</td>
<td>8</td>
<td>5.2</td>
</tr>
<tr>
<td>Less</td>
<td>35</td>
<td>22.7</td>
</tr>
<tr>
<td>neither less nor more</td>
<td>65</td>
<td>42.2</td>
</tr>
<tr>
<td>More</td>
<td>42</td>
<td>27.3</td>
</tr>
<tr>
<td>much more</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td>100</td>
</tr>
</tbody>
</table>

While comparing their expectations with the actual contribution of portfolios to the learning process of students, 27.9 % (f = 43) of the participants thought that this contribution was less than they expected; on the contrary, 29.9 % (f = 46) concluded the improvement caused by portfolio process was more than they imagined. However, 42.2 % (f = 65) believed nothing much changed.

FINDINGS AND CONCLUSION

The questionnaire was about the opinions about students’ attitudes and performance on portfolios and portfolio tasks. Teachers explained students are generally better on portfolio tasks and discussed reactions of students to the portfolios and portfolio tasks. They described that low achieving students enjoyed doing portfolio tasks more than regular activities, liked the portfolios better than regular assignments; however, they do not learn more owing to the portfolios, they do not find portfolio tasks easier than traditional assignments and teachers believed portfolio tasks did not reflect their ability. According to the teachers, average achieving students also enjoyed doing portfolio tasks more than regular activities, liked the portfolios better than regular assignments, learned more owing to the portfolios and found portfolio tasks easier than traditional assignments; however, they believed portfolio tasks did not reflect their ability. For the next part, teachers revealed high achieving students enjoyed doing portfolio tasks more than regular activities, liked the portfolios better than regular assignments, learned more owing to the portfolios and found portfolio tasks easier than traditional assignments; and they stated portfolio tasks did not reflect their ability. Finally, the teachers concluded the portfolios did not contribute much to the learning process of the students.

As for the implications of portfolios on students, all students no matter they are low, average or high achieving like portfolio activities more than traditional assignments. This shows that portfolios appeal to students. While average and high achievers learn more due to the portfolios, low achievers do not learn more. More important than that, teachers believe portfolios do not contribute much to the learning process of students. Therefore, teachers need to reorganize portfolio activities according to the needs of all students, especially low achievers.

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REFERENCES


THE EFFECT OF FOCUSED WRITTEN CORRECTIVE FEEDBACK OF CONTRASTIVE ANALYSIS ON EFL LEARNERS’ ACQUISITION OF VERB TENSES

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Abstract
The aim of this study is to explore the effect of the written corrective feedback with the focus on teaching Contrastive Analysis helps and magnifies the effects of the corrective feedback on the acquisition of verb tenses (the focus of this research is on the perfect tenses, including past, present and future) by adult intermediate ESL learners (N=30). There was only one experimental group in this study, which received the treatment. In the end of the study, it was concluded that the performance of the participant was highly positive towards the treatment received and they were highly conscious while choosing the correct and relevant verb tenses during the posttest. It showed that the learners gained high language analytic ability and they somehow became alert about the differences in the two languages.

Key Words: Focused Corrective Feedback, Contrastive analysis, Verb Tenses, Language Acquisition.

INTRODUCTION
With the rise of communicative methodology in the late 1970s, the role of grammar instruction in second language learning was downplayed, and it was even suggested that teaching grammar was not only unhelpful but might actually be detrimental. However, recent research has demonstrated the need for formal instruction for learners to attain high levels of accuracy (H. Nassaji & S. Fotos).

As an important part of the grammar, verb tenses are the component which have a main role in distinguishing a text accurate, but since they are usually not taught particularly compared with more complicated forms and structures, most ESL and EFL learners get to the high levels but they are not alert enough regarding the verb tenses, especially concerning the differences of the verb tenses (here perfect ones) used in the first and the second language (L1 and L2). And they still need to be corrected. Yet, this article is not specifically concerning the writing, but since the perfect verb tenses and the use of them is so important when articulating language, it is good to know that over the past several decades, there has been considerable attention given to written corrective feedback (WCF) in second language writing (L2). Actually, Corrective feedback is a long-standing educational practice that can arguably be linked to almost everything we learn (Evans, Hartshorn, McCollum, & Woltersberger, 2010; Hattie & Timperley, 2007). According to Russell and Spada (2006), in language learning “the term corrective feedback [refers] to any feedback provided to a learner, from any source that contains evidence of learner error of language form” (p. 134). That is why in this research we focus on the role of the corrective feedback on learning the perfect verb tenses and teaching Contrastive Analysis of the verb tenses in the two languages, here are English and Persian, and the how it constitutes the analytic ability of the ESL learners.

The current research is relevant to writing pedagogy, considering that such pedagogy aims to improve students’ written grammatical accuracy. And, particularly its purpose is to examine the role of corrective
feedback (CF) in L2 acquisition in the form of applying written CF and teaching CA. However, it should be stated here that writing is a complex activity, and writing teachers view CF more broadly than second language acquisition (SLA) researchers (Sheen, 2007a).

As mentioned before, considering the role of such research in the writing pedagogy and the role of its result in teaching grammar, here the verb tenses, and teaching CA and its role in activating the learners analytic ability, conducting this research plays an important role in writing pedagogy.

Also, considering the debates about the written corrective feedback (WCF) in writing, it has been questioned if it could be given to students at higher levels too, or it should only be given at beginning levels.

Considering the Truscott’s (1996) review of written CF studies and his controversial conclusion that written CF is ineffective and even harmful in promoting L2 acquisition constituted a challenge to researchers, it is good to make sure about such controversies.

Research Question(s)
This study attempts to address some of the problems arose in written CF research by using the methodology and the theory of oral CF research in SLA and by addressing teaching CA and its role in activating the analytical ability of the student which can affect the CF role. This research considers the following questions:

1- Is focusing on the written corrective feedback of the verb tenses with the view of CA influential and beneficial in intermediate ESL learners’ acquisition of English verb tenses?
2- Is written corrective feedback of the contrastive analysis of the two languages’ verb tenses effective in ESL learners’ acquisition at higher levels than the beginning ones?

Given this fact that corrective feedback is somehow relevant to almost whatever we learn, it is assumed that the answer to the first question is yes. And by focusing on the written corrective feedback of contrastive analysis, the instructors of the ESL and the practitioners can use this method to enhance their ESL learners’ acquisition.

And regarding the second research question, it is also believed that there would not be a high difference between young learners or adult ones, or beginners or the ones at higher level, and this method works for all levels.

Review of Literature
In spite of this fact that there have been over two decades of research and writing, there have been so many inconsistencies in the research that still make it unclear what role WCF should play in the language classroom. Some researchers have stepped forward in strong support of WCF (Bitchener, 2008; Bitchener et al., 2005; Bitchener & Knoch, 2009a, 2009b; Chandler, 2003; Ellis, Erlam, & Loewen, 2006; Evans et al., 2010; Ferris, 1997; Ferris & Roberts, 2001, 2004; Hartshorn et al., 2010; Lalande, 1984; Polio & Sachs, 2007; Sheen, 2007). Others have argued against it for various reasons (Kepner, 1991; Robb, Ross, & Shortreed, 1986; Semke, 1984; Truscott, 1996, 1999, 2007; Zamel, 1985). Some researchers have neither supported nor opposed WCF, but have demanded instead careful reanalysis of the published studies, arguing that the variations and inconsistencies in them negate the possibility of reaching any real conclusions on the matter (Bruton, 2009; Ferris, 2004; Guénette, 2007; Hyland & Hyland, 2002; Russell & Spada, 2006). It is to review some of these studies in detail.

Theoretical Background
Critical Feedback
Corrective feedback has been an important practice in second language classrooms. It refers to the responses to a learner’s nontargetlike L2 production in L2 acquisition.

Two major types of interactional feedback are recasts and elicitations, which have also been considered as pedagogically useful strategies in communicative language classrooms (Doughty, 2001, 2003; Doughty & Varela, 1998; Gass, 2003). Recasts refer to feedback that reformulates a learner’s nontargetlike utterance into a targetlike one (Nicholas, Lightbown, & Spada, 2001). Recasts were considered indirect. When an interlocutor
reformulates a learner’s error, the reformulation may draw the learner’s attention to the target form by signaling to the learner that his or her utterance is deviant in some way (Long, Inagaki, & Ortega, 1998). Recasts may provide learners with opportunities for modified output, which has been suggested to be crucial for L2 development (Doughty, 2001; Swain, 1995; Nassaji, 2009). On the other hand, elicitations refer to feedback that does not correctly reformulate the learner’s error pushes the learner to reformulate it (Loewen & Philp, 2006; Lyster, 2004; Nassaji, 2007). Elicitation strategies include self-repair, promoting and providing learners with opportunities to test and revise their hypotheses about the target language (Lyster, 2004; Lyster & Ranta, 1997). Elicitations also provide opportunities for negotiation of form through various forms of requests for clarification and correction (Lyster & Ranta, 1997; Lyster, 1998).

The effects of implicit and explicit corrective feedback differ on SLA. Implicit feedback often takes the form of recasts, in which there is no overt indicator that an error has been committed. Explicit feedback, on the other hand, can take explicit correction, in which the response clearly indicates that what the learner said was incorrect, or metalinguistic feedback, defined by Lyster and Ranta (1997) as “comments, information, or questions related to the well-formedness of the learner’s utterance” (p. 47). In L2 classroom practices, some recasts are explicitly corrective. As Ellis, Loewen, and Erlam (2006) point out in their review of research on corrective feedback, the recasts used in the different studies might not have been equivalent in their degree of implicitness versus explicitness. If the L2 learner did not self-correct, recasts usually followed with emphatic stress to draw attention to the target or reformulated elements. Recasts work for SLA when learners notice the changes that have been made to their own utterances.

The major focus of studies that have investigated the effectiveness of different types of corrective feedback has been the extent to which direct or indirect feedback facilitates improved accuracy. Although these terms have not always been used consistently in the literature, direct corrective feedback may be defined as the provision of the correct linguistic form or structure above or near the linguistic error (Bitchener, Young, & Cameron, 2005; Ferris, 2003). It may include the crossing out of an unnecessary word/phrase/morpheme, the insertion of a missing word/phrase/morpheme, or the provision of the correct form or structure. Additional forms of direct feedback may include written meta-linguistic explanation (the provision of grammar rules and examples at the end of a student’s script with a reference back to places in the text where the error has occurred) and/or oral meta-linguistic explanation (a mini-lesson where the rules and examples are presented, practiced, and discussed; one-on-one individual conferences between teacher and student or conferences between teacher and small groups of students).

On the other hand, indirect corrective feedback indicates that in some way an error has been made. This may be provided in one of four ways: underlining or circling the error; recording in the margin the number of errors in a given line; or using a code to show where the error has occurred and what type of error it is (Ferris & Roberts, 2001; Robb, Ross, & Shortreed, 1986). Rather than the teacher providing an explicit correction, students are left to resolve and correct the problem that has been drawn to their attention.

In earlier years, a stronger case had tended to be made for the special value of providing students with indirect feedback rather than direct feedback. Lalonde (1982) and James (1998) explained that indirect feedback requires learners to engage in guided learning and problem solving and, therefore, promotes the type of reflection that is more likely to foster long-term acquisition. But as SLA researchers of oral L2 production have found, learners must first “notice” (Schmidt, 1990) that an error has been made. Once the error has been noted, indirect feedback has the potential to push learners to engage in hypothesis testing—a process which Ferris (2002) and others (see Doughty & Williams, 1998) suggest may induce deeper internal processing and promote the internalization of correct forms and structures.

While not dismissing the value of indirect feedback, those more in favor of a direct approach have explained that teachers and students prefer direct feedback (Ferris et al., 2000; Ferris & Roberts, 2001; Komura, 1999). In addition, they suggest that direct feedback reduces the kind of confusion that can result when students fail to understand or remember the meaning of error codes used by teachers. Ferris and Roberts (2001) explain how this can easily occur with lower proficiency learners. Leki (1991) and Roberts (1999) have also pointed out that students sometimes feel that indirect feedback does not provide them with sufficient information to resolve
more complex errors such as idiosyncratic and syntactic errors. More recently, Chandler (2003) explained that the greater cognitive effort expended when students are required to use indirect feedback to make their own corrections is offset by the additional delay in knowing whether their own hypothesized correction is in fact correct. Weighing up the relative merits of the various claims is not possible, however, unless the findings of well-designed empirical studies are considered.

Though, Rod Ellis and Sheen (2008) have suggested a different classification for CF which is: focused and unfocused CF. The former corresponds to what might be considered normal practice in writing instruction (although not necessarily what L2 writing researchers advocate); teachers correct all (or at least a range of) the errors in learners’ written work. This type of CF can be viewed as ‘extensive’ because it treats multiple errors. In contrast, focused CF selects specific errors to be corrected and ignores other errors. Highly focused CF will focus on a single error type (e.g. errors in the use of the past simple tense). Somewhat less focused CF will target more than one error type but will still restrict correction to a limited number of pre-selected types (e.g. simple past tense; articles; prepositions). Here are solid theoretical reasons for believing that focused CF will be more effective that unfocused CF. Learners are more likely to attend to corrections directed at a single (or a limited number of) error type(s) and more likely to develop a clearer understanding of the nature of the error and the correction needed. If attention and understanding are important for acquisition, as cognitive theories of L2 acquisition have claimed (e.g. Schmidt, 1994; Ellis, 2005), then focused CF is clearly better equipped to produce positive results.

**Contrastive Analysis**

Contrastive analysis was born as a result of a rather simple assumption. Aware of the same errors appearing so regularly and methodically in the works of increasing numbers of students, language teachers gradually came to assume that they could predict what mistakes the majority of learners would make. From such mistakes, the assumption went on; teachers would be better equipped to foresee difficulties and, consequently, would become wiser in directing learning and teaching efforts.

Contrastive Analysis (CA) became mainstream in the 1960s. According to Larsen-Freeman & Long (1991) in (Yoon, 2002), this was a time when structural linguistics and behavioral psychology were rather dominant in the study of language learning. CA proponents came to advocate that L2 instructional materials could be prepared more efficiently by comparing two languages and, in the process, predict learners’ behaviors and difficulties. Some researchers even believed that when similarities and differences between an L1 and an L2 were taken into account; pedagogy could become more effective and useful. Such arguments gave birth to the basic ideas of Contrastive Analysis Hypothesis (CAH), upon which CA is based. Lado’s *Linguistics Across Cultures* (1957, p. 2) is the landmark work which paved the way for CAH. According to this hypothesis, L1 transfer affects second language acquisition. Lado contends that “those elements that are similar to the [learner’s] native language will be simple for him, and those areas that are different will be difficult.”

The contrastive analysis hypothesis is based on two important assumptions. First, it is believed that the degree of difference between the two languages under analysis corresponds to the degree of difficulty. Second, the degree of similarity is advocated to correspond to the degree of simplicity. Therefore, the greater the differences, the more difficult it will be for the learner to learn a second language, and obviously the more similar the languages, the simpler it will be for the learners.

On the other hand, in the light of many contrastive studies (cf. James 1980; Fisiak 1981; Broselow 1984; Sajavaara 1984; Bot 1986; Odlin 1989; Leather and James 1991; Vroman 1990; Hayati 1995, among others) it has been proved that not all errors are as a result of interlingual interference. However, this does not imply that “interference” has no effect on the process of language learning.

Aside from the theoretical considerations, many people have experienced situations where they had difficulties in expressing themselves in the second language. For example, the answers to the question “how are you? “is “Thank you.” In one language (L1), and “Good, thanks...” in another, say, English (L2). In a situation where such exchanges take place between a native and a non-native speaker, the chances are that the L2 learner, affected by the L1 structure, may automatically use the inappropriate answer, therefore, interference does inevitably
happen; but the question is when and where. Although there have been so many researches to clarify the limitations of CA, but it is still possible to predict in general that there will be difficulties in learning a second language in certain conditions. But, it is not so easy to predict the type and the source of error without experimental verification.

**Operational Background**

During the past two decades many researchers have conducted studies to evaluate the results of different kinds of FC, and also FC in different aspects of pedagogy, and other elements affecting it.

In 1996, Truscott declared that the provision of written corrective feedback on ESL student writing was ineffective and harmful and that it should therefore be abandoned. He maintained that there was empirical evidence (for example: Semke 1984; Robb, Ross, and Shortreed 1986; Kepner 1991) to show that the practice was not worth continuing. Ferris (1999), in her response, pointed out, among a range of arguments, that the research base was drawing upon was too limited and conflicting in its findings and that restraint should be exercised while further investigations were undertaken. And that research evidence was limited in terms of the range of studies that had attempted to address the question of efficacy and in terms of the quality of the research design. Of the studies that have been conducted until fairly recently, most, in terms of their design, execution, and analysis, were flawed to some extent (see Guenette 2007; Bitchener 2008 for a review of these issues) so this has meant that firm conclusions about the efficacy of written corrective feedback are not yet available.

Bitchener (2008) has presented a summary of the research done in this area by different scholars and the relative results of each. He also argues about the flaws of each.

Among these, Fathman and Whalley (1990) have concluded that WFC was effective. But Kepner (1991) gained the opposite result, and also Polio and his colleagues (1998) gain the same result as Kepner. On the other hand, Ashwell (2000) and Ferris and Roberts (2001) have found WFC so effective.

There has been also some research done to compare different forms of WFC. Among them we can mention Lalande (1982), Ferris (1995), Ferris (1997), Ferris et al. (2000) and Chandler (2000), who almost all found it effective in pedagogy.

In a research conducted by Bitchener and Knoch (2008) on the value of a focused approach to written corrective feedback, they found it so effective and that those who received written corrective feedback on the two functions outperformed the control group on all four post-tests.

Sheen (2007) with a study with the same title as the current study found that written CF targeting a single linguistic feature improved learners’ accuracy, especially when metalinguistic feedback was provided and the learners had high language analytic ability.

Contrastive analysis used to be the major field in applied linguistics concerned with drawing the pedagogical implications of structural differences and similarities between languages. Its main objective was that of facilitating the learning of a second language. The literature of applied linguistics during fifties and sixties illustrates these concerns. The changing view of language and language learning brought by generative grammar has broadened the scope of contrastive analysis both in the direction of more theoretical objectives such as the search for linguistic universals in typology and in the direction of psycholinguistics concerned with the explanation of second language learning.

Although the influence of first language in learning a second language was known by such linguists and pioneers in the field of second language learning as Henry Sweet, Harold Palmer and Otto Jespersen, it was Lado (1957) who first stated this common observation of practicing teachers in stating that:

…. Individuals tend to transfer the forms and meanings and the distribution of forms and meanings of their native language and culture to the foreign language and culture – both productively and receptively... that we
can predict and describe the patterns that will cause difficulty in learning by comparing systematically the language and culture to be learned with the native language and culture....(p. 2).

And with this statement the well-known contrastive analysis hypothesis was established. Moreover, it was Fries (1948) who first realized the pedagogical implications of the hypothesis, declaring that “the most effective materials are those that are based on a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner” and thereby establishing contrastive analysis as an integral component of the methodology of second language teaching.

METHODOLOGY

Design
This study used a quasi-experimental research design with a pretest–treatment–posttest–structure, using intact ESL classroom. For two weeks, they received two sessions of CF of contrastive analysis on perfect verb tenses, and then finished with an immediate posttest.

Setting
The study is carried out in two classes of ESL students, at English Institute. The number of the students in each class was 15. The researcher asked the teachers to apply the instructions in the classes, and administrated the exams directly. These students were of intermediate level.

Participants
The participants were all girls of different ages and educations, but almost all at the same level of English accuracy and knowledge. The age ranged from 24 to 45.

Operationalizations
In this study, we used the direct correction, which is a traditional error correction strategy that consists of indicating the location of an error on the student’s text and the provision of the correct form by deleting and/or replacing the error or by adding a linguistic element.

Target Structure
Articles were chosen as the target structure for the current study regarding isolating the effect of error correction from any potential effect of any vocabulary knowledge in general. The reason for this decision is revealed as participating students in any way in the research away from the effect of the vocabulary which they might had problem knowing or even worked with during the semester, and knowing the verb tenses structure in the second language helps the students produce decent language in their L2 learning process and after that. Learners have been observed to experience difficulty in learning specific verb tenses because of their complex nature; that is, the choice of a verb tense is determined by both linguistic and pragmatic factors (Butler, 2002; Liu & Gleason, 2002).

Instruments and Procedures
Since there were only two treatment sessions, in each there was a narrative stimulus to elicit verb tense errors form the learners, but since the focus of this study was on the specific verb tenses only, the complete accuracy of the writings were not aimed, and the main focus remained on the accuracy of the verb tenses.

we chose two stories of the Aesop’s fable, “the Wolf and the Lamb”:

Once upon a time a Wolf was lapping at a spring on a hillside, when, looking up, what should he see but a Lamb just beginning to drink a little lower down. ‘There’s my supper,’ thought he, ‘if only I can find some excuse to seize it.’ Then he called out to the Lamb, ‘How dare you muddle the water from which I am drinking?’

‘No, master, no,’ said Lambkin; ‘if the water bemuddy up there, I cannot be the cause of it, for it runsdown from you to me.’

‘Well, then,’ said the Wolf, ‘why did you call me badnames this time last year?’
‘That cannot be,’ said the Lamb; ‘I am only six months old.’

‘I don’t care,’ snarled the Wolf; ‘if it was not you it was your father;’ and with that he rushed upon the poor little Lamb and .WARRA WARRA WARRA WARRA WARRA .ate her all up. But before she died she gasped out. ‘Any excuse will serve a tyrant.’

And “The Dog and the Shadow”:

It happened that a Dog had got a piece of meat and was carrying it home in his mouth to eat it in peace. Now on his way home he had to cross a plank lying across a running brook. As he crossed, he looked down and saw his own shadow reflected in the water beneath. Thinking it was another dog with another piece of meat, he made up his mind to have that also. So he made a snap at the shadow in the water, but as he opened his mouth the piece of meat fell out, dropped into the water and was never seen more.

Beware lest you lose the substance by grasping at the shadow.

And the Corrective Feedback Treatment Procedures were as follows:
1. First, the teacher handed out the story with an empty writing sheet attached to it and told the students that they were going to read the story and then rewrite the story.
2. Students were asked to read the story silently.
3. The teacher explained key words and discussed the moral of the story with the class.
4. The teacher then collected the stories by asking the students to tear off the story part and keep the writing sheet only.
5. Before asking the students to rewrite the story, the teacher read the story aloud once while the students noted down key words.
6. Then the students were asked to rewrite the story as closely as they could remember but in a step backward in the time.
7. The teacher collected the students’ written narratives which were then handed to the researcher.
8. The researcher corrected the narratives focusing mainly on verb tense errors based on the correction guidelines.
9. In the following class, the students took part in a corrective feedback session during which they received their narratives with corrections. The students were asked to look over their errors and the corrections carefully for at least 5 minutes. And the teacher explained again the difference between the structures of the verb tenses in Persian and English again to them.

Testing Instruments
Two types of tests were used to measure the acquisition of this study, one was a narrative test and the other was an error correction test. We used the same tests for both, pretest and the posttest. But in the case of the error correction test, we changed the order of the items. As the aim of the classes were to teach speaking and writing the second language mainly and not the translation, there was no question in Persian, or any kind of translation test.

Data Analysis Technique
Since in this study we only had one group of 30 students and no control group, the only analysis used was comparing the Means and SDs of the pretest and the posttest of the same group to see if there was any change because of the treatment given, or not.

Results and Conclusion
In order to make it easier to compare the scores of all the tests were out of 20. And the scores are as follows:
Table 1: Scores of the Participants on the error correction test on the pretest and the post test and their relative mean

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Table 2: The result of the participants on the narrative tests in the pretest and the posttest, and the relative means

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</table>
As it is obvious, in both tests, the error correction test and the narrative test, there was an improvement in the mean and the standard deviation.

Based on the results, the answer to the first research question is Yes, since there was an improvement in the scores of the participants, it can be concluded that a focused corrective feedback of contrastive analysis on the verb tenses is beneficial for language teaching.

And as an answer to the second question, it can be stated that, the hypothesis is correct, and the teachers can use this method, WCF, and reviewing the verb tense structures of the two languages (here, Persian and English) in their classes of higher levels.

**DISCUSSION, IMPLICATIONS AND APPLICATION**

There are some factors influencing the results of the current study, which worth mentioning. First of all, the participants of this study are the students of two classes who received the treatments by two different teachers, and in different contexts, which might have had influence on the treatment and the two tests.
As Chandler (2004) noted about Truscott’s (1996, 2004) criticism of written CF, the controversy surrounding the effectiveness of written CF can only be resolved through carefully designed studies. I accept [his] argument that the efficacy of error correction for accuracy of subsequent writing can only be demonstrated by studies containing control groups which receive no correction and experimental groups which correct their errors after either receiving direct correction or having the location of their errors pointed out. So I hope someone will do such a well-designed study (p. 348).

And as Sheen (2007) and Ellis and Sheen (2008) have investigated based on this notion, it’s believed that a favorite result is possible to occur when the investigation is well designed.

**FURTHER SUGGESTIONS FOR FURTHER RESEARCH**

There are some aspects of the research based on knowing and teaching contrastive analysis which is good to work on, especially in the form of WCF. For example, the differences between the usage of the linking verbs plus adjectives in Persian and English.

And also, it is possible to lead research on the effect of the focused corrective feedback on the other aspects of the ESL pedagogy and other components of the grammar, in both oral and written form of the CF with the help of the contrastive analysis knowledge.

There is also this possibility to conduct a research in the form of a translation of perfect tenses with the same structure of the current research.

**REFERENCES**


Appendix

Error Correction Test

Please read each statement. Each statement has two sentences that are related. One of the sentences is underlined. The underlined sentence contains at least one error. There may be more than one error in each underlined sentence. Write out the underlined sentence correcting all the errors. (Note: There are no punctuation or spelling errors.)

Example 1: Gloria have lived in New York during 2001. She really enjoys living in New York.
Answer: Gloria has lived in New York since 2001.

Example 2: John has got a cold. He couldn’t went to school today.
Answer: He hasn’t gone to school today.

1. Mary used to living in Chicago since 1998. She lives in New York now.
2. I look after a little girl and a little boy on Saturday. A little girl has been with others before, but the boy hasn’t.
3. I’ll take three tests tomorrow. I will be finished the tests this time tomorrow.
4. Tom quits smoking before I met him. He started smoking again because he is too stressed out.
5. There might been many ways to get to John’s house since the reconstruction of the town. Can you show me his house on the map?
6. I saw a man in a car across the street by the sandwich bar. I realized that the man will have a sandwich in 5 minutes.
7. Jen and Brad used to be so happy together. I couldn’t believe that they broke up for 6 months now.
8. I saw a very interesting movie last night. Then I remembered that I saw this movie before.
9. Last night I read a magazine and a news article. I don’t know where the news article was before.
10. A young woman and a tall man were talking outside my house. From their voices, I guessed that in ten minutes, the young woman would leave the tall man.
11. I read that book about New York. And I know that the author is from California.
12. We rented a boat last summer. Unfortunately, the boat hit another boat before that and we didn’t know anything about it.
13. We will go to the basketball game on Saturday. So when you come we wouldn’t be there to open the door.
14. When you turn onto Paramus Road, you will see two houses: a blue one and a yellow one. I lived in a blue house since I got married.
15. Be sure that when it is the time to be on the flight to Amsterdam, I told you about my will.
AN ANALYSIS OF BURNOUT OF TURKISH ELEMENTARY SCHOOL PRINCIPALS

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Abstract
The main purpose of this study is to analyse burnout levels of elementary school principals. 190 elementary school principals from Nigde and its districts constitute the survey sample of the research. The data of this research were collected by using the “Maslach Burnout Inventory”. The data were analysed by using SPSS 15.0. In order to analyse the data obtained, mean, standard deviation, Mann-Whitney-U test, variance and Tukey-HSD tests were used. Results of this study show that elementary school principals have “moderate” level of burnout. Also, it was found out that there was a statistical significant difference between elementary school principals in terms of gender in reduced personal accomplishment and depersonalisation sub-scales of the inventory. According to this result, female elementary school principals have higher reduced personal accomplishment and depersonalisation levels than their male counterparts. On the other hand, it was found a statistical significant difference between schools principals in relation to managerial seniority. According to results of this result of the research, school principals were found to differ in reduced personal accomplishment sub-scale so that less experienced school principals have higher burnout levels than their counterparts. It was also found out that there were not any statistical significant difference between elementary school principals in terms of educational level and working place variables.

Key Words: Burnout, elementary education, Turkish school principals.

INTRODUCTION

The concept of burnout originated in the writings of the psychologist Freudenberger (1974). Freudenberger (1974) was one of the first researchers to describe the accumulation of stress as leading to “burnout”. In this regard, Freudenberger (1974) first coined the term burnout to characterize a malady experienced by human service professionals who appear to ‘wear out,’ or reach a stage where they are no longer able to perform their tasks effectively, and sometimes even to care about their clients. Freudenberger (1974, p. 159) described burnout as “the feelings of failure and being worn or wrung out, resulting from an overload of claims on energy, on personal resources, or on the spiritual strength of the worker”. According to Maslach and Jackson (1981), burnout is described as a complex psychological response of individuals involved in difficult person-to-person relationships as part of their everyday working life.

Burnout has been variously defined. Maslach & Zimбардо (1982, p. 37) described the influences of job setting on eventual burnout as “to the extent that job characteristics can either promote or reduce emotional stress, they become important factors in the burnout syndrome”. Maslach & Jackson's (1981) model of burnout has three factors: a) “emotional exhaustion” which is described as feelings of being emotionally over-extended and exhausted, b) “reduced personal accomplishment” which is experienced by teachers as decreased feelings of competence and achievement and a tendency to evaluate oneself negatively with respect to work, c) “depersonalisation” which is the development of negative feelings and attitudes about profession. Literature (Wong & Cheuk, 1998; Adams, 1999) offers a complex etiological model of burnout, and emphasises the interaction of individual, organisational, and societal factors. Certain demographic variables, including age,
marital status, and gender were also found to be related to burnout (Maslach & Zimbardo, 1982; Poulin & Walter, 1993).

Somewhat clinical approach cited above, there are social psychological orientations that view burnout as the loss of idealism and enthusiasm that can be organizationally induced, although this orientation, too, recommends coping strategies (Cherniss 1980, 1992; Maslach & Jackson, 1981; Maslach & Zimbardo, 1982). Likewise, Pines & Aronson (1988) portray burnout as a mental exhaustion induced by emotionally demanding situations. Pines (1993) suggests that such situations create an existential crisis in which the individual comes to question his or her role identity.

Most approaches to improving education in Turkey appear to fail; some succeed in certain schools only to fail elsewhere. Various programmes to school reform fail because the chief administrators in the Ministry of National Education, known as MEB and in local education authorities neglect to consider school principals’ burnout who are currently in post in schools. Their burnout is of very importance because students’ achievements are highly related to their burnout which is affected with work status, gender and work experience, etc. (Gürsel, Sünbül & Sarı, 2002).

In recent years, researchers have become increasingly interested in the problems of school principals’ specifically, their job burnout (Smith-Stevenson, 1994; Combs, Edmonson & Jackson, 2009; Babaçoğlan, 2006; Koçak, 2009; Dönmez & Güneş, 2001; Byrne, 1999; Dworkin, 1987; Gürsel, Sünbül & Sarı, 2002; Sünbül, 2003). Burnout directly affects school principals’ professional lives in their work, particularly through its effect on their emotional well being (Sünbül, 2003). Additionally, school principals’ burnout is crucial in the chain of the education reform, particularly in Turkey where education system urgently needs to be improved (Gürsel, Sünbül & Sarı, 2002).

The school principal’s professional world is characterized by overwhelming responsibilities, information perplexities, and emotional anxiety (Friedman, 2002). According to Sergiovanni (2001), principals are facing an ever-changing and always expanding job role. School administrators and school teachers alike, are faced with the difficult task of managing a school or classroom successfully, maintaining a healthy family life, and preserving their own individual wellness. This balancing act with students, parents, family, administrators, and peers frequently leads to stress and potential burnout.

For the school principal, researchers have identified conditions that cause stress in the daily demands of the job (Friedman, 1995). Common stressors have been students’ lack of poor academic achievement, student discipline issues, declining resources, and the public’s misunderstanding of the principal’s role. Researchers have stated that these role conditions contribute to principal burnout (Gmelch & Gates, 1997; Whitaker, 1996).

Despite long hours and increasing demands, elementary school principals generally report high levels of satisfaction with their work (Doud & Keller, 1999). Yet over the past two decades, principals have reported increased levels of exhaustion, resulting in declining physical and mental health (Brock & Grady, 2002). Generally, burnout refers to an extreme form of job stress (Cherniss, 1988; Maslach & Zimbardo, 1982), and stress has been found to be the most common predictor of burnout (Torelli & Gmelch, 1992).

Even though some studies have explored burnout, they are lacking in how locus of control is related to different aspects of job attitudes for teachers in particular (Marso & Pigge, 1997). It was investigated how elementary school principals’ burnout is related to gender, managerial seniority, education level and working place in this study. It is hoped that the findings of this study would contribute to an understanding of the role of burnout and some demographic characteristics. Also, the findings would be helpful for other researchers in policy discussions and efforts to improve school principals’ quality of work life and performance in developing countries such as Turkey.

As the understanding of burnout continues to be refined, studies that examine school principals and burnout will be helpful to those who provide support to school leaders and are concerned about principal attrition and pending shortages. This study sought to improve the understanding of principal burnout and its prevention and
the role of intervention practices in school organisation. The findings provide information for policymakers concerned with educational administration as well as insights that may be relevant to similar studies elsewhere. Hence, the purpose of this study was to examine elementary school principals’ burnout levels in relation to gender, managerial seniority, education level and working place variables.

METHOD

The “general survey method” was adopted in the research (Karasar, 2005), because there were some advantages for using the method. That approach was also used to receive a variety of responses from a number of subjects participated in this study (Ekiz, 2003).

Subjects

Participants of the study were selected from 212 elementary schools were 190 school principals from elementary schools in Nigde, Turkey. Each subject was visited in his/her school and the purpose of the study was explained to the school principals. They were asked to complete the questionnaire in order to make a contribution to the study. The subjects were assured for the anonymity and confidentiality for their responses. A total number of 190 elementary school principals responded to the survey returning the questionnaire to the researcher himself. Of the 190 subjects, 183 (96,31%) are males while 7 (3,68%) are females. 34 (17,89%) of the elementary school principals have 1-5 years, 28 (14,73%) of them have 6-10 years, 53 (27,89%) of them have 11-15 years, 39 (20,52%) of them have 16-20 years, 22 of them (11,57%) and 14 (7,36%) of them have 26 and above years of managerial experience. 132 (64,47%) of the elementary school principals work in villages and towns, 41 (21,57%) of them work in country centre and 18 (9,47%) of them work in the city centre. In terms of education level variable, it can be said that 36 (18,94%) of the elementary school principals are the graduates of the senior high school and 149 (78,42%) of the school principals are the undergraduates and 5 (2,63%) of them have the postgraduate level of education.

The Instrument

In this study, “Maslach Burnout Inventory” (Maslach & Jackson, 1981) was used in order to collect data to answer the research questions. Maslach Burnout Inventory (MBI) is a commonly used instrument to measure professional burnout worldwide. In this study burnout was assessed with the Turkish version of the Maslach Burnout Inventory (Maslach & Jackson, 1981). The Maslach Burnout Inventory, which was developed by Maslach & Jackson (1981), defined as “increased feelings of emotional exhaustion, depersonalisation, and reduced personal accomplishment that can occur amongst individuals who do work in relation with people. Similar to the original version of the inventory (Maslach & Jackson, 1981), the Turkish version also contains three sub-scales (emotional exhaustion, depersonalisation and reduced personal accomplishment) and 22 items (Izgar, 2001). MBI yields three separate scores for each sub-scale; the higher the score on the emotional exhaustion and depersonalisation sub-scales, the higher the level of burnout. The personal accomplishment sub-scale was scored in the opposite direction so that the lower the score, the higher the level of burnout. Cronbach’s Alpha levels representing the internal consistency of the sub-scales were .86 (emotional exhaustion), .64 (depersonalisation) and .74 (reduced personal accomplishment). Cronbach’s Alpha level of the total inventory was calculated as .89 so that these results indicate that Maslach Burnout Inventory has a high internal consistency to be used in the research. On the other hand, the demographic data were obtained from author constructed form included questions about gender, managerial seniority, education levels and working places.

Procedure

The procedure in the present study was completed in some consecutive steps. Firstly, a cover letter was written to the questionnaire to explain the purpose of the study to the subjects and some extra explanations were sustained when possible to the subjects. Secondly, the elementary school principals completed the questionnaire without indicating their names or other identifying details and then returned them in an envelope to the researcher himself.
Data Analysis

The data collected for this study were analysed by using Mann Whitney-U test and variance analysis (F test). The Mann Whitney-U test was used to compare between elementary school principals’ burnout levels in terms of gender. The managerial experience, education levels and the working places of the school principals were compared with the help of one-way ANOVA (variance) test and Tukey-HSD test was used in order to find the variance of the difference.

FINDINGS

In order to find out the general burnout levels in sub-dimensions of elementary school principals, statistical descriptive analyses are given in Table 1 below.

<table>
<thead>
<tr>
<th>Burnout Sub-Scales</th>
<th>Gender</th>
<th>η</th>
<th>X</th>
<th>Std. Dev.</th>
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</thead>
<tbody>
<tr>
<td>EE</td>
<td>Male</td>
<td>183</td>
<td>8,16</td>
<td>6,14</td>
</tr>
<tr>
<td>PA</td>
<td>Female</td>
<td>7</td>
<td>10,52</td>
<td>4,76</td>
</tr>
<tr>
<td>DP</td>
<td>Female</td>
<td>7</td>
<td>8,13</td>
<td>3,74</td>
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</table>

As one looks at Table 1 above, it can be clearly seen that the elementary schools principals have “low” level of emotional exhaustion [X =8,16], “moderate” level of reduced personal accomplishment [X =10,52] and “moderate” level of depersonalisation [X =8,10]. In a five-Likert type of burnout inventory, 27 and above scores mean “high” level of burnout, 17-26 scores mean “moderate” level burnout and 0-16 scores mean that there is no burnout for the emotional exhaustion (EE) sub-scale of Maslach Burnout Inventory. For the reduced personal accomplishment sub-scale of the burnout inventory, 0-31 scores show “high” level of burnout, 32-38 scores show “moderate” level of burnout and 39 and above scores show “low” level of burnout. 13 and above scores mean “high” level of burnout, 7-12 scores mean “moderate” level of burnout and 0-6 scores indicate “low” level of burnout in the depersonalisation sub-scale of the burnout inventory. In order to compare the elementary school principals’ burnout levels according to gender, the Mann Whitney-U test was made since the number of the female school principals are under 20. The results of the Mann Whitney-U test are given in Table 2 below.

<table>
<thead>
<tr>
<th>Burnout Sub-Scales</th>
<th>Gender</th>
<th>η</th>
<th>X</th>
<th>Std. Dev.</th>
<th>df</th>
<th>t</th>
<th>M W-U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE</td>
<td>Male</td>
<td>183</td>
<td>8,14</td>
<td>6,28432</td>
<td>210</td>
<td>-.142</td>
<td>2140,50</td>
<td>.887</td>
</tr>
<tr>
<td>PA</td>
<td>Female</td>
<td>7</td>
<td>8,33</td>
<td>5,05334</td>
<td>210</td>
<td>2,941</td>
<td>1553,00</td>
<td>.004*</td>
</tr>
<tr>
<td>DP</td>
<td>Female</td>
<td>7</td>
<td>13,16</td>
<td>5,46663</td>
<td>210</td>
<td>1,963</td>
<td>1632,50</td>
<td>.051*</td>
</tr>
</tbody>
</table>

According to Table 2 given above, elementary school principals differ statistically in reduced personal accomplishment [t_{210} = 2,941, p<.05] and depersonalisation [t_{210} = 1,963, p<.05] sub-scale in terms of gender. There was not found any difference in emotional exhaustion sub-scale of the inventory in relation to the gender variable of the elementary school principals. According to the results obtained, female school principals have higher levels of reduced personal accomplishment [X =13,16] than male school principals [X =10,18]. Similarly, female school principals have been found out to have higher levels of depersonalisation [X = 9,54] than those male school principals [X =7,95]. School principals’ managerial seniority was compared in relation to their burnout. The results of the one-way ANOVA (variance) analysis are given in Table 3 below.
The year of the managerial experience of elementary school principals was compared with the help of F test in Table 3 above. According to the statistical analysis, the elementary school principals were found out to differ significantly in reduced personal accomplishment sub-scale \( [F_{(5-206)} = 4.24, p<.05] \) of the burnout inventory. In order to find the variance of the statistical significant difference, the Tukey-HSD test was made. According to the result of the Tukey-HSD test, there is a significant difference between the elementary school principals with 1-5 years of managerial experience and 26 and above years of managerial experience \([\bar{X}_1 = 10.25, \bar{X}_{26+} = 4.28]\). Similarly, there is a significant difference among the elementary school principals with 6-10 \([\bar{X}_6-10 = 10.41]\), 11-15 \([\bar{X}_{11-15} = 10.38]\), and 16-20 years of managerial experience and those who have 26 and above \([\bar{X}_{26+} = 7.81106, p<.05]\) years of managerial experience in relation to the reduced personal accomplishment sub-scale of the burnout inventory. In other words, the elementary school principals with 1-5 years of managerial experience have higher reduced personal accomplishment level \( [\bar{X} = 10.25] \) than those with more years of managerial experience such as school principals with 26 and above years of managerial experience \( [\bar{X} = 4.28] \). These results indicate that elementary school principals with more managerial experience have less reduced personal accomplishment level of burnout. In Table 4, school principals’ education level was compared in relation to their burnout and the results of the one-way ANOVA (variance) analysis are given below.
According to the results of the one-way ANOVA (variance) analysis made in Table 4 above in terms of the burnout levels of the elementary school principals in relation to education levels, it can be seen that there is no statistically significant difference in any sub-scale of the burnout inventory \(p > 0.05\). In light of the data obtained above, it can be said that the school principals do not differ in their burnout levels in terms of education level variable. But, when one looks at the mean scores of the burnout levels of the elementary school principals in terms of education level, it can be seen that the school principals who are the graduates of senior high school have less burnout levels in all sub-scales of the burnout inventory. On the other hand, it was seen that the elementary school principals with postgraduate level of education have more burnout levels than those with undergraduate level of education and the graduates of senior high school. The results of the one-way ANOVA (variance) analysis of the burnout levels of the elementary school principals in relation to working place variance are presented in Table 5.

Table 5: Descriptive Statistical Analyses of the Elementary School Principals in Relation to Working Place

<table>
<thead>
<tr>
<th>Burnout Sub-Scales</th>
<th>Working Place</th>
<th>η</th>
<th>(X)</th>
<th>(F)</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE</td>
<td>Village and Town</td>
<td>132</td>
<td>8.55</td>
<td>0.915</td>
<td>0.402</td>
</tr>
<tr>
<td></td>
<td>Country Centre</td>
<td>41</td>
<td>7.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>City Centre</td>
<td>18</td>
<td>7.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA</td>
<td>Village and Town</td>
<td>132</td>
<td>10.63</td>
<td>0.467</td>
<td>0.627</td>
</tr>
<tr>
<td></td>
<td>Country Centre</td>
<td>41</td>
<td>10.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>City Centre</td>
<td>18</td>
<td>9.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DP</td>
<td>Village and Town</td>
<td>132</td>
<td>8.21</td>
<td>0.366</td>
<td>0.694</td>
</tr>
<tr>
<td></td>
<td>Country Centre</td>
<td>41</td>
<td>8.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>City Centre</td>
<td>18</td>
<td>7.57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the results of the one-way ANOVA (variance) analysis made in Table 5 above in terms of the burnout levels of the elementary school principals in relation to working place variable, it can be seen that there is no statistically significant difference in any sub-scale of the burnout inventory \(p > 0.05\). In light of the data obtained above in Table 5, it can be said that the school principals do not differ in their burnout levels in terms of working place variable, but when one looks at the mean scores of the burnout levels of the elementary school principals in terms of working place variable, it can be seen that the elementary school principals who work in villages and towns have more burnout levels in all sub-scales than those who work in country and city centre. The elementary school principals who work in city centre have the least burnout level of all.

**DISCUSSION AND CONCLUSIONS**

According to the results obtained in the study, the elementary school principals have “low” level of emotional exhaustion and “moderate” level of reduced personal accomplishment and depersonalization. There are studies which support these findings of the study in the literature. In the studies carried out by Izgar (2001), Sarros (1988), Ceyanes (2004), Combs, Edmonson & Jackson (2009), Ceyanes (2004) and Arslan-Ozyurt (2007), school principals have “moderate” level of burnout. However, Babaoğlan (2006), Aydin (2002) and Aksu & Baysal (2004) found out different findings from these studies that they stated that school principals had “low” levels of burnout. The findings obtained from these studies (Babaoğlan, 2006; Aydin, 2002; Aksu & Baysal, 2004) state that school principals have “low” level of emotional exhaustion so that this finding can be said to be parallel to the related finding of the current study. Maslach & Jackson’s (1981) stages of burnout (i.e., emotional exhaustion, depersonalisation, and reduced personal accomplishment) are also supported by these findings.

When the elementary school principals’ burnout levels are analysed in relation to gender, it was found out that there are statistical significant differences between elementary school principals in terms of reduced personal accomplishment.
accomplishment and depersonalisation sub-scales. Elementary school principals differ in terms of their burnout level means so that female school principals have higher level of reduced personal accomplishment and depersonalisation than their male counterparts. Maslach & Zimbardo (1982), Maslach & Jackson (1985) state that gender is a critical variable since it is considered as an important predictor of burnout. In most studies (Örmen, 1993; Whitaker, 1996, 2005; Girgin, 1995; Friedman, 2002; Tümkaya, 1996; Sarros, 1988; Torun, 1995; Maslach & Jackson, 1985; Vizli, 2005; De Robbio, 1995; Izgar, 2001; Tomic & Tomic, 2008; Oplatka, 2002), gender variable is considered as an important predictor of burnout. In this regard, Girgin (1995), Sucuoğlu & Kulaksızoğlu-Aksz (1996), De Robbio (1995) and Chesnutt (1997) found similar findings to the related findings of the current study so that these findings also support the related findings of the current research. On the other hand, in the studies carried out by Babaoğlan (2006), Aksu & Baysal (2004), Combs, Edmonson & Jackson (2009), Arslan-Özyurt (2007) and Koçak (2009), it was found out no statistical significant difference between school principals in terms of gender variable so that it can be said that the findings of these studies do not have parallel results with the results of the current research.

When the elementary school principals’ burnout levels are analysed in relation to managerial seniority, it was found out that there was a statistical significant difference in elementary school principals’ burnout levels in terms of their managerial experience. According to the results obtained in the study in relation to managerial seniority variable, it was found that there was a statistical significant difference between school principals who have 1-5 years of managerial experience and 26 and above years of managerial experience. Also, there was found significant difference between school principals with 6-10, 11-15, 16-20 years of managerial experience and school principals with 26 and above years of managerial experience. The results of the study indicate that more experienced elementary school principals in management have less burnout levels. When the managerial experience levels of school principals fall down to 1-5 years of managerial experience, less experienced elementary school principals have higher burnout levels than their experienced counterparts. The findings obtained from the studies carried out by Izgar (2001), Graf (1996), Aydin (2002), Aksu & Baysal (2004), Babaoğlan (2006), Girgin (1995) and Koçak (2009) also support the related finding of the study so that it was also seen in these studies that less experienced school principals feel higher burnout than their experienced colleagues. The findings of the stated studies have parallel results with the related finding of the current study.

In light of the data gathered in the literature, it can be stated that managerial seniority variable is a crucial indicator of principal burnout so that as the managerial experience of school principals rises, their burnout levels fall down. Less experienced school principals begin their profession with enthusiasm and idealism since they have great expectations from their work. They want to work more to develop their school organisation and the students. However, heavy work load, problems and bureaucratic processes demoralise these school principals (Gümüşeli, 2009) so that they feel more burnout in the initial years of their profession. As the years pass and their managerial experience raises, they get accustomed to those problems and other processes and their working efforts begin to fall down. In the end, they learn how to cope with the problems they face so it occurs that they feel less burnout in their professional lives.

According to the results of the elementary school principals’ burnout levels in relation to education level variable in the study, it was found out that there was not statistical significant difference amongst the school principals. However, elementary school principals differ in terms of their mean scores so that the graduates of senior high school have lower level of burnout than those to undergraduates and postgraduates in relation to education level variable. It was also found out that the elementary school principals who have postgraduate level of education feel higher burnout than those to the graduates of senior high school and undergraduates. Dönmez & Güneş (2001), Friedman (1995), Aydin (2002) and Arslan-Özyurt (2007) found out that there was significant difference between school principals in terms of education level variable. Maslach & Jackson (1981) and Maslach, Schaufeli & Leiter (2001) also state that the people who have high levels of education (i.e., undergraduates, postgraduates) tend to feel high burnout than their counterparts. Similarly, Rothman and others (as cited in Çimen, 2007) also state that people who have high levels of education tend to have higher burnout than their colleagues. Aksu & Baysal (2004), in their study, found that school principals who have postgraduate level of education feel higher burnout than the school principals who are senior high school graduates. The findings of these studies support the related finding of the current study since it was found in this study that the school principals with postgraduate level of education have higher level of burnout than the school principals who are senior high school graduates.
When the elementary school principals’ burnout levels are analysed in relation to working place in the study, it was found out that there was not statistical significant difference amongst the school principals. However, the elementary school principals differ in terms of their mean scores so that the school principals working in villages and towns have higher burnout levels than their counterparts working in country centres and city centre. In the studies carried by Ellis (1983), Graf (1996), Aksu & Baysal (2004), Izgar (2001 and Yerlikaya (2000), it was found out that the elementary school principals working in rural areas (villages and towns) feel higher levels of burnout than their colleagues working in city centre. The school principals were found to feel the emotional exhaustion in the first rank in the study. In this regard, according to Girgin (1995), Izgar (2001), Gezer, Yenel & Şahan (2009), schools in Turkey have some problems dealing with socio-economic problems, physical infrastructure problems, teacher quantity and quality problems, transportation problems, etc. Elementary school principals working in rural areas in Turkey have to cope with these problems since there is some incapability of these schools so that the coping with these problems make school principals feel higher burnout than their counterparts working in city centres. The conditions of rural areas such as villages and towns can have some drawbacks for school principals so that they have to cope with the problems rather than focusing on education and these problems cause to principal burnout. In the studies carried out by Girgin (1995), Izgar (2001), Gezer, Yenel & Şahan (2009), it was found that teachers and school principals working in rural areas feel higher burnout than their colleagues working in city centres. The finding of these studies support the related finding of the current study since it was found out that elementary school principals working in villages and towns (rural areas) feel higher burnout than their counterparts in the study. In light of the data obtained in the study, the following suggestions can be put forward below:

1. In order to make school principals cope with professional burnout, seminars and courses should be organised so that principals are made to understand the effects of stress and burnout on their professional lives at schools.
2. The physical infrastructure of elementary schools, especially in rural areas, should be developed and some changes should be made on the working place changes in order to prevent principal burnout.
3. School principals should be informed about burnout syndrome and less experienced and/or inexperienced school principals should be reinforced in all aspects dealing with school affairs so as to prevent principal burnout at earlier ages.
4. As less experienced and/or inexperienced school principals feel higher burnout than their counterparts, special in-service education should be organised for these group of school principals.
5. Less experienced and experienced school principals should be met in order to share their experiences about the burnout syndrome, then experienced school principals should be made less experienced school principals help to cope with their problems. In order to make this come into existence, tea parties and seminars should be organised by Local Directorates of National Education.
6. Especially, school principals working in rural areas (villages and towns) should be reinforced from all aspects, and then the authorities at Local Directorates of National Education should take steps to help these school principals wherever and whenever possible.
7. School principals’ burnout levels can be compared with other variables such as locus of control, job satisfaction, organisational citizenship, organizational trust, communication skills, etc. Also, some other researches can be carried out on the relationship between burnout and these variables.

