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Full Length Research Paper

The effects of a technology-aided learning environment on the improvement of a primary special education school

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The changes demanded by technology are reshaping people's expectations of education. These changing demands and expectations have introduced certain concepts, such as individuals who have become skilled at learning and the learning organization. Individuals and schools, as the most basic unit of educational organizations, should demonstrate a shift from traditional training toward becoming 'learning' or 'effective' schools in order to survive in the world today. This requires effective implementation of technology infrastructure in schools and the integration of technology into learning environments. This study aimed to examine the impact of technology-aided learning environments on the improvement of a primary special education school where students with hearing impaired attend. The study adopted qualitative research approach and used case study as a research design. Semi-structured interviews and observations were employed for collecting necessary data. The study sample comprised a school principal, a vice principal, a staff, thirteen teachers and four parents of the students in the school. The data were analyzed qualitatively by using a descriptive analysis through the qualitative analysis software MAXQDA®. It was found that themes such as cooperation and organization for school improvement, innovation and student achievement received the highest level of emphasis. The results of the study suggest that using technology aided learning environments, helped the school to improve, changed the way of teachers' functioning and contributed to their professional development. Progress in the social and academic performances of the students was also observed.

Key words: School development, technology, innovation, hearing impaired.

INTRODUCTION

Rapid changes and developments in the science and technology age change quickly the structure of the societies, and become an investigative power for re-designing the aims and methods of education (Bilgili, 2001). Educational organisations have crucial

responsibilities for adapting themselves to the changes around, and also make their students ready for these changes (Çalık, 2003). One of the recent concepts in the educational world today is "learning or effective school". In order to meet the needs of the today's society

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or individuals, schools have to transform themselves from traditional school to learning or effective school notion (Drucker, 2000; Şişman, 2002; Fullan, 2007).

In the road of transforming schools into “learning or effective school”, the idea of school improvement is an important concept and process. School improvement aims to increase the quality of education and student success through employing effective teaching methods and activities (Fullan, 1992). School improvement has many focuses like acceptance of technological innovations brought into school context by school staff, developing suitable strategies and methods for the innovation, adoption change approaches by school staff, and evaluating the whole school focusing on end innovation process (Velzen, 1985; Barth, 1990; Harris, 2000; Hopkins, 2001; Clarke, Harris, and Reynolds, 2004).

Organisational changes in schools are affected from both the developments in science and technology and social renewal activities of the societies (Fullan and Hargreaves, 1998). In the change process, not only do factors of human or technology-structure change, but also all of these factors have to change and improve all together (Balci, 2000). Since school staff might sometimes resist the change process as a result of the fact that innovation attempts may impact school culture and change the structure of the school, the innovations offered for improving schools should involve the views accepted by the schools and their staff. Therefore, in the process of change, it is crucial to look at the views and attitudes of individual to the reform (Fullan, 1992; Ellström, 2008).

Studies of school improvement in the literature have been focusing on the determination of the level of achieving the measures of the quality of education, taking precautions to possible preventing factors to school improvement, and employing effective learning activities (Dwyer et al., 1991; Fullan, 1992; Schein, 1992; Harris, 2000; Hopkins, 2001; Çalık, 2003; Harris and Lambert, 2003; Zeichner, 2003; Coutts et al., 2007; Heck and Hallinger, 2009; Mitchell, Reilly and Logue, 2009; Balkar, 2010; Aasen, 2013; Meijer et al., 2013; Pyhalto et al., 2011; Şahin, 2013). Focuses of some of these studies and projects are to improve the quality of education and to increase student academic and social success (Dwyer et al., 1991), to provide interaction between school staff (Pyhalto et al., 2011), to make cooperation among various disciplines (Aasen, 2013), and to adopt professional development and change and technology into classrooms (Coutts et al., 2007). In short, the main topics focused in school improvement studies are “change”, “innovation”, “cooperation and organization”, “stakeholders”, “infrastructure of school”, “conception of teaching and learning”, and “effectiveness” (Dwyer et al., 1991; Fullan, 1992; Schein, 1992; Harris, 2000; Hopkins, 2001; Çalık, 2003; Harris and Lambert, 2003; Zeichner, 2003; Coutts et al., 2007; Heck and Hallinger, 2009;

Mitchell et al., 2009; Balkar, 2010; Aasen, 2013; Meijer et al., 2013; Pyhalto et al., 2011; Şahin, 2013).

Education of students with hearing impaired and the project ALİS (Alternative Communication System)

Educational systems can change, depending on the physical and cultural characteristics of a society and they should aim to provide the best possible education to all kinds of learners at all times. Education, which cannot be considered independent of emerging technologies, aims to offer equal opportunities to people, help them achieve equal skills, live in the community and educate individuals to be responsible (Özcan, 2010) as each individual has the right to an education. In the field of the education, the provision of appropriate modern technological support brings successful outcomes not only for the education of those people who do not have learning or physical disabilities but also for the individuals with various disabilities (Koul et al., 2005; Takasaki, 2006; AlJa'am et al., 2009).

As a group, the hearing-impaired individuals face problems in using language and communicating with others, due to partial or complete lack of hearing (Etçi, 2013). Considering reading, comprehension, understanding, speaking and listening skills are part of the learning process, literacy levels remain low among the learners with advanced hearing loss. Therefore they face challenges in learning. Hearing-impaired students are told to be behind their peers by at least five years because of this challenge (Kyle and Harris, 2006). Thus, special training is offered to teachers to eliminate this problem. In many developed countries especially in the United States, teachers providing education to deaf students prepare an Individualized Education Plan (IEP) for each student (Şilbir, 2011), and rearrange existing educational outcomes according to their characteristics in the framework of this plan.

A variety of learning activities that are offered to students within the IEP offers students opportunities such as self-expression skills, socializing and adaptation to the community, and ease of learning (Çiftçi, 2009). It is known that the integration of educational content with technology applied at this stage contributes to student learning (Doğru and Arslan, 2008). It is also reported that the technology-aided learning environment positively affects the social and linguistic development of hearing-impaired individuals. Şilbir (2011) found that using the software based on graphic symbols to develop sentence-writing skills for the hearing-impaired students increased their interest, motivation and success. Similar results were reported by Wicha et al. (2012). They found that using a software system including animations, interactive and graphic symbols, to teach English to hearing-impaired students (TCAD and TCAD+) increased hearing-impaired students' motivation and provided more

embedded learning.

Overall, the literature suggests that three important factors should be considered for the education of individuals with hearing impaired: the individual differences and special needs of hearing-impaired students, technology as a learning and teaching tool and learning materials emphasizing the benefits of visual elements. It is obvious that educators, researchers and teachers that bring together these three elements will make significant contributions to the educational environment for the deaf people.

In Turkey, for the purpose of improvement and renewal in the field of education, many studies have been carried out on integrating technology into learning environments by establishing technology infrastructure in schools (Şişman and Taşdemir, 2008; Adıgüzel et al., 2011). By the Ministry of National Education (MoNE), an educational information network (known as EBA) has been established for students, teachers and schools to use interactive teaching and learning materials and multimedia (Eğitim Reformu Girişimi (ERG), 2013). EBA also contains teaching and learning materials for students with special educational needs and their teachers.

There are also local research studies carried out by the universities. The Alternative Communication System (ALIS) is a project initiated to this end and conducted since the year 2010 in a state primary school for deaf people in Trabzon, Turkey. ALIS-T (Alternative Communication System-Design) aimed at designing a graphic symbol system for an alternative communication system for the agglutinative structure of the Turkish language, as well as Turkish social, cultural and psychological characteristics (Examples of the graphic symbols are presented in Figure 1.). It encompassed the process of developing a dictionary, including graphic symbols, describing the everyday life of a character called ALIS, together with peers and adults (Aydın et al., 2012; Karal, 2014). Within this scope, the aim was to develop technology-aided learning environments/materials for the benefit of the deaf students. In line with this aim, another project started and going to be implemented up until December 2015 in the same school.

It is thought that integrating technology aided learning environments including materials and activities, and implementing in the school may bring changes in educational services and practices, resulting in an improvement in the school. This can be understood best by deeply investigating and exploring the views of the affected people like teachers, school administration, staff and parents from the implementation in the school. Moreover, in an innovation or reform process, it is crucial to determine the views of the affected people about the innovation in order to decide whether or not the innovations or reform attempts are successful or have improved the school. Therefore, the present study aimed to determine the effects of the technology-aided learning materials and environments provided by the ALIS project on the improvement of a primary special education

school for the students with hearing impaireds from the perspectives of the school administrators, teachers, staff and parents.

METHODOLOGY

The research was designed as a case study research method since this is an appropriate method for explaining data in cause-effect relations and variability contexts (Çepni, 2009). Yin (2009) states that if a study of real life or current events is needed to be explored, a case study is the most appropriate method. Qualitative data collection techniques were used in this study to ensure long-term monitoring of the current situation and to obtain in-depth data.

Sample

The study group was selected using purposive sampling. Purposive sampling, known as judgmental, selective or subjective sampling, is a type of non-probability sampling technique, focusing on sampling techniques where the groups to be studied are based on the judgement of the researcher. It helps researchers to select special cases which are rich in data and investigate them in detail depending on the purpose of the study (Patton, 1990; Büyüköztürk et al., 2010).

A primary special education school for students with hearing impaireds was selected for the study, the project known as ALIS which aimed to improve communication skills of students with hearing impaireds was conducted. In the study, the principal, vice principal, a member of staff, thirteen teachers of the school, teaching at different level and different subjects were purposively selected for the semi-structured interviews. In addition, parents of four students attending the third and fourth grades were also interviewed. 12 out of 13 teachers were female. While six of them were special education teachers (T1, T2, T3, T4, T6 and T13), two of them were Turkish language teachers (T11 and T12) and the others were teachers of Preschool, Science, Social Studies, Arts, And Technology Design. The field of school administrators were Religious Culture and Ethics (A1) and Turkish (A2). A great majority of the teachers and school administrators had more than a ten years experience in teaching. For example, the head of the school had a 24-year experience. Four parents of the students from the third and fourth grade level were involved in the study. Two of them were female (P3 and P4) and the others were male (P1 and P2). Finally, a female staff member of the school, working as a cleaner was also included in the study in order to collect data from her about the innovation effects on the school.

Data collection and analysis

In the study, mainly qualitative data collection instruments were selected in order to observe the overall change in the school due to the fact that ALIS project had been in effect in the school over a long period of time. Semi-structured interviews with the participants and observation notes of the researcher were used as the data collection tools. Semi-structured interview questions were prepared by education specialists, considering the participant groups. The questions focused on certain factors from the literature related to school improvement, such as 'change', 'innovation', 'student achievement', 'cooperation and organization', 'stakeholders', 'school infrastructure', 'education-instruction approach', and 'effectiveness'. The questions regarding how these issues were embraced by members of the school were addressed to the participants in an informal setting and interviews were recorded electronically with their consent.

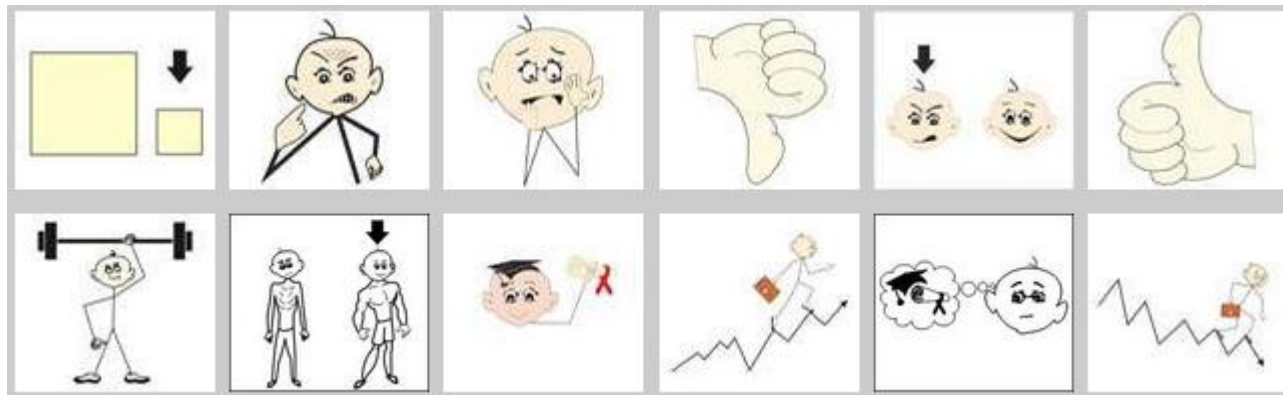


Figure 1. Examples of the graphic symbols.

During the project, in-class activities were observed for the duration of one year by the researcher within classroom settings in the school through video recordings and using an unstructured observation forms. The collected data from the interviews and observations were analyzed with descriptive analysis (Yıldırım and Şimşek, 2003). This allows the identification of direction of the attitudes and values in defining the data and unveiling the participants' thoughts.

In describing the participants' ideas about school improvement, a relationship was established between the categories identified for school improvement and the described data. To avoid data loss during analysis, interview transcripts were analysed through several reading and coding activities and discussed by several specialists (Milne and Adler, 1999). Therefore, the codes obtained from interviews and observations associated with the categories were analyzed and evaluated by two experts for each observer and participant separately. The collected data were analyzed with the qualitative data analysis software MAXQDA©. Quotations from the interviews with the participants were used in the text when necessary through using acronyms and numbers like T for Teachers; A for Administrators; S for Staff; and P for Parents and the numbers for indicating the order of the participant.

RESULTS

In this study, the views of teachers, administrators, staff and parents about the effects of the technology-aided learning environments used in learning and teaching activities of the students with hearing impaired as a part of the ALiS project on the improvement of the school were collected. The participants' views on the improvement of the school were divided into eight main categories emerged from the analysis of the interview data. These categories were change, student achievement, stakeholders, innovation, cooperation and organisation, educational approach, effectiveness, and school infrastructure.