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THE EFFECT OF INTERNET-BASED EDUCATION ON STUDENT SUCCESS IN TEACHING OF 8TH GRADE TRIANGLES SUBJECT

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Abstract
In the study, it was researched the effect of internet-based application on student success. Internet-based application was used at the teaching of triangles subject which is included in 8th grade units of triangles and algebra. The study was carried out over the internet with a computer software program: Vitamin Program. The study was carried out with total 37 8th grade students in two separate classes in a study centre in 2011-2012 school years. It was carried out internet-based teaching material on the experiment group and also conventional teaching method and materials on the control group. In the research, “the achievement test consisting of triangles subject” was carried out as a data collection tool in pre-test and post-test both groups. As a result of the research, success grade of experiment group which was carried out internet-based application applied with Vitamin Program is higher than success grade of control group in which was used conventional teaching method. In consequence of the study, it was suggested that internet-based teaching programs, which call and attract students’ attention must be used in a more frequent way.

Key Words: Triangles, internet-based education, student success, vitamin program

INTRODUCTION

Of course, the system of education has also been impressed by repercussions of dizzily developing technology world. This interaction is valuable from the point of that education dynamics will develop healthfully in future. This is because nowadays, the skills being able to benefit from electronic authorship, information and communication technologies and getting essential efficiency from this process are important for communities’ future (Altun, 2003). In this sense especially in recent years, necessities of computer usage in education have enormously increased due to the fact that the number of students have increased by leaps and bounds, the time have been insufficient, the amount of information have increased, the content get more complicated, the number of teachers have been insufficient, individual talents and differences have gained importance (Alkan, 1998, Trans., Yanpar, 2006).

In parallel with these necessities, present-day developing technology and changing needs have also made important changes in education and commonly used learning methods (Erkunt and Akpinar, 2002). The results arising from internet usage and its effects are rank at the origin of the change. The internet, which also affects
education and learning process, enriches the process and offers rich experiences to students and teachers (Akkoyunlu and Yılmaz, 2005). The most distinct purpose of all these changes is to gear up education learning activities. According to Wiesenmayer and Meadows (1997), the internet provides a wide range of facilities as online access to graphic, sound, lesson plan and data sources for educators and researchers.

One of the abovementioned functions is also Internet-Based Education application, which its usage sweeps in learning environment. The internet-based education is one kind of distance education and a teaching system in which the internet technologies are used to transfer course materials to students (URL-1: http://tr.wikipedia.org). The internet-based education means the fact that the applications to be furthered education are made via internet rather than the fact that education is exactly carried out over the internet. Thanks to the internet-based education, educators move studies which are necessary for lesson to outside the classroom and thus they can easily orient students to extracurricular applications which are necessary for reinforcement of learning (Karaman et al., 2009). The integrity and equality are provided in applications thanks to the internet-based education. In other words, blended learning integrate approaches like intramural and extramural face to face interactive relation, online experiences, that person conducts himself or is conducted by a guide, digital references and group communications to achieve personal and organizational targets (Sethy, 2008). Thus both the usage of technology becomes widespread and learning functionality is supported in students. We can array the roles of the information technologies, which are used in education environments as follows:

- To sensitize students to informatics,
- To facilitate scientific terms to be learned,
- To develop cognitive talent of students,
- To create educational materials (Pekdağ, 2005).

One of the opportunities that technology offers is the opportunity of utilization from education technologies via the internet. Network-based learning programs, which work over internet or intranet and are independent of a certain time and place, are generally known to be referred to as e-learning. E-learning programs are composed of new communication and interaction channels which educational activities as learning material, communication, handholding to student, giving feedback and evaluation are done via electronic ways (Erkunt and Akpinar, 2002). The quality of material that are conveyed in learning environment with these channels is also important because 25 percent increase in remembrance and between 40 and 60 percent decrease in learning time are enabled in accordance with conventional classroom environment with well-designed material (Kruse and Keil, 2000). Internet-based learning has many advantages differently from conventional learning methods. The differences between classrooms in conventional system and internet-based education can be summarized in Table-1 as follows:

<table>
<thead>
<tr>
<th>Conventional education environment</th>
<th>Internet-based instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson based</td>
<td>Discussion based</td>
</tr>
<tr>
<td>Structural</td>
<td>Flexible</td>
</tr>
<tr>
<td>Purposive</td>
<td>Oriented results</td>
</tr>
<tr>
<td>Generally teacher centered</td>
<td>Independent student</td>
</tr>
<tr>
<td>Large classrooms</td>
<td>Small classrooms</td>
</tr>
<tr>
<td>Teacher is the source of information</td>
<td>Teacher leads the students to information resources.</td>
</tr>
</tbody>
</table>

(Data, which located in Table-1, obtained from Çetin, Çakıroğlu, Bayılmış and Ekiz, 2004, page 147.)

Becoming widespread power of technology in education environment all over the world have also made itself evident in recent years in our country. It is exhibited a summary of studies which have been made aimed at the fact that information and communication technologies are used in education-learning environments in our country as below:

- In 1988, the first multimedia lab was established.
- In 1990, the first computer aided education application began.
In 1992, MPEG technology was began to be used in education.
In 1994, rich contents were formed thanks to generation of 3D simulations.
In 1996, SEBİT was established.
In 1998, Academia was put into service of students.
In 2000, Vitamin High School was put into service of students.
In 2001, Vitamin Primary Education was put into service of students.
In 2006, Ministry Of National Education started Self-Access Portal project.
In 2007, Vitamin Online Project started.
In 2008, Vitamin School was taken to be used at public schools.
In 2008, Vitamin was offered houses over internet service provider (Pekdağ, 2010).

Vitamin Program is a computer software program, which has perhaps the most common usage in the above-mentioned information and communication technologies and can be complimentarily used at schools via teachers by Ministry Of National Education. Vitamin Program is an education support service used over the internet that was generated and was developed by SEBİT according to the curriculum of Ministry Of National Education. Vitamin, which is a computer based education product, has been put into service of teacher and students with cooperation among SEBİT, Turk Telekom and Ministry Of National Education (Pekdağ, 2010). Vitamin has been used as interactive support program in Math, Turkish, Social Studies, Revolution History and Kemalism, Science and Technology Lessons at primary levels. When current literature related to the usage of Vitamin software program in Science and Technology Lessons is analyzed, it is observed that studies as its effect on success, persistency and attitude are at current literature (Karaduman and Emrahoglu, 2011; Hangül and Üzel, 2010; Derviş and Tezel, 2009; Pektas, Celik and Katranci, 2009; Kara and Yeşilyurt, 2007; Çetin and Günay, 2007). Vitamin provides teachers and students with great numbers of opportunities: (i) Prepared presentation oriented lecturing, (ii) reaching contents in school book, (iii) interactive activities with 3D model type, (iv) animations, (v) simulations, (vi) experiments, (vii) classroom activities, (viii) examples with solution, (ix) question and answer activities, (x) screening tests, (xi) pilot tests for SBS, (xii) additional resources (Pekdağ, 2010). Karamustafaoğlu, Bacanak and Gencer (2012) inferred from the study termed “student views of usage of Vitamin Program in science and technology lesson” that current interactive activities and applications of Vitamin Program are liked and Vitamin Program can be easily used by students in case of making up shortages of the program. Ersoy and Türkkân (2009) inferred from the study named “perception of internet in pictures of primary school students” that students mention more issues concerning their perceptions of internet in their verbal expressions and also focus on one or a few of them in their pictorial expressions. Moreover, they indicated that students reflect their perceptions of internet to pictures, which they did by focusing single function of internet as research, game and communication in the internet. This study was carried out to determine whether or not learning levels of students are good according to conventional method while 8th grade primary school students were learning triangles subject through Vitamin Program.

METHOD

Semi-experimental method was used in the research. Groups are tested once before the beginning of the experiment and once after the end of the experiment. The test, which is carried out at the beginning, is termed pre-test and the test which is carried out after the application is termed post-test (Karasar, 2002; Çepni 2007). This figure includes a experiment group and a control group, but participants can’t be determined randomly. If there isn’t a significant difference between pre-test points of groups, it can be said that groups are equivalent. While hypotheses are testing, points which show the change from pre-test to post-test of both groups are compared to determine whether a significant difference is between the points (Bulduk, 2003; Christensen, 2004).

The universe and the sample
This study was carried out with 37 volunteer students in a study centre. The experiment group consists of 18 students and the control group consists of 19 students.
Data collection tool and data analysis

“Achievement test about triangles” was carried out as data collection tool in the research. While the achievement test was preparing, it was benefited from the schoolbook and various references. 5 points was given for each correct question in the achievement test, which consist of total 20 questions. Hence the highest score to be gotten is 100 points. The content of the test was chosen in compliance with target and behaviors in Mathematics Instruction Program. Opinions of 3 mathematics teachers and 3 field educators were taken to provide content and face validity of the achievement test.

The final form of the achievement test is carried out to 125 8th grade students who are different from experiment and control groups in order to do its pilot scheme and specimen analysis. KR-20 reliability coefficient of multiple-choice assessment instrument, which took its final form and have 20 questions was founded .78. The obtained data were constructed with analysis of “t” test at 0.05 significance level. For this, it was benefited from SPSS 11.5 (Statistical Package for the Social Science) package in computer environment.

Application of experiment group

This study includes subject of the “Triangles and Algebra” unit and sub-learning domain and learning domain of which is respectively triangles and geometry in the Mathematics program of the Ministry of Education. The study was carried out in 2,5 weeks (in 10 course hours) by lesson teacher. Before carrying out the achievement test, it was given as pre-test in order to test whether there was a significant difference between the experiment and control groups, after carrying out it; it was given as post-test in order to compare the achievements. The conventional teaching methods were used in control group in the research. Teaching of the “Triangles” subject being sub-learning domain of the “Triangles and Algebra” unit was carried out in lesson process by Vitamin Program on the experiment group. The lesson content consists of attainments in the “Algebra and Geometry” unit in teachers’ guide book in accordance with decision dated 14.02.2008 and numbered 113 of Ministry Of National Education Head Council of Education and Morality and decision dated 08.03.2011 and numbered 886 of Publications Department. The attainments are as follows: (i) determines correlation between sum or difference of lengths of two edges and length of third edge of triangle, (ii) determines correlation between edge lengths of triangle and angle measures opposite these edges, (iii) designs a triangle, which sufficient number measures of its elements, is given, (iv) inscribes median, perpendicular bisector, angle bisector and height on triangle. Lesson contents were carried out in classroom environment by internet-based application in the form of package. Thus it was benefited from information technology during lecturing and interactive applications were carried out over internet. Visual materials used in internet-based Vitamin applications are as follows.

Shape 1: Lecturing by Vitamin and Interactive Activity Samples (URL-2:http://www.vitaminegitim.com/)

FINDINGS AND INTERPRETATIONS

In this part, findings obtained from pre-test and post-test applications of “Achievement test about triangles” of experiment and control groups were evaluated. Whether or not a significant difference was in pretest scores of students in control and experiment groups was analyzed using Independent Samples t Test. The results of the analysis are shown on Table 2.
Table 2: T-test Results of Pre-test of Students in Experiment and Control Groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>19</td>
<td>51.68</td>
<td>13.66</td>
<td>-0.270</td>
<td>.789</td>
</tr>
<tr>
<td>Experiment group</td>
<td>18</td>
<td>50.38</td>
<td>15.55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As seen on Table-2, when it is looked at analyses of t-test done depending on pre-test results of control and experiment groups, a statistically significant difference could not be found between groups carried out internet-based education and conventional method before starting education \( t = -0.270, p = .789 > 0.05 \). The average of the test of control group was 51.68 and the average of the test of experiment group was 50.38. This result shows that preliminary information concerning the subject of students in groups is close at the beginning. The scores obtained from posttest of groups studying the “Triangles and Algebra” unit with internet-based education (experiment group) and conventional method (control group) were compared using Independent Samples t Test and the obtained values are shown on Table-3.

Table 3: T-test Results of Post-test of Students in Experiment and Control Groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>19</td>
<td>56.42</td>
<td>10.03</td>
<td>3.058</td>
<td>0.004</td>
</tr>
<tr>
<td>Experiment group</td>
<td>18</td>
<td>67.22</td>
<td>11.02</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As seen on Table-3, as a result of the analyses of t-test done in compliance with the results of the post-test, a statistically significant difference was found between the groups studying with internet-based education and conventional method \( t = 3.058, p = 0.004 < 0.05 \). The average of the test of control group was 56.42 and the average of the test of experiment group was 67.22. As a result, it has ensured that there is a significant difference in favor of experiment group between success levels of the experiment group studying with internet-based education and the control group studying with conventional method.

RESULT, DISCUSSION AND SUGGESTIONS

As a consequence of the study named “Importance of Education for Technologic Development and Position in Education of The Internet-Based Instruction” which was carried out by Çetin and his friends in 2004; it was specified that the distance between students should not be a problem in internet-based education, even if students are away from each other for miles and miles due to their geographical position, they can be close to each other. Even if they are in the same classroom environment, they can be away from each other for miles and miles. It was emphasized that everything depends on whether or not student want to learn. It can be mentioned that students using internet in accordance with their purposes can mostly develop their skills of communicating, researching, reaching the information, communion and students increasing their skills will come more advantageous position in the matter of the usage of information technologies (Akbaba and Altun, 2000).

It is observed that teaching of triangles subject via Vitamin Program-based over internet is more effective on students' success in comparison with conventional methods. Its reason can be explained with the fact that students experience with learning materials catering to great numbers of senses in education environment, their attention against lesson increase or their motivation levels against lesson become a good level. It follows from similar studies carried out in this direction that the usage of technology in education environment strike positive chords on students (Taş, Köse and Çepni, 2006). It is observed that education applications carried out by similar programs increase academic achievements of students. In Physics field, Karamustafaoğlu and his friends (2005) inferred from their study named “Simple Harmonic Motion” that education carried out by simulation program with dynamic system on experiment group is more successful in comparison with education carried out by conventional methods on control group. Accordingly, as a consequence of Hırça and his friends (2011)'s study named “The Effects Of Developed Materials Considering 5E Modal On Students’ Attitudes To Conceptual Change And Physics Lesson: The Example Of “Work, Power, Energy” Unit” they come
to a conclusion that it can be said that using different materials, unifying of subjects with everyday life, being enriched of materials to be used in visual sense, combination of conceptions with games and shows in video, that student is actively located in education activities are important with regards to remove their negative attitudes against physics lesson and to endear students to physics. After this type of instructional materials had been carried to classrooms with the help of technology, positive effects occurred on their mental development. Instructional programs are software which present content of subject to be taught, provide possibility to practice for learning of content, give feedback, evaluate students’ performance, orientate students, the sum and the substance of them, provide an active learning environment by assuming teacher’s role (Kuzu, 2007). Those below have been suggested in consequence of the study.

• Internet-based education programs, which call and attract students’ attention, must be used more frequently.
• It should be set up sufficient substructures concerning internet-based programs for the fact that these embody learning and contribute to students’ academic achievement in a positive way.
• It is observed that internet cater to every field of life and there is increase in number of connecting to internet by mobile. These types of applications in rapport with mobiles can go a long way toward attracting students’ attention and they can use the applications, while they are spending time on mobiles.
• It should be mostly focused on research and development services oriented internet-based education programs. Projects carried out in this direction should be supported and it should be focused on curriculum development efforts carried out with students.
• Teachers should be raised awareness about internet-based education applications and applications should be practically shown them at a push.

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PREPARATION OF EFFECTIVE TEACHERS OF MATHEMATICS FOR EFFECTIVE TEACHING OF MATHEMATICS

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Abstract
In Pakistan, Mathematics’ teachers use different techniques and strategies for effective teaching of mathematics. Teacher’s dynamic participation and active role in the mathematics’ classroom can make it more effective and interesting. Effective teaching of mathematics can be done only when teacher has subject matter knowledge and know the ways to transfer knowledge. It is a common observation that students feel mathematics a dry subject as teachers remain failed in making mathematics an interesting subject. It is also argued that mathematics courses in teacher training program do not prepare student-teachers for conceptual teaching and these student-teachers join their job with poor content knowledge and pedagogical skills, there teaching depend on their academic qualification rather than professional qualification. National Educational Policy (2009), claims that in-service teachers training in mathematics shall be provided, with due attention to developing conceptual understanding, procedural knowledge, problem solving and practical reasoning skills. The objective of the study was to explore the opinion of the teachers about the content of the mathematics courses in teacher training programs. The research question was: what is the impact of job category (Primary, Middle, and Secondary) and gender on total score of teachers’ satisfaction about content of mathematics course in teacher training programs? The sample for the study was the mathematics’ teachers who have mathematics background and have taken mathematics as a subject in teacher training program. A questionnaire was developed on five point Likert scale for knowing the opinion of the teachers. ANOVA was used for finding the impact of job category and gender on teachers’ satisfaction about content of mathematics course in teacher training program.

Key Words: Effective Teachers, Effective teaching, Content of Mathematics course in teacher training programs.

INTRODUCTION
Currently, Teaching does not mean to transfer some information or facts to the students; rather teaching has become more comprehensive, multifaceted and complex phenomenon, in which the roles of teacher and students have been changed. In the new paradigm of teaching-learning process, teaching means to prepare students for future where they will met more complicated situation that will force them to think in some different ways to stay with change. Effective teaching is the only way that can prepare students to meet the challenges of such situation. Effective teaching means, teaching through which desired objectives may be achieved and students may learn with fully understanding. It is effective teaching that prepares the students to absorb new knowledge, connect it with previous knowledge and make a chain of knowledge for working in the changing environment.

Among all subjects of school, mathematics is one of the subjects that always challenge the students’ abilities of thinking and understanding. Mathematics is the subject that demands conceptual knowledge, procedural knowledge and a connection between existing knowledge and previous knowledge. Any poor domain of knowledge can cause the problem in learning of mathematics. Effective teaching of mathematics requires effective teachers of mathematics and for effective teachers, it is necessary that teachers must have subject matter knowledge and a good hand over passing his/her knowledge effectively to the students. If a mathematics teacher has subject matter knowledge and does not know the way to transfer that knowledge
effectively to the students, cannot teach mathematics effectively. Effective teaching of mathematics demand perfect relationship between subject matter knowledge and its delivery to the students.

National and International reports claim that in Pakistan, the curriculum of teacher education has less potential to prepare the teachers for the challenges of 21st century. It is also said that there are many gaps between the curriculum of teacher training programs and the classroom situation. Government of Pakistan is committed to minimize these gaps and to improve the situation of curriculum of teacher training programs, in this regard; several steps have been taken from revision of curriculum to teaching practice with the only aim to produce effective teachers who have knowledge, skills and potential to meet the challenges of the changing environment.

Generally, at school level, mathematics is taught by the teachers who have academic background in mathematics and have learnt mathematics in teacher training program. It is a common perception that in the mathematics classrooms, teachers utilize their academic qualification and less importance is given to the pedagogical skills. Teacher training institutes are giving due attention to overcome the deficiencies pointed out by the research and are trying to produce effective mathematics teachers who have ability to teach mathematics effectively.

**Literature**

Shellard & Moyer (2002) identified following three critical components to effective mathematics instruction:
1. Teaching for conceptual understanding
2. Developing children’s procedural literacy
3. Promoting strategic competence through meaningful problem-solving investigations

Protheroe (2007) suggests that Instruction at the middle grades should build on students’ emerging capabilities for increasingly abstract reasoning, including:
1. Thinking hypothetically
2. Comprehending cause and effect
3. Reasoning in both concrete and abstract terms

The Education Alliance (2006) identified the following factors could be considered for effective teaching of mathematics:
- Focus lessons on specific concept/skills that are standards-based
- Differentiate instruction through flexible grouping, individualizing lessons, compacting, using tiered assignments, and varying question levels
- Ensure that instructional activities are learner-centered and emphasize inquiry/problem-solving
- Use experience and prior knowledge as a basis for building new knowledge
- Use cooperative learning strategies and make real-life connections
- Use scaffolding to make connections to concepts, procedures, and understanding
- Ask probing questions which require students to justify their responses
- Emphasize the development of basic computational skills (p. 17)

Department of Education and Training of Australia (n.d) believe that Effective teachers have a thorough knowledge of their subject content and skills.... Effective teachers use their knowledge of learning processes to determine which will be most effective to help the particular students in their classes learn successfully.

**Teacher Training Programs in Pakistan**

**Primary Teaching Certificate (P.T.C.)**

This was one year teacher-training programme. The admission criterion for this certificate was matriculation (mathematics is a compulsory subject at this level). The objective of this certificate was to produce teachers for grades I-V.
Certificate in Teaching (C.T.)
This was a one-year teacher-training programme. The admission criterion for this certificate was 12 years of schooling. The objective of this certificate was to produce teachers for grades VI-VIII.

Bachelor of Education (B.Ed)
This is a one-year teacher-training programme. The admission criterion for this certificate was bachelor degree. This program is offered in arts and science. The students take up the subjects they have learnt in their bachelor program, i.e. arts or science.

The objective of this certificate is to produce teachers for grades XI-X.

It was observed that the duration of these teacher training programs is short as compared to other countries, in order to improve the quality of teacher training programs, in 2001, government of Pakistan brought reforms in teacher education programs. Report on the System of Education in Pakistan (2006) states that:

Under this reform, admission to primary school teachers' colleges (Grades I - VIII) will require either 10 or 12 years of schooling. The students with a matriculation background are required to complete a 3-year teacher training programme, while students who have passed Grade XII require 1½ years. Candidates obtain a Diploma in Education (p.24).

Teaching of Mathematics in Pakistan
In Pakistan, it is believed that mathematics is a key subject for many fields and can contribute maximum in the overall results in different forms. Mathematics is the subject in which students can earn 100% marks and can make their marks sheet more attractive. But in reality, students do not rank it at top among their favorite subjects. Results show that this is the subject in which students face many problems and majority of the students drop it as they get option for selection.

School administration and teacher training institutes consider mathematics an important subject and treat it differently. For mathematics, most experienced and well-qualified teachers are deputed with the objective of effective teaching. Khan and Jumani (2008) conducted a study entitled “Teaching of Basic Concepts at Secondary School Level” and concluded that the existing syllabus [of mathematics] is tough and teachers do not have command over the subject due to lack of proper training. National Education Policy (2009) states, in-service teachers training in mathematics shall be provided, with due attention to developing conceptual understanding, procedural knowledge, problem solving and practical reasoning skills.

Amirali and Halai (2010) conducted a study on teachers’ knowledge about the nature of mathematics with 174 mathematics teachers taken from private and government schools of Karachi (Sindh) and found that 63% of these teachers irrespective of whether they are professionally qualified or not or whether they are novice or experienced teachers considered mathematical knowledge as ‘truth’ where mathematical rules can never be proved wrong.

This situation shows that teachers work on mathematics in a traditional way as they believe that mathematics rules are fixed then why struggle hard for them, while effective teaching of mathematics demands critical and out of box thinking for effective learning of mathematics.

The objectives of teaching mathematics in pre-service teacher training programs are to train student-teachers for effective teaching of mathematics and to prepare student-teachers with critical thinking. Shahid (2007) advocates, the effective pre-service professional preparation leads to professional commitment and excellence in teaching.

Kiani, Malik and Ahmad (2012) in their study entitled “Teaching of Mathematics in Pakistan – Problems and Suggestions” recommended that although most of the teachers have the professional qualifications of B. Ed, and M.Ed., it is recommended that curriculum and training programs may be revised time to time for the teachers.
Teacher Training Institutes are trying to improve the existing system of teacher training through reforms in curriculum, teaching methods and quality assurance, so that effective mathematics teachers may be produced for effective teaching of mathematics.

**METHODOLOGY**

**Objectives of the Study**
The objective of the study was to explore the opinion of the teachers about the content of the mathematics courses in teacher training programs (PTC for primary teachers, CT for elementary teachers and B.Ed for secondary teachers).

**Research Question**
The research question of the study was: what is the impact of job category (Primary, Middle, and Secondary) and gender on total score of teachers’ satisfaction about content of mathematics course in teacher training programs (PTC for primary teachers, CT for elementary teachers and B.Ed for secondary teachers)?

**Delimitation of the Study**
Mathematics in teacher training programs is divided into two parts; first part is about teaching methods, merits and demerits of these methods and second part dealt with mathematical problems and match the content of school mathematics, the objective of this part is to train the teachers for solving problems in different forms. The present study was delimited to second part i.e content of mathematics in teacher training program.

**Sample of the Study**
A total of 300 mathematics teachers of public schools (middle and secondary schools with primary sections) were selected through cluster sampling technique from Tehsil Bahawalnagar (District Bahawalnagar). The selection criteria were:
1. For B. Ed, having mathematics (A & B) or general mathematics at bachelor level, for C.T, having mathematics in higher secondary school certificate.
2. Completed their teacher training program after 2001 with mathematics as an optional subject in PTC, CT or B.Ed.
3. Minimum 6 months teaching experience in public schools.

Level, gender and total number of teachers is as under:

<table>
<thead>
<tr>
<th>Sr #</th>
<th>Level</th>
<th>Gender</th>
<th>Total Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PTC (For primary classes)</td>
<td>Male = 50 &amp; Female = 50</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>CT (For middle classes)</td>
<td>Male = 50 &amp; Female = 50</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>B.Ed (For secondary classes)</td>
<td>Male = 50 &amp; Female = 50</td>
<td>100</td>
</tr>
</tbody>
</table>

**Instrument for the Study**
A questionnaire with 15 items was developed on five point Likert scale (from 5= strongly agree to 1= strongly disagree) by the researcher. Before developing the questionnaire, the researcher discussed the content of mathematics of PTC, CT and B. Ed with three teacher trainers, who were teaching mathematics to these levels in teacher training institutes.

**Validation of the Instrument**
The self developed questionnaire was presented to ten senior mathematics teachers who were teaching mathematics to different grades and having experience of teaching mathematics to primary, middle and secondary level classes. It was requested that point out gaps or irrelevant statements and also suggest some measures for the improvement of the questionnaire. These teachers pointed out three statements which were not relevant with the other statements and suggested to delete them. In the light of their suggestion, these three statements were deleted. There were 10 statements in the final version of the questionnaire.
Reliability of the Instrument
For testing reliability of the instrument, a pilot study was conducted on 50 teachers who were teaching mathematics to different grades. Cronbach’s alpha was calculated by using SPSS, it was found 0.64. These 50 teachers were also included in the final sample.

Data Collection and Analysis
The researcher delivered the questionnaire with the help of the colleagues and friends to the sample teachers working in different areas of tehsil Bahawalnagar. There was a covering letter with the questionnaire explaining the objective of the study. The researcher also explains the purpose of the data collection to his colleagues and friends so that if someone asks them about the purpose of questionnaire, they must be able to explain the purpose of the study.

Two-way ANOVA was used to determine the impact of job category (Primary, Middle, and Secondary) and gender on total score of teachers’ satisfaction about content of mathematics course in teacher training programs (PTC for primary teachers, CT for elementary teachers and B.Ed for secondary teachers).

RESULTS AND DISCUSSION
Two-way between groups analysis of variance was conducted to explore the impact of job category and gender on total score of satisfaction about the curriculum of mathematics in teacher training programs for male and female teachers. Subjects were divided into three groups (PTC teachers, CT teachers and B.Ed teachers)

Tests of Between-Subjects Effects
Dependent Variable: Totalsatisfaction

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>468707.213</td>
<td>1</td>
<td>468707.213</td>
<td>138967.246</td>
<td>.000</td>
<td>.998</td>
</tr>
<tr>
<td>Jobcategory</td>
<td>8.487</td>
<td>2</td>
<td>4.243</td>
<td>1.258</td>
<td>.286</td>
<td>.008</td>
</tr>
<tr>
<td>Gender</td>
<td>1.613</td>
<td>1</td>
<td>1.613</td>
<td>.478</td>
<td>.490</td>
<td>.002</td>
</tr>
<tr>
<td>Jobcategory * Gender</td>
<td>5.087</td>
<td>2</td>
<td>2.543</td>
<td>.754</td>
<td>.471</td>
<td>.005</td>
</tr>
<tr>
<td>Error</td>
<td>991.600</td>
<td>294</td>
<td>3.373</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Corrected</td>
<td>469714.000</td>
<td>300</td>
<td>3.373</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. R Squared = .015 (Adjusted R Squared = -.002)</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The above table shows that sig value for Gender * Jobcategory is 0.471, means interaction effect is not significant, F (2,294) = .754, p= 0.471. There is no significant difference in the effect of job category on the total score of satisfaction about the curriculum of mathematics in teacher training programs for male and female teachers.

There is no significant main effect for job category and gender. This means that male and female teachers do not differ in terms of their total score as well as there was no difference in total score for job category.
MAJOR FINDINGS

After 2001, in Pakistan, teacher training institutes made different reforms to improve the overall scenario of teacher education. National Education Policy (2009, p. 43) highlights that pre-service training and standardization of qualifications; professional development; teacher remuneration, career progression and status; and governance and management of the teaching workforce, are the areas where reform is required for improving the quality of teachers. In this regard, higher education commission (HEC) and other supporting agencies come forward and helped teacher training institutes in different forms. Both male and female teachers having mathematics in teacher training programs, show their satisfaction about the Content of mathematics in teacher training programs. There agreed that Content of mathematics in teacher training program enable them to understand the content of school mathematics, provide students strong base foundation and to relate it to the daily life examples. They were of the opinion that Content of mathematics in teacher training program train them in problem solving, provide them core knowledge of mathematics, mathematical principals and their interrelationship, and also enable them to test the mathematical ideas for effective teaching of mathematics.

REFERENCES


<table>
<thead>
<tr>
<th>Item #</th>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>UNC</th>
<th>DA</th>
<th>SDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Content of mathematics in teacher training program enable the teachers to understand the content of school mathematics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Content of mathematics in teacher training program trained teachers to link the mathematics with daily life examples.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Content of mathematics in teacher training program train teachers to provide students strong base foundation in mathematics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Content of mathematics in teacher training program train teachers for problem solving techniques.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Content of mathematics in teacher training program provide core knowledge, concepts, mathematical principals and their interrelationship.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Content of mathematics in teacher training program train teachers to organize mathematical ideas, test them and fill the gaps for effective teaching of mathematics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Content of mathematics in teacher training program train teachers to make teaching process effective through involvement of the students.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Content of mathematics in teacher training program train teachers to learn mathematical reasoning and skills for effective teaching of mathematics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Content of mathematics in teacher training program prepare them to explain the mathematical concepts to the students with different learning paces.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Content of mathematics in teacher training program prepare them to explore and explain hidden dimensions of problems in the content of school mathematics.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
MULTIMEDIA MESSAGING SERVICE (MMS) VS. SHORT MESSAGE SENDING (SMS) AND SECOND LANGUAGE LEARNERS’ VOCABULARY

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Abstract
Our aim in this paper reviewed the current state of mobile learning to examine the extent to which mobile device can support English vocabulary learning. This paper studied the application of students’ English vocabulary acquisition in multimedia environment. It involves the comparison the effect of MMS (multimedia messaging service) and SMS (short message sending) on vocabulary learning. 50 elementary level learners were randomly divided into two groups: Group 1: MMS group and group 2: SMS group. This study investigated the superiority of MMS in comparison with SMS. The results (pre and post tests) were analyzed using t-test. The statistical analysis of the results showed that presenting L2 vocabulary with MMS resulted in better learning.

Key Words: Mobile-learning, MMS( multimedia message service), SMS (short message sending)

INTRODUCTION
Mosavi and Nezarat (2012) said mobile learning is characterized by its potential for learning to be spontaneous, informal, personalized and ubiquitous. Such learning is reinforced when people encounter shortage of free time as the result of working longer hours. such an environment, busy people tend to use portable devices to learn new materials rather than taking time for traditional classroom-based courses. Also, they mentioned the rising speed of mobile technology is increasing and penetrating all aspects of the lives so that this technology plays a vital role in learning different dimensions of knowledge. Today, a clear shift from teacher-led learning to student-led learning that m-learning allowed causes the students feel using the technology more effective and interesting than before. In fact, we can provide a richer learning environment through mobile phones for our language learners.

It is claimed that, in Iran, mobile technology is a familiar part of the lives of most teachers and students. Yet it seems to be in its infancy and its using in learning and teaching has been more gradual, as educators have sought to understand how best to use this tool to support various kinds of learning. As learning with a mobile phone is fundamentally different from classroom learning, a new field of study has come in to shape, namely that of Mobile learning (Sharples, 2000). This study investigated how the use of multimedia messages (MMS) via mobile phone affects learners’ English vocabulary acquisition.

Laufer (1997) said for students of English as a foreign language (EFL), 5000 base words are considered a minimal requirement for understanding non specialized English texts. Vocabulary knowledge is considered by both L1 and L2 researchers to be of great significance in the development of language competence (Nation, 2001; Laufer, 1998).

To reduce stress from encounters of unknown words and to enhance vocabulary learning, glosses or annotations on a text are designed. This design increases exposure of the target words and calls learners’ attention to them and the information provided by the design helps learners avoid incorrect guesses and inferences in given context (Nation, 2001:175).

Kost, Foss, and Lenzini (1999) found that EFL learners performed better on both production and recognition vocabulary tests when they were allowed to use a combination of visual text and graphics.
In recent years, some interest has been expressed towards modality of input in language learning due to the increased use of multimedia materials. Multimedia, that is, a combination of print, audio and imagery, has been argued to enhance input by making it more comprehensible (Plass & Jones, 2005). Paivio’s Dual-coding theory (1986) states that learning improves when the information is received through two channel (verbal and visual) to construct meaning.

Chen and Hsieh (2008) present a study using SMS and MMS messages for the study of English vocabulary. The results showed that the validity of both dual coding and cognitive load theories, that is, using more than one modality is more effective than the use of a single modality.

The aim of the study
The goal of this study is to find out whether learning vocabulary via MMS will result in better learning than learning vocabulary via SMS.

Research Question
What are the effects of MMS vs. SMS on vocabulary learning of second language learners?

Alternative Hypothesis
H1: There are significance differences between MMS and SMS in vocabulary learning of second language learners.

METHODOLOGY

Participants
Participants were selected from 5 classes at the same level of language proficiency (elementary level). The subjects were selected among the students who had MMS supported mobile phones. 50 elementary level English learners were randomly divided into two types of treatment. Half of these 50 students formed the group 1 (MMS group) and the other half the group 2 (SMS group). The multimedia messages in this study allowed students to see the definitions of words, example sentences and pictorial representations, while through SMS, just the word with Farsi meaning was sent. These students were selected regarding their use of mobile devices.

Procedure
Before performing the experiment, all participants perform a pre-test to assess their initial vocabulary abilities. In treatment sessions MMS group received English vocabulary with Farsi meaning as well as picture and an example related to vocabulary, while SMS group received the same vocabulary only with farsi meaning.

During these sessions, three times a day, at 9:00, 13:00, 18:00 hours, I sent three MMS to MMS group and three SMS to SMS group each day and students read my messages as they arrived. After four weeks of learning activities they performed a post test to assess their English vocabulary learning achievements. It was composed of 80 items with a full score of 20. Both the formats of the pre-test and post-test are all common. These tests were a list of English words and asked the participants to answer their meaning in Farsi. The testing time is 45 minutes for pre-test and post-test.

Data analysis
For data analysis, the difference score between MMS group and SMS group was the dependent variable whereas the treatment types (MMS, SMS) was the independent variable. All of the 50 participants were homogenous based on pre test that was administered before starting the study. Results obtained by participants in the post test were compared for the MMS and SMS in order to determine each of their effects on vocabulary learning outcomes. A t-test was run to test the alternative hypothesis. Table (1) shows groups descriptive statistics, from this we can see that $x = 16.2$ and SD = 2.47 (MMS group) and $x = 14.7$ and SD = 2.32 (SMS group). Table 1: t-test result.
Table 1: Means and Standard deviation obtained in post-test

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMS</td>
<td>25</td>
<td>16.2</td>
<td>2.47</td>
</tr>
<tr>
<td>SMS</td>
<td>25</td>
<td>14.7</td>
<td>2.32</td>
</tr>
</tbody>
</table>

Also the result of t-test showed that t(48)=0.031, p<0.05, therefore MMS is significantly different from SMS, and we can support the alternative hypothesis.

![Figure 1: Comparison of means obtained in post-test by two groups](image)

**DISCUSSION AND CONCLUSION**

The main purpose of this study was to explore the impact of multimedia messages vs. short message on vocabulary learning of EFL learners. In this regard a t-test was conducted to probe the alternative hypothesis in this study. The results revealed that there was a significant difference between the means of MMS group and SMS group. Therefore, it can be concluded that using MMS has a significant impact on vocabulary learning of Iranian EFL elementary level students and hypothesis of study stating that MMS group would outperform the SMS group is met. The result of this study is in line with dual-coding theory (DCT theory) as well as Lie, Moare, Craham,& Lee (2002). They said that designing pedagogically effective multimedia instruction in language learning has been an important issue. The findings of this study support the idea that the use of visual media supports vocabulary acquisition and helps increase achievement scores. We can say that sending and receiving MMS which has a substantially higher information-carrying capacity than SMS is more impactful.

**Acknowledgements:** I thank my dear sons, Pouya and Nima.
REFERENCES


ASSESSING CHALLENGES IN THE TRAINING OF SECONDARY SCHOOL TECHNICAL SUBJECT TEACHERS THROUGH OPEN AND DISTANCE LEARNING

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Abstract
This study sought to unearth challenges that are besetting the implementation of the secondary technical subject teacher training programme at the Zimbabwe Open University. The descriptive survey design was adopted for this study to capture people’s perceptions on this issue. Questionnaires and interviews were used to solicit data from the respondents. The sample for the study consisted one National Programme Leader stationed at ZOU National Centre, seventy secondary school heads in Mashonaland west Region and two heads of training centres also in the same province. Results of the study go to show that the training of technical subject teachers is a very viable initiative bearing in mind the available resources in the schools and other training institutions. The majority of the schools and training centres were willing to provide their facilities to the Zimbabwe Open University to train technical subject teachers through Open and Distance Education. The evolvement of ZOU from the University of Zimbabwe placed it at an advantage due to the transfer of faculty and other resources such as modules. Basing on these findings it was recommended that ZOU should proceed expeditiously to introduce the secondary school technical teacher training programme. The university should forge Memoranda of Association with the schools and training centres in which ZOU should undertake to train the teachers and lecturers in the schools and colleges at concessionary rates. ZOU should however, upgrade and then make use of available infrastructure in the schools and other training institutions available in the region.

Key Words: challenges, training, secondary school technical subject teachers, Open and Distance Learning.

INTRODUCTION

Following the Nziramasanga Commission of Inquiry into Education and Training (1999), schools have heeded the call to introduce technical education. However, the endeavour has been hampered by lack of manpower despite the existence of teachers colleges meant to produce technical teachers. Because distance education has been seen as the panacea to addressing staff shortages, the Zimbabwe Open University has introduced degree programmes to offer teachers technical qualifications. With no infrastructural facilities, it is interesting to note that a number of challenges may militate against the full implementation of the technical programmes at the university. This study seeks to unearth challenges that are besetting the implementation of the programme which was earmarked to commence during the January to June 2011 semester but has hitherto been postponed to January to June 2012.

BACKGROUND TO THE STUDY

According to the Herald Newspaper of 23 December 2011, Zimbabwe currently has 97000 teachers in post against a demand of 122 000 teachers. Mathematically, this gives a deficit of 26000 teachers that are required in order to meet the staff needs. On way of addressing such a deficit is to train teachers through distance education because those that are in post continue to execute their duties whilst they learn. Among the much sought after teachers are technical subject teachers who continue to be in short supply as evidenced by their being conspicuous in the country’s secondary schools where the implementation of technical subjects has been
hindered by staff shortages. Distance teacher education in Zimbabwe has however, tended to address shortfalls in general primary teacher education training especially were the curricula for the teachers was generally academic. The Zimbabwe Integrated Teacher Education Course (ZINTEC) is one such initiative that was meant to address teacher shortages through distance education.

With the intention of making provision for the technical subject teachers, the Zimbabwe Open University (ZOU), an Open and Distance Learning (ODL) institution, has offered teachers the opportunity to study at their workplaces through distance education. It is the Faculty of Arts and Education, Department of Teacher Development that has come up with the innovation that is meant to address the shortages of technical subject teachers in Zimbabwe. For a start, the department intends to introduce the Bachelor of Education Technical (Metal Technology), Bachelor of Education Technical (Wood Technology), Bachelor of Education Technical (Home Economics) and Bachelor of Education Technical (Building Studies). Thereafter the different Master`s programmes for the various disciplines will follow. However, with the launch of the degree programme being postponed several times, it this view, the current study, sought to establish the challenges confronting the launch as well as those that are likely to impede the smooth implementation of the technical teacher training programme through distance education in Zimbabwe, particularly at the Zimbabwe Open University.

Statement of the problem
Distance education is believed by many to hold promise in addressing critical problems facing skills development at present, namely a lack of qualified instructors, the need to greatly increase the delivery of skills training on a wide scale, and the need to deliver training at much lower unit costs owing to constraints on financing (Stevens, 2001). However, that being the case, there are challenges militating against this noble innovation. The question the present study seeks to answer, therefore, is: What are the challenges confronting the training of technical subject teachers through distance education?

Research questions
The present study sought to establish the challenges impeding the successful training of technical subject teachers through distance education. In order to answer the main research question, the following sub-questions needed to be answered:
1. Are resources available for the training of technical subject teachers through distance education?
2. What are the stakeholders` perceptions of training technical subject teachers through ODL?
3. What is the level of ICT accessibility and availability in schools and tertiary institutions for use in the training of technical subject teachers through Open and Distance learning?
4. What is the effect of the developmental process of ODL institutions evolving from traditional institutions on the training of technical subject teachers through ODL?

LITERATURE REVIEW

Availability of skilled manpower to train the teachers through ODL
Hiring higher education faculty in technical education has been more problematic than in many other fields. The fields of technology education and vocational education are cited by Castle and Arends (2000) as having a lower than average number of applicants per position, with vocational education also showing a much higher than average failure rate (75%) for searches. Brown (2002), notes that there is a very low success search rate for faculty with technical qualifications to fill positions in technical education institutions.

Stakeholder attitudes
Distance educators still must confront a traditional misconception that distance learning is an inappropriate methodology for imparting vocational and technical skills. Still, distance education is generally regarded as most appropriate for post-secondary technical level studies rather than manual skills at the vocational level (Stevens, 2001). Distance learning is often seen as a threat to many instructors and faculty involved in more traditional education. Fear of technological change and job loss can present significant barriers to implementation. Distance learning can often entail a shift in job function and professional development of faculty, instructors, and support staff to enable them to support new models of delivery is critical. In Zimbabwe, currently odds appear to be tilting against distance education institutions particularly ZOU. There is
bad blood between ZOU and competitors from conventional institutions that feel they have lost clients significantly to ZOU, hence some programmes at the ZOU are being mysteriously suspended by ZIMCHE, the Higher Education watchdog which seems to favour the conventional institution over ODL.

**ICT access and availability in schools and tertiary institutions**

There is, at present, highly inequitable access to information and telecommunications technologies between the developed and developing worlds and even within the more advanced economies (Stevens, 2001). The potential of distance education to expand access to training will be increasingly predicated upon finding ways to democratise access to technology. A research by Bukaliya and Mubika (2011) revealed that another setback in ICT is that many educationists are still not fully ICT literate and do not use it in the instructional process. Studies by Ya'acob, Nor and Azman (2005) and So and Swatman (2006) also established that there is still a long way to go before schools can embrace modern technology. Countries of the Sub Sahara will need also to address challenges that are more specific to the region in their efforts to expand distance learning-based technical education. Technology has also changed the face of education. Advances in telecommunications technology has opened up the possibility of personal and group interaction in distance education (Galusha, 2008). According to Stevens (2001), the current levels of infrastructure and access in most countries of Sub-Saharan Africa are poor relative to nearly all other regions of the world. This lack of basic infrastructure limits, at least for the present, the options for distance delivery models.

Furthermore, Jeffries (2002) cited in Bukaliya and Dzimano (2011) acknowledges that educators are a key element in establishing the use of ICT in education and teacher education but many teacher educators themselves lack skills and training in the use of ICT or the equipment to apply and develop their knowledge and skills, once gained. This could, therefore, may militate against the training of technical subject teachers bearing in that ODL in the majority of institutions relies heavily on ICT.

**Distance education development process and access to infrastructure**

Research elsewhere shows distance education has relied on conventional institutions for its initial development. Stevens (2001) argues that there is need to acquire instructional content at first from other institutions during the initial stages of implementation. This has been the same at the ZOU which was a result of the transformation of the Centre for Distance Education at the University of Zimbabwe. Developing and sustaining distance learning systems will require investment in new skills and knowledge for learners, technical support staff, teachers and instructors, administrators, and policy and decision makers (Stevens, 2001).

In order to save on capital outlay, ODL institutions have to rely on available and existing infrastructure. Use of the existing pool of mainstream expertise and infrastructure should be considered so as to perpetuate the quality of ODL curriculum development and implementation so that the ODL system gets overshadowed by the traditional institutions (Bukaliya, 2011). That being the case though, there appears a situation whereby facilities and equipments, resource centers, and others are unavailable. The fact that the education sector is under-funded by the government means that the availability and quality or facilities in learning institutions is affected negatively. As argued by Kelly (1999), even the most basic infrastructure such as buildings, are inadequate due to underfunding.

**METHODOLOGY**

The descriptive survey design was adopted for this study for it enabled the researcher to solicit people’s perceptions on the challenges besetting the introduction of the teacher training programme at the Zimbabwe Open University. Questionnaires and interviews were used to solicit data from the 73 respondents.

**Sample**

The sample for the study consisted of one National Programme Leader responsible for technical education stationed at ZOU National Centre and seventy school heads and two heads of training centres located in Mashonaland West Province. Schools were selected through simple random sampling based on district of location. The training heads automatically made it into the sample because they are the only training centres available in Mashonaland West province. All in all there were 73 respondents in the study.
DATA PRESENTATION AND DISCUSSION

Table 1: Availability of resources for the training of technical subject teachers through distance education

In order to solicit data to respond to question 1, the Programme Leader responsible for technical education, provided the following information.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Available</th>
<th>Not Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trained/Qualified tutors</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>2. Workshops for practicals</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>3. Textbooks</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>4. Instruction books</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>5. Equipment for practicals</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>6. Materials for practicals</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>7. Funding</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8. Modules</td>
<td>yes</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 shows that most of the resources required to introduce and sustain the training of technical subject teachers through ODL are available. These include the trained and qualified tutors, workshops for practical work, textbooks, equipment and materials for practicals and funding. Modules for the various courses were also readily available. The only resources not available were the instruction books. This therefore would imply readiness and preparedness in the implementation of the training of technical subject teachers through Open and Distance Learning.

Figure 1: Responses from heads of schools on the availability of resources for the training of technical subject teachers through distance education

Figure 1 above shows that 51(73%) respondents remarked that trained tutors were available to train technical subject teachers. Another majority of 43 (62%) indicated that workshops for practicals were available while only 27 (38%) thought otherwise. As far as textbooks are concerned, a majority of 38 (54%) said textbooks were not available with a minority of 32(46%) indicating that these were available. Instruction books were not
available in the 58 (83%) schools with only 12 (17%) school heads indicating that these were available in their schools. Equipment for practicals were available in 30 schools whilst 40 (57%) schools did not have such equipment. Materials for practicals were available in 33 (47%) schools whilst the majority of schools, 37 (53%) did not have the materials. Safety equipment was not available in the majority of schools while only 28 (40%) had such equipment.

Two training centres were identified in Mashonaland West Province. However, these are located in one district making the two accessible only to those in their vicinity. The institutional heads provided the following data.

Table 2: Responses from heads of training centres on the availability of resources for the training of technical subject teachers through distance education (N=2)

<table>
<thead>
<tr>
<th>Resource</th>
<th>Available</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>%</td>
<td>NO</td>
</tr>
<tr>
<td>1. Trained/Qualified tutors</td>
<td>2</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>2. Workshops for practicals</td>
<td>2</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>3. Textbooks</td>
<td>1</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>4. Instruction books</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>5. Equipment for practicals</td>
<td>2</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>6. Materials for practicals</td>
<td>1</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>7. Safety equipment</td>
<td>2</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

In both training centres under study, trained tutors, workshops for practicals, equipment for practicals as well as safety equipment were available. Textbooks and materials for practicals were not available in one of the centres whereas instruction books were not available in both centres.

Due to the fact that the only university and the two agricultural colleges in the province viewed ZOU as a competitor, they could not provide their facilities to a competing institution.

Stakeholders’ perceptions of training technical subject teachers through ODL
A number of stakeholders on the issue of training technical subject teachers were identified. These included the major ones such as high schools, universities, agricultural colleges and training centres. Stakeholders were interviewed on the following:
1. Is the training of technical subject teachers viable through ODL?
2. Are you willing to collaborate with the training institution in the training of teachers through ODL?
3. Of what benefit of the type of the training to the stakeholders?
4. What is quality of the product type produced through ODL?
5. What are likely challenges you are likely to encounter in the provision of services to the training institution?
Table 3: ICT accessibility and availability in schools and training centres for the training of technical subject teachers

<table>
<thead>
<tr>
<th>ICT STATUS</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer hardware is available</td>
<td>42</td>
<td>30</td>
</tr>
<tr>
<td>Computer equipment is accessible to all</td>
<td>40</td>
<td>32</td>
</tr>
<tr>
<td>Staff has knowledge of software and hardware in CAD</td>
<td>10</td>
<td>62</td>
</tr>
<tr>
<td>ICT training among staff is adequate</td>
<td>29</td>
<td>43</td>
</tr>
<tr>
<td>Attitudes of teachers to technology is positive</td>
<td>50</td>
<td>22</td>
</tr>
<tr>
<td>Electricity to power ICT gadgets is available</td>
<td>33</td>
<td>39</td>
</tr>
<tr>
<td>Staff is ICT literate</td>
<td>30</td>
<td>42</td>
</tr>
</tbody>
</table>

Table 4 shows the status of computer accessibility and availability the training institutions. Forty-two (58%) institutions indicated that computer hardware was available, with 30 (42%) stating otherwise. Computer equipment was accessible to all according to 40 (56%) respondents while 32 (44%) indicated otherwise. An overwhelming majority of 62 (86%) stated that staff had no knowledge of software and hardware in CAD while only 10 (14%) indicated that staff had such knowledge. According to only 29 (40%) ICT training among staff was adequate whereas the majority of 43 (60%) mentioned that ICT training was inadequate. Attitudes of teachers to technology was positive according to the majority of 50 (69%) while a minority of 22 (31%) thought otherwise. Electricity to power ICT gadgets was available in 33 institutions with the majority of 39 (54%) not having the electricity. According to the majority of 42 (58%), staff was ICT illiterate whereas according to 30 (42%) respondents, staff were ICT literate.

The effect of the developmental process of ODL institutions evolving from traditional institutions on the training of technical subject teachers

In order to solicit responses on the issue, stakeholders were interviewed if the evolvement of ODL from conventional institutions had any effect on the training of technical subject teachers through ODL.

1. What is the effect of acquiring course content and material from parent conventional institution on the training of teachers?
2. To what extent is this scenario beneficial to the training of technical subject teachers?
3. What is the effect of ODL institution accessing available infrastructure?

Interviewees were of the opinion that since the Zimbabwe Open University evolved from the University of Zimbabwe, there was a tendency of being reliant on the parent institution for support in form of staff and other material to be used in the training of teachers. This is supported by the fact that some of the staff members who man programmes at the Zimbabwe Open University were transferred from the University of Zimbabwe. Some of the modules adopted by ZOU still bear the University of Zimbabwe logo. This therefore, means that the transfer of faculty from the parent was beneficial to ZOU. There is overwhelming evidence from the responses that the training of technical subject teachers through Open Distance Learning can benefit immensely from the evolvement of ODL institutions from conventional/traditional education systems. As indicated above, modules and faculty were adopted by ZOU meaning the new institution had a very good foundation and springboard from where to start. The use of already existing resources therefore places the new institution in a point of advantage as it does not start from scratch. The training of technical subject teachers through Open and Distance Learning therefore benefits from the scenario.

Training technical subject teachers through ODL, according to one interviewee requires that the training institution gets into synergies with the already existing institutions so that there is no heavy capital outlay to put in place infrastructure.
CONCLUSIONS

From the above findings, the present study concludes that:

1. There is overwhelming evidence that there is a lot of appropriate infrastructure to use in the schools and training institutions in the region.
2. The training of technical subject teachers is a very viable initiative bearing in mind the available resources in the schools and other training institutions.
3. The majority of the schools and training centres were willing to provide their facilities to the Zimbabwe Open University to train technical subject teachers through Open and Distance Education.
4. The evolution of ZOU from the University of Zimbabwe placed it at an advantage due to the transfer of faculty and other resources such as modules.

RECOMMENDATIONS

Drawing from the conclusions cited above, it is recommended that:

1. Since there is overwhelming evidence that appropriate and adequate infrastructure is available in schools and training centres, ZOU should proceed expeditiously to introduce the secondary school technical teacher training programme.
2. The university should forge Memorandum of Associations with the schools and training centres in which ZOU should undertake to train the teachers and lecturers in the schools and colleges at concessionary rates.
3. ZOU makes use of available infrastructure in the schools and other training institutions available in the region.
4. ZOU makes use of trained and qualified tutors already in existence in the schools and training centres in the region.
5. While in the process of using the existing infrastructure and manpower in schools and training centres, ZOU should work towards upgrading both these resources in line with modern demands.

REFERENCES


USE OF INFORMATION AND COMMUNICATION TECHNOLOGY:
GENDER DIFFERENCES AMONG STUDENTS AT TERTIARY LEVEL

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Abstract
This study was conducted to provide insights regarding the possible gender differences in the male and female students at tertiary level in terms of information and communication technology use. The research was descriptive in nature. The objective of the study was to analyze the opportunities of access to Information and Communication Technology (ICT) for male and female students at the university level. The population was the male and female students of the public sector universities of Pakistan. The purposive sampling technique was used to gather data from the faculty of social sciences of two public sector universities. Data were collected by administering a questionnaire based on a Likert-five point scale. The data were tabulated, analyzed and interpreted. The percentage, Chi Square and mean were applied to analyze the data. The results of the analyzed data revealed that gender differences existed regarding access to ICT among university students. Provision of necessary support for equal access to female students in ICTs through expansion of ICT infrastructure in the educational institutions particularly in universities, Computer Assisted Instructions (CAI) system and awareness about the use of ICTs is essential to overcome the identified gender inequality.

Key Words: Information and Communication Technology, Gender, Higher Education.

INTRODUCTION

The rapid developments in technology have caused significant changes in the way we live, as well as the demands of the society. Recognizing the impact of new technologies in the workplace and everyday life, today’s teacher education institutions try to restructure their education programs and classroom facilities in order to minimize the teaching and learning technology gap between today and the future. This restructuring ongoing process requires effective integration of technologies into existing context in order to provide learners with knowledge of specific subject areas, to promote meaningful learning and to enhance professional productivity (Tomei, 2005).

Information and Communication technology (ICT) plays a critical role in information societies’ educational systems. In these societies, the stakeholders of educational policy, redesign and reconstruct their educational systems based on new educational paradigms such as constructivist theory so that both teachers and students develop the necessary knowledge and skills sought required in this digital age. Hence, most countries around the world are focusing on approaches to integrate ICT in learning and teaching to improve the quality of education by emphasizing competencies such as critical thinking, decision-making, handling of dynamic situations, working as a member of a team, and effective communication (Anderson & Weert, 2002). The integration of ICT into education has been seen as the tool to help realize the potential of the new technological tools to revolutionize an outmoded educational system (Albrini, 2006). Pelgrum et al (1993) have noted that ICT is "not only the backbone of the Information Age, but also an important catalyst and tool for inducing educational reforms that change our students into productive knowledge workers".
Currently many researchers and scholars in education, particularly higher education carry out research and bracing themselves with knowledge on how to approach the attitudes and behaviours of the younger generation regarding usage of ICT. However, one essential aspect seems to be absent from the discourse ‘the possibility that young people do not behave, think and learn in the same manners; that we have a generation with many different competencies. Veen (2003) warns about the growing “net generation” – Homo sapiens – growing up using ICT in their early childhood could have more expectations of media components from their predecessors. The United Nations Organization also acknowledges the significance of gender perspectives in innovation of new technologies as stated: “In reviewing and developing policies and corresponding strategies and programs which encourage innovation, access and the development of advanced skills and channel new technologies towards the most urgent needs of the world’s poor people, it is critical to ensure that gender dimensions are equally addressed” (UNESCAP, 2002).

**Purpose of the Study**

The issue of the gender gap in Instructional Technology has caught the attention of many researchers and as a result, numerous studies have been conducted to study the extent of this gap (Margolis & Fisher, 2002). As early as the 1980s, studies had reported that females exhibited more negative views and perceptions towards the use of computers than males (Dambrot, Watkins-Malek, Silling, Marshall and Garver, 1985; Koohang, 1987). Studies reported in the literature over 20 years ago suggested that gender has had a mediating effect on attitudes and perceptions towards instructional technology but it is important to note that instructional technology was an adequate term then when computers were mostly used for mathematical and word processing tasks but today, computers are being used in various facets of life (Mitra, Lenzmeier, Steffenmeier, Avon, Quand Hazen, 2000). The integration of computers and IT into the education system has greatly influenced the mindset towards instructional technology. Hence, although the literature shows that extensive research related to gender and attitudes towards instructional technology has been carried out over the years, such findings may be irrelevant today because of the ever expanding nature of instructional technology. The debate over the gender gap that started since the 1980s still persists in the new millennium. Many researchers have revisited this issue and many are continuing to do so. For example, the study by Houtzand Gupta (2001) found significant gender differences in the way females and males rated themselves in their ability to master technology skills. Even though both genders were positive about their technological ability, males rated themselves higher than females. In another study, Shashaani and Khalili (2001) reported that female undergraduate students had significantly lower confidence than males when it came to their ability to use computers. Females also reported feeling helpless, nervous and uncomfortable around computers. So the objective of this study was to analyze the opportunities of access to Information and communication Technology (ICT) for male and female students at university level. This study was conducted to find answer of the research question: What ICTs were accessible for and used by male and female students at university level?

**Significance of the Study**

Access to new ICTs is a far away reality for under developing countries like Pakistan, particularly for females, who experience socio-cultural and economic hazards in their education and use of ICT. Given the lack of basic infrastructure, high cost in ICT installation and availability, lack of necessary operational skills, dogma that technology is men’ sphere, a significant portion of population remains deprived of using the ICTs, this poses more hazards for females. Even when they are educated, educated females are lagging behind males related to information and communication technology. The study may be helpful for future planners and think tanks that set patterns for coming generations and plan different techniques and approaches for future betterment of particularly the educational institutions and generally the youth. This study provides food for thought for curriculum developers and syllabus designers so they could include some topic related to practical social training and moral values. The subject of socialization will surely get a place in curriculum. The study will be useful for educational policy makers to understand the actual position of gender biases regarding use of ICT and as a result policy might be devised to eradicate inequalities in using the ICT. It is obvious that social workers play a pivotal role in social mobilization and modification of existing cultural and social values. This research will disclose new areas and as such, it will be useful for researchers to find and explain other dimensions relative to information and communication technology and gender issues that merit further study.
REVIEW LITERATURE

Information and communication technology has a strong effect in education and it provides enormous tools for enhancing teaching and learning. There have been many studies that have highlighted the various ways that ICT may support teaching and learning processes in a range of disciplinary fields such as the construction of new opportunities for interaction between students and knowledge; accessing information etc. ICT can have a useful effect on teaching and learning if it is used under the right conditions including suitable sources, training and support. ICT also offers the potential to meet the learning needs of individual students, to promote equal opportunity, to offer learning material, and also promote interdependence of learning among learners (Leach, Ahmed, Makalima & Power, 2005; cited in Cavas & Cavas, 2009).

Dünstalland Arslanagic (2006) define information and communication technology as a range of equipment (hardware: personal computers, scanners, and digital cameras) and telecommunications infrastructures (phones, faxes, modems, video conferencing equipment and web cameras, that allow us to access, retrieve, store, organize, manipulate, present, send material and communicate locally, nationally and globally through digital media. Burton (1999) says information and communication technology is a set of technological devices and sources used to disseminate, communicate, store and create information. In the literature, while there are many definitions of ICT, it can be broadly defined as “technologies that facilitate, by electronic means, the acquisition, storage, processing, transmission, and disseminating of information in all forms including voice, text, data, graphics and video” (Michielsand Van Crowder, 2001; De Alcantara, 2001). This definition mainly focuses on the importance of the intersection of information technology, information content and telecommunications in enabling new forms of knowledge production and interactivity. ICT allows many people to generate and disseminate information, thus playing an active role in the process of interaction between professionals, learners, policy makers, peers and etc. (Leach, Ahmed, Makalima & Power, 2005) In the definition of information and communication technology in education, four main elements can be taken into consideration; ICT as an object that refers to learning about ICT, an assisting tool, a medium for teaching and learning and finally a tool for organization and management in schools (Monnen & Kommers, 1995; SER, 1998, Pilot, 1998; cited in Jager & Lokman, 1999).

The definitions of access to information and communication technology are based on three factors: quality of services, accessibility and affordability (Verhoest & Cammaerts, 2001). Warschauer (2004) defines access to information and communication technology in terms of physical access to ICT device. Different countries embrace the different concepts of what information and communication technology is necessary to provide. As an essential priority, when government should intervene to decide about the content, value-added, infrastructure and justification of services to access ICT (Greene, 2003). Kirkman (1999) explains “when we speak about access, what we really mean is access to information, knowledge, and communications opportunities, not access to one specific services or technology”. Dorup (2004) in his study of Danish medical undergraduates expounded that majority of the students had access to computers at homes. He further added that males had more favourable attitudes toward computers than female students. Male students manifested their desire to change traditional learning methods with better information and communication technology. Schumacher and Morahan (2001) found that females exhibited negative attitudes towards computers. They also discovered that females possessed less experience of computer usage than males. There were also found prominent differences regarding computer literacy and between males and females.

Researchers (Clarke & Chambers, 1989; Ware & Stuck, 1985; Singh, 1995; Watson, 1997) made the observation that young children believed that ICT was the domain of males. Betz & Hackett (1981) reported that college male students held similar efficacy beliefs for traditional male occupations whereas female students had high efficacy beliefs for positions traditionally held by women but low self-efficacy for positions traditionally held by men. Research consistently showed that boys were more likely to be engaged in extracurricular activities with computers, such as using a computer at home and play computer games. It is also indicated that stereotypical male images found in computing magazines (Ware & Stuck, 1985) acted as deterrents for female involvement in technologies. Gender and ICT interact in complex ways but in the aggregate, females are much less likely to
participate in ICT courses, careers and leadership (Withers, 2000). Fenwick (2004) also showed that gender inequity persists both in access to and experience of learning opportunities with ICT.

METHODOLOGY

The research was targeted toward male and female students of public sector universities located in Islamabad. Population was consisted of male and female students at these universities. This population was targeted due to their similar geographical location, socio-economic and cultural background. The purposive sampling technique was adopted. The sample was selected from the targeted population. The sample was delimited to students from the faculties of social sciences from two public sector universities, an international Islamic university (IIUI), Islamabad and a national university of modern languages (NUML), Islamabad. The total number of the sample was four hundred. The sample was equally divided into two hundred female and two hundred male students of faculties of social sciences enrolled in postgraduate programmes during the Spring semester 2010. The sample of the population was further divided into 100 male and 100 female students of faculty of social sciences randomly selected from each university. A questionnaire was used to collect the data. This questionnaire was distributed to the targeted population with the permission of the heads of the different departments of faculties of social sciences of both the universities (IIUI and NUML) and personally collected. The questionnaire was structured on the basis of a Likert rating scale to provide the same frame of reference for male and female respondents. A draft questionnaire was piloting to identify the ambiguities and inadequacies. The pilot was distributed to fellow students and other research professionals of faculty of Social Sciences of International Islamic University, Islamabad. It was done to ensure that the instrument would obtain the desired data from the inputs of the fellow students and research professionals to ensure language comprehension, reliability, and validity of the questionnaire. A Cronbach’s alpha was applied to measure the reliability of the questionnaire which was 0.89. Data collected through the questionnaire were tabulated, analyzed and interpreted. Percentage method and mean score was applied to analyze the data. Chi Square was used at $\alpha = 0.05$, significance level. The detail of the collected data is given below in table

<table>
<thead>
<tr>
<th>No</th>
<th>Gender</th>
<th>Distributed Questionnaire</th>
<th>Collected Questionnaire</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>200</td>
<td>167</td>
<td>83.50%</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>200</td>
<td>176</td>
<td>88%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
<td>343</td>
<td>85.75%</td>
</tr>
</tbody>
</table>
Statistical treatment of the data

Table 1: Access of ICT for male and female students

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Option</th>
<th>SA</th>
<th>A</th>
<th>UD</th>
<th>DA</th>
<th>SDA</th>
<th>$\chi^2$</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Access to all the ICT facility in the department</td>
<td>Male</td>
<td>35</td>
<td>92</td>
<td>6</td>
<td>25</td>
<td>9</td>
<td>145.31</td>
<td>3.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>22</td>
<td>73</td>
<td>19</td>
<td>39</td>
<td>23</td>
<td>57.95</td>
<td>3.17</td>
</tr>
<tr>
<td>02</td>
<td>ICT facilities are used under the discretion of the teachers.</td>
<td>Male</td>
<td>29</td>
<td>104</td>
<td>11</td>
<td>14</td>
<td>9</td>
<td>193.93</td>
<td>3.78</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>18</td>
<td>114</td>
<td>22</td>
<td>14</td>
<td>8</td>
<td>221.67</td>
<td>3.68</td>
</tr>
<tr>
<td>03</td>
<td>I integrate ICT with learning.</td>
<td>Male</td>
<td>81</td>
<td>53</td>
<td>17</td>
<td>10</td>
<td>6</td>
<td>126.26</td>
<td>4.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>39</td>
<td>84</td>
<td>24</td>
<td>18</td>
<td>11</td>
<td>95.86</td>
<td>3.69</td>
</tr>
<tr>
<td>04</td>
<td>Department has computer (CAI).</td>
<td>Male</td>
<td>9</td>
<td>17</td>
<td>17</td>
<td>75</td>
<td>49</td>
<td>93.03</td>
<td>2.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>15</td>
<td>45</td>
<td>21</td>
<td>66</td>
<td>29</td>
<td>47.69</td>
<td>2.72</td>
</tr>
<tr>
<td>05</td>
<td>Students often use ICT facility in the computer lab.</td>
<td>Male</td>
<td>41</td>
<td>84</td>
<td>19</td>
<td>16</td>
<td>7</td>
<td>114.53</td>
<td>3.81</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>49</td>
<td>82</td>
<td>22</td>
<td>12</td>
<td>12</td>
<td>103.6</td>
<td>3.76</td>
</tr>
</tbody>
</table>

Table 1: Illustrates that the calculated value of Chi Square respectively of statement 01 of male (145.31) and female (57.95), statement 02 of male (193.93) and female (221.67), statement 03 of male (126.26) and female (95.86) statement 04 of male (93.03) and female (47.69), and statement 05 of male (114.53) and female (103.64) is greater than the tabulated value 9.49 of Chi Square. Therefore, it is concluded that all the statements are significant for both male and female respondents. The mean score of statement 01 of male respondents (3.71) is greater than mean score of the female respondents (3.17). This reveals that males are more satisfied with access to ICT facility available in the department. The mean score of statement 02 of male respondents (3.78) and the mean score of the female respondents (3.68) is almost same. This shows that both respondents exhibited agreement on the statement. The mean score of statement 03 of male respondents (4.16) and the mean score of the female respondents is (3.69) This shows that both male and female respondents were agreed regarding the integration of ICT with learning. The mean score of statement 04 of female respondents (2.72) is greater than mean score of the male respondents (2.17). This reveals that both the respondents disagreed with statement 04 as well. This finds that male and female respondents were not satisfied with the facility of computer assisted system of instruction. The mean score of statement 05 of male respondents (3.81) and mean score of the female respondents (3.76) is approximately same. This shows that both the respondents were agreed that students often use ICT in the computer lab.
Table 2: Usage of ICT gender wise

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Option</th>
<th>SA</th>
<th>A</th>
<th>UD</th>
<th>DA</th>
<th>SDA</th>
<th>χ²</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>I use printers and scanners for studies</td>
<td>Male</td>
<td>15</td>
<td>104</td>
<td>11</td>
<td>20</td>
<td>17</td>
<td>187.82</td>
<td>3.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>19</td>
<td>62</td>
<td>14</td>
<td>56</td>
<td>25</td>
<td>55.41</td>
<td>2.97</td>
</tr>
<tr>
<td>07</td>
<td>Computer lab remains over - crowded.</td>
<td>Male</td>
<td>93</td>
<td>48</td>
<td>13</td>
<td>7</td>
<td>6</td>
<td>168.54</td>
<td>4.29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>112</td>
<td>29</td>
<td>13</td>
<td>12</td>
<td>10</td>
<td>214.18</td>
<td>4.26</td>
</tr>
<tr>
<td>08</td>
<td>I use internet frequently in the computer lab</td>
<td>Male</td>
<td>30</td>
<td>81</td>
<td>14</td>
<td>32</td>
<td>10</td>
<td>95.90</td>
<td>3.53</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>13</td>
<td>24</td>
<td>14</td>
<td>97</td>
<td>28</td>
<td>139.13</td>
<td>2.41</td>
</tr>
<tr>
<td>09</td>
<td>Multimedia is frequently used in the classroom.</td>
<td>Male</td>
<td>10</td>
<td>25</td>
<td>14</td>
<td>100</td>
<td>18</td>
<td>169.68</td>
<td>2.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>16</td>
<td>26</td>
<td>9</td>
<td>88</td>
<td>37</td>
<td>110.74</td>
<td>2.41</td>
</tr>
<tr>
<td>10</td>
<td>Students are allowed to use ICT in office</td>
<td>Male</td>
<td>4</td>
<td>10</td>
<td>10</td>
<td>110</td>
<td>33</td>
<td>234.35</td>
<td>2.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>5</td>
<td>20</td>
<td>19</td>
<td>85</td>
<td>47</td>
<td>113.39</td>
<td>2.15</td>
</tr>
</tbody>
</table>

Table No.2 illustrates that the calculated value of Chi Square respectively of statement 06 of male (187.82) and female (55.41), statement 07 of male (168.54) and female (214.18), statement 08 of male (95.90) and female (139.13), statement 09 (169.68) and of male (110.74), statement 10 of male (234.35) and female (113.39) is greater than the tabulated value 9.49 of Chi Square. Therefore, it is concluded that all the statements are significant for both male and female respondents. The mean score of statement 06 of male respondents (3.48) is greater than mean score of the female respondents (2.97). So, male and female respondents replied that they don’t use printers and scanners for studies in the department. The mean score of statement 07 of male respondents (4.29) and the mean score of the female respondents (4.26) is almost same. This reveals that both respondents were agreed to the statement. The mean score of statement 08 of male respondents (3.53) is greater than mean score of the female respondents (2.41). Male respondents were agreed to statement 08 whereas female respondents disagreed with statement 08. The difference in mean scores of statement 08 revealed gender differences. This reveals that males are more satisfied regarding frequent use of internet facility available in the department. The mean score of statement 09 of male respondents (2.46) and mean score of the female respondents (2.41) is almost same. It reveals that multi media is not frequently used in the class room. The mean score of statement 10 of male respondents (2.05) and the mean score of the female respondents (2.15) is almost same. This explores that both male and female respondents disagree with statement 10 regarding permission to use office computers and phones therefore it revealed that they had restrictions regarding access to facility of ICT available in the offices.

Table 3: Opportunity for both male and female students

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Option</th>
<th>SA</th>
<th>A</th>
<th>UD</th>
<th>DA</th>
<th>SDA</th>
<th>χ²</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Male students are facilitated more than female.</td>
<td>Male</td>
<td>14</td>
<td>56</td>
<td>19</td>
<td>52</td>
<td>26</td>
<td>44.76</td>
<td>2.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>68</td>
<td>52</td>
<td>27</td>
<td>10</td>
<td>19</td>
<td>65.44</td>
<td>3.8</td>
</tr>
<tr>
<td>12</td>
<td>Female Students hesitate to use office computers.</td>
<td>Male</td>
<td>11</td>
<td>97</td>
<td>19</td>
<td>25</td>
<td>15</td>
<td>154.59</td>
<td>3.38</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>62</td>
<td>60</td>
<td>20</td>
<td>20</td>
<td>14</td>
<td>63.24</td>
<td>3.77</td>
</tr>
<tr>
<td>13</td>
<td>Equal opportunities of ICT for male and female students.</td>
<td>Male</td>
<td>17</td>
<td>112</td>
<td>20</td>
<td>10</td>
<td>8</td>
<td>234.11</td>
<td>3.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>37</td>
<td>74</td>
<td>38</td>
<td>14</td>
<td>13</td>
<td>69.27</td>
<td>3.61</td>
</tr>
</tbody>
</table>

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Table No.3 illustrates that the calculated value of Chi Square respectively of statement 11 of male (44.76) and female (65.44), statement 12 of male (154.59) and female (63.24), and statement 13 of male (234.11) and female (69.27) is greater than the tabulated value 9.49 of Chi Square. Therefore it is concluded that all the statements are significant for both male and female respondents. The mean score of statement 11 of female respondents (3.80) is greater than mean score of the male respondents (2.88). This reveals that females were more agreed with the statement 11 whereas male showed disagreement to statement 11. This difference of mean scores of male and female respondents indicates the gender differences found between male and female respondents. The mean score of statement 12 of male respondents (3.38) and the mean score of the female respondents (3.77) is approximately same. This reveals that female students hesitate to use office computers. The mean score of statement 13 of male respondents (3.72) and the mean score of the female respondents (3.61) is almost same. It reveals that both respondents were agreed to the statement 13.

CONCLUSION

Male and female respondents disagreed with statement 04 (Department has Computer Assisted Instructions (CAI) system) as well. This revealed that male and female respondents were not satisfied with the facility of Computer Assisted system of Instruction. New technology based Models of teaching and learning are needed to be implemented for improving educational outcomes. Males were more satisfied regarding frequent use of Internet facility available in the department. Male respondents were agreed to statement 08 (Students use internet for entertainment i.e. movies, chat, email etc.). Whereas female respondents disagreed that means male frequently used Internet than female respondents. Both male and female respondents disagreed with statement 10, (Students are allowed to use office computers and phones). Therefore, it revealed that they had restrictions regarding access to facility of ICT available in the office. Females were more agreed with the statement 11 (Male Students are facilitated more than female students to use Computers for study purpose. Departments should establish Computer Assisted Instructions (CAI) system to impart knowledge in more effective manner. New technology based Models of teaching and learning are needed to be implemented for improving educational outcomes. Male and female students should be provided equal opportunities of using Internet in the computer laboratory. Male and female students should have access to the facility of computer and phones available in the department. Training infrastructure should be set up in the department to provide training to females. All the universities may be equipped in such a way that the availability and accessibility of equipments, resources and facilities may be in accordance with the strength of class. University management enforcement for technology usage and incentives/rewards for the students/teachers to use instructional technology may be enhanced for getting good product of the higher education. Digital libraries are main source of information and research but their availability in the universities of third world countries has been found at a very low level. Therefore universities may equip themselves with digital libraries that interlink all the libraries of the world electronically and promote on line teaching.

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TEXTBOOK MATERIALS AND THEIR SUCCESSFUL APPLICATION IN THE CLASSROOM: IMPLICATIONS FOR LANGUAGE DEVELOPMENT

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Abstract

Selection of materials for classroom use is a challenging task for English language teachers as they provide a strong platform through which students learn English language. Presentation of developmentally appropriate, relevant and engaging materials is, therefore, the prime responsibility of the material developers and the teachers. Selection of the right materials makes teaching and learning a worthwhile activity and creates a classroom environment which is efficient, effective and meaningful.

This paper will offer a critique of how textbooks for teaching English are prepared, prescribed and taught in both the private and public schools of Pakistan. It will also discuss the appropriacy of these materials vis-à-vis linguistic suitability, cultural aptness and interest level of students across primary level. The paper will suggest important elements which must be kept in mind while designing and prescribing textbook materials for primary schools. The paper will also provide guidelines to teachers of how to effectively teach textbook materials in classrooms.

Key Words: Textbook Materials, Classroom, Implications, Language Development.

INTRODUCTION

Selection of materials for classroom use is a challenging task for a language teacher as it provides a platform through which students learn English language. Dudley-Evans & St. John (1998) outline the same and reiterate that materials play a crucial role in exposing learners to the language. Moreover, they provide students a lens through which students develops awareness about local and global events, a familiarity with various genres of literature, a consciousness of the present and the past and discernment about the future. They are thus a gateway to understand the world around them.

Presentation of developmentally appropriate, relevant and engaging materials is, therefore, the prime responsibility of the material developers and the teachers. Kitao & Kitao (1997) emphasize the same and claim that materials are the center of instruction and one of the most important influences on what goes on in the classroom. Selection of the right materials makes teaching and learning a worthwhile activity and creates a classroom environment which is efficient, effective and meaningful. On the contrary, if materials present out of context situations to which learners cannot relate to, are uninteresting and complicated, then teaching and learning becomes a dull and monotonous activity. The classroom becomes a stolid forum where de-motivation sets in. It is, therefore, a highly desirable initiative to give students a satisfactory experience through the use of age-appropriate and linguistically viable materials which adequately arouse and maintain their interest in the classrooms.

CAREFUL CHOICE OF MATERIALS

Keeping the learners motivated through materials is a crucial factor in the overall achievement of curricular goals and attainment of education. According to Small (1997), developing life-long learners who are intrinsically motivated, display intellectual curiosity, find learning enjoyable, and continue seeking knowledge after their formal instruction has ended has always been a major goal of education. To attain this goal the educational
Institutions must work towards an educational philosophy which is learner centered and need-focused. In terms of material development, this means that the curricular goals, philosophies and themes, around which materials are carved, are directly at power with the needs and interests of the learners as well as the current local and global contexts. The material developers carefully write, select and frame materials in the light of the linguistic and intellectual demands of various age and grade levels. This ensures enlivened classrooms where students actively pursue knowledge as it meets their overall interest and linguistic requirements.

In order to ensure positive and solid engagements with materials it is also important that the selected materials are initially analyzed and pre-tested before they are put to larger use. Consequently, the materials are revised or adapted in the light of the feedback received and then finally circulated in schools to be used. The teachers, then, must report on the success or failure of these materials for further revision or adaptation. Continuous feedback system from teachers and students is a major source to ensure the sustainability and likability of materials. Teachers and students are the best spokespersons on the quality of materials and their opinions and judgments must be given ample weight. Keeping the motivation levels of teachers and students high is quite a challenging task and go a long way in making the teaching and learning a desirable endeavor.

**TEACHERS AS MATERIAL DEVELOPERS**

In the whole process of material writing and selection the teachers should take up a key role as they are the best judges to report on learners’ needs and interests. Tomlinson (1998) is of the same view and confirms that teachers understand their own learners best and are suited well to be material developers. He goes on to argue that all teachers need grounding in materials writing. Unfortunately, in most schools teachers are handed down the textbooks to teach. They exercise little power in changing or adapting materials. They are strictly made to follow the given syllabus. Teaching and learning become a cumbersome and monotonous task. Teachers are loath to own and teach materials which they know will not make any sense to the learners. Learners at the same time find it difficult to keep pace with learning that does not ignite any interest. The result is a steep fall in the motivational levels of both the teacher and the taught. One solution to this problem is the initiation for teachers to become material developers as being insiders they would graphically and most candidly present the linguistic, psychological and intellectual demands of learners at various levels. Schools must invest in this kind of professional development of teachers to maintain high motivation levels in teachers and learners.

**LOCAL AND GLOBAL MATERIALS**

Another factor that hugely affects learners’ response towards materials is the content they present. If the content of the materials is heavily laden with foreign substance, which learners don’t relate to well, the interest level automatically falls down. Le (2005) shares the same opinion and claims that although English teaching materials come from many places, the dominant sources are countries where English is a native or an official second language. Materials from these English-speaking countries do not reflect the learning styles or cultural values of the EFL students who use them, and, as a result, the students’ motivation suffers and they become reluctant to interact in class and share opinions. Moreover, in majority of the contexts, teachers are just implementers and exercise no power in either adapting or presenting localized materials. In such circumstances, learning again becomes a meaningless activity where teachers and learners are cogs in a machine, operated mindlessly by a highly structured school administration.

If those materials that contain out of context content are replaced with localized matter, most of the problem stands resolved. Localized matter presents culture which learners identify and easily relate to. This encourages more learner participation in class which results in language learning. Brown (1994) is of the same view and opines that localizing materials is based on the idea that relevant contexts naturally encourage students to show interest, which allows the teacher to deliver more effective lessons. When the material is meaningful, students are more participatory and successful at learning a language. Similarly, Dat (2003) supports using localized English teaching materials because they present students with real-life and culturally familiar language contexts.
Although research evidence reveals that local materials are vital for meaningful learning, it also states that a good blend of global materials is necessary to get a wholesome view of language. Language is learnt well when it is presented within the culture which it showcases. According to Alptekin (2002, 58):

"Learning a foreign language becomes a kind of enculturation, where one acquires new cultural frames of reference and a new world view, reflecting those of the target language culture and its speakers."

It is important, therefore, to teach materials which are both foreign and local. It gives students a broader canvas to experiment with language. Le (2005) is of the same view and states that students should also be exposed to materials that focus on the cultures of English-speaking countries. This allows students to compare and contrast their culture with other global cultures, thereby expanding their background knowledge and developing their identity.

AUTHENTIC MATERIALS

Evidence also reveals that the practice of authentic materials in the classroom facilitate language learning as learners are exposed to naturally occurring language experiences. Authentic materials are therefore those materials or texts that present language in real life contexts. Harmer (1991), cited in Matsuta (n.d., para. 1) defines authentic texts as materials which are designed for native speakers; they are real texts; designed not for language students, but for the speakers of the language. Such texts when taught to EFL students serve a dual purpose: it makes learners see language in real life situation. Also, it exposes them to the culture and the community of the English speaking world, thus bringing in the global element in language learning. As claimed by Philips and Shettesworth 1978; Clarke 1989; Peacock 1997, cited in Richards, 2001 such kind of language exposure has a positive effect on learner motivation, provides authentic cultural information, answers the learners' needs well and supports a more creative approach to teaching.

It should, however, be noted that authentic materials need to be carefully used in the classrooms. Learners with little exposure to English language might find them too daunting. Such learners might adopt a fearful approach towards language learning as they might find such materials well beyond their reach. Guariento & Morley (2001) note that at lower levels, the use of authentic materials may cause students to feel demotivated and frustrated since they lack many lexical items and structures used in the target language. However, authentic materials are useful for those learners who already have a fair idea about English language and who can meaningfully interpret the cultural and linguistic nuances of it. For them the use of authentic materials is a pleasant experience in the classroom as they can easily interact with the real language.

Another important factor in the use of such materials is the role of the teacher. The teacher has to constantly provide all the pedagogical support to the learners for the successful interpretation of authentic materials. This may also lesson the gap between the ability levels of learners as learners with low ability levels can also meaningfully interact with such materials given the proper support of the teacher. Kilickaya (2004) is of the view that learners feel better with authentic materials as long as we, as teachers, provide them with pedagogical support.

MATERIAL ADAPTATION

Another successful approach towards materials development is the adaptation of those materials that in their original form might pose difficulty for students. Schumaker & Lens (2003) state that when instructional materials present a barrier to student learning, teachers often adapt the materials to allow students greater access to the information to be taught. They go on to claim that such adaptations may involve changing the content of the materials (the nature or amount of information to be learned) or changing the format of the materials (the way information is presented to the learner). The overall goal, therefore, is to make materials accessible, enjoyable and comprehensible to learners. Again adaptations require the skill of the teacher who can bring careful changes and watchful manipulations in the text for contextual suitability.
Materials that mostly qualify for adaptations are of global nature. Global materials, which are incompatible in content and format, can safely be redeveloped by teachers to suit the linguistic, contextual and interest level of learners. Nguyen (2005) is of the same opinion and reiterates that the role of teachers as skillful material developers is, therefore, crucial because they can make the best judgment about which foreign cultural elements to localize and which to explain.

TEXTBOOK DEVELOPMENT: THE CASE OF PAKISTAN

In the light of the above references to material development and their repercussions for the academic context, it is worthwhile to consider material development and the selection of teaching resources in schools and colleges in the private and the public sectors of Pakistan.

In the public sector, textbook boards are primarily responsible for material development from grades 1-12. The textbook board constitutes committees of authors and editors for textbook development. The authors strictly follow the national curriculum prescribed by the government for various subject areas and develop lessons and activities on the objectives, benchmarks and themes set by the curriculum. The materials once developed by the authors, are reviewed by the editors and are sent to the Provincial Review Committees and then to the Textbook Review Committees for final approvals. The materials thus go through close scrutiny at various steps before being printed.

As a co-author of Grade 9 English textbook and a member of the Provincial Review Committee, I have the following critique to offer with respect to textbook development in the public sector:

• It is important to conduct a needs survey before formulating textbooks for particular grade levels for appropriate and suitable material development.
• It is very important for all authors and material reviewers to know the linguistic needs and interests of the students for which materials are developed. Tomlinson (1998) also claims that materials writing is at its most effective when it is turned to the needs of a particular group of learners.
• It is vital to involve those stakeholders who are directly involved in using and teaching materials. Teachers, teaching at the level for which a textbook is developed, must become part of textbook development committees as they are the best sources to recommend and select appropriate materials.
• The materials chosen must bear relevance to the current and recent global trends, issues and themes. For this the national curriculum also needs constant review so that the themes are set in line with the concurrent global drifts.
• The committees of authors and editors should also be periodically reviewed for better efficiency.
• The authors must not plagiarize materials and must quote the relevant sources to avoid embarrassment.
• The materials must have better visual appeal.
• Teachers must be adequately trained to use materials in the classrooms.

In the private sector, the case is different as the private schools are solely responsible for material selection. Mostly they rely on foreign sources for material selection. The English texts used in the private English medium schools are mainly produced by foreign publishers. The materials are seldom developed by the schools’ curriculum wings and the dependence mainly remains on imported books. The following comments are offered in this regard:

• The materials which are selected must bear relevance to the context and culture in which these materials are used.
• The materials must be adapted to allow students better access. As pointed out by Schumaker et al. (2003) students may have difficulty in acquiring or getting the important information from written materials, storing or remembering the information presented in the materials or expressing the information or demonstrating competence on written tests. For this adaptation of materials offer a better chance for sustained linguistic growth.
• There must be a close blend of local and global materials. It is important to contextualize language and present familiar contexts to students to usher better and meaningful learning.
Materials must undergo constant evaluations. Commercially produced textbooks must be strictly evaluated by teachers. They must be subjected to pre, while and post evaluation. Only then they should be regarded as suitable for classroom use.

Teachers must be adequately trained to use and adapt materials in the classrooms.

**CONCLUSION**

Materials are that vital funnel through which knowledge is transferred from the teachers to the learners. Such knowledge can only be transferred effectively if the materials are appropriate to the needs of the learners, are contextually appropriate, and linguistically sound. Also, such materials are hugely dependent on the pedagogical skill of the teachers and the manner in which they use manipulative skills to teach them. Materials pose a comprehension and contextual threat to the learners if the teachers and school administration fail to use the skill of judging their appropriacy for classroom use. In such circumstances materials become more of a liability and burden and make teaching and learning an unpleasant experience. Materials, therefore, should be carefully selected, processed, adapted if needed, and judged for successful application in the classroom. This can only happen once the learner is kept at the centre of the education stage and materials are selected and used for enhancement of learner knowledge and skill.

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A PARADOX IN DISTANCE EDUCATION

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Abstract
Distance Learners with different backgrounds may have different perceptions about distance education. Prior experience, pre-existing attitudes and beliefs all may play a role in determining whether a student will be successful in distance education or not. Does distance learning work better for some students as opposed to than others? Is this due to their distance learning skills/abilities or something else? These questions are the driving force of this survey.

Responses of 495 distant learners from Turkey and Cyprus differed according to their sex. It was found that there is a curious paradox in distance education in regards to the following statements: e-confidence results in e-success; e-anxiety is an obstacle for e-course capability; reasons of ‘not choosing’ distance education courses are not same as the reasons of ‘drooping’ it. Does this all mean resistance to distance education? Discussions all about these are given.

Key Words: Distance Education, Students, Paradox, E-Attitude, Internet Connection, E-Anxiety.

INTRODUCTION

Distance Education Challenges
Distance education offers an opportunity to students with high e-confidence and less e-anxiety. However, limited face to face interaction is discouraging students during online courses. Students have different perceptions about distance education. There may be several issues effecting learners’ perceptions. Instructor, website, computer skills, pedagogical issues and Language are just a few of these issues. Perceptions may also be differing among visual learners, auditory learners and tactile learners. If learners are not satisfied with the design of the course website, they may have also negative perceptions towards their distant courses. Technological problems and pedagogical issues make learners get frustrated with the online courses (Hara and Kling, 2003).

The issues such as instructional support, faculty motivation and enthusiasm, and technology problems have been raised as problems in developing online instruction in many institutions for a long time (Barr and Tag, 1995). If learners are not satisfied with the design of the course website, they may also have negative perceptions towards their distant courses. Technological problems and pedagogical issues make learners get frustrated with the online courses (Hara and Kling, 2003). According to Rashid & Rashid (2011), the issues in distance education may bring problems such as:
- Maintenance of academic standards,
- Financing problems,
- Organizational problems,
- Postal services,
- Communication,
- Problems related to the study centers,
- Students assignments related problem,
- Misuse of technology and
- Trust to the evaluation system and adequate feedback (Altan & Seferoğlu, 2009).
In addition to the above issues, E-attitude, E-confidence, E-anxiety and E-dropouts may also bring problems in distance education. **Anxiety** is a basic human emotion consisting of fear and uncertainty that typically appears when an individual perceives an event as being a threat to the ego or self-esteem (Sarason, 1988). Although there are not much studies about these in distance education area, it is really important to prevent students being anxious and being unsuccessful due to this anxiousness.

**E-anxiety** is the learners fear and uncertainty that appears when learners decide to start to an e-learning course or a distance education course. This may be due to several reasons. It may be students lack of e-confidence or lack of the technological prerequisites or lack of money.

**E-confidence** is the feeling of being capable to learn by using electronic devices. Confidence brings trust and motivates learners. It generates greater interest, perseverance, and general feelings of self-worth while completing academic assignments (Pajares, 2003). E-confidence is important for learners success in a course. If learners are e-confident than they are motivated.

**E-drop-out** is leaving an e-learning course or a distant course. There may be several reasons of leaving a course. Learners may have run out of motivation, they may have no source of support or encouragement in school or at home; they may lose their e-confidence, they may have e-anxiety; all these may result in their dropping out course.

In distance education courses, since students and teachers are not at the same place physically, their attitudes and perceptions about the course differs according to their courses virtual classroom design. Thus the pedagogy and the strategy under developing the virtual classroom environment are very important for the delivery of distance education. The learners perceived the interactive course environment and frequent discussion as conducive to learning in online courses (Jiang, 1998). The virtual classrooms can be designed according to the learner characteristics. Knowles (1980), in explaining the advantages of knowing the learner, believes that learner behavior is influenced by a combination of the learner's needs plus the learner's situation and personal characteristics. Hence, knowing these personal characteristics is an important aspect of planning distance learning courseware and strategies. Jung (2005) stated that measurement and evaluation are seen as the last step distance education institutions and generally hasn’t been given the necessary importance. Students should trust the measurement and evaluation system. Students’ opinions about the process of assessment and evaluation have a great importance (Altan & Seferoğlu, 2009). Determining students’ positive and negative opinions about the evaluation process helps reviewing assessment methods in distance education and students’ contribution to the creation of more comfortable environments (Altan & Seferoğlu, 2009). The need for computers and internet access to administer exams, lack of security inherent in examination design, the possibility that the students may cheat, the inability to check if the student himself/herself took the exam personally, conditions, obstacles of communication, and lack of information and skills regarding online education (Kerka and Wonacot, 2000; Shuey, 2002; Benson, 2003; Tanyıldızlı and Semerci, 2005; McKombs and Vakili, 2005). May be having people who do not have much computer knowledge preparing exams will help a lot in distance education courses (Xu, 2007).

Not only the culture and the sex of the students have effects on their reflections of their attitudes, perceptions about the course but also the age is very important factor. Those students who were at the early stage of their course of study expressed overall satisfaction with distance courses and were more positive than were their counterparts, who were at the end of their program (Young, 2011).

Since distance education is new century’s education system, students who have used to the old systems have difficulties in adoption. More than traditional students, distance learners are more likely to have insecurities about learning (Knapper, 1988). These insecurities are founded in personal and school related issues such as

- financial costs of study,
- disruption of family life,
- perceived irrelevance of their studies
- and lack of support from online teachers (Galusha, 2008).
Also, the ability of self-learning and planning (self-confidence) and the accreditation of the distance education courses can also be added to these as insecurities of students. Since distance education requires more self learning, these pressures often result in higher dropout rates than among traditional students (Sweet, 1986).

New strategies are necessary for having lower drop-out rates. Polloff and Pratt (2001) found that learners are most satisfied with courses in which the instructors facilitate frequent contact between themselves and learners, use active learning techniques, convey high expectations, emphasize of time spent on specific tasks, and provide prompt feedback.

Up until now, the studies that have looked at barriers to distance education implementation have tended to view them from the technical or the administrative side (Mitchell, 2007). Why there is a resistance to distance education? Or is there? While a growing body of research is seeking to address the issue (Parker, 1999, Diaz, 2002, Wang, et al 2003, Rossett and Schafer, 2003, Berge and Huang, 2004), little of this research considers the learner’s experiences or point of view (Rossett and Schafer, 2003).

Purpose of the study
The main purpose of this study was to find out if there is any relevance between the students'-skills, e-attitude, e-confidence, e-anxiety and their drop outs?" The study aimed to draw attention of the researches to the paradox in distance education.

METHOD
Population
700 online questionnaires were distributed to university students’ ages differing between 19 and 24, and in which have taken distant courses, in Cyprus and in Turkey. A total of 495 questionnaires were filled in 2 months (January 2011-March 2011). 52% of the participants were Male and 48% of them were Female. The distribution among countries was from Turkey 47% and from Cyprus 53% (see Table 1).

Table 1: Students according to Countries

<table>
<thead>
<tr>
<th></th>
<th>Turkey</th>
<th>Cyprus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>24%</td>
<td>28%</td>
</tr>
<tr>
<td>Female</td>
<td>23%</td>
<td>25%</td>
</tr>
</tbody>
</table>

The following expressions are used in the research study
- **Distance Learning Skills Good/Basic**: Students evaluated their distance learning skills. If their *overall distance learning skill score* is above 3 then they are accepted to have Good Skills. If their *overall distances learning skill average score* below 3, then they are accepted to have Basic Skills.
- **Positive Attitude/ Negative Attitude**: According to distant learning attitude scale; the overall attitude score is above 3, they are grouped as “positive attitude learners”, otherwise they are grouped as “negative attitude students”
- **E-skills**: skills which are necessary to carry out an e-learning, which are necessary for distance learning
- **E-knowledge**: knowledge which are necessary to carry out an e-learning, which are necessary for distance learning
- **E-confident**: The students which have high scores of e-skills and e-knowledge are defined as *e-confident*.
- **Internet Confidence**: The students who have high scores of skills related to receiving or sending e-mail, e-shopping
- **Success score**: Total score that students get at the end of the distant courses.

Instruments
A *questionnaire*, consisting of 40 items is distributed online on SurveyMonkey.com (see Figure 1), in two countries (Turkey and Cyprus), in Turkish. All the experts’ evaluations and suggestions are taken over in the
draft form of the questionnaire and afterwards the necessary corrections were made; the questionnaire was
given to the students to fill it in, using a five point Likert scale.

Some of the measured subjects in the questionnaire were: Skill of using visual tools; skill of using a laptop or a
PC; skill of using Web 2.0 tools; ability to join video-conferences through internet; ability to communicate via
Web 2.0 tools. Teachers were asked to choose the suitable scales for themselves, in each item of the
questionnaire. The scales were arranged as: “Needs to be improved”, “basic”, “good”, “very good” and
“excellent”.

Second part of the questionnaire consisted of question for measuring teachers’ e-attitude: Teachers were
asked to choose the suitable scales for themselves, in each item of the questionnaire. The scales were arranged
as: “Unuseful”, “useful”, “neither useful nor unuseful”, “useful” and “very useful”.

The second part of the questionnaire contained questions like; “What are your reasons for choosing a distance
education course instead of a traditional course?”, “What are your reasons for dropping your course?”

In order to evaluate the items in the questionnaires, experts evaluation (n = 17) was required. Experts group
from education technologist and education psychologists evaluated the data gathering scale both individually
and collaboratively. Under the suggestions of experts, the necessary corrections were done to the draft form of
the questionnaire. Hence, the content validity was maintained by the help of the educational technologist
experts.

Figure 1: Online Survey on SurveyMonkey.com

Process of data collection
The distribution of the questionnaire has been a real challenge and it implied lots of explanations. However, all
of this had been overcome successfully. The researcher explained the questionnaire items one by one to the
students and gave the necessary feedback they needed to analyse their own skills or knowledge as excellent,
very good, good, and basic and needs to be improved.

Data analysis
For data analysis, SPSS 17.0 was used. The frequencies, percentages were used for data analysis.
RESULTS AND DISCUSSIONS

This research study had lots of different conflicting results; in which most important results in a curious paradox.

**Does Positive Attitude results in Good Distance Learning Skills?**

Students attitude towards distance education (positive/negative), their internet connection (fast/slow), their own evaluations to their distance learning skills (good/basic) were contradicting with each other. The percentages and the frequencies are as given Table 2.

<table>
<thead>
<tr>
<th>Distance Skills</th>
<th>Learning Skills</th>
<th>Positive Attitude Towards Distance Education Courses</th>
<th>Negative Attitude Towards Distance Education Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Fast</td>
<td>83 (17%)</td>
<td>32 (%7)</td>
<td></td>
</tr>
<tr>
<td>Slow</td>
<td>92 (19%)</td>
<td>61 (%12)</td>
<td></td>
</tr>
<tr>
<td>Basic Fast</td>
<td>55 (11%)</td>
<td>72 (%15)</td>
<td></td>
</tr>
<tr>
<td>Slow</td>
<td>68 (14%)</td>
<td>32 (%7)</td>
<td></td>
</tr>
</tbody>
</table>

We can summarize the results of the survey as:

- 268 students described their distance learning skills as **good**, 227 students described their distance learning skills as **basic**.
- 298 students had **positive** attitude towards distance education courses and 197 students had **negative** attitude.
- 242 students have **fast** internet connection speed and 254 students have **slow** internet connection speed.
- 83 (17%) of them who have positive attitude have also fast internet connection, and 92(19%) have slow internet connection. 32(%7) of them have negative attitude also have good internet connection, and 61(%12) have slow internet connection.
- In this research study students attitudes towards distance education does not differ according to their sex or country.

This may be interpreted as; having the technology does not always mean “willing to use it”. What is important is; students who are willing to use the technology, also belonging it.

<table>
<thead>
<tr>
<th>Control Variables</th>
<th>Distance Learning Skills Correlation Significance (2-tailed)</th>
<th>Distance Education Attitude Correlation Significance (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Connection Speed</td>
<td>df 0 492 1,000 . 492</td>
<td>df 492 . 0 1,000</td>
</tr>
<tr>
<td>Distance Education Attitude</td>
<td>df 492 . 0 1,000</td>
<td>df 492 . 0 1,000</td>
</tr>
<tr>
<td>Internet Connection Speed</td>
<td>df 492 . 0 1,000</td>
<td>df 492 . 0 1,000</td>
</tr>
<tr>
<td>Distance Education Attitude</td>
<td>df 492 . 0 1,000</td>
<td>df 492 . 0 1,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2: Attitude and Skills</th>
<th>Distance Learning Skills</th>
<th>Positive Attitude Towards Distance Education Courses</th>
<th>Negative Attitude Towards Distance Education Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Fast</td>
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</tr>
<tr>
<td>Slow</td>
<td>68 (14%)</td>
<td>32 (%7)</td>
<td></td>
</tr>
</tbody>
</table>
Partial Correlation of all distance learning skills and distance education attitude is calculated, by controlling "internet connection speed" (See Table 3). Correlations among distance learning skills and internet connection \( r=0.11; p<0.01 \); internet connection and distance education attitude \( r=0.11; p<0.01 \) were calculated by using SPSS 17.0. A low correlation among distance education attitude and distance learning skills is found. The paradox here is students having positive attitude towards distance education does not necessarily have good distance learning skills.