According to the findings, there was a common sense among the majority of the participants (T2, T3, T4, T5, T11, T12, T13, A1 and A2) about the fact that the project ALiS had brought change to the school. This change were seen in different aspects of the school such as

teachers, their teaching ways, their beliefs about the curriculum, the teachers' ways of using technology, student achievement and motivation, school capacity and facilities, cooperation among school stakeholders and the effectiveness of the school as a whole, exemplified as:

"Previously, students were mostly given training based on memorization. But now we have started teaching lessons with animations and graphic symbol-based applications in full compliance with plans prepared in accordance with the individual characteristics of students." (T11)

"Changes happened first in the children, their happiness will be reflected to us after seeing the change and transformation in them. I think the project could create a targeted change and we are also pleased about that." (A2)

Changes in the other teachers and their teaching ways were also observed by the researcher, as expressed by a parent *"In my opinion, it influenced teachers somewhat. The success of the teacher; if the teacher had not perceived it, the student wouldn't have been that successful."* (P2). In observation notes, for example, the researcher wrote that the other teachers, other than the participant teachers, could also benefit from the project and used the content comfortably, noting *"A Turkish language teacher made continuous observations about the ALiS applications throughout the first semester. This semester, he also began to use the animations from ALiS in his class. In our project, our team did not intervene at all but he chose to use it because he found it effective."* One of the administrator also supported the researcher by stating;

"Subject teachers, especially those teaching in the secondary stage, are eagerly awaiting the project. They want the project to spread, not only the third and fourth grades, but also the second grade because our subject teachers have real difficulties in communicating with

children, particularly in abstract subjects such as the history of revolutions. In this regard, the project also needs to be accelerated and spread to other classes.” (A2)

A great majority of the participants (T1, T2, T3, T4, T5, T10, T11, T12, T13; A1, A2, S, P1, P2, P3 and P4) indicated that the project contributed to school improvement from the student achievement aspect, as noted:

“The project has increased the students’ interest in the course, there is more interest in visual materials. Both interest and academic level increased. I would say that sentence building increased most.” (T12)

“There is an increase in the students’ knowledge of objects, he can hear at 80% already, but this year he is much better. Now he knows objects well and uses words for them.” (P2)

“She is trying to introduce us to the objects she learnt, for instance. Here she says ... ‘This is television, curtain, door, and window’.” (P1)

They reported that after the project implementation, the students’ interest in lessons and their academic achievement increased. Some remarkable findings of the study include the increasing literacy skills of the students with hearing impaired in Turkish lessons, building more grammatically correct Turkish sentences, increasing students’ reading and writing skills, reaching the stage where they could express themselves, being familiar with the concepts, and increased self-confidence and awareness. The teachers, staff and parents commented that the students were more motivated to and interested in the lessons as a result of implementation of the newly introduced method in class, as illustrated:

“..... motivation, interest and achievement increased. Two classes implemented this system, students have become more sociable and they shared with each other.” (T3)

“For example, we see students being able to understand better the concepts and make sentences, thanks to the project. Also in the use of Turkish suffixes, they are able to make sentences with three, four and five words. This is a great success. If the children had more of these facilities, if they reached a certain level from the first grade, it would be very different.” (A1)

“Secondary school students look at ALİS as curiously as elementary students do. It draws the attention of all students.” (S)

“The students’ self-confidence increased.” (T4)

“He began to express himself more, he is conscious of what he has said.” (P4)

The teachers also reported that their teaching way had been changed, putting more emphasis on building sentences with graphics, the integration of text graphics

into lessons, working with animation in line with course objectives, and the use of standardized pictures. The parents also stated that after project, their students started to transfer their knowledge to daily life more easily. The researcher also noted in his observation notes that an increasing tendency in the students’ interest in the lessons as well as success in forming sentences.

Concerning the category stakeholders, while a few teachers (T1, T2, and T4) talked about it, the whole administrators were positive about the stakeholders’ attitudes to the project and its effects, as indicated by a teacher *“Everyone was supportive. Including the principal first and foremost, they all reacted positively to the project. He believed good things would happen. Our colleagues provided support. Thanks are due to our governor of Trabzon as he did not leave us.” (T4)*. The teachers indicated that the parents had been using the graphic symbol system as well. In addition, they also emphasized the support by the school principal for the project and his willingness to contribute planning, implementation and evaluation stages of the project activities in the school. Furthermore, the administrators especially remarked the support of the Trabzon Governor and the Ministry of National Education for the project and the school, as illustrated:

“The Ministry of Education supports the project but it must provide more financial and moral support. Feedback must be gathered immediately, perhaps all hearing-impaired individuals in Turkey are facing the same problems and can also bring solutions to their problems.” (A2)

According to the teachers, the project created an environment where the teachers and student teachers from the faculty of education could share the scientific knowledge obtained from the project and conducted various studies to help them use the system. However, it was seen that participation of the other families whose children had disabilities into the teaching and learning activities of the project were limited.

In relation to the category of innovation, there were various views of the participants about the effects of the project ALİS. For example, all of the participant teachers pointed out that ALİS was an innovative environment for teaching Turkish language to the students using graphics and animation as it offered various opportunities in training and a learning environment which was a live-dynamic structure, open to development, a systematic structure, a communication system method, creating a common language with the use of visuals, etc. The participant administrators (A1 and A2) also noted that it was the biggest innovation brought to the school contributing to the education of the students with hearing impaired and supporting their personal development. Therefore, they suggested that its teaching materials and activities should be used in all of the classes in the

school. The school staff and all of the participant parents (P1, P3 and P4) also considered the project as an innovation in the school, helping students' personal development.

Almost all of the participants (T1, T2, T3, T4, T5, T6, T7, T9, T11, T12, T13, A1, A2, P1, P2, P3 and P4) reported that the project ALİS improved the cooperation and organisation in the school. It stimulated solidarity, mutual assistance, sharing and exchanging ideas among the teachers regarding teaching and learning of the students, determining course content, and experiences. During the implementation of the project, it was observed that the participant teachers exchanged ideas with each other as well as with the other teachers in the school: *"I exchanged views with my colleagues, I made use of their ideas. I shared my ideas about the project."* (T12). The teachers also indicated that they had organized events at school for the planning, implementation and evaluation of the project and they endeavored to ensure participation in such events as shown below, saying *"We organize a lot of meetings. Turkish Radio and Television (TRT) visited the school for the project. The Governor's Office paid a visit. We talked to our parents and our parents had a positive orientation."* (T3)

In addition, they emphasized the support provided by the school principal for the project and his voluntary contributions at the planning, implementation and evaluation stages in the school. It was noted that collaborating with the faculty members in charge of the project for implementing the project materials in the school and afterwards was one other gain for them, expressing *"Negotiations are held with the project team, our school principal and project teachers at the third and fourth grades. Participation from different fields can be useful. What could it be? They tell you about shortages and surpluses, namely, they are reporting. ..."* (A2). They stated that this project really improved the relationship between the school and the university.

It also developed their organisational skills as they had already started organizing school events. It was reported by the participants that parent involvement in school life and the number of teacher-parent meetings increased. During the events, an intense process of exchanging ideas and views between the teachers and parents was observed, as illustrated by one of the parents (P2) *"We attended of course. We discussed what we can do, they were very keen on us"*.

One of the most important outcomes of the project was reported by a vast majority of the participants (T1, T2, T3, T4, T5, T7, T8, T9, T11, T12, T13, A1, A2, P2 and P3) was the fact that it definitely affected and changed the teachers' educational approach. They stressed the educational value of the "graphic-based applications" for teaching and learning of the hearing-impaired students, which was so difficult for them to make abstract concepts concrete. Seeing that the ALİS project materials containing many visual materials and making abstract

concepts concrete, they declared that it became a part of their understanding of education as using visual objects in the training of the hearing-impaired students was necessary. They stated that they will use visual course materials in a systematic way any more since visual materials play a very important part in conceptualizing abstract themes.

"These symbols can be used in Turkish, Life Sciences and Mathematics lessons. I would like to use your stories addressing these problems for literacy skills in Turkish lesson and work with symbols, problems, operations, etc., regarding these. Because I am now teaching in kindergarten, I make a point of concepts such as the concept of color, the concept of number; I'm working on forming sentences to a certain extent because my students are very young, but I would like to start working from the first grade." (T5)

The participants also emphasized that the project materials and applications created a fun and relaxed learning environment without boring the students and facilitated teaching of the students with hearing disability for the teachers, as expressed by a parent *"I see it as a savior. Easier for children from mainstream education, it is more enjoyable, it seems more interesting to children."* (P3). Despite to these benefits, there were some teachers who did not change their teaching ways and insisted on using their own visuals according to some of the parent oarticipants.

According to the observation notes of the researcher, technology based ALİS teaching and learning materials were intensively used in both the third and fourth grades. In these classes, various measurement and assessment methods were applied to determine the achievement levels of the students. Then, the lessons were reviewed by using the graphic symbols in the classroom. The participant teachers also used the project software to assign homework to students. Looking at these examples, it could be suggested that the project affected the educational approach of the teachers. It was clearly seen that the variety of applications of the project had supported the personal development of hearing-impaired students, contributing to their academic and social development of students. The researcher also wrote that during his observations, *"The students were being introduced the concept of multiple choice tests and being familiar with the tests of the project. The teachers also become familiar with the process and started to use activities of writing sentences"*.

A large proportion of the participants (T2, T3, T4, T5, T7, T9, T11, T12, T13, A1, A2, P1, P2, P3 and P4) indicated that the project ALİS increased the effectiveness of the services presented by the teachers and the school. Technology-aided learning materials and applications of the project were definitely useful for the education of the hearing-impaired students and supported their personal



Figure 2. The painting by the Arts teacher with the visual items developed within the project.

development, as exemplified by a parent *“Well, obviously things are a bit more positive. And vocabulary gain was more, you know, he started to use more words, of course, there is a benefit compared to before.” (P4)*. They helped the teachers solve teaching problems faced in teaching these students, improved the students’ performances in Turkish language, especially and increased their motivation to and interest in the school.

“I think it is effective in the social field. Recognition of the environment is important for our students. In particular, recognition of the student’s immediate surroundings, I think they know the environment better with graphics. Because this is something that develops the knowledge of students, it would be useful in the future of course.” (T11)

Moreover, they indicated that the students’ willingness to attend rehabilitation centres showed a decreasing tendency while their willingness to attend the school increased as a result of the project, as expressed by a parent *“He now really wants to go to school, he used to go to [X] rehabilitation centre, but he isn’t going now.” (P2)*. Because of its effectiveness, the participants suggested that technology based teaching and learning materials and applications of the project and its results should be disseminated all over the schools for students with hearing-impaired; *“This study should be disseminated to all schools for students with hearing impaireds in our country” (A1)*.

Some of the participant teachers and administrators (T1, T3, T5, T8, T12, A1, and A2) stated that the project contributed to improve the school infrastructure. For example, referring to the physical or furnishing changes in the school, in order to increase the visibility of the items developed in the project shown in Figure 2, an illustration was painted in the school corridor by an arts teacher, saying *“I created a visual work myself in the hallway as an art teacher. I did it for the popularization of ALIS among students and to demonstrate it to everybody. The principal asked me to prepare it and let me fictionalize the story. So I did it. It made the school come alive.” (T8)*.

Before the project, the school’s technology infrastructure was inadequate and the teachers and students could not use technology in their lessons. However, after the project, both the project and the other stakeholders tried to supply relevant technology and hardware items to the school, as the participants believe in that the school should be provided with more opportunities and facilities so that the project could be much more efficient.

“The infrastructure of our school is not great but there are computers in our classrooms. We completed this job with the touchscreen that came in with the project. It was enough for two classes but when we took it to the other classes, it was certainly insufficient. But I do not think we will encounter any problems once we equip the smart boards. In this regard, all kinds of support is being extended by TÜBITAK, the Governor’s Office and the

Ministry of Education.” (A1)

“It is critical to complete the school's technological infrastructure. In this regard, smart boards are important for the teaching of the subject. It's hard for me to manage the computer from the desk. But we create activities and interactive materials with smart boards. The internet is working, projections are working, technological infrastructure is ready at all times, this is important. It is essential that we fully and effectively use technology.” (T12)

In short, according to the participants, the project was beneficial for bringing about change to the school and improving the school from various aspects like student achievement and motivation, school infrastructure, teaching activities, personal and professional development, cooperation and organisation and school effectiveness in the school. They stated that technology aided learning materials and applications of the project made teaching and learning easier and more enjoyable for the students with hearing impaired and their teachers.

DISCUSSION AND CONCLUSIONS

This study aimed at determining the effects of the technology-aided learning environments of the ALİS project, as implemented in a primary school for the students with hearing impaired in Trabzon, Turkey. For this purpose, the views of the participating teachers, school administrators, staff and parents were determined. According to the findings of the study, a great majority of the participants put an emphasis on change, student achievement, cooperation and organization, innovation, educational approach, school infrastructure and effectiveness.

Student achievement, cooperation and organization, and innovation in terms of school improvement were the most frequently mentioned categories emerged from the data. The related literature also indicates that increasing student achievement is the focal point of school development (Balkar, 2010; Dwyer et al., 1991). Researchers suggest that in order to improve the quality of education and schools, schools and teachers should adopt innovative approaches, increase the use of ICT appropriate for the time, and develop strategies compliant with the systems referred to as innovation (Schein, 1992; Harris, 2000). In addition, Hopkins (2001) also states that cooperation for school improvement is necessary for planning for such innovation to be brought into school and allowing school members to have a say and negotiate in the creation of such plans. The findings of this study are congruent with the suggestions of Hopkins (2001), in which cooperation and organisation were emphasised by the great majority of the participants. A study by Pyhalto et al. (2011), also found that cooperation of school

members with each other and professionals contributed to school improvement.

Another most highlighted issue in the study was the concept of “change”. It was reported that there were great changes in both the teachers and students. It could be claimed that the project positively affected the teachers' teaching ways and professional practices, the students' personal development and academic performances, the school effectiveness and infrastructure and parents' attitudes towards their children education and schools, improving the school as a whole. This might mean that, the project ALİS not only developed teachers' teaching skills but also created a learning environment and culture for the teachers and students in relation to school improvement, as Bubb and Earley (2009) argued. The participants were aware of the fact that the teachers' skill development and the students' personal development, learning and motivation were being gradually developed during the duration of the project. This was a crucial issue for the planning of teachers' professional development and school improvement, as Fullan (1992) suggested that a vital component of school improvement and improvement in teachers' skills must be carried out as planned and scheduled; otherwise, it might result in failure due to not fulfilling one condition in the course of school development.

Being aware of the developments on their skills and students' performances can facilitate the change process in the school. Zeichner (2003) already remarked that teachers' having a broad perspective on both themselves and their students is closely related to the change in their professional identity. Moreover, a great majority of the participants indicated that change in the school was clear and noticeable, which made it easier to adapt the innovation being introduced by the teachers and students gradually, confirming improvement in the school, as Çalık (2003) and Başaran (1998) noted.

Increased student performance and achievement was another outcome and observation, reported by most of the the participants. According to the teachers, planning lessons including technology aided teaching and learning materials and activities of the project, implementing them in the classrooms and using assessment materials of the project ALİS brought in better results in the students. Another reason for increasing the students' achievement through the end of the project might be the fact that there were various teaching and learning activities where the students actively engaged in the lessons as the researchers stated that introducing active learning environments in schools would facilitate student learning, ultimately causing them to use different teaching methods in their future careers (Vygotsky, 1978; Schein, 1992). The participants and the researcher exemplified these positive changes in the students' performances by giving examples of the students' works like being able to create more grammatically correct sentences in Turkish, transferring their knowledge to everyday life and being

actively engaged in a social life. These better and positive changes all might imply that the project ALİS facilitated and increased the students' learning and personal development. These findings, therefore, might imply that the project ALİS contributed to the improvement process of the school and are congruent with the relevant literature, as Schildkamp et al. (2012) claim that student success should enhanced real school development.