**Do e-confidence results in Success, in Distance Learning?**

There is a common belief that if a student is e-confident or e-talented then s/he can get higher results; however the current studies results differ according to students' sex. **Male students were more confident than females**, about using computers as a learning tool (Ring, 1991; North and Noyes, 2002; Liaw, 2002), while other researchers found that gender did not differentiate between men and females in their attitudes toward computers (Popovich et al. 2008; Kesici, Sahin and Akturk, 2009).

Despite the overall positive attitude however the data showed important difference between the reactions of male and female students. The e-confident female is less successful than e-confident male which may also be defined as a curious paradox (see Figure 2).

**Does E-anxiety play an important role in distant courses?**

Distance Education students are found to have various anxieties like; technology anxiety, test anxiety, social anxiety and language anxiety (Tuncay & Uzunboylu, 2010). E-anxiety is feeling oneself not confident with the course. Which skills of female and male effect e-anxiety? Does

- Skills related to usage of E-tools
- Skills related to Internet Usage

---

**Figure 2: “Confidency” versus “Success”**

---
Skills related to Attaining a E-Course play important role in distance education. According to the results of the current study, the usage of E-tools like E-TV and E-Radio and e-anxiety plays a curious paradox in distant courses.

Although the students’ e-anxiety does not differ much according to their e-anxiety, male has lower internet confidence than female. On the other hand e-anxious male and not e-anxious male has same e-course (joining to course, sharing resources, consulting e-help) skills. However, not e-anxious males claim that they have better usage of e-tools like E-TV, E-Radio; Internet Confidence (searching through internet, receiving or sending e-mail, e-shopping); e-course (joining to course, sharing resources, consulting e-help) than not e-anxious females. Now thus this mean male student are more confident, less anxious and more successful? However closes look at the figure 3 shows that e-anxious males and not e-anxious males’ e-course skill scores are same. Since their e-course skill scores are same, can we say that more male students has positive attitude towards distance education? However section 3.2 shows claims that attitudes towards distance education do not differ among male and female. These all show that there is another paradox in this area that waits to be found out. Other factors in these results need to be investigated. There must some other issues affecting students’ attitude, anxiety or confidence other than the ones investigated in this research study. This is illustrated in Figure 3.

Are reasons of ‘not choosing’ same with the reasons of ‘dropouts’?
The students gave several reasons for not choosing a distance learning course. Some of these are: They are “not face-to face”; there is “not always immediate response”, these are “not always synchronous”, “not in a specific physical place”, distance education is “not as effective” as traditional education; courses are “not easy”, they have “no time” for distance courses, they are very busy: “not available” and distance education courses are “not as social” as traditional courses (see Table 3).
Table 4: Reasons of not choosing

<table>
<thead>
<tr>
<th>Reasons of “Not Choosing”</th>
<th>Frequency (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not face-to-face</td>
<td>43</td>
</tr>
<tr>
<td>Not always immediate response</td>
<td>30</td>
</tr>
<tr>
<td>Not always synchronous</td>
<td>11</td>
</tr>
<tr>
<td>Not a specific physical place</td>
<td>21</td>
</tr>
<tr>
<td>Not as Effective as Traditional Education</td>
<td>33</td>
</tr>
<tr>
<td>Not easy</td>
<td>65</td>
</tr>
<tr>
<td>No time</td>
<td>68</td>
</tr>
<tr>
<td>Not available</td>
<td>75</td>
</tr>
<tr>
<td>Not as social</td>
<td>66</td>
</tr>
</tbody>
</table>

On the other hand, students’ reasons for dropouts are: Instructor (n=77), Perceived irrelevance of their studies (n=75), Website (n=68), Computer Skills (n=65), Financial costs of study (n=63), Lack of support from employees (n=51), Disruption of Family Life (n=41), Pedagogical Issues (n=36), English Language (n=19). As it can be seen, the reasons of not choosing and reasons of dropouts are different. This is also another curious paradox (see Table 4).

Table 5: Reasons of dropouts

<table>
<thead>
<tr>
<th>Reasons of Dropouts</th>
<th>Frequency (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Language</td>
<td>19</td>
</tr>
<tr>
<td>Pedagogical Issues</td>
<td>36</td>
</tr>
<tr>
<td>Disruption of family life</td>
<td>41</td>
</tr>
<tr>
<td>Lack of support from employers</td>
<td>51</td>
</tr>
<tr>
<td>Financial costs of study</td>
<td>63</td>
</tr>
<tr>
<td>Computer Skills</td>
<td>65</td>
</tr>
<tr>
<td>Website</td>
<td>68</td>
</tr>
<tr>
<td>Perceived irrelevance of their studies</td>
<td>75</td>
</tr>
<tr>
<td>Instructor</td>
<td>77</td>
</tr>
</tbody>
</table>

CONCLUSION AND RECOMMENDATION

In this research study it is concluded that students having positive attitude towards distance education does not necessarily have good distance learning skills and the e-confident female is less successful than e-confident male. Also, “Distance Education students’ anxieties showed differences among males and females. On the other hand it is concluded that issues effecting learners’ ‘not choosing’ distant learning are different than their reasons for ‘dropouts’. E-confidence does not always result in e-success. Good Distance learning skills and good internet access do not mean that students have positive attitude to distance education. These results were conflicting with each other and with the literature; which gave the idea that there is a paradox. The limitations of this study are restricted to the university students that researcher were able to contact and send an email to fill the questionnaires in two countries. The following topics were suggested for further research studies:

- Analyse the structure of a distance training framework for self-learning that can assist students in improving their necessary distance education skills and to overcome their e-anxieties establishing development paths, according to the needs identified as critical in their learning space. Another research study about relation of e-confidence and distant education success can be conducted.
- What global approach may be followed in order to fulfil these paradoxes?
- Does culture plays a role on distance learning, if so to what extend and to overcome this problems what should be done? Does this make a paradox?
To resolve mentioned curious paradoxes further researches are going to be conducted by the researcher. It shall extend the distribution of the questionnaire in other countries. The author shall consider both countries whose culture is similar to Turkish and Cypriot culture, and also countries that present a different cultural background. The study shall focus on the analysis of the use of metaphors in order to identify similarities and differences among students that belong to rather similar and quite different cultures and also on understanding the impact of globalization in this context.

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THE EFFECT OF CONTEXT IN ACHIEVEMENT VOCABULARY TESTS

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Abstract
This study investigated the effect of context on the performances of students in achievement vocabulary tests. Two different tests, discrete and contextualized, having the same target vocabulary items were designed by the researcher and were administered to 123 elementary students at Afyon Kocatepe University English preparatory program. The data were analyzed through descriptive statistics. The results revealed that students performed better in the contextualized test, and there is a significant difference between the performances of students. The results also showed that there was a positive and direct correlation between the tests, and these two tests could be used instead of each other in a degree of 56%, which means context is not a must in achievement vocabulary tests.

Key Words: Vocabulary, testing vocabulary, contextualized tests.

INTRODUCTION

Background to the Study
Language tests, in general, are used for three purposes: for research, for making decisions about learners and determining the language problems. In the case of testing vocabulary, many research studies have been carried out on; how broad and deep learners’ vocabulary knowledge is, how effective different testing instruments are, what the effect of other skills on testing vocabulary is, whether and how the learners infer the meanings of unknown words encountered in a text and how they deal with gaps in their vocabulary knowledge.

On the other hand, language teachers and testers who construct vocabulary tests for making decisions about learners have a different focus. They use tests for purposes such as placement, diagnosis, measuring progress or achievement, and assessing proficiency. A progress test assesses how well the students have learned the words presented in the units they have recently studied in the course book. The vocabulary section of a placement test can be designed to estimate how many high frequency words the learners already know. Apart from placing the students, the test scores would help teachers for which vocabulary items should be taught or what kind of vocabulary program should be followed during the instruction process. In the achievement test, the vocabulary section may be designed to assess how well the students have mastered a vocabulary skill that they have been taught (Read, 2000).

Statement of the Problem
Testing vocabulary and its elements have been a controversial issue in language testing for years. One of these elements is the sampling issue. Which vocabulary items the test writers should include in the tests, whether they should be chosen from active or passive vocabulary knowledge, and what the frequency of words should be are the main issues that must be considered in terms of sampling issue in vocabulary tests. On the other hand, testing the productive and the recognition vocabulary has been another issue that is open to discussion considering the criteria of knowing a word and the degree of production. Probably, the most ongoing issue among these elements is the contextualization issue. Presenting the vocabulary items in a test whether discrete or contextualized, what discrete and contextualized means, and the degree of contextualization are the main problems that have been discussed for many years. This most ongoing element of testing vocabulary, discrete or contextualized, is also the issue in this paper.
Purpose of the Study
In this study, it is aimed to find out whether presenting the items in discrete or contextualized way in an achievement vocabulary test affect the performances of students. It is also investigated whether these two types, discrete and contextualized, correlate. In order to reach these aims, two tests, discrete and contextualized, having the same target vocabulary items were constructed and administered to the same group of students as an achievement test.

Research Questions
In the light of the purposes of the study, the following research questions were studied;
1. What are the performances of students in a discrete item vocabulary test and in a contextualized vocabulary test?
2. Is there a significant difference between the performances of students in these two vocabulary tests?
3. Do these two types of tests correlate? If so, to what extent and what does it mean?

LITERATURE REVIEW

In this part of the paper, some concepts regarding vocabulary and testing it are discussed in accordance with the study.

Knowing a Word
What is “knowing a word”?: In the broadest sense, knowing about a word involves knowing about its form (how it sounds, how it is spelt, the grammatical changes that can be made to it), its meaning (its conceptual content and how it relates to other concepts and words), and its use (its patterns of occurrence with other words, and in particular types of language) (Cameron, 2001).

According to Ellis and Sinclair (1989), knowing vocabulary involves understanding the word when it is spoken or written, recalling it when needed, using it with the correct meaning and in a grammatically correct way and in the right situation, pronouncing and spelling it correctly, knowing which other words can and cannot be used with it, knowing if it has positive or negative connotations and when or when not to use it.

In accordance with the criteria of knowing a word, Hatch and Brown (1995, p.383) describe five essential steps in vocabulary learning based on research in learners’ strategies: (1) having resources for encountering new words, (2) getting a clear image, whether visual or auditory or both, for the new form of the words, (3) learning the meaning of the words, (4) making a strong memory connection between the forms and meaning of the words, (5) using the words.

Types of vocabulary: Read (2000) points out that the number of words we recognize and understand is rather larger than the number we use in our own speech and writing. Therefore, he distinguishes between receptive and productive vocabulary. (Some scholars use the terms active and passive vocabulary).

According to Lado (1964), producing a vocabulary means that a unit can be recalled almost instantaneously with its proper structural position in accordance with the context. A passive vocabulary requires only recognizing and grasping the meaning from the form in its partly redundant context.

Receptive vocabulary is described by Harmer (1991) as words which students will recognize when they meet them but they will not be able to produce. It is generally assumed that words are known receptively first and only later they become available for productive use. Melka (1997; cited in Read, 2000) regards this process as “receptive to productive continuum” representing the increasing degrees of knowledge or familiarity with a word. Thus, upon first encounter, learners have limited knowledge of the word and may not even remember it until they come across it again. It is only after they gain more knowledge of pronunciation, spelling, grammar, meaning, range of use etc. that they are able to use it themselves.
The importance of vocabulary in language learning: Vocabulary and lexical units have great importance in learning a language and communicating it. Without enough vocabulary knowledge, it is not possible to employ grammatical or other types of linguistic knowledge in communication or discourse. According to Folse (2003), without syntax, meaning is hindered; but without vocabulary meaning is impossible.

It is also emphasized that vocabulary is needed for every language skill and grammar. It can be regarded as the core of the four skills: speaking, listening, reading and writing. As Chastain (1988) states, the lack of needed vocabulary is the most common cause of students’ inability to say what they want to say during communication activities. To clarify the importance of vocabulary in the development of other skills in terms of testing, Heaton (1988) points out that tests of vocabulary often provide a good guide to reading ability.

As it is seen, unless the language learner has a sufficient amount of word knowledge, s/he can neither express her/himself as intended, nor understand the speaker. Without sufficient word knowledge, a learner cannot write or read in a desired way. In such a case, when the learners are confronted with situations where they feel they lack the knowledge of vocabulary, their motivation to learn language decreases.

Testing Vocabulary
The importance of testing vocabulary in language testing: Since it is a well known fact that vocabulary has a big importance as much as the language skills in the whole language system, the importance of the assessment of vocabulary is the same as the assessment of other skills. As Schmitt (2000) states, vocabulary is an essential building block of language and, as such it makes sense to be able to measure learners’ knowledge of it. With regard to second language acquisition, vocabulary is an indispensable and basic part. Both teachers and learners spend lots of time and energy on vocabulary acquisition. For this reason, due to the importance of vocabulary in the whole language system, it is quite necessary to test the vocabulary knowledge of learners.

Why do we test?: One of the most common reasons for testing vocabulary is to find out if the students have covered the words they have been taught. As Read (2000) states, in the achievement test, the vocabulary section may be designed to assess how well the students have mastered a vocabulary skill that they have been taught. Moreover, vocabulary test can be utilized as a means of motivating students to study and showing them their progress in learning new words. Also, vocabulary tests which are part of commercial tests, such as TOEFL, attempt to provide a measure of learners’ vocabulary size, which is believed to give an indication of overall language proficiency (Schmitt, 1994).

What do we test?: A careful selection, or sampling, of lexical items for inclusion in a test is generally a most exciting task (Heaton, 1988). While making this selection, the test writer should consider some aspects. The first one is whether to test the students’ active or passive vocabulary and whether to take the vocabulary items from spoken or written language. When the four skills are added to these dimensions, as Heaton (1988) states, selection of vocabulary can be thought of falling rough divisions according to four major language skills.

The other aspect of selecting the vocabulary items is the frequency of them. Whether to test high frequency words or more specialized technical vocabulary is the main issue of this aspect. High frequency words are so important that anything teachers and learners can do to make sure they are learned is worth doing. The 2000 most frequent words of English as high frequency words is extremely useful particularly for students who want to go on to academic study (Nation & Hwang, 1995). On the other hand, Read (2007) states that vocabulary size tests for second language learners understandably focus on a narrower range of words than those for native speakers, since low frequency words are much less likely to be known, especially by learners in a foreign language environment.

The third aspect of what to test is the breadth or depth. Vocabulary breadth is defined as the quantity of words for which students may have some level of knowledge (Anderson & Freebody, 1981, cited in Stahl & Bravo, 2010). On the other hand, vocabulary depth refers to how much students know about a word and the dimensions of word learning addressed previously. So, according to the purpose of test writer, the dimension of breadth or depth affects the selection of items in a vocabulary test.
How do we test?: Deciding how to test vocabulary is still a controversial issue in the world of language testing. The dominance of communicative approach to language teaching in the past thirty years has thrown up various challenges to the validity of the conventional vocabulary test and this has prompted some re-thinking of the nature of lexical ability as well as how it can best be assessed (Read, 2007).

Depending on this re-thinking, some dimensions on how to test vocabulary have been improved. One of these dimensions is the discrete-embedded issue. This distinction addresses whether vocabulary is regarded as a separate construct with its own separate set of test items and its own score report, which is the discrete end of the continuum, or whether vocabulary is an embedded construct that contributes to, but is not regarded as separate from, the larger construct of text comprehension (Pearson & Hiebert & Kamil, 2007).

The issue of contextualized-decontextualized is the second one in the dimension of how to test vocabulary. The issue involves the presentation of the vocabulary in a context or in an isolated way. According to Pearson & Hiebert & Kamil (2007), this continuum refers to the degree that textual context is required to determine the meaning of a word. Any word can readily and easily be assessed in a decontextualized format. But simply assessing a word in a contextualized format does not necessarily mean that context is required to determine its meaning. In order to meet the standard of assessing students’ ability to use context to identify word meaning, context must actually be used in completing the item.

The Importance of Context in Testing Vocabulary
An important dimension of vocabulary assessment is concerned with the role of context. This dimension considers the extent to which the test-taker is required to engage with and utilize the context in which the vocabulary items appear. The decontextualized formats present students with words in isolation and require them to select meanings for the words without reference to any linguistic context (Read & Chapelle, 2001). However, in context-dependent vocabulary tests students need to make use of contextual clues. Many scholars believe that vocabulary testing in context can offer a real situation for test takers and, the usage of words is tested in such real situations.

Related Studies
The issue of testing vocabulary has been one of the interests of the researchers in the field of language testing. Many different studies have been carried out to test vocabulary knowledge of learners. Read (1997) ascertains that if vocabulary knowledge is accepted as a fundamental component of second language proficiency, it is natural to accept that one of the primary goals of language testing will be to assess whether learners know the meanings of the words they need to communicate in a successful way in L2. Here are some of the studies related to the assessment and testing of vocabulary knowledge;

Qian (2008) conducted a research on the predictive power of discrete and contextualized vocabulary items on assessing the reading performance. According to results of this research, in assessing reading performance, discrete-point vocabulary items and fully contextualized vocabulary items provide a similar amount of prediction. However, in the context of considering educational impact, the article argues in favor of the continued adoption of the fully contextualized vocabulary item format because it will more likely induce beneficial backwash effects than the discrete-point vocabulary item format. It is also stated that the contextualized format also has the advantage of bringing vocabulary testing closer to real-life communicative application of the English language and therefore has more positive implications for the language classroom.

A very recent study was carried out by Fitzpatrick and Clenton (2010) on the performance of vocabulary test, Lex30, designed to measure second language productive vocabulary knowledge. In this article, they presented evidence which makes a significant contribution to the inquiry into the validity of the Lex30 test of vocabulary knowledge. Their research encourages further investigation of its validity in an instructional context.

In their research study, Laufer and Goldstein (2004), they test the size and strength of vocabulary with the trial of bilingual computerized test. They consider the size as the number of words the learners know, and the
strength as a combination of four aspects of knowledge of meaning that are assumed to constitute a
hierarchy of difficulty: passive recognition, active recognition, passive recall and active recall. They investigated
whether this hierarchy was valid and which modality correlated best with classroom language performance.
The participants were 435 learners of English as a second language. Results showed that the hierarchy was
present at all word frequency levels and passive recall was the best predictor of classroom language
performance.

METHODOLOGY

Participants
The participants of this study include 123 students from Afyon Kocatepe University English preparatory
program. Their level of English is elementary as all the students in this preparatory program. Since most of the
students come from state schools, their level of proficiency is low. They have 25 hours of English every week.
English is taught integratively in English preparatory program at Kocatepe University. Students have 15 hours
main course for the course book and 10 hours of writing and reading skills with a different instructor.

The participants were chosen from five different classes which are close to each other in terms of proficiency
level. Their proficiency levels are indicated with their official mid-term grades in the appendix.

Instruments
Two multiple choice vocabulary tests were designed by the researcher himself, one of which consisted of
discrete vocabulary items (called d-test in the paper), and the other consisted of contextualized items (called c-
test in the paper). The researcher benefited from the guidelines for writing test items described by Heaton
(1988). Both tests had 25 items having the same target vocabulary items to be tested. The target vocabulary
items were chosen from the vocabulary items that had been taught to the students in their lessons. In other
words, the tests were administered as an achievement test which is designed to assess how well the students
have mastered a vocabulary skill that they have been taught (Read, 2000).

The d-test consisted of 25 target vocabulary items. The items in this test were presented as discrete-point
items. In discrete-point items, the target vocabulary is presented in a sentence context or an isolated way.
Read (2000) states that in discrete items, the context most commonly consists of a sentence in which the target
word occurs. Both ways of presenting the target word were designed in such a way that makes the test a
totally discrete-point test and distinguishes it from the c-test in terms of the issue of contextualization.

The c-test, on the other hand, was designed in a different way. Although it had the same target vocabulary
items, the presentation of them was totally different from the d-test. It is a known fact that the context for a
target vocabulary item should provide a meaningful way for students in making their responses to the items.
Read (2000) states that the test writers should broaden the notion of context, to include whole texts and more
generally discourse. Depending on this clear definition, the researcher tried to create discourses for the target
words in each item to provide contextual clues for the students.

By designing two different tests and presenting the same target words to the test takers in two different ways,
the researcher tried to reach his aim which is to learn whether the students perform differently in these two
different tests having the same target vocabulary items. In other words, the researcher tried to find out
whether the presentation of words to the students in a discrete way and contextualized way affects the
students’ performances.

Procedure
Before the study, the researcher made an evaluation on the classes that would form the participants of the
study by examining their official mid-term grades. After deciding on the participants, the instruments of the
study (d-test, c-test) were examined and evaluated by the colleagues of the researcher. One of them had had
her MA degree on teaching vocabulary and contributed a lot to examining the instruments.
After this process, the tests were administered to the participants. First, the d-test was administered because the researcher believed that if the c-test had been administered first, the students would have had the meanings from the contexts and would have done the d-test easily. For this reason, in order to prevent this, it was more appropriate to administer the d-test first.

The next day, the c-test was administered. Although the same target vocabulary items were included in the c-test, the order of the items and the order of distractors were changed in order to prevent memorization. The reason for administering the c-test on the next day is that if it had been administered on the same day with d-test, the researcher thought that the students would have given the same answers without reading the texts and dialogues. The administration of c-test on the next day made students perform a new and different test. The researcher believed that this application affected the reliability of the study in a positive way.

Data analysis
The data collected from the participants was analyzed using the Statistical Package for Social Sciences (SPSS version 17.0). The mean scores for both tests were calculated and analyzed by means of T-test to see whether there was a significant difference between the performances of participants in two tests. To see the correlation of the tests, the Pearson Correlation was used.

RESULTS

Reliability of the tests
Before the data analysis in the light of the three research questions, the reliability and scores of the tests administered for the study were computed using split-half method.

Table 1: Reliability Statistics - d test (discrete – point test) and c test (contextualized test)

<table>
<thead>
<tr>
<th></th>
<th>Guttman Split-Half Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>c-test (contextualized test)</td>
<td>0.784</td>
</tr>
<tr>
<td>d-test (discrete-point test)</td>
<td>0.706</td>
</tr>
</tbody>
</table>

As it is shown in Table 1, the reliability score (Guttman Split-Half Coefficient) for the d-test is 0.706 and for the c-test, it is 0.784. In terms of reliability, since it is known that the closer the score to 1, the higher is the degree of reliability, it can be said that the reliability scores of these two tests are satisfactory. These scores contribute a lot to the reliability of the study.

Performances of the participants
In the light of the first research question, performances of the participants and related statistics were shown in Table 2.

Table 2 : Performances of Students

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair</td>
<td>d_total</td>
<td>123</td>
<td>4.34044</td>
<td>.39136</td>
</tr>
<tr>
<td></td>
<td>c_total</td>
<td>123</td>
<td>4.77496</td>
<td>.43054</td>
</tr>
</tbody>
</table>

Although there is not a big difference between them, the mean scores in Table 2 shows that the participants performed better in the contextualized test. While the participants had a score of 12.4 out of 25 in the test having discrete point items (d-test), they had 13.8 out of 25 in the test having contextualized items (c-test), which shows a 1.4 difference in their performances.

T-test results
To answer the second research question, the difference between the tests was computed by means of t-test.
Table 3: Differences Between Performances

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>d_total</td>
<td>12,4472</td>
<td>123</td>
<td>4,34044</td>
<td>.000</td>
</tr>
<tr>
<td>c_total</td>
<td>13,8943</td>
<td>123</td>
<td>4,77496</td>
<td></td>
</tr>
</tbody>
</table>

As it is understood from Table 3, the sig. value for the performances in two tests is 0.00 (p< 0.05), which means there is a statistically significant difference between the participants’ performances in two tests. This significant difference can be interpreted as students perform better in a vocabulary test having contextualized items than a vocabulary test having discrete point items.

**Correlation results**

In the light of the third research question, the correlation between the results of two tests was computed by using Pearson Correlation.

Table 4: Correlations

<table>
<thead>
<tr>
<th></th>
<th>d_total</th>
<th>c_total</th>
</tr>
</thead>
<tbody>
<tr>
<td>d_total</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.754**</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>123</td>
<td>123</td>
</tr>
<tr>
<td>c_total</td>
<td>Pearson Correlation</td>
<td>.754**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>123</td>
<td>123</td>
</tr>
</tbody>
</table>

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

As it is shown in Table 4, the correlation coefficient (r) between the results of these two tests is 0.754, which means that the results of these two tests have a high and positive correlation. Depending on this finding, the square of correlation coefficient is calculated as 0.56 (56%) which explains the correlation of these two tests as a percentage.

**DISCUSSION**

This study aimed at finding answers to three research questions: a. What are the performances of students in a discrete item vocabulary test and in a contextualized vocabulary test? b. Is there a significant difference between the performances of students in these two vocabulary tests? c. Do these two types of tests correlate? If so, to what extent and what does it mean?

For the first question, the mean scores of two tests were computed. The participants had a score of 12.44 over 25 in the test having discrete-point items, and 13.8 in the test having contextualized items. It is seen that the students did better in the c-test than the d-test although they included the same target vocabulary items.

For the second questions, the performances of participants were compared by using t-test in order to see whether there was a significant difference between their performances. The findings showed that there was a significant difference between the performances of the participants. This significant difference reveals that participants performed better in a vocabulary test in which the target vocabulary items were presented in a contextualized way. This contextualization helped students grasp the meaning of the target word and created a meaningful way for the students in making responses to the items. On the other hand, presenting the target items in a discrete way provided no clues to the students for grasping the meaning and, they performed poorer.
For the third question, Pearson correlation coefficient was used to reveal the relation between these two tests. The finding showed that there was a high and positive correlation ($r : 0.754$) between these two different tests. This statistical finding reveals that there is a direct and positive relationship between these tests. That means, if the performances of students in the d-test increases or decreases, their performances in the c-test will also increase or decrease in the same way. Furthermore, the square of the correlation coefficient which was calculated as $R^2: 0.56$ which means that the results of the d-test can be explained by the results of the c-test or vice versa in a degree of 56%. In other words, these two tests can be administered as an achievement test instead of each other in a degree of 56%, which is a very important statistical finding of this study.

One of the most important points that cannot be ignored in this study is that the tests were administered as an achievement test. Since the participants had already been taught the target vocabulary items, it was observed that they responded correctly in both tests if they remembered the target word, and they couldn’t respond correctly in d-test if they did not remember the target words. Just in this case, the contexts helped them to respond correctly. For this reason, there is not a big difference between the mean scores of these tests. However, the researcher believes that if the tests had been designed as proficiency test the vocabulary items of which had not already been taught, the difference between the mean scores would have been broader and the contexts would have played a more important role in the responses of the participants.

CONCLUSION

Testing vocabulary has been a very hot debate in the world of testing for many years. Having too many dimensions such as what to test, how to test, criteria of knowing a word etc., the issue becomes much more challenging both for the instructors and test writers.

It is definite that the perspective on testing vocabulary will differ depending on the purpose of the test writers. The issues that must be taken into consideration in terms of the dimensions of testing vocabulary mentioned above will change depending on the testing objective. In other words, for example, the issues considered in an achievement vocabulary test will be different from the issues considered in the vocabulary part of a proficiency or certification test. No matter what the objectives or purposes are, since the importance of testing vocabulary has been revealed in the literature, it is crucial that this important language development skill is assessed validly and reliably. To accomplish this, several important issues need to be taken into account and decisions need to be made about how best to assess vocabulary.

This study focused on one of the issues in the dimension of how to test vocabulary, which is “contextualization”. The researcher provided a little contribution to the importance of contextualization in vocabulary testing by revealing the difference of a contextualized test and a discrete point test which were administered as achievement tests. Although the issue covered in this paper constitutes a small aspect of testing vocabulary, it provides a good start for the researcher for future studies on testing vocabulary.

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STUDENT OPINIONS ABOUT ELECTIVE COURSES IN CHANGING EDUCATION: 
THE EXAMPLE OF KOCAELI UNIVERSITY FACULTY OF EDUCATION

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Abstract
Bologna Process, which aims to make higher education institutions comparable with each other without changing their peculiarities, has been experienced at universities. This process includes reconstruction and quality in education. This study aims to determine the student preferences related to out-of-field elective courses that will enrich students’ occupational and personal development and to state the reasons for their preferences. An online questionnaire was prepared and the students were asked to complete this questionnaire. The findings of this study suggest that candidate teachers need elective courses in the fields of art, first aid and health knowledge, information and communication technologies, communication skills, psychology and sports during their occupational and personal development processes.

Key Words: The process of restructuring education and quality, elective courses, candidate teachers.
INTRODUCTION

21st century has brought change and transformation in many different fields, mainly science and technology. Higher education institutions, one of the most important and influential components in the education system, has also experienced this process of change. Bologna Process, which includes Reconstruction and Quality Process in Education, aims to make higher education institutions comparable with each other without changing their peculiarities. The main purpose of this process is to educate individuals who are able to make sense of what they learn, to be able to conduct research, to think, to produce new pieces of knowledge and to use them to solve problems rather than the ones who memorize what is given to them. In accordance with this purpose, in different faculties, students are expected to improve themselves with the help of not only major field courses but also out-of-field elective courses. Kocaeli University is also one of the universities included in this process. The aim of this study, which is about the minor field elective courses in the process of reconstruction in education at Kocaeli University, is to discern the attitudes and expectations of students of Faculty of Education related to elective courses and to describe the incentives behind these attitudes and expectations. As they are the first group of students that were affected by this Bologna Process, freshmen at Kocaeli University Faculty of Education were given an online questionnaire and the data of this research were analyzed qualitatively and quantitatively. In the subsequent parts of this research, some information will be given about the process of reconstruction and quality in education; the methodology of the research, data collection and data analysis processes, findings and interpretations and finally conclusions and suggestions will be explained.

The Process Of Reconstruction And Quality In Education

This century has included many social, cultural, and political changes in societies. Reconstruction in education has also taken place with these changes. According to Erçetin (2001), these changes have an influence on educational institutions as “they have an obligation to educate more qualified individuals who are open to universal values, who are able to contribute to the the production of knowledge and to use the knowledge creatively”. In this sense, it is known that this kind of changing processes take place in the primary school and secondary school level. In addition, higher education institutions have also started to take part in this type of change. “(...) educational institutions have a tendency to reconstruct their system of education to be able to make their programmes more compatible with the changing needs and expectations and social changes. In this case, it is apparent that all the countries in the world regardless of their level of development, increasing the quality in education has been an important issue.” (Özden, 1999; Karslı, Yıldız, Akgün ve Cerit, 2001). For this reason, in the research related to educational institutions and the quality of education (Sezal ve Erkan, 1997; Sözer, 1991; Güven, 2001), teacher quality and teacher education programmes have had priorities and it deals with the new missions and responsibilities given to teachers by the process of development and change.

It is seen that new courses such as methodology, teaching practicum, school experience have started to take part in teacher education programmes in order to support field education in faculties of education (YÖK, 1998). In addition to these courses, in order to train teachers multidimensionally, students have started to take some elective courses from different faculties/departments. In this context, the decisions about the elective courses are important for students to think about which elective courses will be beneficial for them and for teachers to determine the elective courses for students to choose.

The Purpose Of The Study

The aim of this study is to discern the preferences of students of Kocaeli University Faculty of Education related to the out-of-field elective courses that might foster occupational and personal development and to find out the reasons behind these preferences.

Limitations Of The Study

This study is limited with the answers given to open ended questions by the students of Kocaeli University Faculty of Education, Departments of English Language Teaching, Turkish Language Teaching, Primary School Science Education, Mathematics Education, Pre-School Teaching and Educational Sciences Department and
Psychological Counselling and Guidance in the spring term of 2011-2012 academic year. 403 students were given the questionnaire in this study and all of the questionnaires were evaluated.

METHODOLOGY

The Model of the Study
In this study, which aimed to determine the preferences of students of Kocaeli University Faculty of Education related to the out-of-field elective courses that might foster occupational and personal development and to find out the reasons behind these preferences, screening model was used.

The Sample and the Universe of the Study
The universe of this study consists of 526 freshmen that attend Kocaeli University Faculty of Education, Departments of English Language Teaching, Turkish Language Teaching, Primary School Science Education, Mathematics Education, Pre-School Teaching and Educational Sciences Department and Psychological Counselling and Guidance in the spring term of 2011-2012 academic year. The sample of the study, on the other hand, is composed of 403 students that take part in this study voluntarily.

Data Collection Instrument
A questionnaire, which aims to determine the preferences of students of Kocaeli University Faculty of Education related to the out-of-field elective courses that might foster occupational and personal development and to find out the reasons behind these preferences, was developed by the researchers and used in this study. The questionnaire was given to students online and the participants answered the questions in the questionnaire under the researchers’ supervision.

The questionnaire consists of 2 parts: in the first part, there are questions related to students’ departments, year of education and whether they are morning or evening students; in the second part, there are questions related to students’ preferences of out-of-field elective courses. In the second part, the participants were asked two main questions: The first one is a multiple choice question that is formed by the opinions of both the researchers and 54 students and this question makes it possible to choose one or more alternatives among some categories. Moreover, the choice of “other” was added to the alternatives with the idea that some students might have different opinions. The second question is an open ended question that asks for the students’ reasons for choosing the categories of elective courses. For the validity of the draft questionnaire, the opinions of 5 lecturers from different programmes of faculty of education and for the spelling and grammar of the questionnaire, the opinions of a linguist were taken into consideration and the final version of the questionnaire was formed in accordance with these opinions.

For the reliability of the questionnaire, the answers given to the open ended questions by the students were analyzed by the experts from 3 different fields and the items that led to “agreement” and “disagreement” were determined. For the degree of reliability of this questionnaire, the formula suggested by Miles & Huberman (1994) was used. According to this formula: P (Percentage of Agreement) = \( \frac{Na \text{ (Agreement)}}{Na \text{ (Agreement)} + Nd \text{ (Disagreement)}} \times 100 \). As a result of the calculation, the value that is found is P=0.90 and this questionnaire is regarded as reliable.

The Analysis Of Data
The data collected online as a part of this study consist of both qualitative and quantitative data. For the analysis of quantitative data, frequency and percentage; for the analysis of qualitative data, QSR Nvivo 9.0 programme was used. In this analysis, the codes were formed as free codes. The elective course categories determined by the researchers previously were discerned as themes and free codes were associated with these themes. Three researchers identified the suitability of the codes and themes and they also identified the distribution of student opinions according to the codes and themes. The appropriacy of codes was determined with the help of comparisons and 37 codes were chosen to be used in this study.

In the analysis of qualitative data, as the students stated opinions that suited different themes, there are differences in the number of student opinions might differ from each other. In the presentation of codes and
themes after the analysis of qualitative data, models were used and they were presented with some quotations directly taken from the student opinions.

**FINDINGS AND INTERPRETATIONS**

**The Number of Students according to their Programmes and the Sessions They Attend which are Day and Evening**

The numbers and percentages of students according to their programmes and the sessions they attend which are day and evening were given in Table 1. According to Table 1, the number of students taking part in this study is 403, which includes 284 regular students and 119 evening students. As there are only day students in the programmes of Pre-School Teaching, Turkish Language Education and Psychological Counselling and Guidance, all of the participants from these departments are regular students.

Table 1: The Distribution of Students according to their Departments and the Sessions They Attend which are Day and Evening.

<table>
<thead>
<tr>
<th>Department</th>
<th>Day Students</th>
<th>Evening Students</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary School Teaching</td>
<td>50</td>
<td>46</td>
<td>96</td>
</tr>
<tr>
<td>Mathematics Education</td>
<td>59</td>
<td>34</td>
<td>93</td>
</tr>
<tr>
<td>Science Education</td>
<td>46</td>
<td>17</td>
<td>63</td>
</tr>
<tr>
<td>Pre-School Education</td>
<td>48</td>
<td>-</td>
<td>48</td>
</tr>
<tr>
<td>English Language Teaching</td>
<td>26</td>
<td>22</td>
<td>48</td>
</tr>
<tr>
<td>Turkish Language Teaching</td>
<td>6</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Psychological Counselling and Guidance</td>
<td>49</td>
<td>-</td>
<td>49</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>284</strong></td>
<td><strong>119</strong></td>
<td><strong>403</strong></td>
</tr>
</tbody>
</table>

The opinions of students related to their preferences were given in Table 2. According to the data presented, the elective course preferences of 403 students were given in the column “General”, the opinions of 193 students from the departments of Primary School Teaching, Pre-School Teaching and Psychological Counselling and Guidance were given in the column “Verbal Departments”, the opinions of 156 students from Science Education and Mathematics Education were given in the column “Numerical Departments” and the opinions of 54 students from the departments of English Language Teaching and Turkish Language Teaching were given in the column “Language Teaching Departments”.

According to the data presented in Table 2, freshmen are mainly interested in elective courses related to art (76%). The other preferences are respectively courses related to first aid and health knowledge (49%), courses related to information and communication technologies (49%), courses related to improving communication skills (48%), and psychology courses (47%). Generally, the opinions of students from verbal, numerical and language teaching departments related to elective courses are alike and elective courses related to information technologies are one of the courses that are preferred less than the other courses by the students of verbal departments (18%). Moreover, it is apparent that students from language teaching departments do not prefer elective courses related to first aid and health knowledge (11%) when compared with the students of other departments. As previously stated, the category of “other” was also added to the categories of elective courses with the idea that they might have different opinions. However, the number of students choosing this category is very few (3), for this reason, it was not taken into account in the process of analysis.
Table 2: The Distribution of Students’ Elective Course Preferences

<table>
<thead>
<tr>
<th>Elective course categories</th>
<th>General (403 students)</th>
<th>Verbal departments (primary school teaching, pre-school teaching &amp; psychological counselling and guidance) (193 students)</th>
<th>Numerical Departments (science teaching, mathematics teaching) (156 students)</th>
<th>Language teaching departments (Turkish and English Language Teaching) (54 students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art courses</td>
<td>f 307 76%</td>
<td>f 97 50%</td>
<td>f 77 40%</td>
<td>f 28 52%</td>
</tr>
<tr>
<td>First aid and health knowledge</td>
<td>196 49%</td>
<td>72 37%</td>
<td>56 29%</td>
<td>6 11%</td>
</tr>
<tr>
<td>Information and communication technologies</td>
<td>196 49%</td>
<td>34 18%</td>
<td>69 36%</td>
<td>12 22%</td>
</tr>
<tr>
<td>Communication skills courses</td>
<td>194 48%</td>
<td>76 39%</td>
<td>42 22%</td>
<td>17 31%</td>
</tr>
<tr>
<td>Psychology courses</td>
<td>189 47%</td>
<td>87 45%</td>
<td>38 20%</td>
<td>13 24%</td>
</tr>
<tr>
<td>Sports courses</td>
<td>123 31%</td>
<td>35 18%</td>
<td>31 16%</td>
<td>13 24%</td>
</tr>
<tr>
<td>Philosophy courses</td>
<td>61 15%</td>
<td>19 10%</td>
<td>10 5%</td>
<td>11 20%</td>
</tr>
<tr>
<td>Law courses</td>
<td>52 13%</td>
<td>16 8%</td>
<td>15 8%</td>
<td>3 6%</td>
</tr>
<tr>
<td>Disaster management courses</td>
<td>30 7%</td>
<td>6 3%</td>
<td>10 5%</td>
<td>2 4%</td>
</tr>
<tr>
<td>Anthropology courses</td>
<td>26 6%</td>
<td>8 4%</td>
<td>5 3%</td>
<td>4 7%</td>
</tr>
</tbody>
</table>

**Codes and Themes Showing the Reasons for Students’ Elective Course Preferences**

The models showing the reasons for course preferences according to the sequence shown in Table 2 are given in Figure 1.a, 1.b, 1.c, 1.d, 1.e and 1.f.

The results of the qualitative data match up with the results of the quantitative data. The students state that they want to take art courses, first aid courses, computer technology and usage courses, communication skills courses, psychology courses and sports courses as out-of-field elective courses. Figure 1 shows the distribution of codes related to the reasons for these preferences. According to this figure, personal development, teaching profession, professional development, matching students’ areas of interest, being interesting are influential in students’ elective course preferences. Students want to take these courses because first of all, they believe that these courses will contribute to their personal development, secondly, they think that these courses will be beneficial for their Professional development and finally, they think these courses are suitable for their areas of interest.
Some of the students’ written opinions are given below so as to exemplify different course themes. In these example quotations, students’ use of language remained the same and the researchers did not make any corrections of grammar. A participant from the Department of Pre-School Education stated that “… art-based elective courses as I thought that they might be helpful when I need to devise art-based activities in the classroom”; a participant from Turkish Language Teaching Department stated for the courses related to information and communication technologies that “…to be able to benefit from these technologies more when I become a teacher”; a participant from the Department of Psychological Counselling and Guidance stated that “I wanted to take psychology courses as I thought that they would be important to understand the human psychology and do occupational practice better accordingly”; a participant from the Department of Pre-School Teaching stated that “We need to work with children of 0-6 ages so we need to master the topic of psychology”. In all these comments, the students stated the reasons why they preferred and they mainly emphasized the professional development dimension.

Figure 1: The Distribution of students’ reasons for elective course preferences according to codes and themes.

On the other hand, a participant from the Department of Psychological Counselling and Guidance stated that “I want to improve myself about first aid and health issues and they will be necessary till the end of our lives. I want to help if someone has a traffic accident.”; a participant from the Department of English Language Teaching stated that “I want to improve myself with technology-based courses as technology has become an indispensable part of our lives.”; a participant from Science Education Department, considering sports-based elective courses, stated that “I believe we cannot educate ourselves well in terms of the knowledge of the world as our field courses keep our minds and they are stressful.” In all these comments, students emphasized the contribution of elective courses to personal development.

A participant from the English Language Teaching Department mentioned psychology courses and stated that “I want to have more information about these issues because everyone needs some information about them.”; a participant from Mathematics Teaching Department stated that “I would choose sports based courses as I like sports and I want to improve my abilities.” In all these comments, students mentioned the suitability of the elective courses for areas of their interests and their fields.
CONCLUSION AND SUGGESTIONS

According to the findings of this study, which aimed to discern the preferences of students of Kocaeli University Faculty of Education related to the out-of-field elective courses that might foster occupational and personal development and to find out the reasons behind these preferences, it was found out that students, who were grouped in the categories of verbal, numerical and language teaching, want to take elective courses related to art most. In addition to the art courses, they want to have elective courses related to first aid and health issues, information and communication technologies, improving communication skills, psychology and sports, respectively.

When the reasons behind these preferences were analyzed, it was observed that the students used some phrases like “that will contribute to our professional development”, “that will contribute to our personal development”. In the art-based courses, “personal development” and “areas of interest” were emphasized; in the courses related to first aid and health issues “self-improvement and professional development” were emphasized; in the courses related to psychology and communication skills “teaching profession and personal development” were emphasized; in the sports-based courses, “relaxation” and “self-improvement” were emphasized.

Identifying the participant students viewpoints about elective courses until the end of their university education with their reasons and making necessary comparisons might be helpful in enriching the content of out-of-field elective courses and in increasing the variety of courses.

It is apparent that students’ ability to prefer elective courses in terms of their needs and interests will have a positive effect on their academic achievement. Moreover, when they are able to choose courses which are suitable for their wishes and interests will contribute positively to their characteristic traits such as motivation and self-efficacy. Since motivation stems from an individual’s personal, social, educational and occupational needs, it turns into intrinsic motivation and intrinsic motivation is closely related to academic achievement. It is stated in literature that the students having intrinsic motivation find classes more enjoyable (Schunk, Pintrich and Meece, 2008) and their level of learning and achievement increases (Gottfield, 1990; Lepper, et al., 2005).

According to Tebassam & Grainger (2002), there is also a positive relationship between the level of academic achievement and self-efficacy perception, which is defined as the individual’s perceiving herself/himself as efficient and his/her belief in coping with the possible issues that he/she might encounter in future (Bandura, 1999). Bandura (1999) states that self-efficacy beliefs have an influence on an individual’s feelings, opinions motivation and attitudes. The expectations about self-efficacy also have an influence on what kind of an activity a person will take part in, how much effort he/she is going to supply and how long this effort will continue (Tipton & Worthington, 1984).

In this sense, it is clear that the elective courses that will be determined within the scope of the students’ interests, wishes and abilities will contribute to their self-efficacy perceptions. Motivation, as well as self-efficacy perception, affects whether an individual will continue that activity of not (Ormrod, 2008). Focusing on the student tendencies before deciding on out-of-field elective courses in the higher education institutions might be beneficial when the better level of achievement and efficiency of students who are motivated and who have higher self-efficacy levels are taken into consideration.

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REFERENCES


EVALUATING THE PROBLEMS ENCOUNTERED IN THE DYNED IMPLEMENTATION AND IMPLICATIONS FOR ELT

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Abstract
In Turkey teaching English has its own potential problem. The DynEd software was started to use in state primary education in order to solve the problems. This study was carried out to determine the problems that faced in the DynEd implementation in state primary education. The research was conducted with 121 teachers of English from 10 different cities in Turkey in 2010-2011 academic year. The questionnaire and semi-structured interview were used to collect the needed data. In analyzing data, frequencies, percentages, mean were used with SPSS v11.5 program. The content analysis technique was used while the qualitative data were being analyzed. The results indicated that teachers of English faced problems such as lack of equipment, internet connection problem, intensive syllabus, crowded classes, insufficient servers, lack of technical and administrative support. Also with the help of semi-structured interview, suggestions to the identified problems are presented like changing curriculum and increasing numbers of computer and labs.

Key Words: DynEd, Teaching English, Problems in DynEd.

INTRODUCTION
Since the last fifty years the world language has been English and for education, technology, business and political contexts it serves as the lingua franca. In Turkey, English is a foreign language. It has been started to be taught from the fourth grade in primary schools since 1997. Also English regarded as one of the most important skills to gain. Therefore nowadays at many universities, English language teaching departments are popular and enlarging their capacities to train more language teachers.

On the other hand in a foreign context such as Turkey teaching a language has some potential difficulties. In many studies, it is indicated that foreign language teaching is very problematic. For instance, in their article Tılfarlioğlu and Öztürk (2007) state that it can be said that foreign language teaching/learning has been failure in Turkey for many years although nearly everyone believes that speaking at least one foreign language is essential today (202: 212). Also they state that

Another point that should be taken into consideration in ELT is about the four language skills; reading, writing, listening and speaking. The results show that 13.3 % of the instructors say that they never practise speaking in the class, and 18.8 % of them say that they rarely do speaking in ELT class. This means that one third of students try to learn a foreign language without speaking or doing a little speaking. However, speaking is one of the most important components of language teaching in every stage.

In another study Arıbaş and Tok indicate (2004) that unfortunately in Turkey foreign language teaching is unsatisfactory, therefore in foreign language courses more visual and auditory material should be used and also especially computers should be used. Computers help students to improve their four language skills which are speaking, writing, reading and listening.

In addition to these Işık (2008) states that despite the time, money and effort spent on foreign language education in Turkey, low foreign language proficiency level has remained a serious problem. The ever-existing traditional method and language teaching habits and the defects in language planning can be listed as two of
the main causes of the problem. More over Işık writes that to learn a language there should be a very good input both in the class and outside the class. One of the best ways of input is multimedia CALL software.

According to Ozdemir (2007) and Demirbilek-Oflaz (2009), the course books used for English classes in Turkey have some problems with their contents (vocabulary, number of units, presentation of language items, etc.) and teachers face with some problems in this regard. The methods used are not enough to make the students gain more communicative competence (Er, 2006).

All these studies show that in spite of the time, money and effort spent on foreign language education in Turkey, there is a failure in foreign language education. It is a fact that for years, millions of hours of English classes have been held, thousands of teachers have taught courses and our children have spent their time. But unfortunately, we are not able to teach English in the desired way. We could teach neither English, nor other languages. Some who have graduated from high school cannot speak 5 sentences in succession without making any mistake.

As a result in order to solve the problem in foreign language education in Turkey the Turkish Ministry of National Education decided to use a CALL multimedia software which is DynEd. The purpose of the Ministry of National Education by application of DynEd is that learning in English will be permanent and meaningful with use of DynEd calling upon many sense organs of students with different learning styles, within the frame of multiple intelligence theory. One of the objectives is that students learn English in a more complete manner thanks to this software intended for providing a language education on the basis of reading, writing, listening and speaking, rather than a grammar-oriented language education (DynEd İngilizce Dil Eğitim Sistemi, 2010). Since DynED software offers students to listen and speak, it sustains students to gain the target language just like their mother tongue.

How did DynEd reach to the Ministry of National Education? The answer is that recently the Ministry of National Education (MNE) has tried to do its best to use computers in language teaching. SANKO holding company donated DynEd interactive software to the MNE and the protocol was signed between the MNE and Sanko Holding Company and Future Prints Computer Organization. The Ministry aimed to implement DynEd in 11,152 pilot schools in 2007-2008 Educational term and started its implementation in all primary education in Turkey in 2008-2009 Educational year. (MEB, 2007a, Minister Certification). At first as a preparation period, coordinator teachers were selected from pilot regions and the training period of them started. Two steps for these training sessions were defined and the Ministry aimed to finish these training sessions until 11th January 2008 (MEB, 2007b, Minister Certification). Since 2008-2009 educational year DynEd has been applied in all primary education in Turkey. Also it is anticipated that 8.5 million elementary level students would benefit from the software program via internet.

It is better to know more about the DynEd. DynEd was founded in 1987 by the former director of the total immersion program at the Language Institute of Japan and a team of engineers. DynEd’s founders created the world’s first interactive multimedia language learning CD-ROM in 1988 and received a U.S. patent for this invention in 1991 (Stark, 2004).

DynEd composes of a new metric, the Completion Percentage, and the Intelligent Tutor. Completion percentage assesses how well students are utilizing each lesson. The Completion Percentage is a measure of the number of micro learning steps (MLS) that a student has completed. It claims to stem from neural sciences and define a micro learning step to be any one of the following: (1) listening to and comprehending a language utterance, (2) recording and monitoring an utterance with comprehension, (3) processing information and completing a task in the target language, and (4) reading or writing a sentence or phrase with comprehension in the target language. To further assist in the monitoring and coaching of students, the Intelligent Tutor combs through the 21 details of each student’s learning activities and summarizes the results so that teachers can identify which students need additional coaching. In addition, the Tutor provides specific suggestions about how the students can improve their practice strategies (Knowles, 2004).
The DynEd has nearly 30 different courses. But the Turkish Ministry of National Education chose two of them for primary schools. They are First English and English for Success. In his article Stark states that each DynEd course is based on sound, time proven approaches to language teaching, curriculum design, and human interface design. Evidence for the effectiveness of its courseware is based on over twenty-five years of experience in language programs from around the world and on recent findings in the neural sciences. DynEd also has access to the real-time study records of thousands of students from around the world. DynEd’s research-based courses cover all proficiency levels and include a range of age-appropriate courses, from kids in school to adults in leading corporations. In addition, DynEd courses are supported by an award-winning Records Management System, Mastery and placement tests, and extensive teacher-support materials, including teacher-training and mentoring. DynED is a program designed to help English Language Learners (ELLs) aged between 11-18 acquire the language they need for success at school in their classes and with their new schoolmates. It is based on brain and language acquisition research, exploiting both to form a blended model where multimedia activities and classroom interaction complement each other (2004).

As stated before nearly 8.5 million primary education students are using the DynEd. In fact, it is not so easy to organize so many students to use the DynEd without problems. As a teacher of English, who work in a primary education in Trabzon, given the present researcher own experience in using the DynEd in English teaching and teachers of English faced many problems. Therefore, the purpose of this study is to report the factors that make teachers abstain from using the DynEd.

METHODOLOGY

The purpose of the research is an attempt to describe the factors that make teachers abstain from using the DynEd. Therefore, this research is descriptive and developmental in nature. This study also employed elements of quantitative and qualitative research. Also this study contains elements of survey research, e.g. sampling and questionnaire.

In order to gather data, a questionnaire was used and the results of this questionnaire were analyzed quantitatively. In addition to this, face to face semi-structured interviews were employed to collect info from the teachers to in order to clarify their ideas in detail and the results were analyzed qualitatively.

Research Setting

The target of the research is to investigate teachers’ the factors that make teachers abstain from using the DynEd which is used in the primary education in Turkey. Therefore, a major component of the study was to review the current context in the application of the DynEd in all primary education in Turkey. Accordingly, 10 cities were selected as the focus of this investigation. Given the resource constraints and limitations of the study, the present researcher decided to carry out an investigation of only 10 cities (İstanbul, Manisa, Antalya, Amasya, Sivas, Gaziantep, Bingöl, Ağrı, Trabzon, and Rize). For concerns of representation, the cities were chosen from different geographical locations. The researcher tried to choose a city from every region. The main concern in choosing cities from different regions was that of representation. This study carried out in 2009-2010 academic year.

Sampling of the Study

Convenience sampling technique was applied to select teachers while gathering of the data required. However, simple random sampling procedures were used in selecting teacher samples in interview. The target population of this study is teachers of English. Accordingly, samples were selected in order to represent the population. The size of the teacher sample was determined as 15 from each city, making a total of 150 (N=150). Teacher samples in all cities were selected by using the convenience-sampling method. This is a non-probability sampling method. The reason for using the convenience sampling was time constraints and, not all teachers were available at the time of the administration of questionnaires. Thus, the questionnaire was distributed to those who were willing and available to participate in the study at the time. Interviewers were selected from participants of questionnaires. When a participant filled the questionnaire they were asked whether or not they wanted to be a volunteer for the interview. Later 15 teachers randomly selected from the volunteers.
Research Instrument

Two instruments were used in this study: Questionnaire and semi-structured interview. The questionnaire and semi-structured interview were used to collect the needed data. Semi-structured interview was developed from research questions. A questionnaire was constructed to elicit data for the research question. The researcher had reviewed questionnaire construction guidelines from the educational research literature. With the help of the research literature on questionnaire design, the data needed was determined and as many items as possible were created before the construction of the questionnaire. Especially after an analysis of Özerol’s (2009) study, the researcher decided to partly utilize her questionnaire and interview. In order to develop the questionnaire and interview, the present researcher got necessary permission from Özerol to partly utilize her questionnaire and interview. In her study Özerol states that she adapted her questionnaire and interview from Braul, Omar Ali, Albirini and Levy’s studies which are highly reliable and valid. Instructions and items were revised several times to ensure reliability and validity before the pilot work. The researcher made necessary adaptations in accordance with the purpose of the study.

The questionnaire also contained a cover page which included a letter to the respondents describing the subject, aims and importance of the inquiry. A statement of confidentiality was also included in cover letter. It took nearly two months to construct the questionnaire.

After the questionnaire and interview were developed, they were translated into Turkish by an expert. The reason for this is that the present researcher thought that while filling in the questionnaire, teachers would feel more confident with their mother tongue.

The pilot study was administered to four experts and six teachers of English. Four experts were from different universities and the six teachers were from different cities. The researcher sent the questionnaires and interview via e-mail. After they had analyzed it, they phoned the researcher to tell their ideas about the questionnaire and interview or sent e-mail to the researcher which explained their ideas about the questionnaire and interview. Necessary changes were made to the questionnaire and interview according to the feedback taken from these experts and teachers. There were some unnecessary items and some unclear points. The researcher fixed them. Also it was found that nearly 15-20 minutes was enough to fill out the questionnaire.

After necessary modifications, the questionnaire and interview were considered to be appropriate for the study. Four experts confirmed that the questionnaire and interview were valid. So the questionnaire and interview were ready to be used.

Data collection Procedures

In order to collect the necessary data, the presents study employed a questionnaire and interview. 150 questionnaires were distributed in the second week of February, in 2010. The data collection took three weeks. As mentioned before, the researcher chose 10 different cities and tried to choose cities from every region. Having selected the cities, the researcher contacted a colleague in these cities through telephone. They were informed of the study and were asked whether or not they could help the researcher. In every city, the researcher chose one responsible teacher from the colleagues who accepted to participate in the study. These teachers were responsible for the distribution and collection of the questionnaires in their cities. The questionnaires were mailed either by a delivery service or by e-mail. The volunteer responsible teachers that received the questionnaires were requested to collect and send the questionnaires back via cash-on-delivery method. Also permission was obtained from the Ministry of National Education (MNE) before the administration of the questionnaire. In addition, permission of headmasters of each school was also obtained to conduct the study in their schools and a copy of the permission of the MNE letter was given to the mentors.

The responsible teachers were asked to hand out the questionnaires to the other teachers of English and to collect them. A total of 150 questionnaires were sent to those cities. 15 questionnaires were sent to every city and 121 of 150 questionnaires returned. The return rate was found to be 80,66%.
Another data collection tool was interview. The English teachers who filled the questionnaire were asked whether they would like to join the interview. Nearly 30 teachers of English volunteered to join the interview. But the researcher randomly selected 15 of them for the interview. Each of the volunteers was interviewed. Some of the volunteers were interviewed through telephone and their interviews were recorded by using a telephone.

Data Analysis
All the items in the questionnaire were analyzed by using the Statistical Package for Social Sciences (SPSS v.11.5). Frequency calculations and percentages of each item (i.e. how many teachers selected each answer) were used to produce central tendency statistics that were used to find out the factors that make teachers abstain from using the DynEd. Also, The content analysis technique was used while the qualitative data were being analyzed.

FINDINGS

Findings of Questionnaire
The Factors That Make Teachers Abstain From Using DynEd
This part of the questionnaire was a selected response type. Teachers were asked to tick the options that are suitable for them. (Teachers may choose more than one.) This question aimed to investigate the factors that make teachers abstain from using the DynEd. Table 1 shows frequencies and percentages of the responses.

<table>
<thead>
<tr>
<th>The Factors That Make Teachers Abstain From Using DynEd</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient equipments (number of computers, microphones, headphones, etc.)</td>
<td>112</td>
<td>92.6</td>
</tr>
<tr>
<td>The students don't have computers at their home environment.</td>
<td>103</td>
<td>85.1</td>
</tr>
<tr>
<td>Insufficient computer laboratory access.</td>
<td>96</td>
<td>79.3</td>
</tr>
<tr>
<td>Lack of competence of students on the matters of using the computer and DynEd.</td>
<td>88</td>
<td>72.7</td>
</tr>
<tr>
<td>Lack of technical support.</td>
<td>83</td>
<td>68.6</td>
</tr>
<tr>
<td>Lack of competence of teachers on the matters of using the computer and DynEd.</td>
<td>62</td>
<td>51.2</td>
</tr>
<tr>
<td>The teachers aren’t familiar with DynEd program.</td>
<td>54</td>
<td>44.6</td>
</tr>
<tr>
<td>Lack of teacher training programs related to the use DynEd.</td>
<td>52</td>
<td>43.0</td>
</tr>
<tr>
<td>School administrations do not support DynEd application</td>
<td>22</td>
<td>18.2</td>
</tr>
</tbody>
</table>

The options that are preferred by teachers can be divided into three groups: The first group is the ones that are preferred by most of the teachers. According to the responses, the most reported factors that make teachers abstain from using the DynEd were insufficient equipment (number of computers, microphones, headphones, etc.) (92,6%), the students don’t have computers at their home (85,1%), insufficient computer laboratory access (79,3%), lack of competence of students on the matters of using the computer and DynEd (72,7%) and lack of technical support (68,6%).

The second group of options were also preferred by some teachers and are neither low nor high in number. Lack of competence of teachers on the matters of using the computer and DynEd was the choice of 51,2% teachers. This was followed by the option that teachers aren’t familiar with the DynEd program (44,6%). The number of teachers who think that lack of teacher training programs related to the use the DynEd as a factor that makes teachers abstain from using the DynEd is not low (43%).

The third group is preferred by a low number of teachers. The less indicated factor that makes teachers abstain from using the DynEd is that the school administrations do not support the DynEd application 22 (18,2%).

It is apparent that teachers think that insufficient equipments (number of computers, microphones, headphones, etc.) and insufficient computer laboratory access are the most important factors that make
teachers abstain from using the DynEd. The researcher thinks that if school administrations or Ministry of National Education can solve these problems, DynEd can be used effectively.

Finding of Interviews
Factors That Affect the Use of the DynEd Effectively

15 interviewees were asked “Are there any factors that affect your use of the DynEd in an effective way? Please specify them, if any.” Some of them stated that they are similar and cannot be separated. Therefore, they are given under the same title. Teachers responded to these questions by taking into consideration their own situations. From these results, the current problematic situations related to the DynEd unveiled. All the codes are given in Table 2. Although some of them are related, they are given as different codes.

80% of the interviewees (T1, T2, T3, T4, T5, T7, T8, T9, T11, T12, T14, and T15) stated that there was insufficient equipment (number of computers, microphones, headphones, etc.) in their schools. Internet connection problem was another factor that affects the use of the DynEd effectively. Eight of the interviewees (T1, T2, T3, T4, T5, T6, T7, and T9) stated this, which is presented in Table 2.

According to T3, T9, T12, T13, T14, T15, intensive syllabus was another factor that affects the use of the DynEd effectively. Intensive syllabus means that the subjects studied throughout the year include lots of topics, and it is difficult for some teachers to teach all of them. As shown in Table 2, four of the interviewees (T1, T8, T9, and T15) indicated that crowded classes were a factor that affected the use of the DynEd effectively. In crowded classes, the numbers of students are more than an appropriate class size; so, teachers cannot use computers in these classes effectively.

Table 2: Factors That Affect Usage of the DynEd Effectively

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequencies</th>
<th>Mentioned by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient equipments (number of computers, microphones, headphones, etc.)</td>
<td>12</td>
<td>T1, T2, T3, T4, T5, T7, T8, T9, T11, T12, T14, T15</td>
</tr>
<tr>
<td>Internet connection problem</td>
<td>8</td>
<td>T1, T2, T3, T4, T5, T6, T7, T9</td>
</tr>
<tr>
<td>Intensive syllabus</td>
<td>6</td>
<td>T3, T9, T12, T13, T14, T15</td>
</tr>
<tr>
<td>Crowded classes</td>
<td>4</td>
<td>T1, T8, T9, T15</td>
</tr>
<tr>
<td>Different curriculum of SBS (Seviye Belirleme Sınavı) placement test</td>
<td>4</td>
<td>T2, T10, T12, T13</td>
</tr>
<tr>
<td>Insufficient severs</td>
<td>4</td>
<td>T4, T5, T6, T13</td>
</tr>
<tr>
<td>Students’ insufficient competence on computer</td>
<td>2</td>
<td>T7, T9</td>
</tr>
<tr>
<td>School administrations did not support DynEd application</td>
<td>2</td>
<td>T4, T8</td>
</tr>
<tr>
<td>The students don’t have computers at their home environment.</td>
<td>1</td>
<td>T6</td>
</tr>
</tbody>
</table>

Mostly in connection with the intensive syllabus, four teachers (T2, T10, T12, and T13) stated that the curriculum of the DynEd was different from SBS (Seviye Belirleme Sınavı) placement test curriculum as a factor that affects the use of the DynEd effectively. Insufficient severs was another factor that affects the use of the DynEd effectively, which was stated by four interviewees (T4, T5, T6, T13). Insufficient severs means that servers in the ministry of national education were not enough for the students to use the DynEd at the same time. They stated that when they tried to connect to the DynEd servers, they could not achieve this because the servers were very busy. Hence, they had to wait for a long time. Another perceived factor that affects the use of the DynEd effectively was students’ lack of computer competence. This means that some students cannot operate computers while using the DynEd. T7 and T9 reported this lack. As obvious from Table 2 school administrations did not support the DynEd application. T4 and T8 stated that sometimes school administrations must support the DynEd application and organize everything for teachers and students to use the DynEd efficiently in their schools. Finally, T6 stated that some of the students did not have the computer at their houses. So, this is a factor that affects the use of the DynEd effectively. All of these items are related to factors that affects usage of DynEd effectively. The following excerpts are given as samples to these codes:
“Our computers are not enough for us and our internet connection is very problematic. These factors affect us to use the DynEd effectively in a negative way” (T1)

“To use the DynEd effectively there should not be infrastructure problems. Because of economical problems of schools administrations cannot provide technical equipments such as microphones or headphones. Also time deficiency and different curriculum of SBS placement test from the DynEd’s curriculum are other factors. All these factors affect the use of the DynEd effectively.” (T2)

“Of course there are factors that affect us negatively. First of all Insufficient severs. We have to wait for a long time to connect to servers. Also most of my students don’t have computers at their houses. I think it will take a long time to use the DynEd effectively in rural areas.” (T6)

Teacher Recommendations for the Effective use of the DynEd

In order to elicit teachers’ recommendations, interviewees were asked: “What do you think should be done in order to use the DynEd effectively at primary education in Turkey?” Similar points in their responses were coded and presented in Table 3.

According to the interview results, 80% of interviewees (T1, T2, T3, T4, T6, T7, T8, T9, T11, T13, T14, and T15) indicated their most important recommendation as “setting up language classes” and “labs and increasing the number of computers.” This means that authorities should set up special language classes or language labs with all the equipment, and also they should increase the number of computers in computer labs.

Increasing the hours of English lessons is another recommendation that was stated by 40% of the interviewees (T2, T3, T4, T9, T13, and T14). This means that the hours of English lessons are limited for the effective use of the DynEd.

Table 3: Recommendations for Effective use of CALL

<table>
<thead>
<tr>
<th>Items</th>
<th>N</th>
<th>Mentioned by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set up Language classes and labs and increasing the number of computers.</td>
<td>12</td>
<td>T1, T2, T3, T4, T6, T7, T8, T9, T11, T13, T14, T15</td>
</tr>
<tr>
<td>Increasing hour of English lessons</td>
<td>6</td>
<td>T2, T3, T4, T9, T13, T14</td>
</tr>
<tr>
<td>Change of curriculum</td>
<td>6</td>
<td>T2, T3, T10, T12, T13, T15</td>
</tr>
<tr>
<td>Increasing internet connection speed</td>
<td>5</td>
<td>T1, T3, T5, T6, T8</td>
</tr>
<tr>
<td>Increasing number of DynEd servers in the ministry</td>
<td>5</td>
<td>T5, T6, T7, T13, T14</td>
</tr>
<tr>
<td>Teacher and student training</td>
<td>5</td>
<td>T4, T6, T7, T8, T11</td>
</tr>
<tr>
<td>Crowded Classes should be decreased</td>
<td>1</td>
<td>T15</td>
</tr>
</tbody>
</table>

According to the results, the change of the curriculum was stated by 40% of interviewees as another recommendation for the effective use of the DynEd (T2, T3, T10, T12, T13, T15). For, they think that curriculum is not suitable for the effective use of the DynEd. As a recommendation, 33,3% of the interviewees (T1, T3, T5, T6, T8) stated that authorities should increase internet connection speed. Another recommendation that was stated by 33,3% of the interviewees (T5, T6, T7, T13, and T14) were to increase the number of the DynEd servers in the ministry. This means that authorities should increase the number of DynEd servers in the ministry to use the DynEd more effectively. As presented in Table 3, five of the interviewees (T4, T6, T7, T8, T11) stated that teacher training was another recommendation. It refers to the fact that teachers and students should be trained in the DynEd before implementing and using it in the lessons. As a final recommendation, one of the participants (T15) stated that crowded classes should be decreased. This participant thinks that decreasing the number of crowded classes is important for effective implementation of the DynEd.

“...computers should be renewed and internet connection speed should be increased.” (T1)
“Computer labs should be organized as a computer for each student; curriculum should be changed and made necessary adaptation according to the DynEd. Internet connection speed should be increased. All infrastructures should be constructed to use the DynEd in all schools. In addition to these numbers of the English lesson should be increased.” (T3)

DISCUSSION AND CONCLUSION

Both questionnaire and interview were designed to investigate the factors that make teachers abstain from using the DynEd. The question was a selected response type. Respondents were asked to tick the options that were suitable for them. (Respondents may choose more than one). All the options were about the challenges which they face while implementing the DynEd. The findings showed that nearly all of the teachers (92.6%) believed that insufficient equipment (number of computers, microphones, headphones, etc.) was the biggest factor that makes them abstain from using the DynEd. This is a very important reason because DynEd is individual learning software and the software focuses on the speaking and listening skills. Therefore, in order to use the DynEd efficiently, there should be computers, microphones and headphones for each student. In addition, the second important factor that makes teachers abstain from using the DynEd was that the students did not have computers at their homes. In schools, students can’t find enough time and sufficient equipment to use DynEd regularly. Therefore, teachers try to motivate students to use the DynEd at their homes. However, most of the students do not have computers at their homes: especially the students who live in rural areas do not have computers at their homes. Hence, students neither at school nor at home can use DynEd regularly.

According to the findings 79.3% of the respondents reported that insufficient computer laboratory access was one of the important factors. Teachers stated that in schools, there are too many classes and students for computer labs. Generally, there are one or two computer labs in schools but there are more than 10 classes in the schools. So, it was nearly impossible to organize so many classes to use these computer labs.

72.7% of the teachers reported that students’ lack of competence in using the computers and DynEd was another factor that makes teachers abstain from using the DynEd. Also the interview data verify the questionnaire results. 80% interviewees indicated that their students do not have enough computer competence to use DynEd efficiently. This is really an important problem because when students do not have enough competence in using computers, it is really difficult to explain to them how to use DynEd. Apart from these, teachers complain about the lack of technical support. While using the DynEd, teachers and students encounter a lot of technical problems but unfortunately the ministry cannot supply enough technical support to solve the problems. In addition, some of the teachers thought that teachers do not have enough competence in using computers and DynEd. This is also one of the important factors that make teachers abstain from using the DynEd. Normally, teachers should explain it to the students how to use the DynEd, but when teachers’ competence in using computers is not enough, it is nearly impossible for teachers to explain to their students how to use the DynEd.

The quantitative data indicated that nearly half of the teachers thought that teachers were not familiar with the DynEd and there was a lack of teacher training programs related to the use of the DynEd. These factors are important because it is impossible for teachers to introduce the DynEd to their students if they are not familiar with it. Of course, there should be enough teacher training programs related to the use of the DynEd to make teachers familiar with it.

To get detailed information in the interview, about factors that make teachers abstain from using the DynEd, the researcher asked “Are there any factors that affect your use of DynEd in an effective way? Please specify them if any.” The interview data verifies the questionnaire findings. Also these data revealed that there were five more factors that make teachers abstain from using the DynEd. These are the internet connection problem, insufficient severs, intensive syllabus, crowded classes and different curriculum of SBS (Seviye Belirleme Sınavı) placement test. The teachers stated that internet connection in the schools was very problematic. They stated that when they tried to connect to the DynEd servers, they could not achieve this because the servers were very busy. Therefore, they had to wait for a long time to connect. Another important factor that the teachers stated was that there was a very intensive syllabus. Because of the intensive syllabus,
teachers could not find time to use the DynEd. Also they complained that the curriculum of DynEd was different from SBS placement test curriculum. So, it is difficult for teachers and students to follow two different curriculums at the same time. As it is clear, both the questionnaire and the interview findings provide supportive evidence for each other.

Kızıldağ (2009) found very similar results at the end of her study. She investigated “Teaching English in Turkey: Dialogues with teachers about the challenges in public primary schools”. With this act, the Ministry of National Education adopted a communicative and authentic language teaching philosophy. However, the problem starts with the lack of infrastructural support. Since DynED is internet-based software, the schools need a strong infrastructure for internet access. At this point, three major problems emerge in line with participant answers:

- schools do not have a computer laboratory
- schools do not have internet access
- schools have computer laboratory; yet, not used for language classes but only for computer classes.

She also states that crowded classrooms are another problem. In Turkey, most of the primary schools are overpopulated. Especially, after the law of 8-year-compulsory primary education in 1997, schools received more and more students. Currently, classes usually have 40 students; nonetheless it is also well-known that this number may go up till 60.

Finally she states that compared to the previous studies conducted in Turkey in identifying problems and challenges of English language and/or foreign language teaching, this study is highly consistent with the relevant literature. However, it also reveals some newly emerging problems due to the new policies put into practice after 2006: the placement test (SBS) and DynEd, self-study internet-based learning material. The incompatibility between the test content and curriculum affects teaching negatively. Similarly, having spent a huge budget, time and energy, the poor accessibility of DynEd seems not fully benefited by the users due to the lack of infrastructure. As a result, it seems that the good will turns into a bad result due to the poor planning in Turkey.

The results of the study of Baş (2010) are similar. He states that there is no computer labs and Internet access and the number of the computers is limited in some schools. Time duration both for DynED courses and English lessons is limited so that teachers have problems completing English curriculum at the end of the year. School principals do not pay attention to DynED courses and they also do not supply technical and other support to English Language teachers at schools so that most of the schools especially schools in rural areas are in urgent need of internet access and some other technical facilities such as computers microphones, earphones, vs. Teachers face problems with installing the programme on the computer so that computers do not work with a programme, named “deepfreeze”. Also, the programme creates problems to teachers in adding students name lists and classes, vs. in the software. The software works very slowly so that students sometimes cannot have access to DynED courses. Elementary supervisors are not aware of the benefits and the application of the programme so that they cannot help the teachers who have problems with the programme. As far as one can understand from teachers’ views on supervisors, Elementary supervisors do not know how to install and apply the software at schools. On the other hand, computer lessons are elective for 4th and 5th graders at schools so that while these students in these classes are having access to computers, the students for DynED courses cannot access to computers since the computer labs are not empty. Teachers have some technical problems since some of them do not have microphones and earphones, as well as some do not have Internet access at school for the computers in their schools. Elementary English curriculum does not correlate within DynED subject content so that most of the subjects in the curriculum especially 7th and 8th graders do not correlate with DynED subject content. English classes are four hours time a week in elementary schools in Turkey so that time duration of DynED courses is limited since one hour time in a week is separated for DynED courses. Students in the classrooms are very crowded so that students cannot have access to DynED courses due to the limited number of computers at schools.
IMPLICATIONS FOR ELT

In order for the DynEd implementation to be successful in primary education from the 4th to 8th grades in Turkey, several recommendations need to be made.

The first thing to be done is to set up language classes and labs and to increase the number of computers. The MNE should supply sufficient equipment (number of computers, microphones, headphones, etc.) to schools. Language labs or computer labs can be established in each school as recommended by the teachers because some teachers do not even have a computer lab for implementing the DynEd. Additionally, hours of English lessons need to be increased. The hours of English lessons are limited for the effective use of the DynEd. 4 hours for each class is not enough to use the DynEd effectively and to follow different curriculums. In addition, the class sizes need to be decreased to enable the effective DynEd implementation.

Curriculums should also be changed for the effective use of the DynEd, because teachers think that the curriculum is not suitable for the effective use of the DynEd. The curriculum of DynEd is different from the curriculum for SBS placement test. So, it is difficult for teachers and students to follow two different curriculums at the same time.

To use the DynEd internet connection is needed. But generally, internet connection is very problematic in schools. So, the MNE needs to solve this problem as quickly as possible. The infrastructure for the internet needs to be reconstructed and the MNE needs to increase the internet connection speed for an unproblematic use of the DynEd. Hence, the MNE needs to increase the number of the DynEd servers in the ministry.

Because teachers want to use the DynEd, they need to be trained for this. Teachers stated that they knew how to use computers and use them for many purposes already. Hence they do not need to be trained in using computers, but need to be trained in using the DynEd. It can be said that the MNE should provide in-service teacher training, which will focus mainly on the implementation of DynEd.

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THE ROLE OF LIBRARIANS IN THE DEVELOPMENT OF STUDENTS’ INFORMATION LITERACY SKILLS AND A MODEL PROPOSAL

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Abstract
The development of societies depends upon the quality of their workforces. Contemporary societies, in comparison with past societies, now need workforces with different qualities. The best way to prepare for a future characterized by constant change is to equip the individuals which make up these societies with skills which will help them to keep up with these changes. The most important of these skills are life-long learning skills and information literacy skills. Individuals who have information literacy skills are people who are more likely to be equipped for all kinds of change in their personal and professional lives. In equipping the individuals who make up society with these skills, the educational institutions, libraries and librarians have an important role to play.

Key Words: Information literacy, librarians, students, model.

“The illiterates of the future will not be those who cannot read and write, but those who don’t know how to obtain information”.

Alvin Toffler

INTRODUCTION

Information literacy means having the right skills to locate information in different formats, access it, evaluate it, use it and communicate it. In equipping individuals with these skills, educational institutions and therefore the libraries which support these institutions have important duties to fulfill. Librarians are also expected to play a supporting role in helping to equip students with such skills.

It is often stressed that information literacy should occupy a place on the programs of educational institutions at all levels and ought to be a part of the educational process of each student. That information literacy skills are some of the fundamental skills that should be taught to students throughout their education is an idea which has begun to gain general acceptance (Kurbanoğlu and Torun, 2009).

The term information literacy is a term which was first used in a report written in 1974 by Paul Zurkowski which refers to “the education of individuals to enable them to use information sources related to their work”. Information literate people were defined as “individuals who have the necessary skills to use sources of information, as well as the ability to create solutions to problems by accessing appropriate sources (Polat, 2003)”.

Although many more definitions of information literacy have been developed, the definition of the American Library Society (ALA) is generally used. According to this definition (ALA, 1989);

“Information literacy is a set of abilities requiring individuals to “recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.”
Information literacy is also increasingly important in the contemporary environment of rapid technological change and proliferating information resources. Because of the escalating complexity of this environment, individuals are faced with diverse, abundant information choices - in their academic studies, in the workplace, and in their personal lives. Information is available through libraries, community resources, special interest organizations, media, and the Internet - and increasingly, information comes to individuals in unfiltered formats, raising questions about its authenticity, validity, and reliability. In addition, information is available through multiple media, including graphical, aural, and textual, and these pose new challenges for individuals in evaluating and understanding it. The uncertain quality and expanding quantity of information pose large challenges for society. The sheer abundance of information will not in itself create a more informed citizenry without a complementary cluster of abilities necessary to use information effectively (ALA, 1989).

Information literacy is examined as an extension of user education, introduction to the library and bibliographic training. In addition to this, information literacy needs to be defined separately. In contrast to the situation which existed in the past, in the present day information is everywhere, which causes the user to have difficulty in evaluating the quality of that information and there is therefore an increasing need for users who are able to look critically and question the information. Ability to use databases, search engines, printed and non-printed information sources are the skills required by the information literate person (Saatçioğlu, Özmen and Özer, 2003).

In addition to these skills, being aware of the reasons for choosing to use one source of information in preference to another, the evaluation and analysis of the source and selecting suitable sources of information for the chosen topic are all component parts of information literacy. Students who possess such information literacy skills are learning how to operate as independent researchers. Librarians can help individuals to evaluate sources in the course of the research process. The increasing reliance on internet sources has also increased the value of the expertise and objectivity of librarians in assessing information and information sources.

**METHOD**

In this study, the published sources and applications used to achieve the stated goals are examined. First, the definitions of information literacy, its stages, methods of helping individuals to develop information literacy, educational programs, and applications used, models which have been developed and sources on the subject of the role of librarians were examined. In this way, both the conditions necessary in order for students to be educated as information literate individuals and the development of the student’s information literacy are discussed and also the role of librarians in this process.

**FINDINGS**

To become full members of the society in which we live, known as the information society it is now necessary to be able to find and use information, in other words to be information literate. In fact, the information society needs individuals with life-long learning skills. For this reason, in our times, it has become very important for individuals to begin to learn life-long learning skills at an early age (Kurbanoğlu and Akkoyunlu, 2002).

When we examine the literature on information literacy, it can be seen that information literacy has been extensively studied and many research studies were done but that a methodology has not yet been developed for this and consequently a road map has not yet been drawn out for educating students to become fully information literate individuals. Also, it is obvious that libraries and librarians constitute an important element in educating students to become information literate. Librarians, who already have an important role in bibliographic training, now have an additional role and responsibility in connection with the concept of information literacy (Kurbanoğlu, 2002; Kurbanoğlu and Akkoyunlu 2009; ALA 1989; SCONUL, 1999; SCONUL, 2011).
Another discovery is that educationalists need to work closely with librarians to develop the information literacy skills of students. In order to achieve this, information literacy must have a place on the program at every level of education. The rapid increase of information in the electronic environment, the increase in its use in the fields of education, training and research and the need for life-long learning, have made it absolutely necessary for students to develop information literacy skills (Saatçioğlu, Özmen and Özer, 2003).

**DISCUSSION AND CONCLUSION**

There is no doubt that in the acquisition by individuals of information literacy skills the most important role is that of educational institutions. An educated person is a person who, both in his/her daily life and professional life has the necessary competencies to solve problems which he / she may meet with. Taking this as a starting point, the educational institutions of modern times, instead of communicating only known information have also the responsibility to teach life-long learning skills or, in other words information literacy skills (Polat, 2005).

**The Role of Librarians**

Information literacy skills, in our rapidly changing contemporary society, are essential skills to enable individuals to continue to learn throughout life. For this reason, it is necessary for every student in an educational institution, according to their level of education, to have their educational deficiencies compensated for and, for this purpose special educational programs should be prepared. In the development of these special programs the main responsibility should lie with the librarians. The librarians who are responsible for running these programs should, as well as having professional training, have the necessary skills to run educational training courses, have the communication and cooperation skills which are necessary fort his work and be proficient in information technologies (Polat, 2005).

Librarians, to do their jobs, need to know how to access information in the shortest possible way. Therefore librarians know which information technologies they should use at each stage of their work and how they should use it. Librarians, who are known nowadays as information professionals, in order to prevent loss of their own time or the users’ time are now developing a new understanding of service and approach to service. To look upon, information as a work procedure and a strategy which creates a difference, they must make information a part of work processes. Making information part of work processes appears to be an important aspect of the transition from librarian to information professional.

While librarians were traditionally presenting printed materials to the users in a standard library, from the beginning of the 1990s the service-oriented approach began and spread rapidly and librarians had to master new skills such as marketing and strategic decision-making. At the same time the rapid development in the fields of the internet and digital information made it necessary for librarians to master skills such as database management, website design and digitalization, making it necessary to know technical information and as a result those librarians who had mastered all these skills and who had, in short, kept up with change began to be known as digital librarians (Barton, 2006).

The roles of reference librarians, in particular, underwent a great change and they began to be called as teachers. In fact, they began to be seen as educationalists or trainers who could show the user where they could find which information. At the same time, the reference librarians who could help users to choose suitable sources of information, in comparison to their past roles took on a much more active role (Li, Leung and Tam, 2007).

Over time, libraries became not just places to store book collections, but rich technological environments and their role was no longer confined to locating information, but became closely involved with the educational process. A school program which is integrated with the library became a necessary factor in order for students to become equipped with the necessary information literacy skills (Kurbanoğlu and Torun, 2009).

Modern educational theory describes students as active users of information. To make the students independent users of technology is now among the responsibilities of librarians. The librarians, who are a fundamental part of the library, work together with the institution to help the students to be in harmony with
the age they live in by developing educational programs to help to develop information literacy skills at primary and middle school levels, help to develop individuals with life-long learning skills, in other words help to develop individuals who are well – prepared for the needs of the age we live in and for that reason they are extremely important for students who are not going to continue their education further than primary and middle school levels and, for these students who are going to continue their education, contribute to their future success. Knowledge gained before the start of higher education will obviously greatly influence the contribution that the students are able to make to the culture of learning and research. For all these reasons, many countries in particular the United States, are trying to teach students information literacy skills at primary and middle school levels and it can be observed that the school libraries actively participate in this (Kurbanoğlu and Torun, 2009).

While the responsibility for the preparation of information literacy programs belongs to the librarians, the success of these programs is dependent on cooperation with the educational institutions.

The responsibility of the librarians does not end with the development of information literacy programs, but also includes carefully chosen school programs suitable for purpose and developing library collections to support life-long learning, observing the needs of the users to ensure access in all types of formats, developing the reading habits of the students by means of work done on all kinds of information services and also following the studies done in the fields librarianship and information literacy (Kurbanoğlu and Torun).

The people who play a role in information literacy education may differ according to the institution. However, the one common element is that the librarian definitely has a role to play in educational process. This process can be summarized as shown below (Saatçioğlu, Özmen and Özer, 2003):

- To follow developments in the fields of education and teaching and to play a role in the development of lesson programs
- To follow studies carried out in the field of information science, to integrate electronic information into the lesson programs and to help those members of the teaching staff who want to use information technology in education.
- To develop the information skills of the students, help the students and do work to encourage reading.
- To enable access to information in every format.

The Model of Gap Analysis

The students who are being educated in a certain educational institution can be tested on their level of information literacy skills by the librarian of the institution. The table below shows 3 critical success factors for a student to have information literacy and to develop these skills. These factors are awarded a total of 10 points and each one of the factors has been awarded points separately.

In the same table a 5 level evaluation system can be observed. In this system, depending on the answers from the students, points will be awarded and the points from the 3 factors will be subtracted from 10. In this way the differences will be analyzed and the deficient aspects will be compensated for according to these results. The table below shows an example. According to this, a total of 10 points can be awarded. The first 2 factors can gain a maximum of 3 points and the last factor can gain a maximum of 4. However, after the study was completed the students were awarded level 1 and the total was 2.5. As a result, the library was analyzed to have a difference of 7.5 in information literacy.
Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning. An information literate individual is able to (ALA, 1989):

- Determine the extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically
- Incorporate selected information into one’s knowledge base
- Use information effectively to accomplish a specific purpose
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally

**CONCLUSION**

The responsibility of educating individuals who are equipped with life-long learning skills belongs mainly to the educational institution. Technological developments have made it necessary to reorganize these educational institutions. Instead of passive and individual learning, it will be necessary to make a transition to active and participative education, flexible education with teaching from the source and similar educational models which are prominent now. These models emphasize research and teaching from the source and also stress individuals accessing information and skills connected to using the material and communicating it. Gaining such skills is emphasized.

Information literacy and related skills is a concept which has emerged in recent years. In a society where there is a lot of information, the ability of the individual to access, evaluate and use information to solve problems and make decisions is dependent on the information literacy and information skills of these individuals. In this connection, in a society made up of individuals, the teaching of information literacy is mainly the responsibility of the educational institutions.
The last link of the educational chain, the universities, is institutions which to a large extent determine the role of the individual in society. In this regard, they have great responsibility for producing individuals with information literacy equipped for life-long learning. The universities must prepare programs to ensure that students graduate with information literacy skills to prepare them for life-long learning. The librarians have a responsibility and educational institutions and librarians must work together to achieve this goal.

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THE EFFECT OF CONCERN LEVELS ON PROFESSIONAL DEVELOPMENT OF TEACHERS

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Abstract
The study has investigated the effect of concern levels on professional development of teachers. The relational survey method was used about the concern levels of teachers of biology, chemistry, physics and science and technology. The data were collected through an questionnaire form developed by researcher. This questionnaire has included totally 43 items. Data collection tool was applied in four elementary schools and five high-schools with 45 teachers. Besides, an open-ended question was asked to them. Data were analysed using indepented t-test and ANNOVA suitable for the purpose. As a result, there is a significant difference between genders for 2, 3, 21, 27, 32 and 43. statements, branches for 7, 28 and 40. statements, experiences for 6, 8, and 37. statements and faculties for 10, 19, 31, 37, 39, 42 and 43. statements (p<0,05).

Key Words: Science Education, Concern Levels, Professional Development.

INTRODUCTION
Educational theorists have put forward the idea of development change in teachers’ thinking (Berliner, 1988; Burden, 19982; Fuller, 1969; Katz, 1972). Fundamental to these theories is that teachers’ ways of thinking change over time, with changes occurring in instructional behaviors, understanding of students and learning, awareness and understanding of context, and perceptions of self and teaching profession (Feiman-Nemser, 1983). The premise for this depiction of teacher development is based on “concerns theory” and can be attributed to work of Fuller (1969). Central to concerns theory is the idea that teachers identify and articulate the nature of their teaching concerns. Concerns, in this context, can be defined as perceived problems of teachers (Fuller, 1969), or things a teacher “thinks about frequently and would like to do something about personally” (Reeves & Kazelskis, 1985, p.267).

Concerns can be defined as:
The questions with a more or less emotional undertone which signal insecurity and possible resistance against new situations and/or changes and which, one way or another, will have to solved by the teachers. Concerns, as expressed in questions and remarks, refer to a lack of competence perceived at this moment to responsibly perform the educational activities expected. In this way concerns are a natural phenomenon in situations in which teachers are expected to tackle novel problems, to use new materials or new methods, etc. (Van den Berg & Vanderberghe, 1995, p.20).

The concern-based adoption model discerns three main forms of concerns in the implementation of innovations: self-concerns, task-concern and other concern (Van den Berg & Vanderberghe, 1981). At the beginning of an innovation process many teachers especially wonder what the innovation will entail for them. This form of concerns is called self-concern. When self-concerns decrease, teachers start to wonder what the innovation will mean for their daily task performance. This attention for the effects on their tasks is called task-concern. Teachers orientating more to their pupils and colleagues are called other-concerned. Teachers who show other-concern will make an effort to concretize the innovation together with colleagues and pupils.

Within the three main forms of the concern-based adoption model we distinguish seven so-called stages of concern. These stages are defined as follows (Van den Berg et al., 1995, pp. 50-52).
• Becoming conscious (stage 0): the teacher shows little concern with the innovation has little or no interest for it and knows little about it.
• Personal concern/information (stage 1): the teacher is interested in changes to occur in his or her own personal work situation, in the way in which he or she will have to prepare his or her daily work, in the time necessary to realize the innovation; the teacher wants to get the opportunity to study and/or discuss information about the innovation and wants to know how colleagues feel and do.

• Consequences for the pupils (stage 2): the teacher wants to make certain of the opportunities presented by the innovation with a group of pupils with whom he or she has some experience. He or she wants to have an indication of value of the innovation for those pupils.

• Restraint (stage 3): the attention is mainly aimed at the daily tasks and at realizing the innovation in practice as well as possible. The teacher is in the first place oriented to solving practical problems that occur regularly.

• Collaboration (stage 4): the concerns are in the first place aimed at collaboration with colleagues in view of a better implementation of the innovation; discussions and coordination with colleagues are regarded to be important.

• Revision on the basis of experiences with pupils (stage 5): the teacher is oriented to revision, i.e. change of the innovation as far as possible on the basis of pupils’ reactions and on the basis of concrete results with pupils.

• Revision (stage 6): the teacher has more or less concrete changes in his mind to realize in practice, he or she sees clear alternatives to change the current innovation.

Stages 0, 1 and 2 refer to self-concern. Stage 3 relates to task-concern and stages 4 and 5 refer to other-concern. The stage of Revision (stage 6) is separate from the three main forms distinguished.

Self-concerns primarily deal with a teacher’s feelings or adequacy and competence, and focus on worries such as “How am I doing?” “Will my students like me?”. Task concerns deal with a teacher’s preoccupation with a specific chore or duty, often focused on time or logistics, and relate to a teacher’s assimilation of pedagogical knowledge. For example, “What music should I choose?” “What is the best way to teach a specific concept?”. Other-concerns represent a shift in a teacher’s focus toward student learning, including areas such as motivation, individual differences in learners, achievement and accomplishment of students. For example, “Is everyone learning in this class?” “How can learners’ feelings of accomplishment be increased?”. On the other hand, there are a lot of studies about perceived problems of beginning teachers, expectations of preservice teachers and their concerns with educational innovations in the literature (Viennam, 1984; Killen, 1993; Jongmans, 1998; Seferoğlu, 2001). To support and assist these studies, this study has been made to investigate effectiveness of concern levels on professional development of teachers.

METHOD

In this study, survey method was used. Within the scope of this method were studied teachers. The study was applied using questionnaire.

Universe and Sample

The universe of this study composed of whole secondary and high school teachers in Trabzon. The sample of this study consisted of 45 teachers from high schools and secondary schools in Trabzon during the 2009-2010 academic years. Features of participants are shown in the Table 1 below:

Table 1: Features of Participants

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>GENDER</th>
<th>SUBJECT DISCIPLINE</th>
<th>TEACHER EXPERIENCE LEVEL</th>
<th>GRADUATED FACULTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER of PARTICIPANTS</td>
<td>F M</td>
<td>P C B S</td>
<td>1-5 years 6-10 years 11-20 years Over years</td>
<td>T A</td>
</tr>
<tr>
<td>NUMBER of PARTICIPANTS</td>
<td>21 24</td>
<td>13 11</td>
<td>10 11</td>
<td>6 7</td>
</tr>
</tbody>
</table>
Data Collection Instruments
The main data collection tool was a questionnaire, which was applied to 45 teachers. The questionnaire was a structured five likert scale including 43 statements which measures concern levels of teachers. To obtain validity, expert opinion was received. The reliability of questionnaire was found to be 0.89.

1. 1-1.8 (Do not worried)
2. 1.9-2.7 (Less concerned)
3. 2.8-3.6 (A little worried)
4. 3.7-4.5 (Worried)
5. 4.6-5.4 (Very worried)

Data Analysis
In this study, data were obtained result of questionnaire. After application of questionnaire, concern levels were code from 1, 2, 3, 4 and 5, gender were code 1 and 2, branches were code 1, 2, 3, and 4, experiences were code 1, 2, 3, and 4, faculties were code 1 and 2. Then, to analyze of data, SPSS programme was used. Results of questionnaire were compared with independent t-test for gender and faculty, ANNOVA for subjects discipline and teacher experience level. Assessments have been interpreted with tables (Table 2, 3, 4, 5, 6).

FINDINGS

Teacher Concern Levels According to Gender

Obtained Findings from T-test According to Gender

Table 2: Paired sample T-test

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<th>S</th>
<th>sd</th>
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</thead>
<tbody>
<tr>
<td>To know when I am observed as I teach</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>F 2.48</td>
<td>1.030</td>
<td>39.355</td>
<td>2.272</td>
<td>0.028</td>
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<tr>
<td></td>
<td></td>
<td>M 1.83</td>
<td>0.868</td>
<td></td>
<td>2.245</td>
<td>0.030</td>
</tr>
<tr>
<td>Managing my life efficiently</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>F 3.10</td>
<td>1.221</td>
<td>39.355</td>
<td>2.104</td>
<td>0.041</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M 2.33</td>
<td>1.204</td>
<td></td>
<td>2.102</td>
<td>0.042</td>
</tr>
<tr>
<td>Too many standards and regulations</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>for teachers</td>
<td>45</td>
<td>F 3.14</td>
<td>1.014</td>
<td>42.935</td>
<td>2.289</td>
<td>0.027</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M 2.38</td>
<td>1.209</td>
<td></td>
<td>2.316</td>
<td>0.025</td>
</tr>
<tr>
<td>Planning according to students needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>F 2.05</td>
<td>1.024</td>
<td>38.619</td>
<td>-2.688</td>
<td>0.010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M 2.79</td>
<td>0.833</td>
<td></td>
<td>-2.651</td>
<td>0.012</td>
</tr>
<tr>
<td>Not recognizing the social and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>emotional needs of students</td>
<td>45</td>
<td>F 2.95</td>
<td>0.865</td>
<td>42.130</td>
<td>-2.937</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M 3.71</td>
<td>0.859</td>
<td></td>
<td>-2.935</td>
<td>0.005</td>
</tr>
<tr>
<td>Asking question of my students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>F 1.67</td>
<td>0.796</td>
<td>30.346</td>
<td>2.207</td>
<td>0.033</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M 1.25</td>
<td>0.442</td>
<td></td>
<td>2.129</td>
<td>0.042</td>
</tr>
</tbody>
</table>

According to results of T-test; there is a significant difference between genders for 2, 3, 21, 27, 32 and 43. statements. (p<0.05).
For second statement, female teachers have chosen mostly “Less concerned” and male teachers have chosen commonly “Do not worried”.
For third statement, female teachers have chosen mostly “A little worried” and male teachers have chosen commonly “Less concerned”.
For twenty-first statement, female teachers have chosen mostly “A little worried” and male teachers have chosen commonly “Less concerned”.
For twenty-seventh statement, female teachers have chosen mostly “Less concerned” and male teachers have chosen commonly “Worried”.
For thirty-second statement, female teachers have chosen mostly “A little worried” and male teachers have chosen commonly “Worried”.
For forty-third statement, both female and male teachers have chosen commonly “Do not worried”.

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Teacher Concern Levels According to Subject Discipline

 Obtained Findings From Anova According to Subject Discipline

Table 3: Anova Tukey test

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What is the principal may think if there is too much “noise” in my classroom</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>11.324</td>
<td>3</td>
<td>3.775</td>
<td>2.830</td>
<td>.050</td>
</tr>
<tr>
<td>Within Groups</td>
<td>54.676</td>
<td>41</td>
<td>1.334</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>66.000</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The absence of students which help science education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>15.631</td>
<td>3</td>
<td>5.210</td>
<td>4.607</td>
<td>.007</td>
</tr>
<tr>
<td>Within Groups</td>
<td>46.369</td>
<td>41</td>
<td>1.131</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>62.000</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Not being flexible to meet the needs of different students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>14.929</td>
<td>3</td>
<td>4.976</td>
<td>3.844</td>
<td>.016</td>
</tr>
<tr>
<td>Within Groups</td>
<td>53.071</td>
<td>41</td>
<td>1.294</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>68.000</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to results of Anova-Tukey test, there is a significant difference between branches for 7, 28 and 40. statements (p<0.05).

For twenty-eighth statement, there is a significant difference between chemistry and biology teachers.

For fortieth statement, there are significant differences between chemistry and biology, chemistry and science-technology teachers.

If we compare concern levels according to 7, 28 and 40. statements;

For seventh statement, physics teachers have chosen commonly “Less concerned”, biology teachers have chosen “A little worried”, and science-technology teachers have chosen “A little worried”.

For twenty-eighth statement, physics teachers have chosen mostly “A little worried”, chemistry teachers have chosen “Worried”, biology teachers have chosen “Less concerned”, and science-technology teachers have chosen “A little concerned”.

For fortieth statement, physics teachers have chosen commonly “A little concerned”, chemistry teachers have chosen “Worried”, biology teacher have chosen “Less concerned” and science-technology teachers have chosen “Less concerned”.

These results show that chemistry teachers have much concern about assisted students who enrich to learn science and not to be relaxing meet to different students’ needs. Using different approaches may not always a good way for each concepts. There are differences between subject disciplines according to teaching. For instance; biology is based on more verbal.

Teacher Concern Levels According to Teacher Experience Level

 Obtained Findings From Anova According to Teacher Experience Level

According to results of Anova-Tukey test; there is a significant difference between experiences for 6, 8 and 37. statements (p<0.05).

For sixth statement, there is a significant difference between 6-10 years and 11-20 years, 6-10 years and over twenty years.

For eighth statement, there is significant difference between 11-20 years and over twenty years.

For thirty-seventh statement, there is a significant difference between 1-5 years and 11-20 years.
Table 4: Anova Tukey Test

<table>
<thead>
<tr>
<th>Condition</th>
<th>Between Groups</th>
<th>df</th>
<th>Within Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not making sure that students learn science concepts and skills by using a variety of approaches</td>
<td>12.655</td>
<td>3</td>
<td>44.589</td>
<td>57.244</td>
</tr>
<tr>
<td>Obtaining high achievement from my students</td>
<td>17.246</td>
<td>3</td>
<td>55.065</td>
<td>72.311</td>
</tr>
<tr>
<td>Having my inadequacies become known by administrators</td>
<td>12.538</td>
<td>3</td>
<td>54.262</td>
<td>66.800</td>
</tr>
</tbody>
</table>

These results show that there is a significant difference between experiences about “Having my inadequacies become known by administrators”, “Could get a high success from my students” and “Using different approaches, not to be sure students learn science concepts and skills”.

Teacher Concern Levels According to Graduated Faculty

Obtained Findings From T-test According to Graduated Faculty

Table 5: Paired Sample T-test

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>X</th>
<th>S</th>
<th>sd</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>My ability to maintain the appropriate degree of class control</td>
<td>45</td>
<td>3.77</td>
<td>0.992</td>
<td>32.531</td>
<td>2.261</td>
<td>0.029</td>
</tr>
<tr>
<td>Not enough time for grading testing, assessments</td>
<td>45</td>
<td>3.27</td>
<td>0.962</td>
<td>37.558</td>
<td>2.672</td>
<td>0.011</td>
</tr>
<tr>
<td>Whether each student is reaching his or her maximum potential</td>
<td>45</td>
<td>3.58</td>
<td>1.065</td>
<td>41.067</td>
<td>2.383</td>
<td>0.022</td>
</tr>
<tr>
<td>Not making sure that students learn science concepts and skills by using a variety of approaches</td>
<td>45</td>
<td>3.69</td>
<td>0.970</td>
<td>34.880</td>
<td>3.021</td>
<td>0.004</td>
</tr>
<tr>
<td>Not motivating of my students</td>
<td>45</td>
<td>3.88</td>
<td>0.993</td>
<td>35.293</td>
<td>2.755</td>
<td>0.009</td>
</tr>
<tr>
<td>Not providing an opportunity to students for implementation of their learning</td>
<td>45</td>
<td>3.42</td>
<td>1.270</td>
<td>42.015</td>
<td>2.639</td>
<td>0.012</td>
</tr>
<tr>
<td>Asking question of my students</td>
<td>45</td>
<td>1.19</td>
<td>0.402</td>
<td>24.859</td>
<td>-3.328</td>
<td>0.002</td>
</tr>
</tbody>
</table>

According to results of independent t-test; there is a significant difference between faculty for 10, 19, 31, 37, 39, 42, and 43. statements (p<0.05).