The findings of the study showed that the implementation of the project in the school stimulated collaboration among the teachers, school management, and parents. It was seen that there more times where the participants exchanged, shared and discussed their ideas and experiences with each other, and showed mutual assistance and solidarity. These might be considered as important step stones for the efforts of improving schools and also be indicators for improved schools, as reported by the relevant literature (Aasen, 2013; Altun and Aydın, 2010). Mitchell et al. (2009) argue that exchanging experiences could help make the most appropriate decisions about the relationship between teaching practice and theory. Moreover, it was seen that the support provided by the faculty of education, as a professional help to the school, increased both the teachers', school administrator's and students' motivation levels. This strong support by the faculty of education encouraged them to engage and participate more in the project ALİS. Meijer et al. (2013) underline that this kind of help from the professionals to teachers as well as other school members are crucial as it creates opportunities for them to cooperate and exchange their knowledge and experiences with professionals.

Furthermore, there were other teachers rather than the participants, who were willing to take in implementing and applying the project materials in their classes. This dedication of these teachers expanded and disseminated the activities of the project within the school and helped the project appeal to various groups. Involving people various backgrounds in the project might be another reason for the improvement seen in the school. This is well matched with the views of Hopkins (2001) as he stated that it is important that different people take part in planning and scheduling for real school development, and people who participate in activities must be arranged at the same time with the organization of the learning environment.

To embrace and use the innovation, schools need to have appropriate physical infrastructure (Balkar, 2010; Şahin, 2013). Otherwise, innovative attempts might cause in unsatisfactory or unsuccessful results. Therefore, the researcher tried to improve the school infrastructure before and during the project in order to implement technology aided teaching and learning materiles of the study. In this sense, stakeholders like the school, the Ministry of National education, the Governor's Office and the university have undertaken initiatives to improve the conditions of the school. All these efforts targeted

increasing the quality of the educational environment and facilitating the implementation of the innovation. These efforts to develop school capacity were compatible with the views of Harris and Lambert (2003) and Heck and Hallinger (2009), who emphasized the need to improve school capacity for the reform attempts.

Finally, integrating technology into classes by considering student characteristics, customizing education and applying innovative pedagogy seem to be indicators of developed schools. The objectives of the project were providing support for school improvement, offering an innovative education environment to students, and enhancing teachers' and students' use of technology. Considering the results obtained from the study, it could be stated that teachers adopted the innovative, graphic symbol-based work and that their skills increased in the use of technology. Teachers also reported their intentions to use graphic symbol-based work in their future lesson plans, which can account for changes in their educational approach. Coutts et al. (2007) explained this result indicating the fact that it is one of the basic issues of school development, that teachers adopt different teaching and learning methods and put these methods into practice over the long term. The participant teachers' intention to use and the adoption of technology aided teaching and learning materials and activities of the project which might be a strong indicator of their school improvement efforts and beliefs.

RECOMMENDATIONS

The present study aimed at determining the views of the teachers, school administrators, school staff and parents about the effects of an innovative attempt including technology aided learning materials and activities for the students with hearing impaired in a state primary school in Trabzon, Turkey. According to the results of the study, using these materials and activities in the lessons increased student achievement and personal development. However, the implementation was limited with only primary school classes. Therefore, use of these materials at different levels of classes and schools having students at various ages should be experimented in order to create a standart vocabulary of the students with with hearing impaired.

In general, the study caused in positive outcomes and gains like increased student achievement and personal development, changing educational approach in a positive way, increased collaboration among the stakeholders, increasing the effectiveness of the school, developing the infrastructure of the school, etc. The students responded to it positively. All these findings imply that the implementation of the project ALİS improved the school. However, the study was carried out in a state primary school in Trabzon, Turkey and the materials were developed by the researcher grown up in this city.

Moreover, at the implementation phases of the project in the school, being acquainted with most of the teachers and the principal of the school culturally facilitated the implementation and acceptance of the project by the participants. Turkey has a huge population and differentiated cultures according to its geographical regions. Language development and vocabulary can be different in different cultures in Turkey and hearing impaired students grow up with different cultures and accents of Turkish language might respond these technology aided graphic symbols differently. As a result, school improvement process in terms of student achievement dimension may not be occurred. Therefore, the technology aided learning materials and activities developed by the project ALİS should be implemented and used in different school levels at different parts of Turkey in order to see its effects on the students and schools.

As Trabzon is a small city compared to the other big cities of Turkey, like İstanbul, Ankara, İzmir and Adana, there is a close and genuine friendly relationship among the stakeholders such as the school administration, local education authorities, the governorship of the city, the university administration and academics, and parents facilitated the implementation of the project and presented positive contributions to the process of school improvement. Therefore, for future studies, in order for the innovations or reform attempts to be successful, this kind of close and friendly relationship should be established among the participants.

Finally, even though the project in the school has been continued from the year 2010 to 2015, it is better to conduct more follow up studies in order to see and decide whether there was a real improvement and how far its effects will survive and sustain in the school. At that time, it can precisely be said if the project was successful or not in terms of school improvement.

Conflict of Interests

The author has not declared any conflicts of interest.

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Full Length Research Paper

The comparison of the attitudes of students from different high schools within Turkish education system towards Physical Education and Sports

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The aim of this research is to set forth the attitudes of students from different high schools within Turkish education system towards physical education and sports class. 99 students from Sports High School, 195 from Vocational High School, 313 from Anatolian High School, 158 from Fine Arts High School, 255 from Imam Hatip High School, 192 from Science High School, 171 from Social Sciences High School, in total 1383 students participated in this research. "Physical Education and Sports Attitude Scale" is used in order to measure students' attitudes towards physical education class. This scale is composed of 12 positive and 12 negative, in total 24 items and developed by Demirhan and Altay. In data analysis independent Samples T-Test is used for the comparison of two groups, and One-Way ANOVA is used for independent groups. When a difference is detected, in order to find the source group of the difference, Tukey Test with significance of $p < 0.05$ is used. It is found that students' attitude scores towards physical education class are high (100.27 ± 13.39). Also it is obtained that there is a statistical difference in students' attitude scores towards physical education class according to their school type ($p < 0.001$), grade ($p < 0.001$) and gender ($p < 0.01$). As a result of this study, it was found that students' attitude towards physical education class differ according to school type, grade and gender.

Key words: Physical education, attitude, high school.

INTRODUCTION

Turkey has its own education system like every other country in the world. Secondary education (high school education) comprises all educational institutions providing four years of general, vocational, or technical education subsequent to and based upon basic education. One of the goals of secondary education is to provide programs

and schools that will prepare students for the future, for higher education and / or various vocational and professional fields in keeping with their interest and abilities. Admission to secondary education is centralized and based on a nation-wide examination administered by the Ministry of National Education. Students in their

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senior year take this exam and their score from this exam determines where these students are placed, whether general high school or vocational or technical high school. The contents as well as the goal of physical education and sport class are the same in these schools. One of the goals is to have the students develop positive attitudes towards physical education and sports. In this respect, if the individuals develop positive attitude towards physical education and sport classes, the reflection on the society will be positive.

Physical education and sports now have an important place in the lives of individuals as a component of society in terms of the tasks and goals it undertakes. Today physical education and sports has begun to function as a strong educational appliance in the solution of social problems by expanding its sphere of interest in order to answer different expectations of individuals (Çelik and Pular, 2011). According to Fişek (1980), physical education and sports include several activities which prepare a suitable competition environment to control aggressive instinct existing in human nature, which facilitates for the individuals the process of social adjustment, and secure people's psychological and physical health. These activities arise from applied and theoretical structure of the physical education and sport classes.

Physical education and sports class attracts attention from many researches because its structure is different from the other classes. In general the studies cover positive and negative attitudes that the students develop towards physical education and sports class in relation to age and gender factors (Demirel and Ün, 1987).

Attitude is taken as learned tendencies that make individuals exhibit specific behaviors in the face of specific people, objects and situations (Demirel and Ün, 1987). A study (Aicinena, 1991) points out that several factors like teacher's behavior, class, family, and school management have an influence on positive students' attitude towards physical education class (qtd. in Çelik and Pular, 2011). Figley (1985)'s study analyzes the attitudes of high school students, and explains that when the students sense a lack of interest from their teachers, they develop negative attitude. It is also given in the same study that the reasons behind students' positive attitudes are 41.6% teacher, 31.2% instructional program, and 27.2% consecutively class environment, students' self-perception, others and peer behavior; while the reasons behind negative attitudes are 35.6% instructional program, 33.3% teacher, and 31.1% consecutively class environment, peer behavior, students' self-perception and others (qtd. in Çelik and Pular, 2011).

High schools have been ignored in most of the existing studies. It is essential to present the attitudes of students from different high schools in Turkish education system towards physical education and sports class. Thus this study will make an important contribution as it aims to present the attitudes of students from different high

schools in Turkish education system towards physical education and sports class.

RESEARCH METHODOLOGY

Participants

The research had been conducted in 2015-2016 academic year in Bolu. One school from each type and one each grade have been drawn. 99 students from Sports High School (There are students in these schools who want to be physical education teachers, trainers and sport managers.), 195 from Vocational High School (The graduates of these schools may work in tourism, health and technical fields.), 313 from Anatolian High School (The students in these schools will choose professions in the verbal field such as law, history teaching, etc.), 158 from Fine Arts High School (The students who want to be music and/or art teachers prefer fine arts high school), 255 from Imam Hatip High School (These are the high schools preferred by the students who want to work in the religious fields), 192 from Science High School (The students in these schools prefer professions like medicine, engineering), 171 from Social Sciences High School (These are the schools chosen by students who are interested in social fields), in total 1383 students participated in this research.

Data collection instrument

"Physical Education and Sports Attitude Scale" is used in order to measure students' attitudes towards physical education and sports class. This scale is composed of 24 articles in total, 12 positive and 12 negative, and developed by Demirhan and Altay (2001). The lowest point of this scale is 24, and the highest point is 120. The grading key is: 5- I agree completely, 4- I agree, 3- I am neutral, 2- I do not agree, 1- I disagree completely. Scores between 1-24 show the most negative attitude; 25-48 show negative attitude; 49-72 show neutral attitude; 73-94 show positive attitude; and 95-129 show the most positive attitude. The scale's Cronbach Alpha reliability co-efficient is 0.93, and its validity coefficient is 0.83. In this research reliability coefficient is found as 0.81.

Data collection procedure

Permits required for the application of the scale had been obtained from the institutions before the research and the students had been informed about the scale before physical education class. Scales were delivered to the students, and after they filled them, the scales were gathered back.

Data analysis

Arithmetic average (\bar{x}) and standard deviation (sd) of the attitude points towards physical education and sports class have been calculated from the data obtained. In data analysis independent Samples t-test is used for the comparison of two groups, and One-Way ANOVA is used for independent groups. When a difference is detected between groups, in order to find the source of difference, Tukey Test is used with significance level of $p < 0.05$.

RESEARCH FINDINGS

In Table 1, students' attitude points towards physical

Table 1. Comparison of the attitudes of high schools within Turkish education system towards physical education class.

High Schools	n	\bar{x}	sd	Sum of Square	df	Mean of Square	F	p Value	Significant Differences
Sports High School	99	107,90	10,02	Intergroup	6	1904,09	11,074	0,000	There is a statistical difference between Science High School and Sports High School($p<0.001$), Vocational High School($p<0.01$) and Anatolian High School($p<0.05$)
Vocational High School	195	102,65	12,79	1424,583	1376	7			
Anatolian High School	313	101,65	12,74	Intragroup	1382	171,939			There is a statistical difference between Sports High School and Social Sciences High School($p<0.001$), Imam Hatip High School($p<0.001$), Fine Arts High School($p<0.001$), Anatolian High School($p<0.001$) and Vocational High School($p<0.05$)
Fine Arts High School	158	99,16	11,89	236588,555					
Imam Hatip High School	255	98,49	13,48	Total					There is a statistical difference between Social Sciences High School and Anatolian High School ($p<0.05$)
Science High School	192	98,03	14,43	248013,138					
Social Sciences High School	171	96,85	14,55						There is a statistical difference between Vocational High School and Imam Hatip High School ($p<0.05$)
Total	1383	100.27	13.39						

education and sports class are compared with respect to their schools. It is understood from the table that the students in Sports High School have the highest average of attitude scores towards physical education class ($107,90\pm 10,028$). This is followed by Vocational High School ($102,65\pm 12,79$), Anatolian High School ($101,65\pm 12,74$), Fine Arts High School ($99,16\pm 11,89$) and Imam Hatip High School ($98,49\pm 13,48$). It is detected that lowest average of attitude scores are recorded in Science High School ($98,03\pm 14,43$) and Social Sciences High School ($96,85\pm 14,55$). Statistical difference is

observed at the end of comparing the students' attitude scores ($p<0.001$). In order to detect the source of difference, Tukey test is applied as a result of which the difference is detected between Science High School and Sports High School ($p<0.001$), Vocational High School ($p<0.01$) and Anatolian High School ($p<0.05$); Sports High School and Social Sciences High School ($p<0.001$), Imam Hatip High School ($p<0.001$), Fine Arts High School ($p<0.001$), Anatolian High School ($p<0.05$) and Vocational High School ($p<0.05$); Social Sciences High School and Vocational High School ($p<0.05$) and Anatolian

High School ($p<0.05$); Vocational High School and Imam Hatip High School ($p<0.05$).

In Table 2, students' attitude points towards physical education class are compared with respect to their grades. It is understood from Table 2 that 9th grade students have the highest attitude scores towards physical education class ($103,60\pm 12,01$). It is followed consecutively by 10th grade ($100,68\pm 13,17$), 11th grade ($98,68\pm 13,88$) and 12th grade ($95,53\pm 13,86$). Statistical difference is also observed at the end of comparing the students' attitude scores with respect to their grades ($p<0.001$). In order to

Table 2. Comparison of the Attitudes of High Schools within Turkish Education System towards Physical Education Class with respect to their Grades.

Grades	n	\bar{x}	sd	Sum of Square	df	Mean Square	F	p Value	Significant Differences
9 th Grade	496	103,60	12,01	Intergroup 12734,733	3	4244,911	24,880	0,000	There is a statistical difference between 9 th Grade and 10 th Grade ($p<0.01$), 11 th Grade ($p<0.001$) and 12 th Grade ($p<0.001$)
10 th Grade	338	100,68	13,17		Intra-group				
11 th Grade	259	98,68	13,88	235278,405	1382				There is a statistical difference between 10 th Grade and 12 th Grade ($p<0.001$)
12 th Grade	290	95,53	13,86	Total 248013,138					There is a statistical difference between 11 th Grade and 12 th Grade ($p<0.05$)
Total	1383								

Table 3. Comparison of the Attitudes of High School Students within Turkish Education System towards Physical Education Class with respect to Their Gender.

Sex	n	\bar{x}	sd	df	t	p
Male	618	105,20	11,98	1381	13,006	0,001
Female	765	96,30	13,16			

detect the source of difference, Tukey test is applied as a result of which the difference is detected between 9th Grade and 10th grade ($p<0.01$), 11th grade and 12th grade ($p<0.001$); between 10th grade and 12th grade ($p<0.001$); and between 11th grade and 12th grade ($p<0.05$).

In Table 3, students' attitude points towards physical education and sports class are compared with respect to their gender. According to the table, it is detected that male students have higher attitude points ($105,20\pm 11,98$) than female students ($96,30\pm 13,16$). As a result of statistical comparison, statistical difference is detected ($p<0.01$).