For tenth statement, teachers’ colleges have chosen mostly “Worried” and faculties of arts and sciences have chosen commonly “A little worried”.
For nineteenth statement, teachers’ colleges have chosen mostly “A little worried” and faculties of arts and sciences have chosen commonly “Less concerned”.
For thirty-first statement, both teachers’ colleges and faculties of arts and sciences have chosen commonly “A little worried”.
For thirty-seventh statement, teachers’ colleges have chosen mostly “Worried” and faculties of arts and sciences have chosen commonly “Less concerned”.
For thirty-ninth statement, teachers’ colleges have chosen mostly “Worried” and faculties of arts and sciences have chosen commonly “A little worried”.
For forty-second statement, teachers’ colleges have chosen mostly “A little worried” and faculties of arts and sciences have chosen commonly “Less concerned”.

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For forty-third statement, both teachers’ colleges and faculties of arts and sciences have chosen commonly “Do not worry”.
Findings show that faculties of arts and sciences have less worried than teachers’ colleges especially impact concerns. These results may be related to pedagogical knowledge of teachers.
The means of statements are shown in the Table 6 below:
Table 6: The Means of Statements

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>3.33</td>
</tr>
<tr>
<td>45</td>
<td>2.13</td>
</tr>
<tr>
<td>45</td>
<td>2.69</td>
</tr>
<tr>
<td>45</td>
<td>2.62</td>
</tr>
<tr>
<td>45</td>
<td>2.96</td>
</tr>
<tr>
<td>45</td>
<td>2.93</td>
</tr>
<tr>
<td>45</td>
<td>2.67</td>
</tr>
<tr>
<td>45</td>
<td>2.76</td>
</tr>
<tr>
<td>45</td>
<td>3.36</td>
</tr>
<tr>
<td>45</td>
<td>3.44</td>
</tr>
<tr>
<td>45</td>
<td>2.49</td>
</tr>
<tr>
<td>45</td>
<td>3.16</td>
</tr>
<tr>
<td>45</td>
<td>2.89</td>
</tr>
<tr>
<td>45</td>
<td>2.49</td>
</tr>
<tr>
<td>45</td>
<td>3.02</td>
</tr>
<tr>
<td>45</td>
<td>2.82</td>
</tr>
<tr>
<td>45</td>
<td>2.84</td>
</tr>
<tr>
<td>45</td>
<td>2.58</td>
</tr>
<tr>
<td>45</td>
<td>2.93</td>
</tr>
<tr>
<td>45</td>
<td>3.24</td>
</tr>
<tr>
<td>45</td>
<td>2.73</td>
</tr>
<tr>
<td>45</td>
<td>2.80</td>
</tr>
<tr>
<td>45</td>
<td>2.71</td>
</tr>
<tr>
<td>45</td>
<td>3.11</td>
</tr>
<tr>
<td>45</td>
<td>2.87</td>
</tr>
<tr>
<td>45</td>
<td>2.56</td>
</tr>
<tr>
<td>45</td>
<td>2.44</td>
</tr>
<tr>
<td>45</td>
<td>3.00</td>
</tr>
<tr>
<td>45</td>
<td>2.87</td>
</tr>
<tr>
<td>45</td>
<td>2.98</td>
</tr>
<tr>
<td>45</td>
<td>3.27</td>
</tr>
<tr>
<td>45</td>
<td>3.36</td>
</tr>
<tr>
<td>45</td>
<td>3.13</td>
</tr>
<tr>
<td>45</td>
<td>3.22</td>
</tr>
<tr>
<td>45</td>
<td>3.29</td>
</tr>
<tr>
<td>45</td>
<td>3.09</td>
</tr>
<tr>
<td>45</td>
<td>3.29</td>
</tr>
<tr>
<td>45</td>
<td>3.13</td>
</tr>
<tr>
<td>45</td>
<td>3.51</td>
</tr>
<tr>
<td>45</td>
<td>3.00</td>
</tr>
<tr>
<td>45</td>
<td>3.18</td>
</tr>
<tr>
<td>45</td>
<td>3.02</td>
</tr>
<tr>
<td>45</td>
<td>1.44</td>
</tr>
</tbody>
</table>
The highest concern level has been determined "Unable to control the class" and the least one has been determined "Asking questions of students in class".

**DISCUSSION AND CONCLUSION**

These results show that male teachers are more inadequate than female teachers to meet the social and emotional needs. Female teachers have much concern about managing their life efficiently. It can be related to Turkish social structure. Expectations and efforts of male teachers which related to professional development is less and it is dependent on variety of individual reasons have been emphasized other studies. Caused it because of economic concerns as the male teachers out of class rather than taking the time to professional development through additional work to do is specify that they want to spend (Seferoğlu, 2001).

To provide effective science education teachers’ colleges are authorized to highlight studies is taken into account in fact more of graduates of other faculties and in-service training to professional development requirements as it is possible to say (Keskil, 1999). This result, graduates of the teachers’ colleges more than others to adopt what the training and professional development so that they may indicate a warmer look.

To answer the key question about the relation between teachers’ professional development and their concern according to gender, subject discipline, teacher experience and graduated faculty. Results show that female teachers are more adequate than male teachers to meet the social and emotional needs of students. But female teachers have much concern about managing their life efficiently. Not only other jobs but also teaching requires too much effort. Elimination of disparities in the labor-cost will affect professional development positively. This result also can be related to Turkish social structure.

Another result from research is that chemistry teachers have much concern about assisted students who enrich to learn science and not to be relaxing meet to different students’ needs. Generally there is a significant difference between chemistry and physics teachers.

According to obtained results from teacher experience, there is a significant difference between teacher experience about “Having my inadequacies become known by administrators”, “Could get a high success from my students” and “Using different approaches, not to be sure students learn science concepts and skills”. To decrease significant difference, new teachers in the profession who can guide them in schools where teachers must begin to work. Teachers may discuss their problems and exchange ideas. Teachers can be informative about different approaches and techniques to each other. Teachers can advise each other of professional publications. Teachers can prepare teaching plan together and collaborate to share activities. Teachers can give each other moral support (Seferoğlu, 2001).

Pedagogical formation is necessary for to understand students’ feelings and needs. Primarily for the development of a society of trained manpower is needed. Manpower is possible in good schools. Better training of students by teachers is dependent on the quality of education provided. Quality of education is dependent on development of teacher. It is not only individual but also related to in-service education program. Teachers should utilize from sources sufficiently.

**REFERENCES**


IMPLEMENTATION OF EXCELLENCE MODEL CAF IN TRAINING AND CONSULTANCY ORGANIZATION CEMAKS

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Abstract
In our contribution are described experiences concerning the development and implementation of excellence model CAF in training and consultancy company CEMAKS at the Slovak University of Technology in Bratislava (Slovakia). There are described criteria and sub-criteria of model CAF and fulfilling of these criteria by company CEMAKS. In contribution will be presented some ideas and opportunities for continuing improvement of quality level in education organization. CEMAKS has prepared automated system of evaluation of model CAF which allows to measure quality level in time. This CAF model is useful tool for schools and universities on way to find new approach to increase quality level in education process.

Key Words: Quality, model, education, process.

INTRODUCTION

The Common Assessment Framework (CAF) is a total quality management tool inspired by the Excellence Model of the European Foundation for Quality Management (EFQM) and the model of the German University of Administrative Sciences in Speyer. It is based on the premise that excellent results in organizational performance, citizens/costumers, people and society are achieved through leadership driving strategy and planning, people, partnerships and resources and processes. It looks at the organization from different angles at the same time, the holistic approach of organization performance analysis.

The CAF model is an European model based on Total Quality Management – TQM. It is designed for all organizations of public sector that are interested in continuous improvement and progress towards excellence. The main purpose of the CAF model is self-assessment of the organization in order to achieve continuous improvement of quality. It helps identify strengths and opportunities for improvement and encourages solutions. It allows for an independent view on the organization and its functioning.

The CAF model is a basis for assessment and evaluation of a business aspiring to receive the European Quality Award (EQA), but also the National Quality Award of the Slovak Republic. In order to win the EQA, the model must be applied for at least three years and yield the corresponding results.

The EFQM model may be used in any business as well as any governmental organization (however, the Common Assessment Framework – the CAF model is specially designed for public administration). There are several literature sources, which describe the structure of EFQM and CAF model and offer methodology, how to implement and evaluate it, but for customers are very brief and hardly understandable. Therefore we decided in our research work to propose integrated electronic manual, which will offer to public organizations...
complex and total information concerning the implementation and evaluation of all criteria of CAF model. Our electronic manual contains total 9 criteria, 32 sub-criteria and 121 sub-sub criteria of CAF model. Users of this manual can self evaluate own activity in a given sub-criterion and using automated system (software) determines point value of quality level (see next chapters).

**MAIN PURPOSES OF MODEL CAF**

The CAF is offered as an easy to use tool to assist public sector organizations across Europe to use quality management techniques to improve performance. The CAF provides a self-assessment framework that is conceptually similar to the major TQM models, CAF in particular, but is specially conceived for the public sector organizations, taking into account their differences. The CAF has four main purposes:

- to introduce public administration to the principles of TQM and progressively guide them, through the use and understanding of self-assessment, from the current “Plan-Do” sequence of activities to a full fledged “PDCA” cycle,
- to facilitate the self-assessment of a public organization in order to obtain a diagnosis and improvement actions,
- to act as a bridge across the various models used in quality management,
- to facilitate bench learning between public sector organizations.

The CAF model is based on 9 criteria: leadership, strategy and planning, people, partnerships and resources, processes, citizen/customer oriented results, people results, society results and key performance results. The first 5 criteria are enablers (what the organization has got) and the remaining 4 criteria are results (what the organization achieves). All criteria are divided into sub and sub-sub criteria. The diagram of the model, together with score for each criterion is shown in Figure 1. The direction of arrows shows the dynamic nature of the model. Innovation and learning help improve enablers, which leads to improved results. This process is continuous. Criteria and sub-criteria of the model are very sophisticated and deal with all areas of the organization, even with the environment surrounding it. The model emphasizes the ethical principle crucial for those who are exceptional.

**METHODOLOGY FOR THE CAF MODEL APPLICATION IN ORGANIZATION**

During the research work at this area, we propose a methodology for application of the CAF model, which is proposed especially to education organizations, which have developed and implemented Quality Management System (QMS) according to standards ISO 9001 and plan further development and improvement of the existing management system using the model CAF. Steps of the methodology are illustrated in Figure 2. The methodology is designed in conjunction with manual and automated self-assessment system to enable the organization to apply the CAF model in less time and evaluate their performance level and effectiveness by more transparent way. The methodology enables to get an idea of what is necessary to do in the process of CAF model application. The actual implementation of the methodology and the manual is designed to avoid confusion and unnecessary complexity, what require starting again and resulting to time loss.

**Used scientific methods**

Selected scientific methods of problem solution can be divided into two main groups: empirical and logic (scientific analysis and synthesis). Empirical methods are applied to an electronic survey that aimed to determine knowledge of the CAF model and its use in practice among organizations operating in Slovakia. The logical method was utilized for the problem solving analysis and synthesis. Methods of scientific analysis was used to evaluate the current issue of Quality Management level and CAF implementation in public sector, analysis of criteria and sub criteria of the CAF model, exploring the possibilities of applying the CAF model in public organizations and examination of existing systems of assessment under the CAF model. Scientific synthesis method was used during the process of CAF model development and implementation including the creation of electronic manual and during the process of automated evaluation system of public company quality management level.

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Figure 1: Structure of model CAF (last revision in year 2006)

MANUAL FOR THE CAF MODEL IMPLEMENTATION

Electronic manual is designed on the basis of the CAF model criteria and sub criteria requirements and helps to organization in a shorter time to understand and apply the CAF model and evaluate their own performance and effectiveness. The structure of the proposed manual consists of three main parts:

- analysis of CAF model requirements defined by criteria and sub criteria and determine the existing quality level of the organization and opportunities for improvement,
- self-assessment system of organization quality management level using the criteria and sub criteria of the CAF model by electronic automated system.

The evaluation system of the CAF model criteria

CAF model consists of enablers and results parts. For each of them is in the manual suggested a specific method of evaluation. In this paper we provide an example evaluation of enablers part of the CAF model.

In the process of self-assessment of the organization is for each of the manual requirements of enablers part of the CAF model selected phase of applications based on the Deming cycle (Table 1) and the performance level (Table 2).

The selected phase applications and performance levels are the basis for calculating the assessment for the achievement of the criterion and sub-criterion requirement. Position in the current phase of the application assumes management of the previous phases. If the company in meeting this requirement found for example in phase "act" with the degree to 0.5, the overall percentage achieved in meeting this requirement is:
$1 \times 10 + 1 \times 15 + 1 \times 20 + 0,5 \times 25 = 57.5\%$

PLAN     DO      CHECK    ACT

**INPUT:**
Model CAF Defined Requirements

![Diagram](image-url)

- Applied in organization? (YES/NO)
- Effectiveness Evaluation
- Analysis of CAF model criteria and sub-criteria
- Comparison of Quality Management (QM) existing level and CAF model requirements
- Improvement of existing organization quality management level by implementation of CAF model requirements
- Electronic manual and automated electronic self-assessment system application
- QM level improvement National or European Quality Award
- CAF implementation (YES/NO)
- Corrective and preventive actions with aim to continually improvement effectiveness of organization

Figure 2: Steps to apply CAF model in education organization
Table 1: Evaluation of activity level application according to requirements of CAF model sub-criterion in organization

<table>
<thead>
<tr>
<th>Activity is:</th>
<th>Description</th>
<th>Evaluation in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>P (planned)</td>
<td>Organization plans the activity to apply</td>
<td>10</td>
</tr>
<tr>
<td>D (done)</td>
<td>Activity is implemented</td>
<td>15</td>
</tr>
<tr>
<td>C (checked)</td>
<td>Organization checks the effects</td>
<td>20</td>
</tr>
<tr>
<td>A (acted)</td>
<td>In a case of positive effects activity is used in practice</td>
<td>25</td>
</tr>
<tr>
<td>B (benchmarked)</td>
<td>Organization compares the activity with best organization in market</td>
<td>30</td>
</tr>
</tbody>
</table>

Table 2. Level of CAF model sub-criterion fulfilling in a given phase of application

<table>
<thead>
<tr>
<th>Level of fulfilling</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>There is no evidence to fulfill the requirements</td>
</tr>
<tr>
<td>0,25</td>
<td>There exist indicators of compliance requirements</td>
</tr>
<tr>
<td>0,5</td>
<td>Partial evidence of requirement fulfilling</td>
</tr>
<tr>
<td>0,75</td>
<td>Significant evidence of requirement fulfilling</td>
</tr>
<tr>
<td>1</td>
<td>Clear evidence of requirement fulfilling</td>
</tr>
</tbody>
</table>

By this way is calculated the percentages evaluations for all requirements $P_{KiSj}$. The percentage evaluation of each sub-criterion is the weighted average of achieved percentage values for each of its requirements, and a set of weights represents the coefficients of importance. $P_{KiSj}$ is calculated according to this formula:

$$P_{K_iS_j} = \frac{\sum_{r=1}^{n} P_{K_iS_jR_r} d_{K_iS_jR_r}}{\sum_{r=1}^{n} d_{K_iS_jR_r}}$$  \hspace{1cm} (1)$$

where

$P_{K_iS_j}$ is achieved percentage evaluation of “$j$” sub-criterion in “$i$” criterion

$r = 1, 2, ..., n$ – number of requirements in criterion $K_i$ and subcriterion $S_j$

$d_{K_iS_jR_r}$ is coefficient of importance for “$r$” requirements of “$j$” sub-criterion in “$i$” criterion

Each of the criterions of the CAF model has a defined maximum point value which can be achieved. It is evenly distributed among the individual sub-criteria. The resulting number of points for the sub-criterion we obtain by multiplying of the achieved percentage value by maximum number of points. Generally we can for any criterion express:

$$B_S = B_{max} \cdot \frac{P_s}{100}$$  \hspace{1cm} (2)$$

where
B_s is achieved score in evaluated sub-criterion
B_{max} is maximum score which can be in a given sub-criterion obtained
P_s is achieved percentage evaluation for given sub-criterion

The resulting score for each criterion is the sum of achieved point value of its individual sub-criteria. The total achieved point value concerning the enablers is the sum of achieved points for criterion 1 to 5. The maximum possible score can be 500 points (see enablers - Figure 1).

Electronic evaluation of the proposed solution
Electronic solution of proposed evaluation system is realized by using Microsoft Excel Program. The aim was to design and develop an automated system using computer technology, which would on the basis of defined requirements in electronic manual and in evaluation system allow easy, fast and comfortably realize evaluation of business performance and effectiveness, as well as clear and understandable display output of the evaluation process. Entering of inputs is handled through a questionnaire form, by selection of predefined options from “drop down menu” (dropdown list). The user does not perform any calculations, nor inscribe the input values. The results are updated immediately after any change in input data. The selected values the user can change at all time during the evaluation process. Sheets “enablers” and “results” clearly show achieved percentage scores for each sub-criteria and requirements, and from these values is automatically calculated score for sub-criteria, and all criteria of “enablers” and “results” sections. Changes of point values are automatically transferred to the sheet CAF - assessment, in which is a graphical view of the structure of the CAF model with the nine criteria and the corresponding percentage and scoring for each of them for the “enable” and “result” part and also total assessment of all criteria.

APPLICATION OF THE PROPOSED METHODOLOGY AND MANUAL INTO EDUCATION COMPANY CEMAKS

Application of the proposed methodology and the electronic manual was made for an education company CEMAKS in Slovakia, in which both authors of this contribution are working.

CEMAKS (Quality Management Centre in Construction) was founded in the year 1996 at the Department of Building Technology of the Faculty of Civil Engineering of the Slovak Technical University in Bratislava with an aim to secure training and consulting activities at introduction and implementation of quality management systems and integrated management systems according to STN EN ISO 9001:2009, STN EN ISO 14001:2005 and STN OHSAS 18001:2009. In its training activities, CEMAKS provides its customers the world-class management trends, such as total quality management (TQM), the KAIZEN method, reengineering and excellence models EFQM and CAF. CEMAKS is, since the year 1998, a holder of a certificate for SMK according to ISO 9001, granted by the certification organization Bureau Veritas Slovakia.

In this part of the contribution, the approach of CEMAKS at fulfilling the criteria of the CAF model will be described. After the analysis of criteria and sub-criteria of the CAF model (see Figure 1), CEMAKS elaborated in the year 2009 a self-assessment report with an aim to investigate opportunities for further improvement of its activity.

Leadership
The director of CEMAKS endeavours since founding of the organization to encourage by personal example to active work for the benefit of the customers the quality manager and his/her co-workers at assurance of quality of the products and services. To the essential attributes of the CEMAKS leadership there belong:

• an aspiration to continually make headways in the field of quality management, with an aim to satisfy the needs and requirements of internal and external customers,
• the ability to encourage the colleagues in fulfilling the vision and quality policy at implementation of the quality targets of the organization,
• personal example as the most powerful motive for enforcing new ideas, opinions and targets,
• joining the moral credit and professional attitude at work,
• bringing new thoughts, ideas and their implementation in practice,
• openness towards the employees and colleagues,
• active scientific and research activity with an aim to offer the clients the brand-knew pieces of knowledge,
• non-conflicting solution of problems at the workplace,
• customer care with an aim to keep the trust and loyalty of our customers.

The CEMAKS management secures the aforementioned intentions by means of documents such as ethical codex of the organization, the vision and quality policy, strategy of quality management and of quality improvement and quality targets, which are in compliance with the quality policy and are annually set and reviewed.

**Strategy and planning**

Our organization aims to interconnect effectively the internally associated activities with the vision by means of a clear strategy. The strategy is transposed into plans, intentions and measureable targets. Planning and strategy reflect the attitude of the organization to accomplish modernization and innovation, especially in the form of scientific and research projects. The essential activities of CEMAKS in this field are:

• clearly stipulated strategy of management and quality improvement,
• systematic investigation of the needs and requirements of the interested parties,
• flexible response to the requirements of the interested parties and adaption of the products and services,
• transposing the strategy into plans and targets with their subsequent realization,
• using every occasion to integrate CEMAKS into new projects,
• systematic innovation of products and services of CEMAKS with an aim to attract and satisfy the customer and the interested parties.

**Employees**

CEMAKS has only 3 internal employees (a director executing also the function of Quality Management representative, a quality manager, an administrative worker), but it has a number of external co-workers to whom, at the time of their integration into the CEMAKS processes, it approaches as to their own ones. The CEMAKS management strives not only to create good working conditions for the employees, but it also takes care for consistent application of the company culture. Mutual respect, esteem, dialogue, empowering and also granting safe and medically convenient working environment represent a fundament for securing loyalty and participation of the employees on the course of the organization to exceptionality.

The organization manages, develops and transfers the full potential of its employees from the individual level up to the level of the whole organization in order to support strategy, planning and effective functioning of its processes. In this field, CEMAKS focuses mainly on:

• permanent raising of qualification of the employees,
• creating opportunities for education and training according to specific needs of CEMAKS and personal interest of the employees,
• securing a high quality, safe and medically convenient working environment in course of building its infrastructure,
• such attitude to the employees, which will lead to their loyalty to the organization,
• effective communication and teamwork of its employees,
• building up the infrastructure for quality and safe work of its employees.

**Partnerships and resources**

CEMAKS considers partnerships to be an important resource of correct functioning of the organization. Besides partnerships, the organization also needs traditional sources, such as material, financial and, first of all, human resources for securing its efficient functioning. Those are being used and developed to support the strategy of the organization and its most important processes, to achieve the targets of the organization as effectively as possible. All CEMAKS resources are being secured in a transparent way, in compliance with the principles of the entrepreneurial activity of the Faculty of Civil Engineering of STU Bratislava.
CEMAKS selects its partners in its home country and abroad and it creates resources with an aim to:

- permanently raise the effectiveness of processes and improve the quality of the products and services,
- secure specific requirements of its customers and spread its enterprising potential,
- acquire valuable information for further development,
- promote its activities,
- get into broader consciousness at home and abroad,
- improve the infrastructure for realization of the products and services,
- utilize the resources in a legitimate and transparent way,
- secure resource reserves for unpredictable economic situations and crises.

Among the distinguished recent partners of CEMAKS there is also the International Association for Automation and Robotics in Construction (IAARC) with its residence in Eindhoven, the publishing organization Verlag Dashofer in Bratislava and TRIBUN EU in Brno, Slovak Association of Construction Supervision (SASDARS) in Slovakia etc...

**Processes**

CEMAKS identifies, manages, improves and develops its key processes with an aim to support the specified strategy and planning. The moving spirit of our organization is creativity and seeking new ways and ideas at creation of new products, which will surpass the expectations of our customers. Another important factor is innovation and the need to create added value for the customers and also for our citizens and other interested parties, in order to satisfy their desires, wishes and expectations. The main activities in this field are:

- identification of the key processes and their interaction, process management and control,
- permanent improvement of quality of the products and services of CEMAKS by education of the CEMAKS employees and by scientific and research activities,
- innovation and updating of methodic handbooks for training courses and education of the customers,
- innovation of methodic and specialist documents for the needs of construction organizations,
- improvement of quality of the consulting services on the basis of practical experience and train-up activities of the CEMAKS employees,
- willingness to consult with the customers the topic of managerial systems, free of charge,
- patience at preparation and realization of the processes of our organization,
- organizing courses, specialist colloquia and scientific conferences at home and abroad in the field of managerial systems,
- spreading the offered services abroad (Czech Republic, Kuwait, Cyprus, Ukraine).

**Results in relation to the customer/citizen, to the employees and the society**

From its origination, CEMAKS keeps building its positive image at its customers. The CEMAKS employees behave towards the customers openly, but friendly, they possess good communication techniques and they honestly fulfill the conditions agreed in the contract. The customers engage themselves actively in the process of CEMAKS quality assessment. Within the last 5 years, the assessment of customers’ satisfaction for the complex consulting and training services in the scale from 1 (excellent) to 5 (unsatisfactory) ranged between 1.0 and 1.2. The results of assessment of the courses are even better. The CEMAKS employees attend personally as observers the certification audits of their customers, and they receive thereby a feedback regarding the quality of consulting and products. Until nowadays, all organizations prepared by us passed through the certification for the first time.

In relation to its employees, CEMAKS applies the following principles:

- fair and objective approach to the employees,
- motivation and deserved remuneration of the employees for the results achieved,
- support of specialist progress of the employees and the possibilities of employees to actively influence the events in the organization,
• support of education of the employees according to the requirements of CEMAKS and their interest,
• securing satisfaction of the employees in the economic and social sphere.

The assessment of employees’ satisfaction is being performed on the basis of a form, and the results in the scale from 1 (excellent) to 5 (unsatisfactory) range between 1.0 and 1.2. CEMAKS finances the employees’ training courses, colloquia and conferences at home as well as abroad (Cyprus, Croatia, Bosnia). Because of good economic results, the employees of CEMAKS have very good working conditions created (infrastructure) and they are fairly remunerated in accordance with preset rules.

In relation to the society, CEMAKS actively influences the educational level of the citizens in the sphere of quality, environmental protection and occupational safety by its pedagogical activities at universities and by providing educational courses. The CEMAKS employees present the results of their scientific and research work in the area of managerial systems by active participation in international conferences in over 12 countries in Europe and worldwide. The director of CEMAKS is a member of the executive committee of the International Association for Automation and Robotics in Construction (IAARC) with its residence in Eindhoven and CEMAKS has partnership cooperation with this organization. CEMAKS actively cooperates also with the third sector (Academia Istropolitana).

**Key results of performance**

For the 15 years of existence of CEMAKS, the following results may be considered as the most important:

• 145 construction companies certified for the system of quality management according to ISO 9001 in Slovakia and in the Czech Republic and 24 organizations certified for Integrated management System (IMS) according to ISO 9001, ISO 14001 and OHSAS 18001,
• at least 1300 students of the Faculty of Civil Engineering from all departments, trained for the function of „quality manager”, 5200 workers from practice trained in the field of quality management and 2550 workers from practice trained for the function of internal auditor of the quality management system according to ISO 9001,
• 20 publications and 30 lectures in the area of quality management abroad,
• 3 successfully finished research projects VEGA in Slovakia in the field of managerial systems and 2 projects abroad (Leonardo da Vinci) focused on quality,
• specialist and organizational guarantor of 3 international conferences (Bratislava, Bosnia); the most important of those was the international symposium on automation and robotics in construction (ISARC 2010) held in June 2010 in Bratislava, being of a world importance,

Process of self-evaluation of model CAF in CEMAKS was realized using our software for automated evaluation of quality management level in company according to CAF model criteria. By application of the higher described methodology and electronic manual company CEMAKS during one year increased quality management level in all criteria of the CAF model, (see Figure 5).

**CONCLUSIONS**

Model CAF is useful to implement after development and implementation of Quality Management System (QMS) according to ISO 9001. QMS represents very good basis for application of higher quality management
Figure 5. Effects in CEMAKS after model CAF application

Legend to Figure 5:
1 – Leadership  2 – Strategy and planning  3 - People (employees)  4 - Partnership and resources  
5 - Processes,  6 – Citizen/ Customer oriented results  7 - People results  8 – Society results  
9 – Key results

Philosophy, like TQM, KAIZEN or model CAF. Research work described at this contribution results in the form of its own methodology and electronic manual allows to public (education) organizations effectively introduce and implement CAF model requirements to practice in a relatively short period of time with aim to constantly improvement its performance towards excellence.

Model CAF is an effective tool for continual improvement of organization quality, which leads not only to higher level of quality, but also to customer satisfaction, success at national and world market and to increasing the culture of whole organization.

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REFERENCES


Citizenship Education in Zimbabwe: Challenges and Prospects

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Abstract
Efforts to introduce citizenship education in the curricula of educational institutions such as primary and secondary schools, vocational and tertiary colleges in Zimbabwe have been on-going since 1980. However, the introduction of the subject has been challenge ridden. This qualitative study examines the challenges that have emerged from teaching citizenship education through the secondary school History curriculum in the country. Twenty three History teachers (9 females and 14 males) participated in the study. The findings suggest that the challenges associated with citizenship education in the country emanate from the context in which it is being taught and the influence that this bears on the rationale for, and content of the citizenship education curriculum. As a result the subject is viewed with suspicion and as a bid to indoctrinate the youth. The paper concludes that if the prospects of the subject are to be improved, there is need to depoliticize it and involve varied stakeholders to work the modalities of its implementation.

Key Words: Citizenship education, youth, patriotism, context.

INTRODUCTION

Citizenship education is a topical issue worldwide and many countries have made initiatives to introduce it on the school curricula (Sears & Hughes, 2006). Sears and Hughes view the heightened interest in citizenship education as a result of “a context of perceived disaffection, alienation and lack of social cohesion in democratic societies”. In this regard then, citizenship education should bring about a sense of oneness.

Attempts to introduce citizenship education on the school curriculum in Zimbabwe have been on-going since independence. In 1980, the country emerged from 90 years of colonial rule, an era whose repressive, exploitative and discriminative tendencies had relegated the blacks, who comprised the majority of the population, to a position of second class citizens. Consistent with this, civic education had been provided to white children while black children were instead taught the history of the colonial master. This was a ploy to ensure that the blacks would remain politically illiterate and not claim/demand their rights. One of the mandates of the new government therefore, was to redefine citizenship education and how it could be implemented in all schools. But this has not been an easy task and has been hounded by controversy.

Since independence therefore, there have been several attempts to introduce citizenship education into mainstream education. The discourse has appeared in the curriculum in various guises. At primary school level, citizenship education issues were integrated mainly in Social Studies, a subject whose major goal is to impart citizenship education (source). At secondary school level the issues were integrated into such subjects as History and Education with Production. New syllabuses which focused more on the History of Zimbabwe and Africa rather than that of Europe and other distant places had been introduced at independence. Prior to this, the history that was taught in African schools portrayed Europeans as invincible while Africans came through as having no history of their own. This move, according to Moyana (an official in the Ministry of Education), was in recognition of the role that History plays ‘in domesticating a people more than any of the traditional disciplines’ (Moyana, 1984). Education with Production, a concept consistent with socialist principles, was also incorporated into the secondary school curriculum at the time (Chung & Ngara, 1985). The subject was meant to produce an all-round student who could link theory with practice and would some virtue in manual work. Attempts were also made to initiate Political Economy but without success. What should be emphasized here is that these initiatives seem to have been driven by political concerns.
The citizenship education initiatives in the country seem to have consistently been a response to what Arcodia (2000) calls ‘philosophical frameworks and emerging political and economic circumstances’ or ‘a litany of alarm’ (Sears & Hughes, 2006). At independence, the new government needed to introduce reforms that would reflect the aspirations of the new political dispensation. One such reform was the adoption of the Socialist ideology which was perceived to be a solution to the repression, exploitation, inequalities and other ills created by colonialism. In addition, there was a lack of social and political cohesion as illustrated by the problem of dissidents which started in Matebeleland in 1982 and which tended to be regarded as an ethnic issue rather than a legitimate political issue. In the late 1990s, the country began to experience political and economic problems, with the latter being attributed to the compensation of the war veterans in 1987. The people’s frustrations and impatience with the government manifested themselves through attempts to form opposition parties, thus challenging the one party state arrangement which had been part of the political reforms of the 1980s. These crises precipitated the citizenship education initiatives directed at socializing the young people into ideal citizens.

The context for this study is the Nziramasanga Presidential Commission on Education and Training Report (1999). The Nziramasanga Presidential Commission on Education and Training was appointed by the President of Zimbabwe to “inquire into and report upon the fundamental changes to the current curriculum at all levels so that education becomes a useful tool for character and citizenship formation”(Presidential Report, 1999:349). The Report, among other things, recommended that citizenship education be introduced as an independent subject on the school curriculum in Zimbabwean schools to address the problems that were in the country’s schools and society which it depicted as follows:

Vandalism, violence and indiscipline in our schools and society are a result of lack of values, relevant ethics, morals, individual and collective responsibilities for protecting property and valuing human life. This reflective of that unhu/ubuntu is currently lacking in society and the formal education process (Presidential Report, 1999:349).

The Presidential Report (1999:354) further noted:
There is a very serious and eminent danger of producing a disenchanted generation who are not loyal to our own nation but who favour foreign influences. The need for national identity, image and patriotism is greater now than ever. Without being xenophobic we need to encourage national pride and self confidence in our people.

The rationale for the introduction of citizenship education therefore was that the youth had lost anchorage in who they were and there was need to instil in them a sense of identity and belonging. Indeed around the time the Commission was appointed there had been an upsurge in violence and destructive behaviour amongst the youth especially in institutions of higher learning in the country (The Herald: 22 January; 29 and 30 September 1997; 25, 27 and 30 October 2001). These disturbances occurred against the backdrop of the economic and political problems in the country, with the latter being associated with the emergence of a new opposition political party in the country. As noted above, however, the Report viewed the unrest among the youth as an indication of a crisis in citizenship and a disconnection with values. Citizenship education was therefore, regarded as a panacea to this disconnect, a way of influencing young people’s civic attitudes and a tool for protecting the country’s democracy.

The Report noted that citizenship education initiatives in the curriculum at the time were inadequate. With reference to the status of History on the school curriculum, the Report observed: “…one subject in which citizenship issues are covered at secondary school level is not compulsory…..real Citizenship Education is marginalised and to a larger extent it is never taught (Presidential Commission, 1999:50). In response to this observation, in 1999, the study of History was made compulsory up to ‘O’ level and it became one core of the subjects on the secondary school curriculum together with such subjects as English, Mathematics, Science and ChiShona or Isindebele. A feature of the new History syllabi for the various secondary school levels (forms one to six) that came into force in 2003 are the Human Rights and Democracy topics which, according to Osler and Starkey, are widely recognised as being core to citizenship education. These were meant to complement traditional topics with inherent citizenship education concepts such as the French Revolution and Dictatorships
in Europe. Making History compulsory was perhaps in recognition of the role that the subject plays in education for citizenship. The move was meant to ensure that all students would encounter citizenship education in their curriculum experience.

The period after the Nziramasanga Presidential Commission Report (1999) saw a number of developments in the area of citizenship education in the country. Besides integration of citizenship issues into the History syllabus, there were attempts to introduce Human Rights education as a stand-alone subject but these failed. In the primary school, the HIV/AIDS and Life Skills Education Primary School Syllabus was introduced in 2003. Although the syllabus has heavy dosages of HIV/AIDS education, it includes aspects of citizenship education such as values and beliefs, participation in community programmes and conflict resolution. It should be noted that citizenship education initiatives in the primary schools has not generated much debate, perhaps because they do not focus on blatant issues.

In tertiary institutions, a new compulsory subject, National and Strategic Studies, whose focus would be citizenship education, was introduced in 2004. The country also witnessed the introduction of the National Youth Service whose goal was also citizenship education. These initiatives have generally been viewed as an attempt to indoctrinate the youth (Nyakudya, 2007; Mashingaidze, 2007 & Ranger, 2004). But Maravanyika (2011), Apple (1990) and Jansen (1991) counter argue that there is no education that is apolitical and that all education is designed to achieve certain political and economic ends.

The goals of the citizenship education curriculum would be: ‘to enable children to grow into good citizens who conform to certain accepted practice; train them to hold beliefs; to ensure the reception and acceptance of our values, ethics and civic processes by all our youth; and to enlighten our children of their civic rights, obligations and responsibilities’ (Presidential Commission, 1999:353). The suggested curriculum would focus on such aspects as Our Heritage, Legal Education (learners learning about human rights, responsibilities and obligations); National Identity: a study of our culture...a close study of our democracy (252).

This paper examines experiences History teachers with citizenship education in Zimbabwe in relation to the History curriculum that came into force in 2003. The objectives of the study were to:

- examine the experiences of History teachers in the teaching of citizenship education issues
- assess the challenges emerging from these experiences
- evaluate the prospects for institutionalisation of citizenship education.

The History curriculum remains central in the delivery of citizenship education because the recommendation made by the Presidential Commission to have the discourse as a stand-alone in the country’s school curriculum has not yet been implemented.

Defining Citizenship and citizenship education

Citizenship is a complex and contested concepts. Consequently its interpretations are broad and its definitions are varied ((Osler & Starkey, 2006; Sears & Hughes, 2006; Davies, 2001Kerr, 1999). Traditionally, citizenship as conceptualised by T.H. Marshall comprised of three elements namely civil, political and social (Beck, 1996). Contemporary notions of citizenship are influenced by social, political and economic, environmental issues and so perceptions about it have remained muddled and its meaning is a subject of constant debate. However, Barbalet (1988) simply defines citizenship as ‘those who are and those who are not, members of a common society’. This definition has its own problems as it does not account for other types of citizenship, but it will suffice for this study.

Citizenship education which is sometimes referred to as education for democracy, or civic education (Nieuweinhuis, 2007) also tends to provoke debate and controversy. Consequently, its value and contribution to people’s has at times been questioned (Kisby & Sloam, 2009). In this paper, citizenship education is viewed as the preparation of young people for their roles and responsibilities and for the challenges and uncertainty of life through provision of relevant education (Kerr, 1999). The main goals of citizenship education are to provide political socialisation and to equip young people with knowledge, skills and values to participate effectively in
democratic a society (Kisby & Sloam, 2009). Along the same lines, Davies (2001) views the functions of citizenship education as socialisation into norms and citizen duties and promotion of autonomy and critical thinking. He however, argues that these functions are contradictory as socialisation implies fostering of compliance and obedience and it is difficult to reconcile this with critical thing. In my view such dichotomies may manifest in the implementation of some citizenship education programmes.

METHODOLOGY

This qualitative study investigated the challenges and prospects of citizenship education in Zimbabwe based on the experiences of twenty three practising History secondary school teachers who part-time students at Great Zimbabwe University. Of these participants, nineteen are on a three year undergraduate Bachelor of Education (Bed) In-Service programme and four are on a one and half years post Graduate Diploma in Education (Grad.DE) programme. The ages of the participants ranged from 26 to 44 years. Their experiences as teachers of History ranged from five to 23 years. Four of the participants were teaching History at Advanced ('A') level while the rest were teaching it up to ‘O’ level. The participants were from six of the country’s ten provinces as well as from different school settings as follows:

- urban schools- 5
- church/mission schools -3
- rural schools-17
- peri-urban-6)

This diversity enabled the study to learn about citizenship education experiences from the different settings and the emerging challenges and provided for triangulation of data.

Sampling was purposive and sought out participants who had experienced citizenship education as implementers of the curriculum. Data was gathered through intensive semi-structured interviews and focus group discussions. The interviews were meant to collect data regarding the experiences of teachers with the delivery of citizenship education. The focus discussions were used to further pursue issues that had emerged during interview with individual participants as well as to triangulate the interview data. The transcribe interview data was made available to ten participants for checking.

RESULTS

Findings of this study suggest that teachers from different contexts and situations identify similar issues pertaining to their experiences in delivering citizenship education through the History curriculum and this reflects a commonality of experiences. They stated the overall aims of History and citizenship education as to foster patriotism and national consciousness.

Participants identified the following as problematic areas in the secondary school History syllabi: Human Rights, Democracy, and Dictatorships in Europe, post-independence developments in Zimbabwe and the Zimbabwe Constitution and the French Revolution. These are core topics in the delivery of citizenship education through the History curriculum and problems with their teaching would in a way indicate the challenges of the discourse in Zimbabwe.

The message that came through from the participants’ responses is that the said topics are sensitive. Three main trends emerged in relation to the teaching of the topics.

Students’ reception of citizenship education issues

Three issues emerged in relation to students’ reception of citizenship education issues. Firstly, participants reported that after studying topics whose content is overtly citizenship education students would apply the lessons from topics. Two examples which illustrated students’ application of knowledge were given. In the first instance, after studying the Human Rights topic, some students refused to clean toilets and to do manual work around the school because there were some people employed for the job. The History teacher was then accused of inciting the students to revolt against the school authorities. Another participant cited an incident
whereby the headmaster tried to exclude some students from classes for non-payment of school fees, again after the affected students had been exposed to the Human Rights topic. The students pointed out to the school head that they have a right to education. The school head in turn asked the History teacher- Do you now work for a Non-Governmental Organisation (NGO)? (NGOs have been at the forefront of providing civic education to communities and this has not been taken kindly in certain quarters).

Secondly, indications are some of students have become civic and politically literate and can relate what is being taught in classes for citizenship to occurrences they encounter in their day to day interactions. The participants explained that they could be more politically literate than assumed as a result of everyday experiences where, in some instances, they have witnessed political violence in their communities. They cited the following as questions asked which had put them as teachers in awkward positions:

- **Which political party does the teacher subscribe to?**
- **Which political parties did the Unity Accord of 1987 unite?** (the idea being to emphasize the exclusion of other significant parties from the Accord)
- **Why was so and so not accorded national hero status?** (A question raised when the wife of the founder passed away and was not declared a hero and yet spouses of other leaders have buried at the national shrine)
- **Was Chenjerai Hunzvi (the late war veterans’ leader) involved in the liberation war? Why is he not featured in History books?**
- **Who initiated the land reform programme- the opposition or the ruling party?**

According to the participants, students ask the above questions, not because they are ignorant of the issues but as a way of signifying the gaps in the content of the citizenship curriculum currently on offer in secondary schools. Such a development as argued by Kisby and Sloam (2009:1) is quite acceptable as “young people must be allowed to fully experience politics, deliberate upon experiences, and reconstruct citizenship in their own image” if the goals of citizenship education are to be realised.

Thirdly, it emerged from focus discussions that some students are affiliated to political parties and try to use classrooms to advance political ideas. Anecdotal evidence from teachers revealed that outside the school grounds some the students were youth leaders in political parties and in these positions the students yielded power even over their teachers.

**Fear of victimisation**

Participants revealed that they were afraid to teach citizenship related topics because of fear of victimisation by the school administration and the community and being labelled as bad apples and unpatriotic. They claimed that History teachers are often accused of teaching politics. One respondent said that whenever there is victimisation of teachers in the community, teachers of History bear the brunt. Another participant related an incident where a young newly qualified teacher taught the Human Rights and Democracy topics. There was uproar in the community about it resulting in his transfer from the school. After the incident, education officials visited the school and teachers were advised that they should know the limits to which they teach certain topics.

Other experiences which were recounted by the participants and that instilled fear in them about handling certain topics include:

- teachers, in informal discussions with school administrators, being discouraged from teaching the citizenship education topics to avoid upsetting the situation.
- at a district subject panel meeting, an official advised teachers to avoid teaching of Human Rights and Democracy and an ‘A’ level topic- Zimbabwe under black majority rule, especially the period after 1999 when a strong opposition political party emerged. They were also advised to leave students to make their own analysis of issues and other controversial issues. Justification- to avoid harassment.
- a member of parliament sitting in a history where the lesson topic was Hitler’s Germany. After the lesson complained to the school head that focus should be on local history and not histories of foreign countries.
The participants were of the view that students reported whatever was discussed and taught during citizenship education related to the community and this would lead to their victimisation.

**Tension between citizenship education and issues of the day**

Several issues which indicate a tension between citizenship education and issues of the day emerged from the findings. Participants revealed that in teaching citizenship education related topics teachers are misinterpreted and misconstrued to be attacking politicians or the school administration. In the words of one participant, *Examples used by the teacher may be perceived as an attack on individuals. Teachers may therefore have problems in explaining and giving examples to certain concepts and aspects of citizenship education related topics.* The participant went on to relate how he was cautioned by the school head after teaching about Mussolini as a case study of a dictatorship. Another participant observed that *democracy is difficult to define, politicians, parents and pupils may have their own definitions.* When the teacher’s definition, which may be more authoritative, is at variance with those other definitions, problems arise and teachers have sometimes been accused of being affiliated to the opposition.

Participants indicated that they had problems with responding to students’ questions in the light of the prevailing political environment in which one could not be sure about how the information they disseminated would be construed.

A recurring message was that *teachers play it safe in teaching sensitive topics* and some that participants were left with no choice but to avoid teaching the offensive topics and concentrate on other areas of the syllabi which are not controversial. In addition, the respondents were of the opinion open discussion of citizenship education issues is not yet part of the local culture. They suggested that citizenship education should be introduced in earnest at primary school levels so as to nurture a civic the culture.

Other observations made by the participants were that generally, teachers were not empowered to deliver citizenship education as they lacked the requisite content knowledge and pedagogic skills for the discourse. They also bemoaned the shortage of relevant resources and text books. Lastly, the participants observed that although History is compulsory and schools generally ensure that all ‘O’ level students register to sit History examinations, not all student attend classes. Such students miss out on opportunities for education for citizenship.

**DISCUSSION**

The research data shows that there are several challenges associated with citizenship education in Zimbabwe. Findings reveal that teachers are constrained in implementing the citizenship education curriculum. The constraints arise partly from a lack of grounding in Human rights and democracy issues. But more importantly, they arise from a fear of victimisation which is a product of their experiences and the observed experiences of others with the citizenship discourse. Nieuweinhuys (2007) contends that citizenship education should focus on the political and social issues of the day. But the problem, according to Torney-Purta & Lopez (2006), is that teachers are frequently uncertain of the boundaries around engaging students because of the political nature of the subject. Furthermore, the insistent message from school heads and education officials to approach citizenship education with caution is indicative of a need for even teacher to conform. This need to conform is implied by the Presidential Report’s (1999) definition of citizenship education as that which ‘enables children to grow into good citizens who conform to certain accepted practices; trains them to hold beliefs’. However, this stifles the element of rational disputation which should be the hallmark of citizenship education classes. The remonstrations from officials also send mixed messages to teachers about place of the discourse on the curriculum and hamper its effective implementation.

The Crick Report cited by Osler and Starkey (2006) identify three dimensions of citizenship education namely political literacy, social and moral responsibility and community involvement. However, current citizenship education initiatives in Zimbabwe tend to focus more on political literacy and neglect the other two dimensions, implying that they are not holistic in their approach. This is problematic in that the level of one’s political literacy is not necessarily an indication of one’s level of civic participation and responsibility though
participation and knowledge should be interrelated (Arcodia, 2000). In addition, the kind of political literacy that is encouraged is skewed. There seems to be a specific version of political literacy that is prescribed and those who see beyond this version are considered to be deviant. This could because as Nieuweinhuis (2007:34) puts it "most politicians realise the potential of education to mould a generation, hence cannot allow education systems to ignore their role in educating children for citizenship”. However, such a stance suggests a conceptualisation of citizenship education as a tool for social control whose intention is to foster conformity and to moderate delinquency and moral decadence (Davies, 2001).

The questions asked by the students in the study suggest a number of things. First, they indicate that there are gaps and a lack of balance in the content of the citizenship education that is being taught in schools. This has resulted in the exclusion of issues historical significance (which would promote a holistic development of national consciousness) and a narrow focus on what Ranger (2005) describes as ‘patriotic history. Such kind of history tends to marginalise certain sections of society may who may have contributed to creating the Zimbabwe heritage, for example, ethnic groups, other political parties and personalities (Matereke, 2011). A focus on patriotic history can be detrimental as according to Arcodia (2000) “failure to recognize and understand...diversity leads to severe difficulties in identifying and sharing common values and consequently, a weaker civic culture”.

The students’ questions also suggest that the Presidential Report (1999) underestimates their levels of political literacy. Again, the questions could be an indication of the students’ desire to participate in national debates; after all it’s their future that the debates are about. The minimal approach that the Presidential Commission seems to prescribe may therefore be irrelevant for the situation. Kerr (1999) argues that such an approach is characterised by narrow definition of citizenship, promotion of particular and elitist interests and minimal interpretations which result in narrow and formal approaches to the discourse which concentrate on transmission to students of knowledge about the country’s History, etc and there is little room for student interaction and initiative.

While History is now compulsory and all students seating for ‘O’ level examinations are expected write it, their participation in the subject tends to be a formality and not guaranteed. Because this comes at a time when a recommendation of the Presidential Commission that citizenship education be introduced as stand-alone subject in schools has not yet come to fruition, further reduces the impact of the education for citizen initiatives in the country.

Findings reveal that students are generally interested in the citizenship discourse and displayed a high level of civic literacy. This should spell favourable prospects for citizenship education in the country especially in the light of Kirby and Sloam’s (2009) assertion that students with the high civic knowledge tend to be amenable to participatory civic activities. However, the prospects are determined by the environment within which the discourse is implemented.

CONCLUSION

What emerges from the preceding discussion is that currently, citizenship education efforts in the country through the secondary school curriculum are characterised by dichotomies and what Sears and Hughes (2006) describe as a tension between education and indoctrination in both discourse and practice. The need to educate the youth to be informed and responsible is recognized. But there is a narrow conception of citizenship. The prevailing socio-political environment in the country does not allow for the proper implementation of the citizenship education curriculum. The need to educate the youth for citizenship has been overshadowed by another need to manipulate them to address political agendas. What passes for citizenship education in the country today is inconsistent with the principles of experiential and service learning. This has resulted in citizenship education being associated with indoctrination. Indeed some of the features of indoctrination are manifest, for example, narrow jingoistic nation building, demonization of opponents and gross oversimplification of both problems and solutions (Sears and Hughes, 2006). Consequently, the legitimacy of the discourse in the school curriculum has been compromised. Clearly, there is a need for a depoliticised approach where citizenship education is not seen as a political ploy but stakeholders
can begin to freely appreciate its relevance. It is recommended that, if the goal of citizenship education is to be realized, there is need for fundamental changes in the way the subject is conceptualised, perceived and taught. Also, there is need for the involvement all stakeholders - the curriculum planners, teachers, and the community - in coming up with a model for citizenship education that all conceive to be the best for the country.

Notes
1. unhu/ Ubuntu: ChiShona and IsiNdebele terms depict qualities of humaneness such as a spirit of caring, community harmony, hospitality, respect and responsiveness, that groups and individuals show for each other (Mzamo Mangaliso in Matereke, 2011)
2. ChiShona and Isindebele: These are the major local languages spoken in Zimbabwe
3. This article was presented at World Conference on Educational and Instructional Studies - WCEIS, 07-09 November, 2012, Antalya-Turkey and was selected for publication for Volume 2 Number 4 of WJEIS 2012 by WJEIS Scientific Committee.

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THE EFFECT OF BACKGROUND KNOWLEDGE AND CULTURAL NATIVIZATION ON READING COMPREHENSION AND VOCABULARY INFERENCE

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Abstract
This study aimed to investigate the influence of background knowledge and cultural familiarity on reading comprehension and vocabulary inference of Turkish 7th grade students in public primary schools in Turkey. For this purpose; two texts, one of which was based on the authentic culture and the other one based on the nativized version, a vocabulary test and parallel reading comprehension tests were developed by the researcher. To carry out the research, experimental and control groups were arranged and reading comprehension texts & tests were administered to the subjects in both groups. Additionally, experimental (EG) and control (CG) groups took a multiple-choice vocabulary test. It was concluded that cultural nativization of the text and elements related with background knowledge in the nativized text had a facilitative effect on comprehension of the short passages and inferring the meaning of the unknown words by the students. It was observed that EG students, who read the nativized version of the text got higher scores both in reading comprehension and vocabulary tests compared to CG students who read the denativized(authenticated) version. The findings of the study are expected to bear some implications for English material designers and EFL teachers.

Key Words: Cultural nativization, background knowledge, vocabulary inference.

INTRODUCTION

Culture is defined as the shared patterns of behaviors and interactions, cognitive constructs, and affective understanding that are learned through a process of socialization. Culture is what shapes the lives of human beings in a society. According to Peck (1998), culture is all the accepted and patterned ways of behavior of a given people. Fairclough (1989) maintains that language and culture are from the start inseparably connected to each other and language is not an ‘autonomous construct’; but social practice both creating and created by ‘the structures and forces of the social institutions within which we live and function’. Sapir (1970) supports this idea and mentions that language does not exist apart from culture, that is, from the socially inherited assemblage of practices and beliefs that determines the texture of our lives. Considering the notions above, here we should ask whether the main language skills are the sole elements that lead to language learning or are all these accepted ways of behavior of peoples of the target language a bridge to learning process as well ?. It is widely asserted that culture is one of the most basic elements in language learning process. Being a competent, up-to-date speaker of a target language and being able to communicate internationally necessitates, in a sense, being an intercultural speaker. Since every language inherently creates its own culture, the learner and the teacher of the target language automatically have to be conscious of the cultural values and habits of that language. At this point, we should be cognisant of the fact that ‘if we teach language without teaching at the same time the culture in which it operates, we are teaching meaningless symbols or symbols to which the student attaches the wrong meaning...’ (Politzer, 1959). Here the key question should be ‘do the above suggestions apply to learning of all the languages?’. Alptekin (2002) proposes that if it were not English but any other language in the world, then it would be possible to teach the culture with the language; but that is not the same for English as it is a global language. Also, English language has more non-native speakers than native ones. That is, most languages belong to a certain group of people but
that’s not the case for English language. For this reason, Alptekin (2002) infers that teaching English culture is not possible since whose culture is going to be taught is not clear.

Hinkel (2001) states that the term culture includes speech acts, rhetorical structure of texts, socio-cultural behaviours, and ways in which knowledge is transmitted and obtained. Hinkel further distinguishes between visible and invisible culture. Visible culture, more readily apparent, includes style of dress, cuisine, festivals, customs and other traditions. The far more complex invisible culture is shown through socio-cultural norms, world views, beliefs, assumptions and values. In order to build the context in which knowledge is transmitted and obtained by making use of the elements of visible culture, here we will consider nativizing texts, which proposes the adaptation of cultural elements in an authentic text into the L2 learner’s own culture. In Alptekin’s (2006; cited in Razi, 2009) study, the nativization provided students with a locality that they were culturally familiar with. By nativizing texts or familiarizing learners with the cultural components, as Cakir (2006) states it is aimed to:

- develop the communicative skills,
- understand the linguistic and behavioral patterns both of the target and the native culture at a more conscious level,
- develop intercultural and international understanding,
- adopt a wider perspective in the perception of the reality,
- make teaching sessions more enjoyable to develop an awareness of the potential mistakes that might come up in comprehension, interpretation, and translation and communication.

**Schema and Schema Theory**

Different researchers use different labels for the concept of background knowledge; in addition to schemata, other terms commonly used are frames (Fillmore, 1976), scripts (Schank & Abelson, 1977), event chains (Warren, Nicholas & Trabasso, 1979), and expectations (Tannen, 1978). Carrell (1983) states that however much these concepts aren’t all identical, they share some fundamental assumptions and yield some of the same important insights into comprehension. The role of background knowledge, also called prior knowledge, in second language comprehension have widely been discussed. Schemata are accepted as interlocking mental structures representing readers’ knowledge (Perkins, 1983; cited in Razi, 2009) and researches clearly indicate that what we understand of something is nothing but activating our past experiences. Rumelhart (1980) has illustrated schemata as “building blocks of cognition” that are used in the process of understanding sensory data, in repossessing information from memory, in organizing aims and sub-goals, in allocating resources, and in leading the flow of the processing system.

In traditional classification of schema, formal and content schema are the most commonly adopted types. Formal schema, often known as textual schema, is defined as knowledge of language and linguistic conventions, containing knowledge of how texts are structured and what the key characteristics of a particular genre of writing are (Alderson, 2000; Carrell, 1987; Carrell & Eisterhold, 1983). A person can use formal schematic representations of a text to understand information in a new text. A study of formal schema proposes that “texts with familiar rhetorical organization should be easier to read and comprehend than texts with unfamiliar rhetorical organization” (Carrell, 1987; cited in Erten and Razi, 2009). Sharp (2002) assumes that formal schemata are part of the macrostructure of a text and contain the logical organization of the text which the writer has used to represent the intended meaning. Meyer and Freedle (1979; cited in Zhang, 2008) explored the effects of different formal schemata on recall. The 4 types of formal schemata compared were: (1) contrastive schema; (2) cause-effect schema; (3) problem-solution schema; and (4) collection-of-descriptions schema. The first three types of formal schemata have “an extra link of relationship” over the descriptive schema. Results demonstrated that subjects who were exposed to formal schemata 1 and 2 recalled more than formal schemata 3 and 4. The results can be explained by schema theory. Based on this theory, recall of information relayed by the first three formal schemata, which offer extra linkage, should be better than that of the descriptive schema. Meyer et al. (1980) conducted another experiment to confirm that readers who adopted the strategy of identifying the author’s organization
structure would be able to recall more information than students who did not. Results were consistent with the predicted outcome.

On the other hand, content schema is background information that is essential for understanding a text (Martin, 1995; Carrell, 1982; Enkvist, 1987). Content schema refers to the familiarity of the subject matter of the text and contains an understanding of the topic of the text and the cultural-specific constituents required to interpret it. It also refers to a reader’s background or world knowledge and provides readers with a foundation, a basis for comparison (Carrell & Eisterhold, 1983; Carrell, Pharis, & Liberto, 1989).

The place of schemata in reading comprehension is heavily scrutinized within schema theory. “This theory is grounded on the belief that every act of understanding includes one’s knowledge of the world” (AL-Issa, 2006). Jalilifar and Assi (2008) inform us that one of the most interesting and well-documented findings of schema-theoretic studies, particularly in L2 reading, has been the significant role that cultural schemata or cultural background knowledge plays in reading comprehension. It has been argued that non-native readers’ failure to activate appropriate cultural schemata during reading may result in various degrees of non-comprehension. The reason is that while native readers, as Ketchum (2006) points out, already possess the necessary cultural background knowledge when approaching a written text, non-native readers must overcome an added challenge of cultural unfamiliarity when processing written communication. Carrell (1983) informs us that we comprehend something only when we can relate it to something we already know – only when we can relate the new experience to an existing knowledge structure. The process of interpretation, according to schema theory, is guided by the principle that every input is mapped against existing schema and that all aspects of that schema must be compatible with the input information. This principle results in two basic models of information processing. Bottom-up processing is evoked by the incoming data; the features of the data enter the system through the best-fitting bottom level or specific schemata. As these schemata converge into higher level, more general schemata, these too are activated. Top-down processing occurs as the system searches the input for confirmation of predictions made on the basis of higher order, general schemata.

METHODOLOGY

This applied research was conducted in four different public schools in Konya, Turkey during the fall semester of 2012-2013 academic year.

Participants
The participants, all of whom were at 7th grade of primary education, were divided into two groups, the experimental group (EG) and the control group (CG). Each group consisted of two classes in two different primary schools, four schools in total in Konya, Turkey, with a fair distribution of classes in terms of gender and level of students to provide reliability for the study. 121 students participated in the study. There were 34 males and 31 females in EG and CG was comprised of 29 males and 27 females.

Materials
For the purpose of the study, two texts were prepared by the researcher (See Appendix A). The first text, which was target-culturally loaded was about the ‘Independence Day’, a turning point of American political history. It isn’t an authentic text, since it wasn’t prepared by a native speaker. However, it was authenticated by the researcher, i.e. made up to be rich in target cultural content within the scope of the research. In the rest of the study, it will therefore be referred to as ‘denativized’ or ‘authenticated’ text not as ‘authentic’ text. The second text, also prepared by the researcher was about ‘Republic Day’, the most important event in the history of Turkish Republic. It was loaded with the elements of Turkish history and culture, thus provided a schematic basis for the students. In the rest of the paper, being culturally familiarized, it will be mentioned as ‘nativized’ text. Before the implementation of the study, both texts were proofread by a native and a non-native speaker of English. The texts
weren’t kept too long because the students could be classified in elementary level and it was aimed to avoid negative effects of long stories during the students’ reading process. Both texts were one step beyond the students’ current language ability, because this would stretch the boundaries of students’ knowledge and force them to make an extra effort to provide a better understanding and as Krashen (1981) states, allow learners to continue to progress with their language development.

In the nativization process, the name of the cities, countries, events and dates in the authenticated text were transformed to Turkish equivalents to activate the schemata of the students about the most important day of Turkish history, which Alptekin (2002) calls ‘Turkification’. All the elements used in nativized text were elaborately selected for the EG students to visualize that national, historical day full of nationwide celebrations held both in televisions and stadiums.

Table 1: Textual and Contextual Cues in the Two Versions of the Texts

<table>
<thead>
<tr>
<th>Denativized (Authenticated) version</th>
<th>Nativized (localized) version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence Day</td>
<td>Republic Day</td>
</tr>
<tr>
<td>the United States</td>
<td>Turkey</td>
</tr>
<tr>
<td>Washington</td>
<td>Ankara</td>
</tr>
<tr>
<td>declaration of independence</td>
<td>declaration of republic</td>
</tr>
<tr>
<td>July 4, 1776</td>
<td>October 29, 1923</td>
</tr>
<tr>
<td>American flag</td>
<td>Turkish flag</td>
</tr>
<tr>
<td>Americans</td>
<td>Mustafa Kemal Atatürk</td>
</tr>
<tr>
<td>23rd anniversary of the declaration of Independence</td>
<td>88th anniversary of the declaration of Republic</td>
</tr>
<tr>
<td>especially in the streets</td>
<td>especially in the stadiums</td>
</tr>
</tbody>
</table>

INSTRUMENTS & PROCEDURE

Nativized text was administered to experimental group and denativized text was given to control group. In the beginning of the study, all the students were instructed in their mother tongue as to what to do after reading the texts and both experimental and control groups were given thirty minutes to answer the questions. In order to collect relevant data, firstly both groups were made to read a parallel text, same in content and design but different in cultural/schematic elements. Then, a parallel true-false test was taken by both of the groups to evaluate reading comprehension. Except for the above-cited cultural and historical, textual and contextual cues, the rest of each sentence was the same in the whole body of parallel true/false tests (See Appendix B). By the way, with the aim of minimizing the guessability of the T/F reading comprehension tests, target words and their Turkish meanings were not included in T/F reading comprehension items. In order to provide reliability for the answers and a full and flawless understanding of the questions, T/F items were given in Turkish to all of the participants, i.e. in their mother tongue.

Secondly, with the aim of exploring to what extent both groups inferred correct meaning of the words in the texts, a multiple-choice vocabulary test was administered to each of the groups (See Appendix C). The distractors in multiple-choice test were chosen from different aspects of life in order not to create a historic,cultural atmosphere in the minds of the students. This way, it was aimed to prevent the distractors from serving as reminders or cues to the participants during the test. Contrary to the reading comprehension true-false test which had two versions adapted to the two different cultures, there was only one type, standard vocabulary test, because the target vocabulary that was aimed to be correctly inferred by the students was the same and these words were written in bold in both of the texts to draw the attention of the students during reading process. For the same reasons as in
reading comprehension test, choices in multiple-choice vocabulary test were written in Turkish. In other words, the students were oriented to find the meaning of English words by choosing from the Turkish words. Before the application of the test, it was made sure that all the students had no knowledge of what the target words mean. In addition, to establish reliability, reliability coefficients (Cronbach’s α) were found as 0.653 for the vocabulary test, which would let the researcher use the instruments in the study.

Data Analysis
After gathering data from the two instruments, in order to find out if there was a significant difference in the answers of experimental and control groups to reading comprehension and vocabulary tests, independent samples T-tests were conducted through SPSS program.

RESULTS AND DISCUSSION
The results of this study are given in detail below. The research questions related with the research are firstly brought in one by one and then the results are illustrated.

RQ1. Do background knowledge and nativization of the text facilitate reading comprehension?
In order to understand if background knowledge and cultural familiarization of the text facilitate reading comprehension, independent samples T-test was applied to compare the answers of EG and CG students to reading comprehension true-false test.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Sd.</th>
<th>t</th>
<th>df</th>
<th>Sig.(2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG</td>
<td>56</td>
<td>5.6964</td>
<td>1.43868</td>
<td>-3.159</td>
<td>119</td>
<td>0.002</td>
</tr>
<tr>
<td>EG</td>
<td>65</td>
<td>6.4615</td>
<td>1.22573</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p(=.002) is significant at the <0.01 level

The results of T-test above indicate that the difference between the answers of EG and CG students is statistically significant (t= -3.159, p<0.05 ). The mean values of the groups ($\bar{X}_{EG} = 6.4615$ and $\bar{X}_{CG}=5.6964$) also made clear that the scores of experimental group were much higher than those of control group, which suggests that background knowledge of the students existing in a text and familiarizing texts have a facilitative effect on students’ reading comprehension.

RQ2. Do background knowledge and cultural familiarization of the text help to infer vocabulary?
To determine whether background knowledge and nativization of the text also help to infer meaning of the target words, another independent samples T-test was applied in order to compare the scores of EG and CG received from multiple-choice vocabulary text. As shown in the table below, there is a significant difference between the answers of experimental and control groups (t= -3.754, p=0.05 ).
Table 3: Independent Samples T-test Results comparing EG and CG’s Answers to Vocabulary Test

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Sd.</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG</td>
<td>56</td>
<td>5.9821</td>
<td>2.5335</td>
<td>-3.754</td>
<td>119</td>
</tr>
<tr>
<td>EG</td>
<td>65</td>
<td>7.8308</td>
<td>2.5162</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

It is also understood from the mean values of the groups ($\bar{X}_{EG} = 7.8308$ and $\bar{X}_{CG} = 5.9821$) that EG did much better than CG during the vocabulary test. Based on these results, we can easily state that background knowledge and nativizing texts have a positive effect on guessing the meaning of the words in the text.

To sum up, analysis of the data collected from a reading comprehension multiple-choice and a vocabulary test revealed that the text’s including elements supporting background knowledge of the students and its familiarization to the history and culture of the EG students facilitated not only their reading comprehension, but also inferring the correct meaning of the words.

CONCLUSION AND IMPLICATIONS

The results of this study made clear that nativization of short stories from the target language culture into Turkish culture facilitated Turkish EFL students’ comprehension of the stories and their inferring vocabulary existent in nativized versions. This is possibly due to the fact that (1) culturally-familiarized texts enable readers to activate their schemata more effectively than original versions do. (2) Settings, plots, events, characters and themes are basic constituents of fiction and these are the differing parts between nativized and original versions. Taloon (2006) suggests that the establishment of an identifiable setting is a strong psychological preference in most readers. In their reading of narratives, readers like to know where they are, and look for “clear spatiotemporal indications” of just where and when a thing happened (p.91). Accordingly, these indications, when visualized by the reader, are assumed to ring a schematic bell in the minds of readers. In line with Taloon’s notions, for instance, it is very likely that a young Turkish EFL learner has a schemata of celebrations of national holidays and in his/her mind stadiums are the traditional settings to celebrate these national days. On the other hand, in the United States, the central point of celebrations aren’t stadiums as in Turkey, activities mostly center around the streets, which may not eventually be found so conversant by the Turkish readers of the original text. As Jallifar and Assi (2008) state, readers’ familiarity with the setting can trigger activation of the schemata about the incidents taking place in that setting.

Apart from the setting that functions as a leading element in the emergence of fiction, nativization of the characters have also a significant effect on activating schemata. Jallifar and Assi (2008) assert that nativization creates a sense of cultural intimacy between readers and their imagined persons because these persons seem more compatible with the readers’ own culture. In the familiarized text used in this study, for example, while Americans regarded Independence Day as the most important day in the history of the U.S., Atatürk was the one who did it. With reference to this fact, Turkish students have Atatürk schema in their minds as the national hero and the founder of Turkish Republic. This schema is assumed to remind Turkish students of national holidays, one of which was mentioned in the nativized text. To sum up, the more the reader empathize himself with the character and identifies characters, the more inferences he/she is supposed to make from the stories.

The facilitative effect of background knowledge on vocabulary inference was already mentioned above. In his study, Stanovich (2000) explored that the nativized group who read the stories which were more in line with their
background knowledge could compensate for their possible vocabulary deficiencies by drawing on their background knowledge in order to infer the meaning of the unknown words or phrases; as a result, the fact that his surveyees’ comprehension of the stories was enhanced is an underpinning of the findings of current study. Pulido (2004) moreover supports the idea that cultural background knowledge can facilitate lexical inferencing during reading.

This study further shed light on the issue that culture and language are inseparably linked and connected. In their study, Jalilifar and Assi (2008) found that nativization of short stories from the target language culture into Persian culture facilitated Iranian EFL learners’ comprehension of the stories. The results also illustrated that cultural nativization enhanced the subjects’ comprehension of the stories at the literal as well as the inferential level. While Alptekin’s (2006) study made clear that nativization plays a facilitative role essentially in readers’ inferential comprehension rather than reading comprehension as a whole, Razi (2004) found that nativization of short stories from target language culture into learner’s own culture enhances their comprehension of the stories. Besides, Chihara et al. (1989) and Sasaki (2000) have explored that adapting texts to conform to the learners’ cultural expectations makes them more comprehensible to the readers. Whether consciously or unconsciously, what EFL/ESL teachers have taught so far is closely linked to culture in some points. And this study made clear that cultural schemata can easily be activated through nativizing texts. Localizing classes, let’s say putting local and cultural elements into the class during foreign language teaching may help to draw more interest assuming that L2 learners will be surprised to see local contents embedded in stories written in the target language. From this point of view, nativization technique can be utilized by EFL teachers and language material designers by tailoring stories & texts according to the levels and ages of students. Rashidi and Soureshjani (2011) inferred from their experimental study that teaching culturally-loaded texts also helped to increase motivation in EFL classes.

This study had also some limitations in some aspects. First of all, however much this study, which was built upon prepared nativized texts provided the results that were theorized in the very beginning, a longer text or a story richer in cultural content could have helped to concretize the events more, but students’ being at elementary level and long texts’ proven uselessness in reading comprehension (see Jalilehvand, 2012) stopped the researcher from using a longer passage. The instrument used was the other limitation. As was stated before, considering their levels, reading comprehension questions were asked in students’ mother tongue and as the most appropriate type to facilitate understanding, true-false test was adopted. But this type of testing is questionable since there is a big chance of success as a result of fifty percent of fallibility. Lastly, the study was carried out with a small sample of students attending four different primary schools in Konya. Researches conducted in different schools and institutions could yield different results.

Appendix A

Independence Day

Independence Day is a public holiday in the United States. Independence Day is the declaration of Independence and celebrated every year on July 4, 1776. It is commonly associated with fireworks, parades, speeches and ceremonies. Patriotic displays and events are organized throughout the United States with a large participation of citizens, especially in the streets. Especially Washington, the capital of the United States, is the heart of nationwide celebrations. Many people display the American flag outside their homes or buildings. Politicians appear at public events to show their support for the history, heritage and people of their country. Above all, people in the United States express and give thanks for the freedom and liberties fought by their ancestors. Public administration buildings, schools, post offices and many small businesses are usually closed and very few people have to work on that day. Last year, 235th anniversary of the declaration of Independence was celebrated enthusiastically throughout the country. Independence Day occupies a big part of the political history of the United States. Americans regard this day as the most important event in the history of the United States.
Republic Day

Republic Day is a public holiday in Turkey. Republic Day is the declaration of Republic and celebrated every year on October 29, 1923. It is commonly associated with fireworks, parades, speeches and ceremonies. Patriotic displays and events are organized throughout Turkey with a large participation of citizens, especially in the stadiums. Especially Ankara, the capital of Turkey, is the heart of nationwide celebrations. Many people display the Turkish flag outside their homes or buildings. Politicians appear at public events to show their support for the history, heritage and people of their country. Above all, people in Turkey express and give thanks for the freedom and liberties fought by their ancestors. Public administration buildings, schools, post offices and many small businesses are usually closed and very few people have to work on that day. Last year, 88th anniversary of the declaration of Republic was celebrated enthusiastically throughout the country. Republic Day occupies a big part of the political history of Turkey. Mustafa Kemal Atatürk regards this day as the most important event in the history of Turkish Republic.

Appendix B

True-False test measuring Reading Comprehension of Control group

<table>
<thead>
<tr>
<th>Statement</th>
<th>DOĞRU</th>
<th>YANLIŞ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence Day, dini bir gündür.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence Day ’i insanlar aile fertyleryle beraber evlerinde geçirirler.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence Day, Amerika için büyük bir öneme sahiptir.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence Day, çeşitli törenlerle özdeşleşmiştir.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence Day esnasında insanlar binaların camlarına bayrak asarlar.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence Day esnasında resmi dairesi, okullar açık değildir.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence Day esnasında devlet adamları halka bütünleşir.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

True-False test measuring Reading Comprehension of Experimental group

<table>
<thead>
<tr>
<th>Statement</th>
<th>DOĞRU</th>
<th>YANLIŞ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Republic Day, dini bir gündür.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Republic Day ’i insanlar aile fertyleryle beraber evlerinde geçirirler.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Republic Day, Türkiye için büyük bir öneme sahiptir.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Republic Day, çeşitli törenlerle özdeşleşmiştir.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Republic Day esnasında insanlar binaların camlarına bayrak asarlar.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Republic Day esnasında resmi dairesi, okullar açık değildir.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Republic Day esnasında devlet adamları halka bütünleşir.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C

Multiple-choice questions measuring vocabulary inference of Experimental and Control groups

1. declaration
   a. hatırlama
   b. değişim
   c. sunum
   d. ilan etme

2. celebrate
   a. hazırlamak
   b. kutlamak
   c. bağışlamak
   d. üretmek

3. parade
   a. misafirhane
   b. geçit töreni
   c. bağışıklık
   d. sosyal fobi

4. patriotic
   a. karşıt
   b. yurtsever
   c. dostane
   d. hayâli

5. heritage
   a. miras
   b. unsur
   c. lezzet
   d. seyahat

6. liberty
   a. aşılama
   b. özellikle
   c. numune
   d. özgürlük

7. ancestor
   a. edat
   b. durak
   c. heves
   d. ekip

8. administration
   a. eğilim
   b. yönetim
   c. süreç
   d. işletme

9. enthusiastically
   a. sınırlı bir şekilde
   b. kapsamlı bir şekilde
   c. coşkulu bir şekilde
   d. tedbirsızce

10. event
    a. olay
    b. konu
    c. etki
    d. biçim

11. support
    a. telafi
    b. görüşme
    c. destek
    d. adalet

12. regard
    a. saymak, olarak görmek
    b. üstüne basmak, çiğnemek
    c. ayrıştırmak, uzaklaştırmak
    d. örtbas etmek, üstünü örtmek

13. citizen
    a. gösterici
    b. vatandaş
    c. katılımcı
    d. eylemci

14. capital
    a. büyükşehir
    b. başkent
    c. megakent
    d. vilayet
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REFERENCES


IMPLEMENTATION OF INQUIRY-BASED SCIENCE EDUCATION
IN SCIENCE TEACHER TRAINING

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Abstract
The number of students interested in studying science and technology has decreased all over the world. Research results have shown that one of the main negative factors is an improper outdated method of science teaching in schools. There are also significant changes in students' learning style, which requires innovation of a learning method. It is necessary to prepare young people for lifelong learning. Inquiry-based science education (IBSE) has succeeded as a suitable educational method that greatly motivates students. To make this educational method effective, it is necessary to follow its principles and implement it in education properly. Therefore it should be included in science teacher training. The model of development of science teacher professional skills for IBSE application is presented. Particular curricular materials show the principles of IBSE. The European project PROFILES presents implementation of IBSE into science teacher training.

Key Words: Inquiry-based science education, science education, teacher training.

INTRODUCTION
Yet as scientific knowledge develops and grows, as new scientific tools and technologies emerge and work their way further into civic life, there is grave concern and debates about the quality of science education (Duschl, Schweingruber, & Shouse, 2007). Science educators around the world face the problematic decline in the study of science and technology (OECD, 2006). Researches in the Czech Republic show that increasing age of students brings decreasing interest in the studying of science (Ministry of Education, Youth and Sports CR, 2008). One of the factors leading to this phenomenon is considered an unsuitable outdated method of teaching/learning science in schools (Rocard et al., 2007). Only 15 % of European students are satisfied with the quality of science teaching in schools and nearly 60 % state that science teaching/learning is not interesting enough (Ministry of Education, Youth and Sports CR, 2010). Traditional teaching concepts very often prefer separate knowledge acquisition such as data, formulas, equations, theories, etc., that are difficult to understand for students who just memorize them and forget them very easily. Misunderstood knowledge cannot be used to solve tasks and problems. Students therefore consider science to be very difficult and even though they believe science contents are important for society, they consider them unnecessary in their everyday life. This statement has been confirmed by the results of the research we conducted in the project PROFILES (see below).

Interest has also been found to influence future educational training and career choices (Krapp, 2000), an important aspect in terms of the urgent need to counter the declining interest that young people have in...
pursuing scientific education and careers (Osborne & Dillon, 2008; Rocard et al., 2007). Developing an understanding of and ability to use evidence is important not only for the study of science, but also for lifelong learning and for solving problems in everyday life. Science is a practice that incorporates more than just concepts and facts, but also involves scientific ways of thinking and reasoning (McNeill, 2010). Evidence, in the form of data that are obtained by experiment and measurement, is used to answer questions, solve problems or make decisions (Aikenhead, 2005). Tytler, Duggan and Gott (2001) argue that the use of evidence is central to the interactions between the public and science. When making a decision, everyone should be able to evaluate information, ask questions, use evidence and argue. Scientifically literate citizens use scientific approaches for analyzing and solving problems requiring investigation, basing their judgments upon evidence rather than presuppositions and bias. For example, Zohar and Nemet (2002) found out that students were able to transfer their argumentative skills from the instruction of genetics and apply them successfully in the dilemmas of everyday life. As an example of application of the scientific process in decision making in everyday life, the solution of vaccination can be mentioned (Aikenhead, 2005).

The current situation in science education suggests that the gap between how science subjects are taught and how they are perceived in society (e.g. on television and in other media) is rapidly increasing (Cakmakci et al., 2011; Osborne, 2007). This is also an argument for the need to implement into science subjects contemporary teaching/learning methods that can reduce the gap between the understanding of nature based on the knowledge taught in school and extracurricular knowledge obtained from different information sources (Ault & Dodick, 2010; Bianchini, 2008). Therefore it is necessary to look for innovative teaching/learning methods that will lead to more effective science education and increase in students’ motivation for science.

Last years have seen a growing call for inquiry to play an important role in science education (American Association for the Advancement of Science, 1994; National Research Council, 1996; Blumenfeld et al., 1991; Linn, diSessa, Pea, & Songer, 1994). For these reasons, inquiry-based science education is becoming increasingly popular and has proved to be a suitable educational method for the development of necessary knowledge and skills, motivating students significantly. Inquiry-based science education holds out the promise of engaging students more productively, of giving them opportunity to enjoy science and find it rewarding.

**IBSE IN SCIENCE EDUCATION**

Today’s rapidly changing world brings in new requirements for education and thus for science education. The importance of knowledge and traditional skills is decreasing because their life span is getting shorter. The society wants schools to equip young people with “new weapons to fight the market” such as creativity, curiosity, change management and life-long learning. In addition, it is necessary to motivate students to get interested in science. This requires changes in science education. It is necessary to revise science contents and apply appropriate modern teaching/learning methods. Such teaching/learning methods include inquiry-based science education (hereinafter IBSE). It is an instructional learner-centred approach that on the bases of inquiry integrates theory and practice, and develops knowledge and skills for a solution to a defined problem. Students have to solve the problem, conduct self-directed learning and work in teams to make their own connection, creation and organization for future application in similar problems. This deviates from didactic, lecture-tutorial, teacher-centred approach where the focus is on only transmission of knowledge from teacher to students. Students in IBSE lessons are encouraged to be able to solve problems independently and competently. This call for inquiry-based learning is based on the recognition that science is essentially a question-driven, open-ended process and that students must have personal experience with scientific inquiry to understand this fundamental aspect of science (Linn, Songer, & Eylon, 1996). Furthermore, inquiry activities provide a valuable context for learners to acquire, clarify, and apply an understanding of science concepts. Research results (Darling-Hammond, 2008; Rocard et al., 2007) prove that IBSE brings the required competences to society, it is effective and increases students’ interest in studying science, and also stimulates the motivation of teachers. This method is effective for all types of students: from the weakest to the smartest (including the gifted ones), boys and girls, students of all ages.
IBSE levels in science education

However, it is logical that IBSE is age-specific when being applied to science education. Application IBSE needs a large ensemble of activities that constitute “doing science”. These activities include conducting investigations, sharing ideas with peers, specialized ways of talking and writing, mechanical, mathematical, and computer-based modelling, and development of representations of phenomena. This type of science education involves active learning, and it takes advantage of children’s curiosity by increasing their understanding of the world through problem solving. To develop skills in science, students must have the opportunity to participate in this full range of activities. It would be wrong to assume that young students in primary science are able to conduct scientific research independently and from the beginning as students in secondary science courses, or even as real scientists do. The teacher has to develop individual skills gradually and systematically and lead the students to some extent according to their abilities even in IBSE. Banchi and Bell (2008) defined four IBSE levels (see Table 1) according to the degree of teacher’s guidance (help in the process, asking guiding questions and the formulation of the expected output).

<table>
<thead>
<tr>
<th>IBSE levels</th>
<th>Questions (defined by teacher)</th>
<th>Procedure (defined by teacher)</th>
<th>Solution (defined by teacher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Confirmation</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>(2) Structured</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>(3) Guided</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>(4) Open</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

(1) Confirmation inquiry
It is based on confirmation or verification of laws and theories. Confirmatory inquiry is appropriate at the beginning of IBSE implementation, when the teacher aims to develop observational, experimental and analytical skills of the students. When conducting experiments, students follow teacher’s detailed instructions under his/her guidance.

(2) Structured inquiry
The teacher significantly influences the inquiry at this level and helps students by asking questions and providing guidance. Students look for solutions (answers) through their inquiry and provide an explanation based on the evidence they have collected. A detailed procedure of experiments is defined by the teacher, but the results are not known in advance. Students show their creativity in discovering laws. However, they are conducted by teacher’s instructions in the research. This level of inquiry is very important for developing students’ abilities to perform high-level inquiry.

(3) Guided inquiry
The third level of IBSE changes the role of the teacher dramatically. The teacher becomes a students’ guide. He/she cooperates with students in defining research questions (problems) and gives advice on procedures and implementation. Students themselves suggest procedures to verify the inquiry questions and their subsequent solutions. Students are encouraged by the teacher much less than in the previous two levels, which radically increases their level of independence. Students should have previous experience of lower levels to be able to work independently.

(4) Open inquiry
This highest level of IBSE builds on previous three inquiry levels and it resembles a real scientific research. Students should be able to set up their inquiry questions, methods and procedures of research, record and analyze data and draw conclusions from evidence. This requires a high level of scientific thinking and places high cognitive demands on students, so it is applicable for the oldest and/or gifted students.
These four IBSE levels correspond to different age levels of students. However, it is possible to apply different levels of IBSE to the same age group during group instruction depending on students' abilities. Similarly, we can choose the appropriate level of IBSE according to the demands of the science course.

**IBSE and students' age**

Developmental constraints used to be presented as a reason why teaching based on inquiry shouldn't be applied to younger students in primary science. The idea of children being concrete and simplistic thinkers is outdated and shows that children's thinking is surprisingly sophisticated. Current researches show that even young children can be involved in learning using basic scientific procedures (Duschl et al., 2007). Zembal-Saul (2009) believes it is appropriate for younger students to get involved in simple inquiry, not only in the form of fun hands-on activities. Children’s development of inquiry-based learning wants students to learn to verify evidence, make arguments, look for connections between findings, discuss and search for alternative explanations. It is also important to encourage younger students’ interest in science education because researches show that increasing age of students brings decreasing interest in science (Simpson & Oliver, 1985; Baram-Tsabar & Yarden, 2009). This statement has been confirmed by the results of a research in the Czech Republic (MEYSCR, 2010). It has been proved that the rejection of science subjects increases with school attendance age. Upper secondary school students reject science more than lower secondary ones. For example, chemistry was turned down by less than a fifth of lower secondary school students, while in upper secondary schools the number was nearly 50% (MEYSCR, 2010).

**Science contents appropriate for IBSE**

An appropriate choice of science contents is of great importance for successful IBSE application. Strategy for the selection of a motivating contents for IBSE is in focus on a relevant, meaningful, controversial, and open scientific issue (Blumenfeld et al., 1991; Barron et al., 1998). Absence of relevance is a common complaint of students about their science lessons and a reason for lack of desire to continue studying science beyond school. What is seen as relevant by teachers and other adults may not be perceived as such by young people.

Researches show that students are motivated if the science contents are associated with the problems of everyday life (Baram-Tsabar & Yarden, 2009). Therefore, one of the most important IBSE principles is to use students’ experience of everyday life as a learning aid for scientific procedures (Warren et al., 2001). Such experience may be similar to or quite different from academic disciplinary practices. It is important for teachers to understand these similarities and differences in order to implement them in instruction in a suitable way (Taylor, 2009). Teachers candidates in pre-service teacher training begin to acquire this very important pedagogical skill and they develop it in their professional life in in-service teacher training. A part of our project PROFILES was research analysing the research question whether students in the Czech Republic are interested in science contents associated with their everyday life. We used a students’ questionnaire as a research method. In 2011 we collected 334 responses of a representative sample of students aged 14-15 years, 158 boys and 176 girls from nine secondary schools. Students expressed their views on whether their lessons contain what they need in everyday life and what is important for the development of society. They considered this issue at two levels. First they expressed their experience of actual or real science lessons and then had the opportunity to express their ideas of imaginary ideal lessons. Partial results of the questionnaire survey are shown below (See Table 2).
Table 2: Questionnaire Survey Results

<table>
<thead>
<tr>
<th>ACTUAL or REAL lessons which students attend in the area of science (number of students = 334)</th>
<th>Question</th>
<th>Scale and percentage of answers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Extreme</td>
</tr>
<tr>
<td>1</td>
<td>The level of importance to my everyday life of the topics I study in science lessons may be described as:</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The level of importance to society in general of the topics I study in science lessons may be described as:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IDEAL lessons which students attend in the area of science (number of students = 334)</th>
<th>Question</th>
<th>Scale and percentage of answers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Extreme</td>
</tr>
<tr>
<td>1</td>
<td>For me, science lessons should be useful in my everyday life:</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>For me, science lessons should be relevant to society in general:</td>
<td></td>
</tr>
</tbody>
</table>

Regarding the real lessons only a quarter of students (25 %) considers science contents to some extent (extremely important + very important + important) important for their daily lives and 45 % of students believe it is important to society. On the contrary, 42 % of students consider science contents to some extent unimportant (somewhat unimportant + very unimportant + extremely unimportant) to their daily lives and about 25 % of students as unimportant to society. Approximately a third of students expressed a neutral opinion to both questions.

Students could express their wishes regarding science contents in the idea of an ideal science lesson. More than half (56 %) of students would like the science contents related to everyday life and 62 % of students said that the science contents should be beneficial to society.

Our research confirms the international experience that problems of everyday life motivate and inspire students to study science. There is evident contradiction between what is really taught in Czech schools and what students would like to be taught. These findings have been confirmed by other studies carried out in the Czech Republic (MEYSCR, 2008; MEYSCR, 2010). Science educators have to consider the fact when innovating teaching/learning methods and also in science teacher training.
IMPLEMENTATION OF IBSE IN SCIENCE TEACHER TRAINING

We must not forget the important role of teachers in promoting children’s curiosity and persistence by directing their attention, structuring their experiences, supporting their learning attempts, and regulating the complexity and difficulty of levels of information for them. To be successful in science, students need carefully structured experiences, instructional support from teachers, and opportunities for sustained engagement with the same set of ideas over weeks, months, and even years (Duschl et al., 2007).

Teacher professional development is very important because how science is taught depends on the teachers. The experience shows no innovation will be sustained unless systematic and ongoing professional development of science teachers is provided to support the changes required in the instruction (Osborne & Dillon, 2008). Pajares (1992) believes teachers’ conceptions are a product of their experiences in education as students. Teacher’s PCK (Shulman, 1987) has long-term and complex development, therefore it is necessary to start with the preparation of science teachers for IBSE application in pre-service training and continue in in-service training. Teachers and teacher candidates have confirmed this statement in our opinion surveys.

Regarding the fact, many countries, including the Czech Republic, put emphasis primarily on traditional transmissive teaching methods, so neither teachers nor teacher candidates have their own personal experience with IBSE. This significantly limits the rapid changes of PCK in the context of IBSE acceptance. Teachers sometimes struggle with how to design and implement inquiry instruction with their students. The first step, understanding what inquiry is, can be difficult, let alone designing activities that support the inquiry. Improper application of IBSE in science instruction may not produce the expected positive results and the disappointed teacher comes back to the traditional style of teaching (Darling-Hammond, 2008).

To make IBSE effective, it is essential for teachers to acquire professional competency to apply IBSE consisting of a set of specific skills. Science teachers need to be able to determine what level of IBSE can be used, what knowledge and skills should their students acquire, at what level and in what order. What is also important is the choice of contents and their transformation into a form suitable for IBSE. It is therefore essential to integrate this competence to apply IBSE in the teacher educational programme and continual professional development (CPD).

The model of IBSE implementation in science teacher training

Five acquiring stages exist in the development of science teacher’s skills to apply IBSE:
(a) Motivation stage: Completing of professional interest and attitudes towards IBSE.
(b) Orientation stage: Acquiring knowledge necessary for IBSE.
(c) Stabilization stage: Solving of simple applied tasks of IBSE application.
(d) Completing stage: Solving of complicated applied tasks of IBSE application.
(e) Integration stage: Solving of teaching problem situation in school practice (new skill is integrated into skill structure).

Completing and integration stages are conditioned by several-year experience of the teacher and that’s why acquiring these skills is not possible to finish as soon as pre-service teacher training.

Science teacher training in IBSE is a long-term process. We can identify by use of design-based research links between the above-mentioned stages of the development of skills to apply IBSE and levels of IBSE applied in instruction by a professionally prepared teacher. This simple model describes the relationship (see Table 3).
Table 3: Model of Development of Skills for IBSE Application

<table>
<thead>
<tr>
<th>Period of teacher training</th>
<th>Main objective of teacher training</th>
<th>Acquiring stage of skills for IBSE application</th>
<th>Levels of IBSE with full teacher competency to apply</th>
<th>Teacher training methods (examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-service</strong></td>
<td>Initial professionalization</td>
<td>(a) Motivation stage  (b) Orientation stage (c) Stabilization stage</td>
<td>(1) Confirmation (2) Structured</td>
<td>The actual training using IBSE (teacher in the role of a student); IBSE video analysis; the first practical application of IBSE in school practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>In-service</strong></td>
<td>Continual professional development</td>
<td>(d) Completing stage (e) Integration stage</td>
<td>(3) Guided (4) Open</td>
<td>Action research; design-based research</td>
</tr>
</tbody>
</table>

During the pre-service phase, the initial professionalization of a science teacher candidate starts as a part of his/her university studies. At this stage of professional training, the teacher candidate is usually able to handle only the first three stages of implementation IBSE skills. An appropriate training method is an introduction to IBSE when the teacher candidate plays the role of a student. A video analysis of IBSE lessons has been successful as well. Later the teacher candidate is led by experienced teachers and university educators to use IBSE elements in school practice. At the end of the pre-service training, the teacher candidate is usually sufficiently qualified for the first two levels of IBSE: confirmation and structured. During the in-service phase, the teacher can reach the other two levels of IBSE. A necessary condition is sufficient teaching experience. So the last two stages of acquiring skills for IBSE application can be completed. This model of teacher development for IBSE application can become the basic structure for a teacher training programme.

**Science teacher competency for application of IBSE**

Teacher training to apply IBSE runs in the pre-service and in-service phase in a different form. Kansanen (2005) distinguishes, similarly to other authors, between different levels: from a novice teacher to an expert teacher. Teachers reach the novice level in university preparation. Teaching experience and further studies may shift the teacher to the expert level. At this level, the teacher can fully apply all IBSE levels.

To implement effective science teacher training for IBSE, it is necessary to compile a set of educational objectives in the form of teachers’ professional knowledge and skills. This will bring full competency to apply IBSE as a system complex of pedagogical professional teachers’ knowledge, understandings and skills.

We obtained the initial outputs of our design-based research in the field of IBSE application focusing on a role of simple experimentation in IBSE. These conclusions have resulted in defining a set of professional science teachers’ knowledge, understandings and skills for IBSE application:

- Knowledge and understanding of IBSE paradigms and objectives
- Knowledge and understanding of each IBSE level
- Skill to select appropriate contents (from everyday life etc.)
- Skill to transform the contents into individual IBSE levels
- Skill to motivate students (simple experimenting, projects)
- Skill to observe and to do experiment
- Skill to ask questions in accordance with IBSE
- Skill to conduct action research and design-based research
- Skill to apply ICT in IBSE
- Skill to encourage students in communication skills in IBSE
• Skill to organize student educational activities in IBSE
• Skill to use a wide range of educational techniques (methods, forms, and aids) suitable for IBSE

This and another potential set of professional teacher knowledge, understandings and skills will set up a system - the competency of teachers to apply IBSE effectively. The role of educators of science teachers is to integrate the knowledge, understandings and skills in the pre-service and in-service science teacher training.

DISCUSSIONS AND CONCLUSION

According to the research and international experience IBSE is one of the most promising innovative teaching/learning methods. This method not only motivates students but also science teachers. It is necessary to spread this educational method with science teachers and develop teaching/learning curricular materials such as textbooks, exercise books, collections of tasks, files of experiments, etc. in accordance with IBSE.

The project PROFILES (Professional Reflection-Oriented Focus on Inquiry-based Learning and Education through Science) is a European project that aims to support science teachers in the IBSE application in science teaching so that this method could become a common part of school practice (Profiles, 2011). The PROFILES project offers suitable materials and supports teachers to use IBSE so that the method can become an integral part of science and technology teaching. The project PROFILES includes a set of specific educational modules adapted for IBSE. The authors of this contribution are co-researchers of the project PROFILES and its outputs will be presented in pre-service and in-service science teacher training.

As example of IBSE module in the Project PROFILES can be used an excerpt from the module “Brushing up on chemistry”, developed by G. Tsaparlis and G. Papaphotis (Profiles, 2011):

The teacher assigns to students the task of going to a supermarket and buy a small selection of toothpastes, including toothpastes that have different purpose, for instance, whitening, with baking soda, for gingivitis. Following that they identify from the product packages the ingredients of each brand and under the teacher’s guidance about a general reference to the composition of toothpastes they divide the ingredients into particular groups, depending on their action/functioning. Students carry out hands on activity preparing home-made toothpaste, using available at home materials. Subsequently they test the effect of homemade toothpaste by comparing with a commercial brand of toothpaste. The cleaning power of the both kinds of toothpastes is compared by testing their ability to remove food colouring from egg shells (see Fig. 1).

Figure 1: Comparison of abrasiveness of homemade and commercial toothpastes
Through the study of the toothpaste, a common, well-known product of daily use, we aim to connect chemistry with everyday life, and increase students’ interest in chemistry. In addition, through the toothpaste, we have the opportunity to refer to a large number of chemical substances and students can gain practice in experimenting. Apart from the hands on activity, which is shown in the previous text, there are many others in the full module. Students prepare solutions, measure pH; check reactions of ingredients with acids and hydroxides. Except science skills and knowledge students improve other competences. This activity offers the opportunity to discuss in class the importance of regular dental care for health of teeth and the general health.

Subsequent open research problems in implementation of IBSE in science teacher training are: combining experiments and problem tasks, development of appropriate experiments, reshaping of project teaching, adjustment IBSE for gifted and disabled etc.

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REFERENCES


THE ACQUISITION OF ENGLISH RELATIVE CLAUSES BY IRANIAN EFL LEARNERS: THE IMPACT OF PROCESSING INSTRUCTION & MEANINGFUL OUTPUT-BASED INSTRUCTION

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Abstract
Studies on the learning of grammatical points have suggested the effective role of types of instruction. The current study aims at investigating the impact of Processing Instruction (PI), an input-based approach to grammar instruction introduced by Van Patten (1996), and Meaningful Output–based Instruction (MOBI), on the Acquisition of English Relative Clauses. The participants consisted of 60 intermediate Iranian EFL learners in two Treatment groups of (PI) and (MOBI) and one Control group(C). The researchers used a quasi-experimental design with a pretest- treatment-posttest sequence. As for the assessment, a Grammaticality Judgment Test (GJT) was employed, focusing on the sentence level. Experimental groups received the same input and material for the instruction but received meaningful oral and written input or output-based exercises. The relative effects of the two approaches (PI and MOBI) on the linguistic development, i.e. acquisition of relative clauses, of learners were analyzed. Having compared the results of group one and two, PI and MOBI, the researchers found that there is a statistically significant difference between the pretest & posttest of Experimental groups. Processing Instruction had more influence on the correct selection of grammatical sentences in comparison with Meaningful Output-based Instruction. Therefore, we can draw the conclusion that PI can facilitate the acquisition process of English relative clauses. In addition, comparing the results of Control group with that of Experimental groups also confirms the previous findings; besides, the participants of Control group could not outperform those of Experimental groups. However, the experimental groups could do better than the control group.

Key Words: Processing Instruction, Meaningful Output-based Instruction, Comprehension Practice, Production Practice, English Relative Clauses.

INTRODUCTION

The understanding of how input and output affect comprehension and production of target forms and structures in one’s second language (L2), is a key issue in SLA research and has been the subject of several studies trying to examine the relative effects of input-based as compared to output-based instructional conditions.” (Allen, 2000; Collentine, 1998; Dekeyser and Sokalski, 1996; Erlam, 2003; Nagata, 1998; Salaberry, 1997). Accordingly in this study the focus is not on “does instruction help?” , but on “what types of instruction are more effective for L2 learning in formal contexts?” The types of instruction in many studies refer to input-based and output-based instructional options. The two approaches differ in the question of whether instruction would be more effective when provided via one modality versus another ,i.e., comprehension versus production(Ellis, 1999).
VanPatten’s Processing Instruction (PI) (which is a type of Input-Based Instruction), is an input-based instructional technique which affects the acquisition of target forms by actively engaging learners in processing structured input, that is, input that has been manipulated to contain many instances of the same grammatical meaning-form relationship. In this way learners are pushed to alter their existing processing strategies by changing the ways they attend to input data that result in better intake. PI provides 1) Explicit, non-paradigmatic grammatical instructions that include input through examples and information about processing strategy. 2) Structured input practice composed of meaningful tasks. 3) Feedback, so PI provides 2 types of input: a) examples b) structured.

Meaningful Output-Based Instruction (MOBI) or Traditional Instruction (TI) presents learners with paradigmatic grammatical instruction with input through examples, oral and written output-based practices that move from mechanical to meaningful to open-ended communicative tasks.

In this study Intermediate Iranian Students (n=60) in 3 groups were assigned to Processing Instruction, Meaningful Output-Based Instruction and a control group. Experimental groups received the same input in instruction but received meaningful practice that was input or output based. In structured – input instruction, students pay attention to the form of the target structure and process input for meaning through tasks that do not require them to produce the target structure. The structured – input group receives explicit instruction on the key grammatical item and practices this feature through input-based activities. In meaning-oriented output-based instruction, students are intended to focus only on meaningful activities, and are given opportunities to produce language.

Van Patten and Cadierno (1993) compared the effects of processing instruction (PI) with a traditional type of output-based instruction (TI) to examine whether or not the processing strategies that learners take to the task of comprehension without forcing them to produce the newly taught forms, could be effective on the learners’ developmental systems. They instructed two groups of learners, word order and object pronouns in Spanish using PI and TI approaches. Van Patten and Cadierno concluded that PI was superior over OI because the PI learners were both able to interpret and accurately produce the target forms despite the fact that they had never been instructed on the production of forms. In contrast, the OI group was only able to produce object pronoun but not able to interpret.

However, not all the PI studies produced convincing evidence for the advantage of PI over OI. Therefore the purpose of the current study is to compare the linguistic development of Iranian EFL learners who have received structured-input instruction (comprehension practice) for relative clauses in English to the linguistic development of learners who have received output-based instruction (production practice), through Grammaticality Judgment Test to examine whether the PI advantage over OI argued by Van Patten (1996, 2002) could be generalized to other EFL contexts, in this case Iran.

THEORETICAL AND EMPIRICAL BACKGROUND

Since recent researches have demonstrated the need for formal instruction for learners to achieve high levels of accuracy, grammar teaching and its role in second language acquisition has become the focus of most current investigation. Several studies have been done on ways to combine some form of grammar instruction with the provision of opportunities for communicative input and output, and a number of studies have researched their effectiveness.

Van Patten (1993, 1996, and 2002) suggests that one way to teach grammar communicatively is through processing input or what he called processing instruction. In this approach, an initial exposure to explicit instruction is combined with a series of input processing activities, consisting mainly of tasks that encourage the comprehension of the target structure rather than its production. These activities have been suggested to help learners to create form-meaning connections in input and hence process grammar for meaning (Lee & Van Patten, 1995).
Processing instruction mainly aims at helping learners to readjust their inefficient processing strategies. Unlike output-based instruction which emphasizes grammar rules and oral/written production practice, the purpose of processing instruction is to change the processing strategies of learners for input and to make them develop better form-meaning mappings which results in a grammatically richer intake. Meaningful output-based instruction consists of structured output activities which are meaningful activities in nature. They all carry a meaningful context and the target forms are produced not with the sole intention of practicing the target item, but rather to communicate opinions, beliefs, or other information related to designated topic.

After the publication of VanPatten and Cadierno (1993), in which processing instruction was first researched and compared with output-based instruction, a number of empirical studies have appeared that have investigated the role and effects of processing instruction compared to traditional or meaningful output-based instruction. Some of the main studies and their results are as follows:

Vanpatten and Cadierno (1993) conducted the study to investigate the relative effects of Processing Instruction in altering a processing problem known as the first noun principle. They investigated the impact of Processing Instruction and Meaningful Output-based Instruction on the acquisition of direct object pronouns as learners seem to misinterpret sentences containing direct object pronoun in Spanish. The results from the statistical analyses showed that Processing Instruction is superior to Meaningful Output-based Instruction.

A review by Cheng showed both instructional groups produced more estar tokens than the control group.