DISCUSSION

As a result of this study it can be said that the students in different school systems have high attitude points towards physical education class. However, students' attitude scores towards physical education class with respect to school types vary. It is found that Sports High School students have the highest attitude points towards physical education and sports class. It is followed consecutively by Vocational High School, Anatolian High School, Fine Arts High School and Imam Hatip High School. It is attained that Science High School and Social Sciences High School students have the lowest attitude scores. Statistical difference is also observed by

comparing students' attitude scores with respect to their school. As a result of statistical analysis, conducted to find which schools cause the difference, it is found that the difference is between Science High School and Sports High School, Vocational High School and Anatolian High School; Sports High School and Social Sciences High School, Imam Hatip High School, Fine Arts High School, Anatolian High School and Vocational High School; Social Sciences High School and Vocational High School and Anatolian High School; Vocational High School and Imam Hatip High School. The scopes of the existing researches in Turkey do not cover different types of high schools. Çelik and Pulur (2011)'s research compare students' attitude scores towards physical education class at Vocational High School and Anatolian High School, and no statistical difference is found. This research has not detected any statistical difference in students' attitude points at Vocational High School and Anatolian High School, either. However, statistical difference is found in students' attitude towards physical education and sports class at seven different schools. When this difference is considered it can be argued that school types influence attitude points towards physical education and sports class. Students can get into Sports High School after a special talent test. They choose sports training themselves and most of these students are sportsmen/women. Sport activities are performed in Sports High School thus it can be said that the students in this school have the highest attitude points in physical education and sports class. Following Sports High School, Vocational High School and Anatolian High School have the second highest attitude points. It has been thought that the attitude points towards physical education and sports class of these schools would be lower compared to Sports High School. Fine Arts High School and Imam Hatip High School have lower attitude scores compared

to Anatolian High School and Vocational High School. Fine Arts students devote more time for artistic activities like music and drawing, and Imam Hatip students for religious issues. This might have decreased the attitude scores towards physical education and sports class. The students at Science High School and Social Sciences High School have the lowest attitude scores. They score the highest in Transition from Primary to Secondary Education Exam (TEOG, 2015). The students in these schools have intense classes and their goal is to get into a good university. For this reason the students focus on theoretical classes and it is thought that their attitude scores towards physical education are low accordingly.

When attitude scores towards physical education based on grade level are considered, it is observed that 9th grade students have the highest attitude scores towards physical education. The 10th grade, 11th grade and 12th grade follow consecutively in attitude scores towards physical education. At the end of comparing attitude scores based on grades, statistical difference is also observed. It is detected that the difference is caused between 9th grade and 10th grade, 11th grade and 12th grade; 10th grade and 12th grade; 11th grade and 12th grade. Depending on these findings, it can be said that the students' attitude scores towards physical education decrease as they grow. Another research (Alpaslan et al., 2008) states almost the same results. As the students grow, they need to prepare for Student Selection Examination (SSE). The preparation process continues at breaks and in canteens. It is also known that students get medical reports to be excused from physical education classes during which they prepare for SSE. It can be said that due to the increasing exam stress and time pressure, students' attitude towards physical education decrease.

When attitude scores towards physical education based on gender are considered, it is found that male students have higher attitude scores towards physical education classes compared to female students. At the end of statistical comparison, statistical difference is obtained. Taşyığın and Tekin (2009) have come to conclusion in their research that male students' attitude towards physical education class is more positive when compared to female students' attitude. It is observed in many studies that gender affects students' attitude towards physical education. Most of these researches reveal that male students have more positive attitude towards physical education classes than female students (Carlson, 1994; Weinberg et al., 2001; Koca and Demirhan, 2004; Kangalgil et al., 2006). Although it is found that male students present more positive attitude towards physical activities requiring challenge and bearing risk element, it is observed that female students display more positive attitude towards physical activities emphasizing aesthetics and improving social skills (Smoll and Schutz, 1980). Another research on this issue has been conducted by Tannehilla et al. (1994). They frequently expressed that male students like physical education classes due to the sense of superiority they felt

in sports events (qtd. in Hünük, 2006). Another research (Treanor et al., 1998) puts forth that male students feel more talented, strong and powerful in physical education classes compared to female students. It can be said that this way of perception is the cause behind male students' higher attitude scores towards physical education classes.

Conflict of Interests

The author has not declared any conflicts of interest.

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Full Length Research Paper

The relationship between FL reading strategies and FL reading proficiency: A study on Turkish EFL learners

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Reading in FL possesses certain challenges for FL readers such as difficulty in inferring underlying messages in texts and dealing with unfamiliar cultural load. All these challenges may be associated with FL learners' reading proficiency and their use of FL reading strategies especially while reading academic materials. This study aims at identifying reading strategy use of students in a Turkish EFL context and exploring the relation between perceived awareness of FL reading strategies while reading academic materials and FL reading proficiency. For these purposes, 55 students participated in the study. Results of correlation and regression analyses along with interview data suggested that although there was no significant correlation between FL reading strategy and FL reading proficiency, low and high proficient learners differed in their employment of FL reading strategies. This study highlights the importance of awareness and employment of effective FL reading strategies in academic contexts.

Key words: FL reading strategies, language proficiency, strategy use in academic reading.

INTRODUCTION

Researchers have long been aware that reading in any language is a complex process comprising coordination of attention, memory, perception and comprehension (Sellers, 2000; Aarnoutse and Schellings, 2003; Nassaji, 2003; Afflerbach et al., 2008; Tsai et al., 2010). In addition to these, reading foreign language (FL) is challenging due to lack of motivation FL, varying degrees of importance and expectations due to different cultures, unfamiliar cultural load of the target language texts, and reading proficiency in the target language (Crookes and Schmidt, 1991; Oxford, 1996; Mori, 2002; Mokhtari and Reichard, 2004). In order to handle these challenges

imposed on language learners, reading strategies can serve as an emergency aid and help learners overcome many difficulties such as inferring the underlying messages in texts, dealing with unknown terms and unfamiliar cultural load.

Reading strategies are the deliberate mental actions readers employ when they approach a text written in the target language and to make sense of it (Singhal, 2001; Pani, 2004; Yang, 2006; Bolanos, 2012). FL reading strategies differ from language learning strategies in the sense that they involve metacognitive control such as planning and monitoring one's own understanding, and

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conscious execution of certain actions to achieve a particular goal while reading in a foreign/second language (Auerbach and Paxton, 1997). Among these certain actions, we can count strategies such as identifying a purpose for reading, previewing, predicting, questioning, checking prediction or finding answers for questions, connecting the text to prior knowledge, summarizing, connecting one part of the text to another, and recognizing text structures (Janzen and Stoller, 1998).

One's engagement with metacognitive awareness and regulation of reading strategies can be closely related to reading proficiency and reading performance in the target language (Kleitzen, 1991; Singhal, 2001; Bolanos, 2012; Lin and Yu, 2013). While reading in the target language, FL learners use strategies to increase reading comprehension when they lack proficiency in reading (Mokhtari and Sheorey, 2002; Magogwe, 2013). Performance on a reading task or test may be an indicator of using effective and appropriate strategies (Phakiti, 2003; de Milliano et al., 2014) whereas learners who do well on general reading performance tests may fail to use effective reading strategies when they are reading academic materials (Mokhtari and Sheorey, 2002). Similarly, higher proficiency in a foreign language may not always be equal to effective strategy use and reading comprehension (Li and Munby, 1996). That is, learners who are required to read in FL and who are even successful in reading performance tests or regarded as proficient language users may still lack awareness of using effective reading strategies related to their academic studies. In this respect, Grabe (2009) highlights the importance of metalinguistic awareness for strategic readers and claims that what differentiates good readers from poor ones can be attributed to differences in the level of metalinguistic awareness.

Previous research has displayed that students' metacognitive awareness of their reading processes is related to their ability to read and succeed academically (Carrell, 1991; Singhal, 2001; Lau and Chan, 2003; Mokhtari and Reichard, 2004; Magogwe, 2013). Especially at the university level, students are required to read and analyze various academic texts such as journals, research articles, course books, reports and so on in the target language. In English as a foreign language (EFL) contexts, where the instruction language is English or where students are required to read academic materials written in English, they are expected to have high level of competence as part of their study requirement. Lau and Chan (2003) assert that awareness of metacognitive and cognitive strategies play a part in increasing efficiency of the reading process. In this respect, identifying reading strategies used by successful and unsuccessful learners while reading academic texts in relation to FL reading proficiency is highlighted as a research paradigm that requires attention (Singhal, 2001; Mokhtari and Sheorey, 2002; Mokhtari and Reichard, 2004; Magogwe, 2013). Hence, this paper aims to investigate whether there is a

relationship between the perceived use of reading strategies while reading academic or school related materials in FL and reading proficiency in the target language in Turkish EFL context.

FL reading strategy use and FL reading proficiency

FL reading development is influenced by many factors and the role of sociocultural variables is assumed to affect the way FL readers deal with texts (Grabe, 2009). Sociocultural theory of reading in the target language proposes that culture in which learners live and variation in sociocultural factors contribute to FL reading improvement (Saman and Dehqar, 2013; Yang, 2013). FL learners' social interactions with the texts and the culture they are living in with respect to their first language may then have an effect on dealing with texts in the target language. In this respect, FL readers are considered to be active participants in the reading process rather than passive, and they go through many processes while dealing with texts. Throughout this active process, FL learners may be asked to critically review a text or compare conflicting texts in academic sense (Grabe, 2009). Academic reading requires in-depth comprehension. Challenges generally stem from the discrepancies between what FL learners know and what native speakers know about the target language and contents of academic texts (Li and Munby, 1996). In this challenging environment of FL academic reading, role of FL reading proficiency and FL reading strategy use become crucial since these factors may have an effect on students' engagement with academic texts.

Various studies have been conducted in different cultural contexts on FL reading strategy use especially when dealing with academic texts. Difference between native and non-native readers' reading strategy use is one venue for investigation. Non-native readers have been reported to use support mechanisms such as using a dictionary, taking notes or underlining textual information significantly more than native speakers (Sheorey and Mokhtari, 2001). In an academic reading environment, Mokhtari and Reichard (2004) assert that despite differences in socio-cultural environments, native and non-native readers may exhibit similar patterns of strategy awareness and report usage while reading academic materials in English. What is more, adults may have similar levels of metacognitive awareness regardless of English being first or second/foreign language.

In a rather recent study, Magogwe (2013) investigated a similar phenomenon in a Botswana context by focusing on identifying metacognitive awareness of reading strategies of university students from different academic proficiencies. Results have yielded that while reading academic materials, university students reported high use of metacognitive FL reading strategies regardless of their proficiency levels. More proficient learners reported more

meaningful and purposeful reading and used high metacognitive strategies compared to less proficient ones. At this point, there appears a need for examining perceived use of reading strategies of learners in different cultural contexts since readers' own cultures may make a difference in their use of certain reading strategies. However, all studies mentioned so far based on learners' self-reports of proficiency levels; thus, they lack reliable proficiency tests to investigate the relationship between FL reading strategy use and FL reading proficiency.

Research in FL reading also focused on strategies used during the mastery of some sub-skills such as recognizing meaning of a word in isolation, deriving meaning from context, finding answers to comprehension questions, and forming judgment. In a study conducted by Ahmad and Asraf (2004), good and average FL readers in a Malaysian context were investigated in terms of their strategy use while answering comprehension questions based on reading texts. Findings of the study indicated that good EFL readers differ from average readers as they used more strategies while answering comprehension questions. Moreover, good FL readers were able to gear their answers specifically to need and context of the questions in the FL comprehension test. Although concepts of 'good' and 'average' readers used in the study were rather vague, this study shed light on how different readers approached texts by using different strategies.

In FL reading, the notion of good and poor readers is closely associated with FL reading proficiency. Ghavamnia et al. (2013) explored the differences between proficient and less proficient Iranian readers' strategy use while dealing with expository texts. Proficient readers in their study were reported to use metacognitive strategies effectively and approached reading as a meaning-making process. In contrast, less proficient readers isolated sentences from the text for basic understanding and focused on reading as a word-level decoding process. The researchers stressed the need for conducting more studies on FL reading strategy use in different contexts. Ghavamnia et al. (2013) concluded that understanding the relationship between strategy use and proficiency is crucial for improving reading comprehension especially of less proficient readers.

In Turkish EFL context, there is a scarcity of studies on the relationship between proficiency in FL reading and FL reading strategy use of learners in academic settings. In one study, Yiğiter et al. (2005) focused on determining reading strategies good language learners employ in pre, during, and post-reading stages of instruction in a Turkish EFL context. The results of the study indicated that poor and good readers differed in many aspects of their strategy use. In another study, Çubukçu (2008) focused on reading strategies of EFL teacher trainees at a state university in Turkey with the purpose of determining effectiveness of systematic direct instruction of multiple metacognitive strategies while dealing with academic tasks. Findings of the study have shown that systematic

explicit instruction about the concept of metacognition and reading strategies helped students better comprehend importance of reading strategies and apply them to different reading tasks. As a result, this study offered valuable implications for EFL learners and teachers by highlighting the importance of employing certain strategies while reading in the target language.

All studies reviewed here highlighted the importance of effective use of FL reading strategies in order to get meaning out of FL texts more effectively and achieve success in target language reading. Singhal (2001) underlines the need for conducting more studies to identify reading strategies used by successful and unsuccessful learners since research on FL reading strategies generally focus on teaching FL learners a variety of reading strategies rather than revealing what these students actually use. It is put forward that the first step in reading strategy instruction should be to identify what reading strategies learners employ (Mokhtari and Reichard, 2004). Especially while reading academic or school related materials, students may not be aware of their own reading strategies and thus may not benefit from strategy instruction without such awareness.

Review of literature also suggests that FL reading proficiency is an important variable that needs to be taken into consideration since it may affect reading strategy use of learners. What is more, studies in Turkish EFL context on FL reading strategies are scarce, and Çubukçu (2008) pinpoints the urgent need for more studies, which would enlighten FL reading strategy use of Turkish EFL learners. Sheorey and Mokhtari (2001) also suggest conducting studies in different contexts, which would aim at identifying FL reading strategies employed while reading academic materials in order to better understand how learners in various contexts use these strategies. To the author's best knowledge, there has been no prior study conducted in Turkish EFL context focusing both qualitatively and quantitatively on the relation between perceived awareness of FL reading strategies while reading academic materials and FL reading proficiency. Based on this gap, this study seeks to find the answers of the following research questions:

1. Which FL reading strategies do students in a Turkish EFL context use while reading academic materials?
2. Does proficiency in FL reading make a difference in the use of FL reading strategies while reading academic materials?
3. How do learners with high and low FL reading proficiency use FL reading strategies while reading academic materials?