VanPatten and Wong (2004) compared again the effects of Processing Instruction and Meaningful Output-based Instruction on the acquisition of French Faire causative. The results again confirmed the findings of the previous studies. While some of the studies provided supportive evidence for the superiority of PI over other types of grammar interventions, some other studies which involved a range of different grammatical structures and target languages failed to produce evidence supporting the advantage of processing instruction over output-based instruction.

**Research Questions**

The present study was aimed at answering the following questions:

1) Does Processing Instruction have any influence on the acquisition of English Relative Clauses of EFL Learners?
2) Does MOBI have any influence on the acquisition of English Relative Clauses of EFL Learners?
3) Is there any difference between PI & MOBI regarding the acquisition of English Relative Clauses?

**Hypotheses**

1) Processing Instruction doesn’t have any influence on the acquisition of English Relative Clauses of EFL Learners.
2) MOBI doesn’t have any influence on the acquisition of English Relative Clauses of EFL Learners.
3) There is no difference between PI & MOBI regarding the acquisition of English Relative Clauses.

**METHOD**

**Participants**

The participants consisted of 60 intermediate Iranian EFL learners from Jahan-E-Elm Language Institute in two Treatment groups of (PI) and (MOBI) and one Control group (C) in order to reduce the effect of selection bias. They were students who (a) had little or no previous knowledge of the target structure which was measured by administering a Grammaticality Judgment Test (GJT) as a pretest, focusing on the sentence level. (b) attended all the training, treatment, and assessment sessions, and (c) completed all the assessment measures. Gender was not a variable of the study.

**Target Structure**

The target structure in this study was the English relative clauses. Pedagogically, the English relative clauses seemed a good target form to be chosen because they presents lots of problems for Iranian EFL learners both in production and comprehension, both in oral and written modes, and even translation, especially reduced
forms and defining and nondefining relative clauses are very problematic. Also however not exactly but to some extent the use of the relative pronoun as the subject instead of real subject is related to the “the first-noun principle” of IP theory (VanPatten, 2002). The principle holds that learners usually tend to use a default processing strategy that assigns the role of subject to the first noun or phrase they see or hear in the input.

In using relative clauses the role of the relative pronouns as subjects at the beginning of a sentence match the default processing strategies but using a different word (a relative pronoun) instead of the default nouns or pronouns tends to make problems in processing strategies which inhibit them from processing input efficiently. Thus, instruction should change the way learners process input to affect the quality and/or the quantity of intake and consequently affect the linguistic development.

Procedures

Developing the Treatment task: Experimental groups, PI and MOBI, received the same input and material for the instruction but received meaningful oral and written input or output-based exercises. Therefore two separate types of PI and MOBI materials were produced based on the VanPatten’s (1996, 2002) guidelines. The PI materials consisted of (1) a brief script of metalinguistic information about the target form, (2) some explicit explanation about the typical processing problems that Iranian EFL learners usually have in interpreting or producing relative clauses, and (3) structured input activities including referential tasks (pictorial and non-pictorial sentences) and affective tasks (non-pictorial sentences) presented in oral and written modes. Referential activities are defined by VanPatten as “those for which there is a right or wrong answer and for which the learner must rely on the targeted grammatical form to get meaning” (2002, p. 766). In contrast, the affective tasks are aimed at providing more typical examples of the target form as input by engaging learners in processing information about the real world. Both types of activities were designed to push learners to process (not to produce) the information presented in the input containing relative clauses.

The MOBI materials consisted of (1) the same brief script of metalinguistic information about the target form, and (2) production activities (pictorial and non-pictorial sentences) (oral and written) requiring the participants to use the relative pronouns to produce or complete the written & oral tasks. Both types of activities were developed at the sentence level.

Assessment Measures: For the assessment, a Grammaticality Judgment Test (GJT) was employed, focusing on the sentence level, to evaluate the effects of the treatments on the acquisition of the target form. The test consisted of 40 sentences related to different grammatical points about relative pronouns. The students were asked to judge and check whether the sentences were grammatically possible or impossible. They had 7 seconds for each sentence, 30 seconds for reading the instruction and 4.5 minutes for doing the test.

For validating the content of the test, it was reviewed by an English-Persian bilingual and 3 Iranian EFL teacher who had many years experience in teaching English.

RESULTS

Comparing the data obtained from first administration of GJT test with that of second administration, the following results were found:

Using ANOVA, the overall grammaticality vs. ungrammaticality for each group of participants was estimated. In the first group, i.e. Information Processing group, the participants accepted ungrammatical items as grammatical (correct) less than grammatical items, i.e., 92%, (F(2,44) = 103.89, P<0.001). Therefore, it can be concluded that PI model of instruction has had a statistically significant impact on the acquisition of Relative Clauses as measured by GJT test.

Considering the second group, MOBI, it was found that 86% of participants selected the correct grammatical sentences, (F(1,30) = 43.91, P<0.001). Again, like the previous case, it is clearly understood that MOBI influenced the acquisition of Relative Clauses to a great extent.
Finally, in the control group, the participants accepted ungrammatical items as correct items more than grammatical items, i.e. 62% \( F(1.70)=210.51, P<0.13 \). Also the P-value indicates that there was no statistically significant influence on the acquisition of Relative Clauses when learners were taught using traditional method grammar instruction employed by the teachers in Hafez Language Institute.

Comparing the results of group 1 and 2, PI and MOBI, it is found that Processing Instruction had more influence on the correct selection of grammatical sentences in comparison with MOBI. Almost 88% of learners in PI group selected the correct sentences in the second administration of GJ test.

Table 1: One-Way ANOVA of Pre-test and Posttest Results

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI</td>
<td>27.991</td>
<td>3</td>
<td>13.949</td>
<td>9.59</td>
</tr>
<tr>
<td>MOBI</td>
<td>21.244</td>
<td>5</td>
<td>8.441</td>
<td>3.25</td>
</tr>
<tr>
<td>CONTROL</td>
<td>17.445</td>
<td>11</td>
<td>1.454</td>
<td>1.</td>
</tr>
</tbody>
</table>

Using \( \alpha =0.05 \), we have \( F(2, 12) = 3.89, P<0.05 \). Since the test statistics is much larger than the critical value, we can reject the first null hypothesis as the PI doesn’t have any influence on the acquisition of English Relative Clauses of EFL learners, and conclude that there is a statistically significant difference between the pretest & posttest of PI group. The P- value for 9.59 is 0.00325 so that the test statistics is significant at that level.

**DISCUSSION & CONCLUSIONS**

The study led to some new findings about the relative effectiveness of processing instruction and meaningful output-based instruction to grammar acquisition. In this study, unlike the other previous studies, the purpose was not to check the learners' interpretation and production abilities but the linguistic development of the learners after two different types of treatment (interpretation based and production based) by grammaticality judgment test to decide whether the sentences are grammatically possible or impossible. The study indicated that both PI and MOBI groups resulted in linguistic development but comparing the results of group 1 and 2, PI and MOBI, it is found that Processing Instruction had more influence on the correct selection of grammatical sentences in comparison with MOBI. The difference of statistical results between the PI and MOBI group was not significant, though. The finding that PI group improved significantly is in line with VanPatten’s (2002) argument that PI helps L2 learners modify their underlying system and possessing strategies and maximize their intake by pushing them away from incorrect input possessing strategies, which results in improving the accuracy of both comprehension and production of grammar features.

To conclude, this study provided further evidences for the PI as an instructional method and its significance on linguistic development of EFL learners. Therefore as an implication of the study in teaching ,this is an encouraging result for the designers of language programs that require learners to work autonomously and put emphasis on the PI instruction in EFL teaching especially in teaching grammar.

However the study doesn’t ignore the significance of MOBI in linguistic development but by trivial difference in statistical results between the two types of instructions , it also highlights the role of MOBI instructions in linguistic development . Therefore according to this study both PI and MOBI instructions are influential in linguistic development , and use should be made of both approaches to achieve higher and more persistent results . It is noteworthy that the result of this study are related to the impact of these instructions on the acquisition of English relative clauses in this context and the result might not be generalized to all the grammatical structures or to all EFL contexts. So it can be a good idea for other researchers to investigate other grammatical structures and other EFL contexts.
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THE REASONS WHY ENGINEERING STUDENTS PREFER TRAINING COURSES IN PRIVATE SECTOR

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Abstract  
As is known to all, there are plenty of schools present in private sector aside from the universities for disciplines such as Computer Engineering, Software Engineering and Computer Programming. And most of the people preferred those courses in private sector are either university students in the related disciplines or graduates. The subject of this paper was set to determine the percentage of the students in those training courses that are already either graduates or students of the respective disciplines. A survey was conducted among the 545 Software Engineering students in one of the private sector training. Since almost half of the students felt the need to be trained in the very same discipline for a second time, the curriculums of both the universities and the training courses in private sector were investigated thoroughly to be able to understand the reasons behind this need.

In this paper, we aimed at revealing the similarities and differences between the curriculums of the universities and the training courses in private sector by analyzing each point examined in the survey.

Key Words: Software, Training, Computer Engineering, Curriculum.

INTRODUCTION

Nowadays, trainings in the field of software expertise are given by departments of computer programming, computer engineering and software engineering. However, also by a large number of software expertise in the field of special education training institutions are organized and a lot of these programs are in high demand. On examination, people who have studied or have been studying in these departments of universities in the private sector had attended these trainings. Accordingly, a survey was especially conducted in private educational institutions in order to determine the percentage of students studying software expertise relevant departments of universities of education they are receiving. Based on the findings of the survey, it was tried to be figured out that why people got the related trainings in our universities may need to software training in a private educational institution. Finally, as a result of the findings of the universities of Computer Engineering, Software Engineering and Computer Programming students how to read sections will be introduced that can give better quality service.
METHOD

The following sequence of steps were taken in this dissertation.

1. For research, a total of 545 students studying in the field of software expertise in a private educational institution got into the questionnaire.
2. Parts of the educational curricula of universities providing software training is provided on the web pages. In total, five university curricula were examined, because of the similarities between them by reference to a state study was conducted in a private university curricula.
3. The institution of special education curriculum was taken from the same institution.
4. Software Specialist training of students in the private educational institution providing education in universities have read in parallel study to understand the "Related", "Semi-Related" and "Unrelated section" used in recipes.
   a. **Related**: Computer Engineering, Software Engineering and Computer Programming directly to the software, such as graduate students studying or refers to the relevant sections.
   b. **Semi-Related**: Although general engineering, Electrical and Electronics Engineering, Mechanical Engineering, Physics, Mathematics refers to sections close to the subject as well as software.
   c. **Indifferent**: The software is not nothing to do with expertise in Business, Economics, Biology, Political Science refers to sections such as.
5. Graduated from any of the universities for the students to study any part of Graduation-graduating students to Graduation-student progress; graduated from running in any business or operational status-it works for students, working in any job or is working status-does not work for students graduating from the recipes were used.

RESULTS

Our questionnaire "Related", "semi-related", "irrelevant" parts of the numbers of students who graduated or are currently studying these individuals associate degree, undergraduate and graduate-level distributions; still not working in a job and the number of employees and proportional provisions could be identified and results are given in the tables below.

Students in special education institutions surveyed in Table 1, the distribution of the relevant department of the university is provision of digital information. Accordingly, the relevant departments of 48 in % of the students understood that a private educational institution. In other words, almost half of the private educational institution university students studying Software Specialist Computer Engineering, Software Engineering or Computer Programming departments, such as reading or in people who had graduated. Figure 1 represents the situation visually.

Table 1: Related, Semi-related, unrelated Chapter Distributions

<table>
<thead>
<tr>
<th>Department</th>
<th>GRADUATE</th>
<th>STUDENT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>Related</td>
<td>158</td>
<td>29%</td>
<td>101</td>
</tr>
<tr>
<td>Semi-Related</td>
<td>74</td>
<td>14%</td>
<td>44</td>
</tr>
<tr>
<td>Unrelated</td>
<td>95</td>
<td>17%</td>
<td>73</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>327</strong></td>
<td><strong>60%</strong></td>
<td><strong>218</strong></td>
</tr>
</tbody>
</table>
Another important finding is obtained from the private corporate training for students on levels. Table 2 Pre-
graduate, graduate and undergraduate students or graduates of the numerical and percentage distribution of
the relevant department is for. 70% of undergraduate students are understood to be parts of a private
educational institution. So, despite an overwhelming majority Degree level education is a private educational
institution, Software Specialist training. This is visualized in Figure 2.

Table 2: Section - Information Regarding the Distribution of Educational Level

<table>
<thead>
<tr>
<th>Departement</th>
<th>Pre-Graduate</th>
<th>Under-Graduate</th>
<th>Post-Graduate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>Related</td>
<td>99</td>
<td>18%</td>
<td>150</td>
<td>28%</td>
</tr>
<tr>
<td>Semi-Related</td>
<td>7</td>
<td>1%</td>
<td>108</td>
<td>20%</td>
</tr>
<tr>
<td>Unrelated</td>
<td>33</td>
<td>6%</td>
<td>126</td>
<td>23%</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td>26%</td>
<td>384</td>
<td>70%</td>
</tr>
</tbody>
</table>
In addition, the employed and the unemployed, the department is currently examining the relationship between numeric values and percentage equivalents are given in table 3. Here 67% of students in special education institution is understood that any job is not running. In other words, "2 of every 3 people are unemployed.” 35% of the students of a private educational institution Software Experts (Table 5 also shows sub-distribution), although related graduate unemployed Thus confronted with an interesting distribution: "Every third person was unemployed, unemployed, half of it, the department graduate of 2”.

Table 4 and Table 5 private educational institution in the educational level of students, graduation status, related to software training / semi-related / unrelated to the student’s work status and distribution of a section that contains the numeric and percentage values. Clearly stands out as the percentages in Figure 4.
### Table 4: Training Level - Graduation-Related Chapter - Distribution of Working Status of Digital Information

<table>
<thead>
<tr>
<th>Department</th>
<th>Employed Status</th>
<th>Pre-graduate Graduate Student</th>
<th>Under-graduate Graduate Student</th>
<th>Post-graduate Graduate Student</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Related</td>
<td>Employed</td>
<td>30</td>
<td>6</td>
<td>29</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>36</td>
<td>27</td>
<td>59</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semirelated</td>
<td>Employed</td>
<td>4</td>
<td>0</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>2</td>
<td>1</td>
<td>46</td>
<td>38</td>
</tr>
<tr>
<td>Unrelated</td>
<td>Employed</td>
<td>10</td>
<td>4</td>
<td>34</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>12</td>
<td>7</td>
<td>35</td>
<td>31</td>
</tr>
<tr>
<td>1.Total</td>
<td></td>
<td>94</td>
<td>45</td>
<td>225</td>
<td>159</td>
</tr>
<tr>
<td>2.Total</td>
<td></td>
<td>139</td>
<td>384</td>
<td>22</td>
<td>545</td>
</tr>
<tr>
<td>3.Total</td>
<td></td>
<td>545</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 5: Educational Level - Graduation-Related Chapter - Percentage Breakdown of Work Status

<table>
<thead>
<tr>
<th>Department</th>
<th>Employed Status</th>
<th>Pre-Graduate Graduate Student</th>
<th>Under-graduate Graduate Student</th>
<th>Post-graduate Graduate Student</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Related</td>
<td>Employed</td>
<td>6%</td>
<td>1%</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>7%</td>
<td>5%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semirelated</td>
<td>Employed</td>
<td>1%</td>
<td>0%</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
</tr>
<tr>
<td>Unrelated</td>
<td>Employed</td>
<td>2%</td>
<td>1%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>1.Total</td>
<td></td>
<td>17%</td>
<td>8%</td>
<td>41%</td>
<td>29%</td>
</tr>
<tr>
<td>2.Total</td>
<td></td>
<td>26%</td>
<td>70%</td>
<td>100%</td>
<td>4%</td>
</tr>
<tr>
<td>3.Total</td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 4: Education Level-Graduation-Related Part-Percentages Chart of the Distribution of Work Status

To summarize the findings so far;
Private educational institution of education at the undergraduate level, 70% of those trained and consists of 67% of the unemployed persons. And percentage of the unemployed people on graduate is 35%.

It is evident that, the institution of education, special education participants see it as a factor that helps in finding a job.

So, in a matter of a private educational institution in which the property or properties that differ in our universities? Students can not receive university education of the private educational institutions want to pick it up? In order to find answers to these questions, some universities are private educational institution comparing the way the curriculum is chosen.

University and Special Education Curriculum Authority
In order to interpret the findings of the relevant parts of the software courses in universities and private educational institution, the curriculum studied. Table 6 and Table 7, the curriculum benchmarks, Table 8 shows the Special Education Curriculum Authority Instructed Software Specialist.
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Workload</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2-3</td>
<td>ALGEBRA VE PROGRAMLAMA GRİ</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-4</td>
<td>ALGEBRA VE PROGRAMLAMA İ</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-5</td>
<td>ALGEBRA VE PROGRAMLAMA II</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-6</td>
<td>ALGEBRA VE PROGRAMLAMA III</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-7</td>
<td>ALGEBRA VE PROGRAMLAMA IV</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-8</td>
<td>ALGEBRA VE PROGRAMLAMA V</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-9</td>
<td>ALGEBRA VE PROGRAMLAMA VI</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-10</td>
<td>ALGEBRA VE PROGRAMLAMA VII</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-11</td>
<td>ALGEBRA VE PROGRAMLAMA VIII</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-12</td>
<td>ALGEBRA VE PROGRAMLAMA IX</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-13</td>
<td>ALGEBRA VE PROGRAMLAMA X</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-14</td>
<td>ALGEBRA VE PROGRAMLAMA XI</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
<tr>
<td>1-2-15</td>
<td>ALGEBRA VE PROGRAMLAMA XII</td>
<td>1-2-3</td>
<td>30 Saat</td>
<td>Türkçe</td>
</tr>
</tbody>
</table>

Table 6: Foundation University Computer Engineering Department and Institute for Special Education Curriculum Comparison
### Table 7: State University Computer Engineering Department and Institute for Special Education Curriculum Comparison

<table>
<thead>
<tr>
<th>KOD</th>
<th>DERGİ ADI</th>
<th>T</th>
<th>U</th>
<th>K</th>
<th>ST</th>
<th>DEER İÇERİK</th>
<th>ÖZEL HİZMET KURUMU</th>
</tr>
</thead>
<tbody>
<tr>
<td>011532</td>
<td>Bilgisayar Bilimlerine Giriş</td>
<td>20</td>
<td>0</td>
<td>30</td>
<td></td>
<td>Bilgisayar Bilimlerine Giriş Kursu / Bilgisayar Mühendisliğinin Temel Konuları / Bilgisayar Sistemleri ve Çeşit Birimleri</td>
<td>Programlama Giriş</td>
</tr>
<tr>
<td>011533</td>
<td>Bilgisayar Bilimleri B</td>
<td>20</td>
<td>0</td>
<td>30</td>
<td></td>
<td>C Programlama Dillerinin Yapısı ile Genel Özellikleri / Dosya birimleri, Veri Tabanları ve Belgenin Yönetimi / İşaretçilendirme ve Olay Kayıt Yapısı / Özetleme Fonksiyonları</td>
<td>Programlama Dili</td>
</tr>
<tr>
<td>011541</td>
<td>Programlama Dilleri</td>
<td>20</td>
<td>0</td>
<td>30</td>
<td></td>
<td>C Programlama Dilleri ile İlişkili Programlama Yöntemi / Veri Yapanları ve Veri İptal Edici / Bilgisayar Programlama ile Stok Yönetimi / DİNAMİK BILGİ SİSTEMİ / GİRİŞ-ÇAĞ-İNANDIRICI / ÖZEL İÇERİKLER / ÖZEL METODLAR / ÖZEL İÇERİKLER</td>
<td>Programlama Giriş</td>
</tr>
</tbody>
</table>
Table 8: Special Education Curriculum Authority Instructed Software Experts

<table>
<thead>
<tr>
<th>Bölüm 1 – Programlanımı Temelli ve Windows Programlama</th>
<th>Saat</th>
<th>Sınav</th>
<th>Proje</th>
<th>Ödev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kırnak 1 – Programlamaya Giriş</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kırnak 2 – Nesne Tabanlı Programlamaya Giriş (OOP)</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Kırnak 3 – Windows Programlama</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bölüm 2 – Veritabanı Programlamaya ve Yönetimi (MSSQL 2008 R2 - MYSQl )</td>
<td>12</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Kırnak 1 – MYSQl Server 2008 Programlaması ve Yönetimi</td>
<td>50</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Kırnak 2 – MYSQl</td>
<td>10</td>
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</table>

<table>
<thead>
<tr>
<th>Bölüm 3 – Web Programlama (PHP - ASP.NET 4.0)</th>
<th>Saat</th>
<th>Sınav</th>
<th>Proje</th>
<th>Ödev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kırnak 1 – PHP</td>
<td>100</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Kırnak 2 – Server Side Programming with ASP.NET 4.0</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kırnak 3 – ADO.NET 6. XML</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Kırnak 4 – İleri Web Programlama-AJAX</td>
<td>30</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Kırnak 5 – Web tabanlı örnek ara proj</td>
<td>140</td>
<td>X</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Bölüm 4 – İleri .NET Uygulamaları</th>
<th>Saat</th>
<th>Sınav</th>
<th>Proje</th>
<th>Ödev</th>
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</thead>
<tbody>
<tr>
<td>Kırnak 1 – Noksanı Duyar Programlaması (OOP)</td>
<td>40</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Kırnak 2 – .NET Framework 4.0</td>
<td>20</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Bölüm 5 – Mobil Programlama</th>
<th>Saat</th>
<th>Sınav</th>
<th>Proje</th>
<th>Ödev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kırnak 1 – Wodlevs Mobile Programlama</td>
<td>20</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Kırnak 2 – Objective C de iPhone ve İpad Programlama</td>
<td>10</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bölüm 6 – Bitirme Projesi</th>
<th>Saat</th>
<th>Sınav</th>
<th>Proje</th>
<th>Ödev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kırnak 1 – Proje Analizi ve tasarru</td>
<td>20</td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSION

The findings of the survey study and analyzed according to curricula, 1 university (University Foundation) Software Specialist directly related to the total of 700 hours of theoretical and practical training at 112 hours are available. State University is the second university in the 588 hours of theoretical and practical training is 140 hours. Surveys about these times we see that in other universities. However, a total of 300 hours of training for special education institutions receive standard training areas. Detail of a private educational institution in Table 8 we can see that the standard of 300 hours of training. Taking into account that up to 50 hours in addition to the studies, we see that they are taking about 350 hours of classes. Total training time comparison is made on the basis of a private educational institution in the University educational training based on the time it almost seems to be more than twice. So the problem can not be the total training hours.

At this point, training is given and how it meets the needs of what is important. Of these a total of 350 hours of private educational institutions (study 300 hours + 50 hours) When we look at the shape of education administration;
1. 300 hours of training, fully consistent with the realities of the market.
2. Training is chained to each other. For this reason, students receive training in the sequence specified.
3. After describing the essence of the subject training in theory, it continues by carrying out any relevant market.
4. Academic staff need to train individuals with a mission to cultivate the market is not completely focused on the educational tradition and transfers.

This last point is the most important ingredient in our universities separated from the institution of special education is remarkable. Private educational institution, the candidates in the shortest possible time, the latest technologies demanded by the market, the minimum education theory explaining the maximum application software projects aims to educate individuals who have direct responsibility for the professional enough to.

The advantages of a private education institution is seen as follows:
1. There is a concern, such as creating a training curriculum to train academic staff can be very flexible. However, universities are not so flexible. Inconsistent with the demands of the market, a full recount some of the lessons should be compulsory.
2. The curriculum is at the forefront of creating the realities of the market all the time. In fact this is the most important focal point. On the other hand this act resiliently universities. Table 6, 7 and 8 that the contents can be examined. Even a private educational institution in preparing this statement again to revise the contents of education have begun learned.
3. Private training institution focused on professional training, and other expectations, not interested in the software more quickly decide to start their practice.
4. In addition, a hierarchy of universities that you have a dynamic maneuverability than the top level.
5. See Educator staff is very critical at this point to invest. Trainers combine practical working knowledge of theoretical knowledge. Educator staff transferring new technologies quickly.
6. Private educational institution, class sizes limited to a maximum of 15 people. In universities, this number is many times higher than that of the classroom.

In summary, Table 6, 7 and 8 compared with software expertise, education universities set aside a substantial amount of hours of lessons observed. Software Engineer required to raise the sum of the courses there are around 700-800 hours. Supporting courses, this amount increases even more. Corresponding to the amount of the institution of special education courses 300-350 hours. Universities, private educational institutions appear to have at least twice the length of course. This is in spite of the advantage of such a serious lesson time students prefer private educational institutions may be due to the following:
Private educational institutions, educational content as required by the private sector and can update very quickly. Universities aware of the curriculum updates that can not be at the same speed. Educators, not only focusing on the content of their training private educational institution to follow developments closely, the time necessary updates are capable of. On the other hand a lot of the number of courses to be given by faculty members in universities, the number of students in classes and at the same time is too much time to devote to academic studies, because of their course content guncelleleyemeye know at the same speed.

As a result, in general the possibility that the university education has become a routine job.

The effect of all of these, with expertise in software-related or semi-related departments or graduate students who are reading these sections, they had taken the anxiety of finding a better job supporting education in private educational institutions for the purpose of participating in the training of software expertise is obvious. Education curricula in our universities to compensate for this situation, updating course content organized according to the demand of the sector, the number of students and faculty in classes taking into account the number of courses a discernible impact minimization think gonna make a great impact.

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ASSESSING THE BENEFITS AND CHALLENGES OF THE INTRODUCTION OF EARLY CHILDHOOD DEVELOPMENT EDUCATION TO THE INFANT GRADE IN THE ZIMBABWE EDUCATION SYSTEM

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Abstract
This study aimed at assessing the benefits and challenges of Early Childhood Development (ECD) education programme in Zimbabwean primary schools. In an attempt to gather data to enable the researchers to answer the research problem, the present study adopted the descriptive survey design since it was all about people’s perceptions on successes and problems in ECD. Questionnaires and interviews were used to gather data from the respondents. Document analysis was used as a source of evidence to substantiate the claims on the statistics on drop out and retention rates. The population of the study consisted of all grade one teachers and all Teachers in Charge of infant classes in Chegutu District, Mashonaland West Region. In all a total of 200 respondents made it into the sampling frame. Of these 200, only 50 were chosen into the sample through simple random sampling. Benefits accruing to the ECD programme were unearthed. These included among others, a reduction of time needed to explain concepts due to the pupils attending the ECD centres. Results also show that teachers felt relieved to teach the pupils who had gone through the ECD programme because they were already exposed to some class work. The classes experienced an improved pass rate in subsequent grades as a result of attending ECD programmes. Children who have gone through the ECD programme are well disciplined as a result of attending the centres. In spite of these successes, challenges are affecting the smooth flow of the ECD programme in Zimbabwe. There are inadequate and inappropriate classrooms for use by the ECD pupils. Para-professionals are being hired to teach the ECD classes and there are no Education Officers available for effective supervision. There is no adequate equipment and of standard of available equipment at the play centres is poor.

Key Words: Early childhood development education, Infant grade, Education system.

INTRODUCTION

According to the Nziramasanga Commission of Inquiry into Education and Training (1999:261), Terms of Reference 2.1.2, the Commission was required to identify specific areas in the education system requiring reform on a short term, medium term and long term basis. The commission thus identified early childhood development and education as one of decisive areas where the foundation of basic principles and philosophy of Zimbabwe’s education system would be laid so that a child is prepared to meet the challenges of the future.

Many children in the developing countries, for which Zimbabwe is one, are confronted with a difficult road ahead of their growth from infancy to adulthood. Accordingly, their transition from early childhood education to primary school is a difficult one because of the complexities in the availability of resources, both the personal resources that children bring to school and the conditions of the schools themselves which present
obstacles to their successful adjustment (Halpern and Myers, 1985). Realising the need to harness the human resource for the future of the country, there is need to make sure that children receive a conducive environment that enables them to be prepared to learn right from birth.

Governments, the world over have therefore realised the importance of early childhood development whose focus is on the mental and social aspects of maturation in the first few years of life, hence the establishment of the Nziramasanga Commission of Inquiry into Education and Training, in 1999 which identified early childhood development and education as one of the major aspects of Zimbabwe’s education system. Ten years down the line, after the establishment of the commission, one would be interested to make a follow up on the Early Childhood Development programme in Zimbabwe to ascertain the contributions of the initiative as well as assess the challenges encountered in the implementation of the programme.

BACKGROUND OF THE STUDY

International recognition of ECD as an effective community development tool is relatively new particularly in the least developed countries where economic resources have even curtailed the provision of Basic Universal Primary Education (Myers, 1992). However, the need for childhood education has since ancient times been recognised as very critical to the child’s development. Great philosophers of all time such as Plato, Aristotle and Quintillion, among others, have written immensely on children’s need for education while at infancy (Manjengwa, 1994). Historically, formal early childhood education has arisen in response to the needs of middle and upper income groups of developed countries. Later on, it became a part of the educational system in the Third World (Baker, 1987). Traditionally conceived by western society as either the care of young children for working parents, or preschool for the middle-upper classes, ECD in Zimbabwe has also been previously regarded as a privilege for a few especially urban dwellers. Developed at sites such as health centres, clubs and community centres, the early ECD centres were created by the then Ministry of Community Development and Women’s Affairs to take responsible care of children whose mothers were part of the few working women so that they would be free to work during the day. Since then the programme has received prominence as government even stepped in to provide facilities before the Nziramasanga Commission recommended that the programme be compulsory and be used as entry to Grade 1. While the majority of the primary schools have taken the initiative to introduce at least a class for the ECD children, a lot of successes have been scored. However, ten years on, one would be interested to make a follow up of the programme to ascertain the contributions of this very important initiative. At the same time, it is also necessary to assess the challenges encountered in its implementation.

Motivation of the study

Assessing the benefits and challenges of Early Childhood Education in schools is a worthwhile undertaking so as to ascertain the effects and impediments of the infant programme. While follow studies up on the efficacy of ECD education have been carried out elsewhere, further studies need to be undertaken in Zimbabwean primary schools. This is mainly because the ECD programme has just been launched under the auspices of the Zimbabwean Ministry of Education and there is therefore need for the follow up.

Statement of the problem

The rationale behind the implementation of ECD programmes is clear. The children going through the programme would become the drivers of the economy in the next few years of their lives. In order therefore, that the education of these young ones be the best ever they can get, this present study sought to find out the gains made to date and the areas facing challenges so that remedies can be suggested for the improvement of the ECD system. The question to be answered by the present study therefore is: What are benefits derived and impediments encountered in the introduction of the ECD programme in the Zimbabwean primary schools?

Research Questions

The current study was undertaken to answer the following research questions:
1. In what ways has the introduction of ECD programmes benefited the schools?
2. How have the children benefited from the ECD programmes offered by the schools?
3. What challenges have the schools faced in the implementation of the ECD programmes?
LITERATURE REVIEW

Defining Early Childhood Development Education

Early childhood has been defined as a period of life between 0 to 8 years of age (UNESCO, 1996). This is the period of greatest growth and development, when the brain develops most rapidly, almost at its fullest. It is a period when walking, talking, self-esteem, vision of the world and moral foundations are established.

A time of remarkable brain development, these years, 0 to 8, lay the foundation for subsequent learning (UNESCO Early Childhood Care and Education Unit, 1996). Evans et al. (2000) assert early childhood care and education as referring to the provision of all the support necessary for every child to realize his/her right to survival, to protection, to care and to education that thus ensuring optimal development from birth to age six. From the Zimbabwean context, the Nziramasanga Commission of Inquiry into Education and Training (1999:262) defines Early Childhood Development education as “a programme in Zimbabwe that provides for the care and education of children from 0 to 6 years...an endeavour to consciously promote a child’s development and education”.

Though deferring on the age range, it can therefore be deduced from the above citations that ECD is a holistic, integrated, inclusive approach to programming, research and policy for young children who need a healthy, safe and nurturing environment that includes opportunities to support them emotionally, socially, physically, cognitively and spiritually within the context of their community.

PREVIOUS RESEARCH STUDIES

The benefits of Early Childhood Education

A significant number of researchers have written on the positive effects of ECD programmes which are seen as transforming the development of children in all aspects of their lives (Young, 2002). According to Young (2002), ECD programmes benefited the poor and disadvantaged children and families since it has the potency to fight poverty and its educational implications in developing countries. Hereunder, the following section presents some of the perceived benefits of the ECD programmes.

Wylie, Hodgen, Hipkins and Vaughan (2009) and Myers (1992) remark that the period of early childhood development has a strong and positive impact on further development and children’s learning in later ages. Studies by Wylie et al (2009) indicate that attendees of ECD centres continued to benefit from their attendance 11 years later. In order to curb wastages in the education system, ECD has been touted in research studies as diminishing the potency to drop out of school and it has also been found out that grade repetition on primary education is lowered due to attendance in ECD education (Myers, 1992; Young, 2002). These findings were replicated in studies by Plan Bangladesh, among others, which found out that early stimulation and preparation for education enhance student learning in school and increases retention rates up to the terminal grades. There is also the reduced educational expenditure because of little or no need for remedial action for the slow learners since these are minimised through the ECD programmes (UNESCO, 1996). For the children who are not participants of ECD education, there are personal and social costs in the form of poor adjustment, continued high primary school repetition and dropout rates, and consequently, for the country, another generation of functional illiterates (Halpern and Myers, 1985). Thus ECD results in low cost to the financiers of education.

As per the United Nations Millennium Development Goals (MDGs), ECD is a long-term plan for eradicating extreme poverty and hunger by developing a better skilled and more resilient population and quality early childhood education improves the efficacy and cost efficiency of primary schooling by creating school readiness which leads to greater success and thus reduces grade repetition and dropout rates, an important step towards universal primary education (Young, 2002). Because they lay the foundations for acquiring basic literacy and numeracy skills, they help reduce dropout and repetition rates and if well managed, they generate a predisposition of the child towards learning and attending school (UNESCO, 1996).
Also quality early childhood education programmes tend to provoke greater demand and attention to quality as children move up the ladder to primary education; therefore a good early childhood programme helps improve all aspects of quality of education (Wylie et al, 2009). ECD and other pre-primary education programmes are widely recognised as having a significant and positive impact on the subsequent performance of children in basic education programmes.

Research in the Chicago (USA) has shown that children who did not participate in ECD education were 70 percent more likely to be arrested for a violent crime by age 18. In Michigan, 3- and 4-year-olds from low-income families who did not receive preschool were likely to have become chronic lawbreakers by age 27 than those who were assigned to the High/Scope Educational Research Foundation’s Perry Preschool programme (HighScope, 2005). Thus ECD has been instrumental in reduction of crime in later lives of attendees.

Research by UNESCO (1996) indicates that there is improved preparation of children for primary education especially in the development of basic skills such as reading, writing, numeracy and language learning. The detection, treatment, correction, improvement and prevention of nutritional, health, physical or mental defects and the early removal of learning difficulties is also catered for in ECD programmes. Children are also provided with the opportunity to develop positive attitudes, self-confidence, motivation and ability to learn which are conducive to the child’s development, happiness and success at school. ECD education also leads to the development of capable children who will eventually contribute to a society of educated, responsible and productive citizens (UNESCO, 1996).

A significant factor common to children who repeat classes is related to their initial lack of readiness for learning in reading, writing, numeracy and language acquisition as well as unpreparedness for entry into primary schools (UNESCO, 1996).

Further benefits of ECD education include their care and stimulation, the identification and the correction of a variety of problems related to health, nutrition, physical and mental handicaps, pre-reading, pre-writing and pre-numeracy skills, the development of the joy of exploration, experimentation, a heightened sense of curiosity, a love for learning and motivation. Thus to ignore ECD education of children before their entry into primary education is to jeopardise their educational success at their later levels of learning and education (Young, 2002).

The main purpose of linking early childhood development and education and primary education is to ensure that there is a smooth transition for children from one level of learning to another (UNESCO, 1996). ECD is also designed to stimulate children’s interest in learning, to prepare them for further stages in the educational process, to ensure that certain basic skills are mastered and to do so in accordance with the child’s mental and physical development. This is necessary in order to help to reduce failures in academic and social achievement and to help children to adjust to the environment and demands of their future learning institutions. It is also important to note that ECD ensures that pupils are ready for primary education. ECD also ensures that certain basic skills are mastered before the pupils in primary school.

Wylie et al (2009) argue that high-quality Early Childhood Education centres provide lasting benefits for the participants regardless of their family backgrounds. They further argue that children benefit from ECE experience and, in particular, from quality interactions with staff and the benefits of ECE extend well beyond childhood. Thus benefits accruing to ECD pupils are outcomes of quality initiatives from the system.

According to Halpern and Myers (1985) more children without ECE experience drop out of school than those with ECE experience. A more logical deduction is that the large percentage of dropouts at this stage may be due to the lack of ‘holding power of the primary schools in terms of both pedagogy and environment. It is concluded that while the ECE experience does help reduce the total number of dropouts, its impact can be maximised by effecting qualitative improvement in terms of child-centered, activity based pedagogy at the early primary stage in addition to providing ECE, to attract and retain children (Wylie et al, 2009).
Later, et al, (1982) cited by Halpern and Myers (1985) points out that early education teaches children some concrete cognitive skills and also exposes them to some school-relevant non-cognitive skills such as attentiveness to teachers, ability to follow instructions, and task perseverance. When such children enter first grade they have positive attitudes towards classroom activities, are able to adapt to classroom procedures, and are able to learn and do the schoolwork. The children’s positive attitudes toward school are reinforced; they feel competent and their teachers identify them as competent and treat them as such (Later et al, 1982 cited in Halpern and Myers 1985). It can be deduced therefore that pupil competence in primary as well as in later educational levels, is a result of attending ECD education.

Challenges encountered in the implementation of ECD programmes

Research carried out elsewhere reveals that challenges continue to bedevil the ECD programme. Mohiuddin (2008) identified the challenges through observations made during visits to primary schools. The challenges are namely: lack of vertical integration and continuity in planning; placement of inexperienced teachers in preparatory classes; over-crowded classes with disproportionate teacher/pupil ratio; multi-grade settings with persons untrained to teach in these situations: evidence of parents, continuing to paint a “frightening” picture of primary school to their children. Mohiuddin (2008) asserts that in most schools, the number of children is so high that it becomes very difficult for teachers to maintain one to one relationships with children. Eckerman and Whitehead (1999) argue for material resources when they remark that children learn through play, and their play is more cognitively mature in the presence of materials and peers. It follows therefore that in the absence of these resources, ECD is bound to face challenges.

METHODOLOGY

This study, in an attempt to assess the benefits and challenges of ECD adopted the descriptive survey design since it was all about people’s perceptions on successes and problems in ECD. Surveys have the advantages that they can be used to collect a lot of data with relatively small expenses and that data comes from the real world situation. The current study employed a multi-technique approach to data collection in order to obtain a holistic or total view of the teachers on the benefits of the introduction of ECD education to the primary schools in Zimbabwe. A combination of the self-administered questionnaires and interviews, as data collection instruments, was therefore, preferred. This enabled the facilitation of gathering valid and reliable data from the respondents over and above enabling triangulation to cross validate the validity and reliability of the solicited data. The combination of the instruments ensured that the weaknesses of one instrument were compensated for by the strength of another. Document analysis was used as a source of evidence to substantiate the claims on the statistics provided particularly on the retention and dropout rates in the different schools.

A pilot study was carried out with 20 respondents to pre-test the instruments before the final data gathering process. The researcher requested the respondents to answer and then comment on the items in the questionnaires. Feedback from the piloting process was used to revise the questionnaire, and to provide further training on how the questionnaire was to be administered, and on issues of clarity, relevance and adequacy of the responses. This enabled the researcher to make improvements to the questionnaires. The researcher tested the questionnaires’ reliability by giving the same questions to the same 20 respondents, after which the final draft of the questionnaire was produced.

Population and Sample

The population of the study consisted of all grade one teachers in Chegutu District, Mashonaland West Region. These gave a total of 200 respondents. Of these, 50 were chosen through simple random sampling to make it into the sample. Fifty respondents represent 25% of the population and according to Van Dalen (1979) and Tuckman (1994) a sample size of 10% to 20% of population is representative enough.
PRESENTATION AND DISCUSSION OF RESULTS

Table 1: The perceived benefits of ECD programmes to the Grade 1 teacher

<table>
<thead>
<tr>
<th>Benefit to teacher</th>
<th>YES</th>
<th></th>
<th>NO</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reduced time on explaining on concepts</td>
<td>42</td>
<td>84</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>2. Light work because certain basic skills are already mastered</td>
<td>44</td>
<td>88</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>3. There is reduced educational expenditure because of little or no need for remedial action</td>
<td>41</td>
<td>82</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>4. Children adapt easily to classroom procedures</td>
<td>45</td>
<td>90</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>5. Children are able to learn easily</td>
<td>43</td>
<td>86</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>6. Improved pass rate in subsequent grades</td>
<td>45</td>
<td>90</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>7. Children are well disciplined as a result of attending ECD education</td>
<td>46</td>
<td>92</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

Results in Table 1 above show that a majority of 42 (84%) teachers felt that there was a reduction of time needed to explain on concepts due to the pupils attending the ECD centre. This was mostly due to the fact that the pupils were already exposed to some of the material being learnt. Light work because certain basic skills were already mastered was a benefit according to 44 (88%) respondents. Teachers felt relieved to teach the pupils who had gone through the ECD programme because they were already exposed to some class work. The findings replicate those by Later, et al, (1982) and Halpern and Myers (1985) who point out that early education teaches children some concrete cognitive skills and also exposes them to some school-relevant non-cognitive skills such as attentiveness to teachers, ability to follow instructions, and task perseverance.

Some 41 (82%) respondents indicated that there was reduced educational expenditure because of little or no need for remedial action. Time, for example, was fully utilised as there was no wastage as is the case in situations whereby children are failing to understand concepts and repeatedly seek clarification. According to 45 (90%) teachers, children adapted easily to classroom procedures and 43 (86%) teachers felt that children were able to learn easily due to their previous attendance of ECD classes. A majority of 45 (90%) indicated that improved pass rate in subsequent grades were a result of ECD programmes (Wylie et al, 2009). Therefore a good early childhood programme helps improve all aspects of quality of education. Early UNESCO (1996) concurs by remarking that ECD has a significant and positive impact on the subsequent performance of children in basic education programmes since they lay the foundations for acquiring basic literacy and numeracy skills, they help reduce dropout and repetition rates.

According to 46 (92%) respondents, children who have gone through the ECD programme were well disciplined as a result of attending the centres. The results of the current study agree with those by HighScope (2005) in a research Chicago which established that http://www.highscope.org/Content.asp?ContentId=219 children who did not participate in ECD education more likely to be arrested for a violent crime by age 18. In Michigan, children from low-income families who did not receive preschool were likely to become chronic lawbreakers by age 27 than those who received it (HighScope, 2005).
Table 2: The perceived benefits of ECD programmes to the Grade 1 pupil

<table>
<thead>
<tr>
<th>Benefit to teacher</th>
<th>YES</th>
<th>Number</th>
<th>%</th>
<th>NO</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. They show positive attitudes towards classroom activities</td>
<td>44</td>
<td>88</td>
<td>6</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. They are able to adapt to classroom procedures quickly</td>
<td>43</td>
<td>86</td>
<td>7</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. They show a more positive attitude towards school</td>
<td>45</td>
<td>90</td>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. They are motivated to learn and do their schoolwork more effectively.</td>
<td>44</td>
<td>88</td>
<td>6</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. They are more competent</td>
<td>46</td>
<td>92</td>
<td>4</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. There are reduced dropout rates</td>
<td>18</td>
<td>36</td>
<td>32</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Development of motor skills</td>
<td>43</td>
<td>86</td>
<td>7</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Improved language development due to interaction</td>
<td>42</td>
<td>84</td>
<td>8</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Supervision made easy because pupils already acquainted to the school system.</td>
<td>40</td>
<td>80</td>
<td>10</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Improved learning readiness</td>
<td>35</td>
<td>70</td>
<td>15</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As asked what the perceived benefits were to the pupils, 44(88%) indicated that the pupils showed positive attitudes towards classroom activities. According to 43(86%) teachers, the pupils were able to adapt to classroom procedures quickly since they were already exposed to some of these procedures from their ECD programme. According to 45 (90%) respondents the pupils attending ECD centres show a more positive attitude towards school whereas 44 (88%) indicated that the pupils are motivated to learn and do their schoolwork more effectively.

A majority of 46 (92%) indicated that the toddlers were more competent than those who went straight into the Grade 1 without having gone through ECD. The children’s positive attitudes toward school are reinforced; they feel competent and their teachers identify them as competent and treat them as such (Later et al 1982, Wylie et al, 2009).

However, according to a majority of 32(68%) respondents, the system had not experienced reduced dropout rates. This goes to show that attendance at ECD was not a factor towards improved retention rates. Contrary to these findings, research elsewhere points towards drop-out and grade repetition at primary school level being lowered due to attendance at ECD centres (Myers, 1992; Young, 2002). Plan Bangladesh also found out that early stimulation and preparation for education increases retention rates up to the terminal grades thereby contradicting the results of the present study.

Forty-three (86%) teachers stated that those who had gone through the ECD centres had benefitted through the development of motor skills and 42 (84%) indicated that language development due to interaction was one of the benefits attained through the ECD programme. UNESCO (1996) concurs by indicating that there is improved preparation of children for primary education in the development of basic skills such as reading, writing, numeracy and language learning.

The results also show that supervision was made easy due to the fact that pupils had already got acquainted to the school system and were not overwhelmed by the new environment. This was according to 40(80%) of the teacher respondents. Thirty-five (70%) indicated that pupils benefited through improved learning readiness as they were exposed to some of the pertinent issues in the learning environment. Social and emotional competencies are commonly identified by teachers as the most important indicators of school readiness in young children (Brooks-Gunn, 2003). The United Nations MDGs, help in supporting the findings of the present study by arguing that ECD is a long-term plan that develops a better skilled and more resilient population and improves the efficacy and cost efficiency of primary schooling by creating school readiness (Young, 2002).
Table 3: Challenges in the implementation of ECD programmes in schools

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Yes</th>
<th></th>
<th>%</th>
<th>No</th>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There are inadequate classrooms</td>
<td>46</td>
<td>92</td>
<td>4</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Available classrooms not per required standard</td>
<td>45</td>
<td>90</td>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Furniture not suitable for the children</td>
<td>47</td>
<td>94</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Picture reading books not adequate</td>
<td>48</td>
<td>96</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Inadequate teachers- Para professionals being hired</td>
<td>45</td>
<td>90</td>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Ineffective supervision- No Education Officers available</td>
<td>46</td>
<td>92</td>
<td>4</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Play centre equipment inadequate and of poor standard</td>
<td>47</td>
<td>94</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. There is over-crowding in classrooms with disproportionate teacher/pupil ratio</td>
<td>46</td>
<td>92</td>
<td>4</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. There are multi-grade settings for Grade A and B</td>
<td>28</td>
<td>56</td>
<td>22</td>
<td>44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results in the above table show that 46(96%) of the respondents indicated that there were inadequate classrooms meant for use by the ECD pupils. According to 45 (90%) teachers, the available classrooms were not as per the required standard. This meant that ECD pupils were required to learn in the traditional classrooms already in existence at the schools. Furniture was also not suitable for the children. Some were unable to rest their feet on the floor whilst sitting on the chairs. Others struggled to climb up the chair once they disembarked. Basic picture reading books were not adequate, according to an overwhelming majority of 48(96%) of the respondents. It is apparent that resources of all sorts are inadequate as another 45 (90%) indicated that para-professionals were being hired to teach the ECD classes. This therefore compromised the quality of learning achieved in the classes.

To make matters worse, there are no Education Officers available thereby rendering supervision ineffective. Forty-six teachers indicated the nonexistence of Education Officers as a drawback while 47 (94%) indicated that inadequate and of poor standard of equipment at the play centres were a serious challenge.

There is over-crowding in classrooms with a disproportionate teacher/pupil ratio, according to 46(92%) of the respondents. Individual attention to the pupils was therefore affected since the teacher had a huge number of pupils to attend to.

Another serious challenge according to 28 (56%) of the respondents, has been the multi-grade settings for Grade A and B. Both grades learn in a compound class, this being a result of teacher shortage as well as inadequate classrooms. The findings replicate those by Mohiuddin (2008) who found that inexperienced teachers were employed for preparatory classes and there was over-crowding in classes with disproportionate teacher/pupil ratio. Multi-grade settings were also the order of the day as teachers taught mixed classes.

CONCLUSION

It is apparent from the findings of the present study that government has embarked on a programme in which resources are inadequate and the requirements of Nziramasanga Commission of Inquiry into Education and Training requiring that there be ECD education for the under 5s are unlikely to be met due to numerous impediments. The following are the major challenges facing the ECD programme in Zimbabwe.

- There are inadequate and inappropriate classrooms for use by the ECD pupils. ECD pupils are learning in the traditional classrooms already in existence at the schools.
- Furniture and basic picture reading books are inadequate and unsuitable for the children.
- Para-professionals are being hired to teach the ECD classes and there are no Education Officers available for effective supervision.
- There is no adequate equipment and of standard of available equipment at the play centres is poor.
- There is over-crowding in classrooms with a disproportionate teacher/pupil ratio.
• There has been multi-grade settings for Grade A and B. Both grades learn as a compound class.

However, the current study established the following benefits of ECD:
• There was a reduction of time needed to explain concepts due to the pupils attending the ECD centres.
• Teachers felt relieved to teach the pupils who had gone through the ECD programme because they were already exposed to some class work.
• There was reduced educational expenditure because of little or no need for remedial action.
• Children adapted easily to classroom procedures and they were able to learn easily due to their previous attendance of ECD classes.
• The classes experienced an improved pass rate in subsequent grades as a result of attending ECD programmes.
• Children who have gone through the ECD programme are well disciplined as a result of attending the centres.
• The pupils were able to adapt to classroom procedures quickly since they were already exposed to some of these procedures from their ECD programme.
• The pupils are motivated to learn and do their schoolwork more effectively.
• Attendance at ECD centres has not contributed meaningfully towards improved retention rates.

IMPLICATIONS FOR THE FUTURE

Drawing from the above findings, a lot needs to be done to improve the current status of ECD programmes in Zimbabwe. There is need to train more teachers for the ECD programmes. Since distance education programmes are known to churn out huge numbers of graduates without taking the student away from the workplace, there is need to invigorate teacher training through distance education. The Zimbabwe Open University after having introduced the ECD degree programme needs to aggressively market the programme. The training of such teachers should be invigorated to boost the numbers of appropriate teachers within a short space of time. However, there is need to start off the training at diploma level and increase enrolments in teachers colleges. Parents should be encouraged to send their children to ECD programmes in light of the benefits derived from the initiative. Appropriate facilities and infrastructure, through a multi-stakeholder initiative must be improved. Parents and teachers partnership is essential to achieve the desired results in early childhood education.

REFERENCES


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