METHODOLOGY

Participants

Participants of this study were 55 third year Turkish students (36

females, 19 males) enrolled in English Language Teaching (ELT) Department of a Turkish university. Their age ranged from 19 to 22. A non-probabilistic convenient sampling (Creswell, 2005) was preferred for the selection of participants as they were available at the time of the study and were typical EFL learners. Participants studied English language teaching and they had to deal with academic texts in English since the required language at the department was English. In terms of academic reading, participants were reading various materials for academic studies ranging from journal articles, course books to research papers. Participants had taken various academic courses were required to read many academic materials. Language of instruction was English and students were expected to be able to comprehend and interpret these materials effectively to achieve success in their academic studies. Thus, they had experience in academic reading in FL at the time of the study. All the students were required to read the same academic materials. They had prior knowledge about the concept of learning strategies since they came across the meaning and use of it in many academic courses they had taken so far. Students were coming from similar backgrounds with similar FL reading experiences. Students coming from other departments were excluded from the study because academic reading materials they were reading might be different from academic texts participants were reading. The study was based on the voluntary participation of the students. They were informed that they could withdraw from the study. From an ethical perspective, they signed consent forms that guaranteed the confidentiality of their participation. This study was concerned with the FL reading proficiencies of the participants; thus, their general language proficiency was not taken into account for the purposes of the study.

Instruments

This study includes both quantitative and qualitative data collection instruments to provide more insight into FL reading strategies and its relation to FL reading proficiency. Nunan (1992) and Creswell (2005) suggest using various data collection procedures in order to shed more light on the research problem being investigated. Thus, data triangulation was aimed to propose more promising results about the relationship between FL reading strategy use and FL reading proficiency.

In the quantitative part, Survey of Reading Strategies (SORS) and the reading section of a TOEFL test were used. SORS is a Likert type scale developed by Mokhtari and Sheorey (2002). It is intended to measure adolescent or adult ESL/EFL students' metacognitive awareness and perceived use of reading strategies while reading academic materials. Main aim of the survey is to collect information about various strategies students use when they read school-related academic materials in English. The instrument has three subscales, namely *Global Strategies*, *Problem Solving Strategies* and *Support Strategies*. *Global Strategies* are intentional techniques such as having a purpose in mind and previewing the text as to its length. *Problem Solving Strategies* are the actions and procedures that readers use while working directly with the text such as adjusting one's speed of reading when the material becomes difficult or easy and guessing the meaning of unknown words. The final subscale *Support Strategies* are the ones intended to aid the reader in comprehending the text such as using dictionary and taking notes. While responding to survey items, participants were required to circle the number from 1 to 5 (ranging from never to always) that apply to them for statements like '*I try to get back on track when I lose concentration*' and '*when reading I decide what to read closely and what to ignore*'.

The instrument was originally found to have internal consistency (Cronbach Alpha 0.92), but in order to use the instrument in the Turkish EFL context; Cronbach Alpha reliability coefficient was computed (0.85) again. English version of the instrument was

administered to participants and when they had difficulty in understanding any of the items, researcher provided further explanations. The survey was given at appropriate times and participants were not required to respond to survey items in a limited time.

This study also aimed at investigating whether proficiency in FL reading makes a difference in the use of FL reading strategies while reading academic materials. Participants' FL reading proficiency in English was determined by administering reading section of a Test of English as a Foreign Language (TOEFL). TOEFL reading test was appropriate for the aims of this study since this test measured ability to understand university-level academic texts and passages. TOEFL reading section was based on understanding academic reading texts for the purposes of reading to find information, basic comprehension and reading to learn (The Official Guide to the TOEFL, 2009). These purposes were considered as three main purposes for academic reading. There were five passages and length of each passage was approximately 700 words followed by 12-14 questions per passage. Passages were from university-level textbooks and covered a variety of topics appropriate for academic reading. Hence, reading section of TOEFL was able to measure how well students could read academic material (The Official Guide to the TOEFL, 2009). 100 minutes were allocated for the test.

In the qualitative part, in order to find out how high and low proficient learners used FL reading strategies while reading academic materials, semi-structured interviews (see Appendix A) were carried out. Top five students who scored high and bottom five students who scored low on the reading section of TOEFL were selected for interviews. These interviews consisted of four open-ended questions and were carried out in native language of the participants in order to make them feel comfortable and express their ideas more intimately. Interviews with each participant lasted approximately about 15 min. Each interview was carried out at appropriate times both for the participants and the researcher. Confidentiality of participants' responses was also guaranteed.

Data analysis procedures

Data gathered were analyzed quantitatively and qualitatively. In order to identify what FL reading strategies participants employed, SORS scores for each subscale were calculated by using scoring guidelines provided by Mokhtari and Sheorey (2002). Participants' reading section TOEFL scores were calculated by following directions provided by the official TOEFL center. The maximum score a learner could take from the test was 30. In order to find out whether FL reading proficiency made a difference in participants' FL reading strategy use, Pearson product moment correlation coefficient was computed between these two variables. It was also important to know extent of the relationship and whether FL reading strategy use was an important factor in predicting FL reading proficiency. For this purpose, further linear regression analysis was carried out.

Semi-structured interview with ten participants (top five students who scored high and bottom five students who scored low on the reading section of the TOEFL) in qualitative part were audiotaped and then transcribed. Interview data were coded through open coding by two separate raters based on the grounded theory for qualitative analysis (Corbin and Strauss, 2008; Boeije, 2010; Bryant, 2014). Aim of coding the interview data was to find out how high and low proficient readers in the study differed in their FL strategy use and whether their expressions supported quantitative findings. As suggested by Charmez (2006), rather than preconceived categories or codes, emerging codes were identified according to students' own expressions about their FL reading strategy use. Through open coding line-by-line, interview data were broken into parts and through close examination they were compared for similarities and differences. Extracts from student

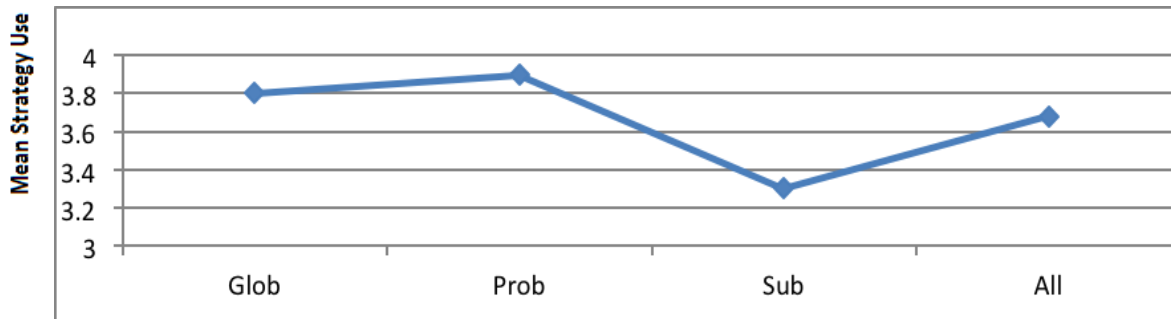


Figure 1. Distribution of the mean strategy use according to FL reading strategy categories.

interviews were included in the study to reflect their perceptions on FL reading strategy use and its relation to FL reading proficiency. Two separate raters checked interview data and selected excerpts that reflected differences between high and low proficient FL readers in the study. Students were given number pseudonyms in the excerpts.

RESULTS AND DISCUSSION

Students' FL reading strategy use

In order to answer the first research question, students' responses to SORS were analyzed. According to SORS scoring guideline, mean strategy use of 3.50 and above indicate high FL reading strategy use, whereas mean use between 3.49 and 2.50 indicate medium FL reading strategy use, and mean strategy use of 2.49 and below indicate low FL reading strategy use. Figure 1 shows distribution of means according to three sub-categories and overall strategy use for all students regardless of their language proficiency.

Strategy categories

As can be seen in Figure 1, overall FL reading strategy use is high (3.68) among all participants ($n=55$) in the study. Mostly used FL reading strategy category is Problem-Solving reading strategies (3.9) and is followed by Global reading strategies (3.8) and Support reading strategies (3.3) respectively.

Table 1 displays distribution of FL reading strategies in detail with means and standard deviations according to reading strategy categories. Standard deviations are included to show how data are spread out in accordance with mean scores.

A closer examination of Table 1 shows that of 13 strategies related to Global reading strategies, 11 fell in the high usage category, and two strategies fell in the medium usage category. As for eight FL reading strategies related to Problem-Solving FL reading strategies, six of them were in high usage category

whereas two of them were in medium usage category. For the final sub-category of FL reading strategies, support reading strategies, only two of nine strategies were in high usage category, five of them fell into medium usage category, and two of them fell into low usage category. Table 2 shows FL reading strategy use of participants in order from most to least used. Five top most used strategies were highlighted.

As displayed in Table 2, students mostly used underlining and circling information in the text to support their reading. When text becomes difficult they paid closer attention to reading. Top five mostly used FL reading strategies also included re-reading the text to handle the difficulties, using context clues, and having a purpose in mind while reading academic materials. As for the least preferred FL reading strategy use, students did not choose paraphrasing for better understanding to support reading, and they did not prefer visualizing information as a strategy to solve problems while reading academic materials. Moreover, *Support* reading strategies such as asking oneself questions, translating from English into their first language and reading aloud when text becomes difficult were the least chosen strategies by the students.

Relationship between FL reading strategy use and FL reading proficiency

In order to find whether FL reading proficiency made a difference in FL reading strategy use of participants, scores on the SORS and TOEFL were correlated with each other by using Pearson product moment correlation coefficient ($r=0.243$). Although there is a slightly significant correlation between FL reading proficiency and FL reading strategy use, it is important to find out extent of the relationship between these variables. For this purpose, linear regression analysis was carried out. TOEFL reading scores of the participants was the dependent variable whereas FL reading strategy use was the independent variable.

Table 3 shows that FL reading strategy use of the

Table 1. Distribution of Reading Strategies according to SORS Categories.

Categories	Strategy	Mean	SD
GLOB 1	Having a purpose for reading	4.18	0.74
GLOB 2	Using prior knowledge	3.96	0.85
GLOB 3	Previewing the text before reading	3.80	1.14
GLOB 4	Checking how text content fits purpose	3.76	0.88
GLOB 5	Skimming to note text characteristics	3.81	1.24
GLOB 6	Determining what to read	4.07	0.74
GLOB 7	Using text features (e.g., tables, figures)	3.49	1.12
GLOB 8	Using context clues	4.18	0.74
GLOB 9	Using typographical aids (e.g., italics)	3.76	0.96
GLOB 10	Critically evaluating what is read	3.54	0.83
GLOB 11	Resolving conflicting information	3.89	0.85
GLOB 12	Predicting or guessing text meaning	3.94	1.02
GLOB 13	Confirming predictions	3.32	1.00
PROB 1	Reading slowly and carefully	4.16	0.91
PROB 2	Trying to stay focused on reading	4.00	0.72
PROB 3	Adjusting reading speed	4.03	0.71
PROB 4	Paying close attention to reading	4.29	0.73
PROB 5	Pausing and thinking about reading	3.30	0.85
PROB 6	Visualizing information read	3.21	1.11
PROB 7	Re-reading for better understanding	4.21	0.85
PROB 8	Guessing meaning of unknown words	4.00	0.74
SUP 1	Taking notes while reading	3.49	0.99
SUP 2	Reading aloud when text becomes difficult	2.39	1.13
SUP 3	Underlining or circling information in the text	4.60	0.85
SUP 4	Using reference materials (e.g., dictionary)	3.30	0.99
SUP 5	Paraphrasing for better understanding	3.21	1.00
SUP 6	Going back and forth in the text	3.96	0.71
SUP 7	Asking oneself questions	2.83	0.93
SUP 8	Translating from English into L1	2.49	1.11
SUP 9	Thinking about information both in English and L1	3.45	0.97

Table 2. Distribution of the most and the least used FL reading strategies.

Category	Strategy
SUP 3	Underlining or circling information in the text
PROB 4	Paying close attention to reading
PROB 7	Re-reading for better understanding
GLOB 8	Using context clues
GLOB 1	Having a purposes for reading
PROB 1	Reading slowly and carefully
GLOB 6	Determining what to read
PROB 3	Adjusting reading speed
PROB 2	Trying to stayed focused on reading
PROB 8	Guessing meaning of unknown words
SUP 6	Going back and forth in the text
GLOB 2	Using prior knowledge
GLOB 12	Predicting or guessing text meaning
GLOB 11	Resolving conflicting information
GLOB 5	Skimming to note text characteristics

Table 2. Cont'd

GLOB 3	Previewing the text before reading
GLOB 4	Checking how text content fits purpose
GLOB 9	Using typographical aids (e.g., italics)
GLOB 10	Critically evaluating what is read
GLOB 7	Using text features (e.g., tables, figures)
SUP 1	Taking notes while reading
SUP 9	Thinking about information both in English and L1
GLOB 13	Confirming predictions
PROB 5	Pausing and thinking about reading
SUP 4	Using reference materials (e.g., dictionary)
SUP 5	Paraphrasing for better understanding
PROB 6	Visualizing information read
SUP 7	Asking oneself questions
SUP 8	Translating from English into L1
SUP 2	Reading aloud when text becomes difficult

Table 3. Linear regression analysis between TOEFL reading scores and FL reading strategy use.

Predictor variable	N*	B-value	R	R ²	F	P
FL reading strategy use	55	0.859	0.243	0.059	3.322	0.074

N*: Number of the participants.

participants is positively correlated with TOEFL reading scores (B-value = 0.859). However, this correlation is not statistically significant ($p = 0.074 > 0.05$).

That is, an increase in FL reading strategy scores does not indicate an increase in the TOEFL reading scores and vice versa. ANOVA results also confirm this finding ($F = 3.32$; 1; 53; $p = 0.074$). When variance between FL reading strategy use scores and TOEFL reading scores (R^2) is taken into account, the FL reading strategy use can only explain 5.9% of the total variance. That is, TOEFL reading scores are not influenced by FL reading strategy use of the participants, and similarly FL reading strategy use scores are not influenced by TOEFL reading scores.

Scatter plot of regression analysis displayed that regression did not follow a linear pattern and data were rather scattered. Such scattered data show that FL reading strategy use does not have a predictive value on TOEFL reading scores. Although a slightly statistical significant correlation was found between TOEFL reading scores and FL reading strategy use scores of participants in the correlation analysis ($r = 0.243$), this correlation is not significant to have some predictions related to variables.

As a result, FL reading strategy use is not a strong predictor of FL reading proficiency and similarly FL reading proficiency is not a strong predictor of FL reading strategy use.

High and low proficient readers' use of FL reading strategies

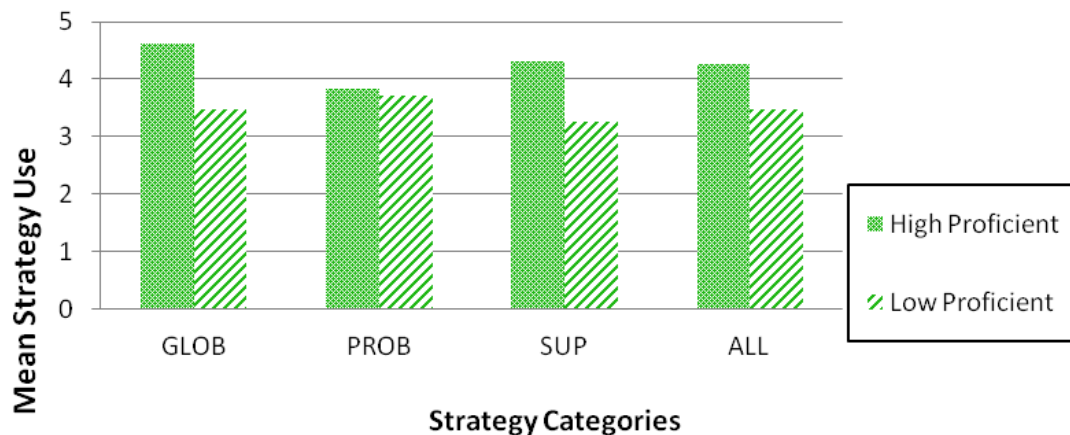
The third research question aimed at investigating how students with high and low FL reading proficiency used FL reading strategies while reading academic materials. According to TOEFL reading scores, top five and bottom five students were selected for interview to support quantitative data and elicit further opinions. Table 4 shows TOEFL reading scores of high proficient and low proficient participants taken for interviews.

As shown in Table 4, top five students' TOEFL reading scores ranged from 22 to 28 whereas bottom five low students' TOEFL reading scores ranged from 8 to 12. It indicates that there is variety among high and low proficient students in terms of FL reading proficiency. As for their FL reading strategy use, Figure 2 shows distribution of means according to three sub-categories and overall strategy use for five high and five low proficient readers.

As displayed in Figure 2, five high proficient students in FL reading generally used more FL reading strategies (4.25) compared to five students with low FL reading proficiency (3.48). For students with high reading proficiency, mostly used FL reading strategy category is *Global* reading strategies (4.62) and is followed by *Support* reading strategies (4.30) and *Problem-Solving* reading strategies (3.84) respectively. On the contrary,

Table 4. TOEFL reading scores of the students participated in interviews.

Students with high reading proficiency	TOEFL scores	Students with high reading proficiency	TOEFL scores
Student 1	28	Student 6	12
Student 2	27	Student 7	12
Student 3	25	Student 8	9
Student 4	24	Student 9	8
Student 5	22	Student 10	8

**Figure 2.** Distribution of mean strategy use according to FL reading strategy categories for high and low proficient students.

five students with low FL reading proficiency used *Problem-Solving* strategies (3.72) more than *Global* reading strategies (3.48) and *Support* reading strategies (3.25) respectively. For these students, *Problem-Solving* strategy use was high (mean of 3.5 and higher) whereas *Global* reading and *Support* reading strategy use were medium (means between 2.5 and 3.49).

In order to shed more light into FL reading strategies, learners with high and low FL reading proficiency (n=10) were asked whether they faced with difficulties while reading academic materials in English such as course books, assignments, articles, and research reports. A total of 28 codes were identified through open coding about difficulties participants expressed while reading academic texts in English. 18 of these codes referred to the difficulties expressed by low proficient readers. Among these, unknown vocabulary, length of academic texts and lack of sufficient background knowledge about content were the mostly stated difficulties. The remaining 10 codes identified about challenges belonged to high proficient readers in interviews. Dealing with cultural content, metalanguage use, identifying referring expressions and identifying underlying meaning were the mostly stated ones. Both groups shared 12 of the codes expressing the same difficulties such as dealing with

complex linguistic structures, making connections among the parts of the text and making critical evaluation of texts.

Although both high proficient and low proficient readers expressed that they faced with certain difficulties while reading academic materials, they differed in how they handled difficulties. That is, their strategy use differed. 42 codes were identified regarding strategy use of both low and high proficient readers in the study. Only 10 of these codes belonged to low proficient ones since they mentioned about a limited use of FL reading strategies. Some of the strategies they used were trying to stay focused while reading, looking up the unknown words from the dictionary, and re-reading the text many times for better understanding. In support with quantitative findings, low proficient readers in interviews mentioned the use of *Problem Solving* strategies mostly followed by *Support* and *Global* strategies while dealing with academic texts. Different from low proficient readers, remaining 32 codes included expressions of high proficient readers on their use of FL reading strategies such as using contextual clues, information in text, taking notes, underlining important information and visualizing information. Quantitative data gathered through SORS about FL reading strategy use of high proficient students were supported by the interviews. That is, high proficient

readers reported to use *Global* reading strategies most, and it was followed by *Support* reading strategies and *Problem-Solving* strategies. Excerpts below taken from interviews illustrate difference between high and low proficient readers' FL reading strategy use:

a. (Student 7- student with low FL reading proficiency)

"Most of the time I feel lost especially while reading academic articles. It seems that language used in such texts is too complex for me to understand. I usually give up reading those materials but it affects my success. In order to overcome such situation, I try to translate texts into my native language and discuss with other friends. I don't think I can handle these materials on my own"

b. (Student 1- student with high FL reading proficiency)

"Of course I experience some difficulties while reading academic materials...we have to deal with authentic texts and language in these texts is sometimes beyond our level. But I try to understand...For example, I re-read the text many times if I have difficulty. In each reading, I understand different points and it helps very much. I try to use contextual clues to understand unknown words or sometimes I use a dictionary... I sometimes search for unknown concepts on the Internet and I try to make a connection with what I already know about topics."

As displayed in the student excerpt above, it was evident from learners' expressions that learners with high FL reading proficiency were more aware of FL reading strategies and their importance for successful reading experience. They used various FL reading strategies while reading academic materials. Students from high FL reading proficiency level commented on their FL reading strategy use as:

c. (Student 3- student with high FL reading proficiency)

"I take notes....they are usually in phrases in my own words in margins. When I read my own sentences, they make sense for me"

d. (Student 4- student with high FL reading proficiency)

"Generally, I highlight important information. When I go back to text again, those highlighted information helps me... I sometimes summarize the text if I think information is really important. I have a small notebook for this."

In contrast to high proficient FL readers, although learners with low FL reading proficiency knew concept of strategies they did not employ effective and appropriate reading strategies while dealing with academic materials in English. Students' excerpts below include low proficient

students' ideas about their FL reading strategy use:

e. (Student 6- student with low FL reading proficiency)

" I know highlighting important points in text is crucial, but for the materials we have to read I cannot differentiate important points from unimportant ones. I think all the information is important so I have difficulties... I find myself highlighting every single sentence in academic materials"

f. (Student 8- student with low FL reading proficiency)

"I know some strategies for reading, but...just their names. I don't know which ones are useful for me. So I think I can't use the strategies I know"

As evident from the excerpt above, although low proficient FL readers displayed an awareness of FL reading strategy use and their importance, they were unable to use them appropriately when they were in need while reading academic materials. All low proficient readers in interviews admitted that they usually experienced difficulty while reading various academic materials and they were not successful in the courses that required large amounts of academic reading. One of the students with low FL reading proficiency in interviews expressed the difficulty she faced while reading academic materials and its effects on the courses as:

g. (Student 7- student with low FL reading proficiency)

"I always have difficulty in understanding academic texts and I can't deal with them successfully...I mean I can't follow ideas in academic texts and can't handle texts with so many unknown words. Especially for the courses related to our field, for example methodology or linguistics, I don't have good grades. These classes require you to read so many texts. I waste time trying to understand important points in these texts... You see I'm not a good reader at all."

To support the quantitative findings and elicit more opinions, selected high and low proficient readers were asked whether they think their level of proficiency in FL reading was important in understanding and comprehending academic materials, and whether their proficiency in FL reading made a difference in the employment of FL reading strategies while reading academic materials. All of the students taken for the interview (n=10) thought level of FL reading proficiency was important for understanding academic materials.

Four of the students told that there might be a relationship between FL reading proficiency and FL reading strategies whereas six of them acknowledged that they did not think about such a relationship before.

The following student excerpts taken from the interviews illustrate students' ideas about this relationship.

h. (Student 8- student with low FL reading proficiency)

"I haven't thought about such a relationship between proficiency in FL reading and strategy use".

i. (Student 2- student with high FL reading proficiency)

"I think both proficiency in reading and strategy use are very important.... Both strategy use and proficiency affect how you understand texts.... Especially literary texts."

As a consequence, results of the study have shown that participants used various FL reading strategies while reading academic materials but there was not a strong relationship between FL reading strategy use and FL reading proficiency. Moreover, interview data have indicated that learners with high and low FL reading proficiency differed in their employment and awareness of effective FL reading strategies.

DISCUSSION

The study reported here unveiled metacognitive awareness and perceived use of reading strategies of learners in a Turkish EFL context while reading academic materials. Results of the study have yielded that *Problem-Solving* strategies such as adjusting reading speed, paying close attention to reading and visualizing information are mostly used strategies by the participants of the study. What is more, *Global* reading strategies such as having a purpose for reading, using context clues and predicting or guessing content of the text appear as the second mostly used FL reading strategies. On the other hand, *Support* reading strategies such as taking notes while reading and paraphrasing information are not used much by the participants. In general, Turkish EFL learners in the study reported high usage of FL reading strategies while reading academic materials.

This study adds to current literature on FL reading strategies by displaying perceived use of FL reading strategies of students in a Turkish EFL context. Findings of the study related to types of FL reading strategies used correspond to findings of Sheorey and Mokhtari (2001) who found that non-native readers showed a high preference for using FL reading strategies while reading academic materials. In this study, non-native readers highly used *Support* reading mechanisms such as using a dictionary, taking notes or underlining textual information. Likewise, Mokhtari and Reichard (2004) found that both Moroccan and American university level students reported high usage of *Support* reading strategies and it was followed by *Global* reading strategies and *Problem-Solving* strategies respectively. However, these findings are not congruent with the findings of the present study as participants had a clear preference for the use of *Problem-Solving* strategies. In

contrast to findings of Sheorey and Mokhtari (2001) and Mokhtari and Reichard (2004), in a recent study by Martinez (2008) Spanish university students were found to show higher reported use for *Problem-Solving* and *Global* reading strategies. Findings of the present study are in corroboration with that of Martinez (2008) as students in a Turkish university EFL contexts reported high preference for *Problem-Solving* and *Global* FL reading strategies rather than *Support* reading strategies.

One possible explanation for this finding may be the amounts of the problems participants faced while reading academic materials. Participants reported to experience problems while reading academic articles in their own field, ELT, due to difficult terminology and complex structures these texts include. Such academic texts involve complex use of grammar, a great deal of unknown vocabulary and cultural concepts that are not familiar to Turkish students. Since those texts are highly important for their academic success, students may feel like they have to understand every bit and piece of these texts, which in turn, create some problems for them. This study puts forward that students in a Turkish EFL context generally try to solve problems related to academic texts in order to handle challenges they face in FL reading. Hence, difficulties and problems students experienced with such academic materials in this study may reveal a preference for the use of *Problem-Solving* strategies. A similar concern was reported by Dhieb-Henia (2003) who found that students often have problems in dealing with academic texts in their fields of study due to the high range of vocabulary and relative importance of these texts to students. She further claims that using appropriate reading strategies are crucial for these students to overcome problems they experience. Hence, students in this study may have a preference for using *Problem-Solving* strategies to deal with difficulties imposed by academic reading materials.

One of the aims of the study was to investigate whether proficiency in the target language reading made a difference in the use of FL reading strategies. Results of correlation and regression analyses in general have indicated that participants' use of FL reading strategies was not dependent on their FL reading proficiency and vice versa. Although all students reported a high usage of FL reading strategies in general, when high and low proficiency readers were interviewed, it was revealed that they differed in their employment of FL reading strategies. High proficient FL readers were more aware of using appropriate and effective strategies while dealing with academic materials. On the other hand, even though learners with low levels of FL reading proficiency highlighted the importance of using FL reading strategies for more successful reading experience, it was apparent from their comments that they were not aware of how to employ appropriate reading strategies for their academic studies.

One explanation of this can be the difference in

metacognitive awareness of high and low proficient readers. As reported by Grabe (2009), although all readers use strategies good readers are more metacognitively aware of strategic responses to text difficulties, and thus they use strategies more effectively than do poor readers.

Findings of the study can be evaluated in comparison with that of Ahmad and Asraf (2004) who found that good readers were more successful in deriving meaning from context, finding main ideas and forming judgment about text. Similarly, Yiğiter et al. (2005) emphasized that good readers were more successful in employment of certain reading strategies like predicting reason the author is writing, guessing meaning of unknown words, and identifying reasons or evidence writer gives. The high proficient readers in this study reported similar tendency in using effective reading strategies with that of good readers in Ahmad and Asraf's (2004) and Yiğiter et al.'s (2005) studies. That is, these students were more successful in employing effective strategies like finding the main ideas, guessing meaning from context and using context clues while reading academic materials. Students with high reading proficiency in recent study also reported to be more successful in selecting effective FL reading strategies for their purpose while reading academic materials.

As a consequence, results of the study emphasized awareness of using FL reading strategies and employment of appropriate and effective FL reading strategies while dealing with academic materials. It is also important to note that at this point that this study makes an attempt to investigate whether proficiency in FL reading make a difference in the use of FL reading strategies while reading academic materials rather than claiming that some strategies are better than the others and have the same effects for all readers. All in all, discussion of the results in comparison to previous studies in this section apparently puts forward that findings presented here will be quite helpful to draw a picture of the Turkish EFL students' perceived awareness of FL strategy use and its relation to FL reading proficiency.

Conclusion

The prominent contribution of the recent study reported here to ELT field is that it is one of the first attempts to shed a considerable light on the FL reading strategy use of Turkish EFL students and the role of FL reading proficiency in their perceived awareness of reading strategy use while reading academic materials. Findings revealed that students in a Turkish EFL context use various FL reading strategies frequently. Although there was not a strong correlation between FL reading strategy use and FL reading proficiency, low and high proficient readers differed in their employment of FL reading

strategies. This finding highlights a need for strategy awareness and this study has certain implications from a pedagogical point of view for both language teachers and learners in different cultural contexts.

One implication is that teachers may lead low proficient readers to apply strategies they learned in various contexts including academic reading. Low proficient learners in this study stated that they knew the concept of reading strategies, but they had difficulty in determining which strategy worked best for them. In this respect, low proficient readers may need more practice for employing appropriate strategies in academic reading. In order to help these learners, teachers may design activities to guide learners use effective FL reading strategies while reading academic materials.

Another implication is that it is important to leave aside the idea that learners should already be able to use FL reading strategies when they come to academic reading context. That is, strategy training should not be limited to general reading but it should also be expanded to academic reading context. According to Mokhtari and Reichard (2004), even high proficient learners can experience difficulties while reading academic materials due to unfamiliar terminology, type of information they include and lack of necessary background to understand these materials. High proficient learners in this study reported similar concerns for their reading of academic materials. Hence, strategy training may be quite beneficial for both high and low proficient learners in order to comprehend and evaluate academic texts. Many researchers emphasize implementation of strategy training and it is assumed that such training should include teaching of how to gear use of reading strategies to different purposes of reading (Song, 1998; Singhal, 2001; Lau and Chan, 2003; Ikeda and Takeuchi, 2006; Çubukçu, 2008; He, 2008; Ghavamnia et al., 2013; Lin and Yu, 2013).

Administering instruments to students which may help them to be aware of their existing and various other FL reading strategies may be quite helpful to foster more awareness on reading strategies available. One of the students in the study stated that the instrument used in the study, SORS, was beneficial for her to become aware of the types of strategies to be used while reading academic materials. In addition to administering these kinds of instruments, self-regulated reading activities and strategy tips can be provided to learners in order to create awareness for employment of effective and appropriate strategies (de Milliano et al., 2014). Martinez (2008) pinpoints that if students are not aware of their own FL reading strategies, they cannot adopt effective strategies to deal with target language texts. Thus, the first step in strategy instruction may be to help learners realize whether they employ reading strategies, and if they do, what types of reading strategies work best for their reading purposes.

Teachers have an indispensable role in guiding

learners become aware of FL reading strategies (Tsai et al., 2010). One implication of this study is that teachers, especially English for Academic Purposes (EAP) teachers, should pay close attention to problems their learners face while dealing with academic materials and guide them in the employment of effective reading strategies. For academic texts, learners may need certain amount of background knowledge about the genre or topics. Some of the students in the study expressed that most of the time they had difficulty in reading academic materials due to lack of necessary background information or field-specific terminology. Moreover, they expressed that they cannot use reading strategies if texts are not familiar to them. To overcome these difficulties, teachers can provide necessary information about academic texts and show learners strategies they can use to activate such information.

Teaching and implementation of FL reading strategies may also help to reduce stress and frustration students may feel while dealing with academic materials (Alves-Martins et al., 2002; Aarnoutse and Schellings, 2003). Furthermore, learners may overcome their unrealistic expectations for understanding everything they read by employing appropriate FL reading strategies. They may also develop capability of using context clues and making correct guesses whenever they encounter with an unknown vocabulary item (Horwitz, 2001). Using effective and appropriate FL reading strategies may also foster more learner autonomy. That is, students can take responsibility of their own reading process and realize their strengths and weaknesses while reading target language texts. Moreover, applying reading strategies can increase motivation of learners (Aarnoutse and Schellings, 2003; Lau and Chan, 2003) and help them deal with academic texts more easily.

As a conclusion, this study pinpointed importance of awareness and employment of effective and appropriate FL reading strategies for more successful reading experience in academic contexts. One limitation of this study is that qualitative data regarding differences in FL reading strategy use of low and high proficient readers came only from interviews. A further study with different data collection instruments such as think aloud protocols while students are reading academic texts would be designed. A close investigation of FL reading strategy use in general teaching and learning contexts other than academic reading context would also be helpful to shed a considerable amount of light to find out how different readers use FL reading strategies in different contexts. What is more, studies in cultural contexts similar to or different from Turkish EFL students' would provide comparable results for FL reading strategy use of students in different cultural contexts.

Conflict of Interests

The author has not declared any conflicts of interest.

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Appendix A- Semi-Structured Interview Questions

1. Do you face difficulties while reading academic materials in English such as course books, assignments and articles? If yes, what kind of difficulties do you experience? How do you think you overcome these difficulties?
2. Do you use FL reading strategies while reading academic materials? If yes, what kind of reading strategies do you employ while reading those materials in English?
3. Do you think your level of FL reading proficiency in English is important in understanding and comprehending those academic materials?
4. Does your FL reading proficiency make a difference in your employment of FL reading strategies while reading academic materials? If yes, how?

Full Length Research Paper

Metaphorical perceptions of class teacher candidates in relation to “music course” conceptⁱ

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The purpose of this research is to determine the perceptions of the class teacher candidates in relation to “Music Course” concept via metaphors. The study was conducted at “Primary School Teaching Department” with 56 undergraduate students studying in Dicle University Ziya Gökalp Faculty of Education in 2014-2015 academic year. The study was carried out with phenomenology design, one of the research designs in line with qualitative research methodology. Metaphors were used as data collection technique; a form including “Music course is like ... because ...” has been used as data collection tool. With the help of this form, an attempt was made to figure out the metaphors developed by class teacher candidates in relation to “Music Course” concept together with the common features of these metaphors. Collected qualitative data was analyzed via content analysis technique and its reliability was found to be 0.93%. The main purpose for content analysis is to reach the concepts and relations which can explain collected data. At the end of the study it found that the metaphorical perceptions in relation to music course concept were placed mostly in the category of “music course as the expression of love” and at least in the category of “music course as an educator-instructor-guide”. Besides, negative metaphorical perceptions such as drudgery, empty word, imposed, nightmare, drug and kill time have also been identified. In the light of the results of the study, in order to raise the knowledge of class teacher candidates in relation to the importance of music education and teaching, organization of various seminars, workshops and symposiums on primary school music course, the availability of taking different courses on music education-teaching for class teacher candidates in the academic institutions they study and increasing the quality of the music courses they take become even more important.

Key words: Music, music course, class teacher, class teacher candidates, metaphor.

INTRODUCTION

At the present time metaphors are often used for determining what an individual knows and thinks about a concept, event and phenomenon. Metaphors, which are

considered as the tools used by individuals for explaining events, objects and especially abstract concepts with various analogies, are the expression of objects/actions

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with the help of word/words by drawing an analogy with a situation; are the making sense of and experiencing a thing in relation to another thing (Cerit, 2008; Palmer and Lundberg, 1995; Lakoff and Johnson 2010).

Individuals use metaphors, which is a way of thinking and seeing and which facilitates the learning of new information, as a tool for understanding and explaining the concepts with respect to a phenomenon they do not know/they have inadequate knowledge (Morgan, 1998). For this reason, metaphors are used in education as a supportive element for teaching because it facilitates explaining-embracing of abstract concepts, phenomena and events and it is not only a good technique for teaching new information but it is also a proven tool for maintaining the knowledge and its durability (Derman, 2014). According to Sanchez et al. (2000), metaphors have been used by teachers as a teaching tool for a long time, sometimes unintentionally but most of the time for explaining ideas, concepts and abstract things. Because, metaphoric thinking is the skill of establishing correlation between two different things by taking similarities into account and teaching purpose metaphors set up a conceptual field in between another conceptual field for connection and play a key role for various problem solving situations (as cited in, Arslan and Bayrakçı, 2006). According to Girmen (2007), cognitive process developed with metaphors creates affective influences on individuals. These influences cause individuals to benefit from metaphors while identifying their own emotions-ideas/other individuals' emotions-ideas. In this context, metaphors indicate the way individuals perceive themselves and the world (as cited in, Mertol et al., 2013).

Metaphors are of vital importance for especially teachers to successfully carry out the teaching practices in relation to what they know about the course/courses they teach, how they perceive these course/courses and the quality of teaching and they are one of the strongest cognitive tools/models to be used for determining all of these (Özdemir, 2011). This cognitive tool, according to Sun (1969), should also be used in primary school music education in the context of educational music teaching which positively or negatively shapes the music future of a society. Since, music courses in primary education underpin the formal music education and positive/negative behaviours, tendencies and habits persist throughout the entire lives of the children (Arapgirlioğlu and Karagöz, 2010). Particularly in primary school music education, children are taught the minimum fundamentals of music culture; they are given the opportunity to meet and play various musical instruments and to test themselves in specific behavioural dimensions of music; teaching practices in accordance with the anatomy, character and tendencies of the students are carried out and as a result of these practices musical knowledge, experience, interest, desire and skills of the students are developed (Uçan, 1997). Consequently, in order to indicate the educational needs of the class teachers, who are to be

assigned teaching music courses in these institutions, it is important to identify the things they draw analogy with the education programme and the images in their mind in relation to educational programme.

METHOD

Phenomenology design in the framework of qualitative research approach has been used in this study. Phenomenology design focuses on the phenomena, which we are aware of but do not have thorough and detailed understanding and which appear before us in the world we live in various forms such as events, experiences, perceptions, concepts and situations. Phenomenology provides an appropriate framework for studies aimed to research the phenomena we face in various forms in our daily life, which are not totally strange but we cannot comprehend completely. Even though phenomenology researches may not produce exact-generalizable results in accordance with the nature of qualitative research, they can reveal examples, explanations and experiences that provide results facilitating a better recognition and understanding for a phenomenon; believe the importance of subjective knowledge and acknowledge its fundamental role (Yıldırım and Şimşek, 2011; Balcı, 2011).

Participants

Purposeful sampling method has been used for this research. The reason behind selecting this sampling method is to determine the perceptions of the class teacher candidates in relation to "music course" concept, the things they draw analogy with the education programme and the images in their mind in relation to educational programme. According to Patton (1987), this sampling method is beneficial for making universal generalization and enables in-depth study of situations about which sound information is thought to be known. Hence, it is beneficial for exploring and explaining phenomena and events in many cases (as cited in, Yıldırım and Şimşek, 2011). The study was conducted with 56 undergraduate students of "Primary School Teaching Department" that are studying in Dicle University Ziya Gökalp Faculty of Education in 2014-2015 academic year. They receive music-music teaching courses. 66.1% of the participants are females (n=37) and 33.9% of them are males (n=19).

Data collection tool

In addition to being a language form implemented to a different content for expressing an analogy of a concept and term, metaphor transfers phenomena for an area to another, filters the fact and defines it in a simple form (Sackmann, 1989; Serman, 1985; as cited in, Yıldırım and Şimşek, 2011). Because metaphors come into being depending on the social, cultural and personal experiences, they constitute not only the thinking process but also the actions of individuals (Lakoff and Johnson, 2005). Therefore, metaphors have been chosen as the data collection tool for the research and a form prepared by researcher has been used for data collection. Over the course of implementation no comment has been given in order not to impair the reliability of the study. With the intent to uncover the perceptions of the research group in relation to "music course", they are asked to complete the sentence which was formed as "Music course is like ... because ...". For this purpose, research data has been collected by giving the forms including this sentence to the participants and asking them to complete this sentence by composing a single metaphor in line with their views on the

concept. In this method, which is frequently applied in metaphor studies, with the help of the phrase “is like” it was aimed to unfold an analogy while the purpose of the phrase “because it is” was to attribute this analogy to a rational ground.

Data analysis

Collected qualitative data was analyzed via content analysis technique and its reliability was found to be 0.93%. The main purpose for content analysis is to reach the concepts and relations which can explain collected data. For this reason, as a first step collected data should be conceptualized, then they should be rationally organized in accordance with the concepts that emerged and themes explaining the data should be determined consequently. Hence, collected data is tried to be defined and the facts could be found in the data are tried to be unfolded through content analysis. Congregating similar data within the frame of certain concepts and themes and interpreting them via organizing comprehensibly underlie the content analysis. In order to increase the reliability of the study, to decrease its biasness, to make comparisons among the themes/categories came up with the analysis of the data and to re-check the results by reaching a larger sample group via other tools such as questionnaires, collected qualitative data was digitalized by frequency analysis, which is also another type of content analysis (Yıldırım and Şimşek, 2011).

Naming phase: Produced metaphors were listed, metaphors and sentences were examined with regard to whether they are meaningful or not, and then established metaphors were codified.

Classification phase: Metaphors were analyzed with a view to their similarities/common features. Acquired 56 valid metaphors were alphabetically listed and a sample metaphor list was composed.

Category development phase: 7 different conceptual categories were carved out thanks to the examination of the common features of the metaphors in relation to “music course” concept and each metaphor was grouped into central themes.

Reliability of validity phase: Expert opinion was approached for the issue of whether metaphors belong to a conceptual category or not, the list including 56 metaphors and 7 conceptual categories was presented to the expert and the expert was asked to match these two lists and to compare them with the matching of the researcher. Hence, the reliability of the research was calculated via using the formula of reliability = agreement / agreement + disagreement (Miles and Huberman, 1994). If the conformity among the assessments of the expert and the researcher is 90% or more, the reliability of the study is ensured (Saban, 2099).

Phase of Interpretation with view to Generated Metaphors: Data was assessed via using the definitive statistical methods, number of participants (f) and their percentage (%) representing the metaphors and categories were calculated.

FINDINGS

In this section, the findings, which were acquired concerning the metaphors developed in relation to the “music course” concept by the class teacher candidates, were shown in the tables and interpreted by analyzing under sub-titles with a view to the research questions.

Metaphorical findings in relation to the “music course” concept

Participants produced 55 valid metaphors in relation to the “music course” concept. Each metaphor was produced by a single participant. These are; pain killer, drudgery, catharsis day, romance, falling in love, mirror, empty word, spirit, flower, chocolate, child, imposed, detergent, nature, 4 primary materials of the nature, friend, emotion, bread, marriage, philosophy, sky, laughing, sun, dream, life, light, medication, nightmare, fate, heart, heart specialist, pose of a girl, bird, timeout, happiness, good news, breath, teacher, psychologist, soul, soul mate, enlightenment of the soul, affection, hot tea, shelter, respiration, chicken with soy sauce, water, candy, cure, therapy, soil, drug, kill time and food (Table 1).

Categorical findings composed by metaphors in relation to the “music course” concept

Metaphorical perceptions of the participants in relation to the “music course” concept were put in seven categories. These are; music course as an expression of love, music course as a part of life, music course as an educator-instructor-guide, music course as an expression of diversity, music course as a curing, music course as a reflection of life and music course as an expression of desperation (Table 2).

Conceptual categories

Music course as an expression of love: 16 metaphors composed by 17 participants (30.1%) are placed under this category which is considered as the expression of love. Catharsis (1), love (2), falling in love (1), flower (1), child (1), friend (1), emotion (1), bread (1), marriage (1), laughing (1), heart (1), happiness (1), good news (1), enlightenment of the soul (1), soul mate (1) and affection (1) fall into this category respectively. The statements of the participants, who composed this category, are as follows: “*Music course is like catharsis day, because it refreshes individuals and best reflects emotions*”. “*Music course is like love, because it steals me away and takes far away*”. “*Music course is like a woman falling in love with a man, because it refreshes individuals, satisfies emotions, spreads happiness. At the same time, it a course which is not cared about at all, it is always mauled and despised but when things are let flow it steals you away*”. “*Music course is like a blossoming flower, because it embellishes its surrounding. It revives emotions, breathes life into nature and humans. It satisfies the needs of the soul, expresses the things that are intended to be told in most beautiful way possible*”. “*Music course is like a child, because children are free and makes you*

Table 1. Metaphors developed in relation to the music course concept.

Order of the Metaphor	Name of the metaphor	Frequency (F)	Percentage (%)
1	Pain killer	1	1.8
2	Drudgery	1	1.8
3	Catharsis day	1	1.8
4	Love	2	3.6
5	Falling in love	1	1.8
6	Mirror	1	1.8
7	Empty word	1	1.8
8	Spirit	1	1.8
9	Flower	1	1.8
10	Chocolate	1	1.8
11	Child	1	1.8
12	Imposed	1	1.8
13	Detergent	1	1.8
14	Nature	1	1.8
15	4 primary materials of the nature	1	1.8
16	Friend	1	1.8
17	Emotion	1	1.8
18	Bread	1	1.8
19	Marriage	1	1.8
20	Philosophy	1	1.8
21	Sky	1	1.8
22	Laughing	1	1.8
23	Sun	1	1.8
24	Dream	1	1.8
25	Life	1	1.8
26	Light	1	1.8
27	Medication	1	1.8
28	Nightmare	1	1.8
29	Fate	1	1.8
30	Heart	1	1.8
31	Heart specialist	1	1.8
32	Pose of a girl	1	1.8

feel free". "Music course is like a friend, because it shares your emotions". "Music course is like emotions, because it saddens and makes you think". "Music course is like bread, because it feeds my soul". "Music course is like marriage, because it is beyond endurance but it is pleasant". "Music course is like laughing, because it makes you happy, relieves and eases". "Music course is like heart, because I breathe in life". "Music course is like happiness, because it gives peace". "Music course is like good news when we feel depresses, because it enables us pours out our feelings, makes us happy when we are unhappy". "Music course is like the enlightenment of the soul, because it voices emotions in most beautiful way possible". "Music course is like a soul mate, because it reflects my opinions with its melody". "Music course is like affection, because it warms my inside".

Music course as a part of life: 11 metaphors composed by 11 participants (19.6%) are placed under this category which is considered as a part of life. Spirit (1), philosophy (1), life (1), fate (1), breath (1), soul (1), respiration (1), water (1), candy (1), soil (1) and food (1) fall into this category respectively. Some of the statements of the participants, who composed this category, are given below: "Music course is like spirit, because it brings life to individual". "Music course is like philosophy, because we associate the events we live with it. It determines our mood, political views, view of life and character". "Music course is like life, because it garnishes our life with colourful themes. It is the direction between the past and future of the individual". "Music course is like fate, because it always comes across with us". "Music course is like breath, because for me music is being entranced

Table 2. Categories composed by metaphorical perceptions in relation to music course concept.

Categories	Metaphors	Frequency of the metaphor	Number of Metaphor
1. Music course as an expression of love	Catharsis (1), Love (2), Falling in love (1), Flower (1), Child (1), Friend (1), Emotion (1), Bread (1), Marriage (1), Laughing (1), Heart (1), Happiness (1), Good news (1), Enlightenment of the soul (1), Soul mate (1), Affection (1)	17	16
2. Music course as a part of life	Spirit (1), Philosophy (1), Life (1), Fate (1), Breath (1), Soul (1), Respiration (1), Water (1), Candy (1), Soil (1), Food (1)	11	11
3. Music course as an educator-instructor-guide	Sun (1), Light (1), Teacher (1)	3	3
4. Music course as an expression of diversity	Chocolate (1), Detergent (1), Dream (1), Pose of a girl (1), Timeout (1), Hot tea (1), Shelter (1), Chicken with soy sauce (1)	8	8
5. Music course as a curing	Pain killer (1), Medication (1), Heart specialist (1), Cure (1), Therapy (1), Psychologist (1)	6	6
6. Music course as a reflection of life	Mirror (1), Nature (1), 4 Primary materials of the nature (1), Sky (1), Bird (1)	5	5
7. Music course as an expression of desperation	Drudgery (1), Empty word (1), Imposition (1), Nightmare (1), Drug (1), Killing time (1)	6	6
	Total	56	55

with the music notes and the beats of the tambourine. Losing yourself with beats. Falling in love with soft tones". "Music course is like soul, because it expresses the inner world of individual". "Music course is like respiration, because humans need to refresh their bodies and soul. It brings life to us, gives breath and liveliness". "Music course is like water, because humans cannot live without music just like they cannot live without water. If there is no music, then there is no emotion". "Music course is like candy, because it flavours your heart". "Music course is like soil, because it feeds me with its melodies. I can find melodies matching my feelings. But, sometimes ridiculous music may give a sour taste just like soil". "Music course is like food, because it feeds my soul".

Music course as an educator-instructor-guide: 3 metaphors composed by 3 participants (5.4%) are placed under this category which is considered as an educator-instructor-guide. Sun (1), light (1) and teacher (1) fall into this category respectively. The statements of the participants, who composed this category, are as follows: *"Music course is like sun, because if it is available my soul is enlightened and if it there is no music then my soul is darkened". "Music course is like light, because it enlightens my inner world and gives me positive energy in my most difficult days". "Music course is like a teacher,*

because it relieves and entertains students when they are bored".

Music course as an expression of diversity: 8 metaphors composed by 8 participants (14.3%) are placed under this category which is considered as an expression of diversity. Chocolate (1), detergent (1), dream (1), pose of a girl (1), timeout (1), hot tea (1), shelter (1) and chicken with soy sauce (1) fall into this category respectively. The statements of the participants, who composed this category, are as follows: *"Music course is like a chocolate, because it flavours and relieves the soul of the individuals. It is omnipresent. At school, work, home, travel... Sometimes it uncovers the skills of individuals and develops their personality". "Music course is like a detergent, because it cleans my soul". "Music course is like a dream, because it takes us to the fantasy world and sets us free from anxieties. But, I wish this course be an applied one". "Music course is like the pose of a girl, because it is the pose that makes a girl to seem pretty". "Music course is like timeout, because melodies make us muse. Just like listening to a fairy tale, it drags us to the fantasy world". "Music course is like hot tea, because it warms me inside and makes me relieved". "Music course is like a shelter, because when I feel sorry, unhappy and sad, I resort to it". "Music course is like*

chicken with soy sauce, because it tastes very good and you will want it no matter how much you eat. There is no one who is get bored by music, because it does not tire you, it relieves you. It is like eating chicken with joy when you are hungry”.

Music course as a curing: 6 metaphors composed by 6 participants (10.8%) are placed under this category which is considered as a curing. Pain killer (1), medication (1), heart specialist (1), cure (1), therapy (1) and psychologist (1) fall into this category respectively. The statements of the participants, who composed this category, are as follows: *“Music course is like pain killer, because it eases the pain of my soul”.* *“Music course is like a medication which relieves the tiredness of life to some extent, because while teaching this course one adds his/her own feeling and thoughts to the work and thus puts out the problems”.* *“Music course is like a heart specialist, because it eases depression”.* *“Music course is like a cure, because it heals my soul, uncovers my skills. One is grey, pale and incomplete without music”.* *“Music course is like a therapy after boring courses, because it relieves tiredness of a whole week and is always fun”.* *“Music course is like a psychologist, because it enables turning to inner world. It decreases our stress, makes life more bearable and reduces difficulties”.*

Music course as a reflection of life: 5 metaphors composed by 5 participants (8.9%) are placed under this category which is considered as a reflection of life. Mirror (1), nature (1), 4 primary materials of the life (1), sky (1) and bird (1) fall into this category respectively. Some of the statements of the participants, who composed this category, are given below: *“Music course is like a mirror, because it makes me see myself. I wish this lesson was an applied one and included instrument training”.* *“Music course is like nature, because it accommodates all sounds in the universe”.* *“Music course is like 4 primary materials of the nature, because you cannot live without it. You do not realize it but it necessary for life”.* *“Music course is like sky, because it is both fun and gloomy. It is like day being blue and night being black”.* *“Music course is like a bird, because it is chirping and cheerful”.*

Music course as an expression of desperation: 6 metaphors composed by 6 participants (10.8%) are placed under this category which is considered as an expression of desperation. Drudgery (1), empty word (1), imposition (1), nightmare (1), drug (1) and killing time (1) fall into this category respectively. Statements of the composing this category are listed as follows: *“Music course is like drudgery, because the purpose is to fill our mind with something temporarily in the course. There is no intention for teaching, it is just information transfer. The teacher transfers and evades just like student pretends to learn and evades. All courses are waste of time”.* *“Music course is like empty word, because it is an idle class and is disregarded”.* *“Music course is like*

imposition, because I do not like its rules. This course should be given to a competent not to unrelated persons”. *“Music course is like nightmare, because I hate this course since I do not have any musical skill and infrastructure”.* *“Music course is like drug, because it hinders my thinking”* *“Music course is like killing time, because I do not like this course, I am in bad with music”.*

DISCUSSION AND CONCLUSION

A great deal of metaphors is needed for explaining music course concept as a whole. In this research, sample group produced 55 different metaphors in relation to “Music Course” concept. According to Yob (2003) “In principle, metaphor is not the thing it mentions, it is just a symbol of it. If it was to be that phenomenon itself, there would be no need for metaphor. For this reason, metaphor is different than the phenomenon it mentions and although it presents a very powerful perspective in relation to this phenomenon, most of the time it is less than that. In order to compensate this situation, multiple metaphors should be used” (as cited in, Kalyoncu, 2012).

Class teacher candidates used different metaphors such as pain killer, drudgery, catharsis day, empty word, chocolate, imposition, detergent, philosophy, nightmare, fate, pose of a girl, timeout, shelter, chicken with soy sauce and drug. This situation is an indicator of the inadequacy of a single metaphor to explain an abstract-complicated concept as a whole and the need for various metaphors for explanation, because, metaphors are eclectic and represent only a single part of the phenomenon they try to explain (Wade and Ernst, 1990).

Metaphorical perceptions of the participants in relation to music course concept are placed mostly under the category of “music course as an expression of love” and least under the category of “music course as an educator-instructor-guide”. This result shows that class teacher candidates do not have adequate knowledge about the functions of music. In fact, music has three key roles as an educational tool, education way-methodology and field of education qualities and through music education the communication-interaction between individual and his/her environment becomes healthier, steadier, more effective and more productive; through music education the changes in the behaviours of the individual can influence society (Uçan, 1997).

There is a significant lack of information and awareness and inadequacy of insightful and deliberate approach in relation to the quality of music, its role in people’s life, its importance and functions; from time to time music education are deflected from its purposes and rendered to serve other purposes. Yet, because of the place-importance of its functions in human life, music has been a beneficial-useful educational tool, a highly effective educational method and a key educational area since the ancient times of human history (Uçan, 1997). Research also included metaphorical perceptions such as drudgery,

empty word, imposition, nightmare, drug and killing time. This situation involves a negative result in terms of the music course practices of class teacher candidates. It should be kept in mind that the music, musical understanding and taste, which is taught to a student in the school, will increasingly take root in the family and society and will become to be experienced by all members of the society. Because of this, pedagogic music education underlies the music life and music future of a society (Sun, 1969).

In the light of the results of the study, in order to raise the knowledge of class teacher candidates in relation to the importance of music education and teaching, organization of various seminars, workshops and symposiums on primary school music course, the availability of taking different courses on music education-teaching for class teacher candidates in the academic institutions they study and increasing the quality of the music courses they take become even more important.

Conflict of Interests

The author has not declared any conflicts of interest.

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Full Length Research Paper

Motives for physical activity participation in Turkish primary school students

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The purpose of this study was to explore the motives for participating in physical activity, and to compare motives with respect to gender and age in pupils aged from 9 to 11 years in Turkey. The participants were 400 voluntary pupils (205 females and 195 males) from a total of four public schools in the center of Cappadocia region. Authorization of parents, teachers and principals were ensured at all times. Data were gathered by "Questionnaire of Motives for Physical Activity Participation". Exploratory factor analysis revealed a four factor solution -*psychological, cognitive, physical, and social aspects of motives*- explaining 60.3% of the variance with 30 possible reasons for participating in physical activity in daily life. Internal consistency coefficient was $\alpha=0.88$ for the questionnaire. Descriptive statistics showed that the most important motives for being physically active were social factors ($M=2.28\pm.69$), it was followed in order of importance by psychological factors ($M=2.25\pm.63$), physical factors ($M=2.20\pm.51$) and cognitive factors ($M=1.82\pm.63$). The most indicated social motive was "to be and play with friends", while the least were "social events as tournament participation" and "to be well-known and popular". Kruskal Wallis Test showed that mean ranks on cognitive and physical motives were significantly different according to age, increasing in importance from age 9 to 11 ($p<.05^*$). Mann-Whitney U test showed that there was no significant difference on participation motives regarding gender ($p>.05$) in primary school students.

Key words: Physical activity, motivation, participation, Turkish students.

INTRODUCTION

Today, obesity and overweight have become the most widespread problem in the world. Especially, school-age children are becoming increasingly sedentary and unfit (Chin and Edginton, 2014; Douglas et al., 1997; Edginton et al., 2013; Ludwig, 2007).

This issue brought attention to the importance of sustained physical activity as a requirement for healthy

active living. Regarding the importance of physical activity to children's current and future health, the evidence clearly shows that being physically active improves physiological, physical (Hallal et al., 2006; Twisk, 2001), psychological, cognitive and social aspects of health (Castelli et al., 2007; Lindner, 2002; Sallis and Owen, 1999; Sibley and Etnier, 2003; Tremblay et al.,

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2000). As stated in many researches, physical activity has positive effects on academic performance, including achievement in math tests and reading, academic grades and perceptual skills. Involvement in sport and physical education can play a significant role in the enrichment of a child's social life and the development of social interaction skills.

In this study, physical activity as a health-enhancing behavior, is a broad concept refers to any bodily movement produced by skeletal muscles that results in energy expenditure, including elective forms of activity, such as sport and exercise, and required forms of activity, such as labor (Sallis and Owen, 1999; Centers for Disease Control and Prevention, 1996). Because physical activity is affected by diverse factors, such as age, gender, health status, self-efficacy, and motivation, integration of ideas from several theories into an ecological model (including inter-relations between individuals and their social and physical environments) makes this approach a comprehensive framework to explain physical activity, proposing that determinants at all levels are contributors. In this holistic approach, behaviors are viewed as an outcome of the interactions among personal attributes (biological and psychological) and environmental factors (social influences and physical facilities/surroundings) (Sallis and Owen, 1997; Sallis et al., 2008).

Most of the research and theoretical studies carried out to date contribute to the understanding of the mechanisms of children's involvement in physical activity or sport, and may also take into account the psychological, physical and cognitive aspects, as well as environmental or social parameters that influence physical activity participation or withdrawal (Biddle et al., 1998; Kremer et al., 1997; Weiss, 1993; Weiss and Petlichkloff, 1989). As Zahariadis and Biddle (2000) stated, physical activity is done for various reasons. In describing the reasons why children are physically active through sport, exercise, physical education, or physical activity 'participation motives' is an important point for understanding their participation. There have been a number of motives that described the possible reasons for participation, such as factors of achievement/status, team atmosphere, fitness, energy release, skill development, friendship, fun, ability, social aspects and physical condition as basic motives for involvement (Biddle, 1998; Gill et al., 1983; Rickel et al., 2012; Sit and Lindner, 2007).

With the aim of measuring motives for participation in different physical activities like physical education, competitive sports, leisure, recreation, exercise and fitness activities, various scales have been designed, and results have been diverse. Such scales have mainly been used for examining the participation in sport of adults; few have been developed specifically for children and young people (Frederick and Ryan, 1993; Markland and Hardy, 1993) emphasizing health/physical fitness and the body. Indeed, Gill et al. (1983) assessed the major participation motives through the Participation Motivation Questionnaire

(PMQ) which is composed of eight motivational factors to measure the sport participants' motivations for youth generation.

The study results showed that the most important reasons for participating in sport were skill improvement, energy release, entertainment, challenge, friendship, team spirit and the improvement of physical condition (Gill et al., 1983; Zahariadis and Biddle, 2000) while a follow up study confirmed the similar reasons (Gill and Williams, 2008). Several others used this measure, or a modification, with other youth sport samples (Cecchini et al., 2002; Oyar, Asci et al., 2001; Sit and Lindner, 2007), and the results were consistent in several ways. First, several factor analyses yielded consistent factors, including competence, fitness, affiliation, team aspects, competition, and fun. Second, children and adolescents typically indicated that several motives were important. Third, there were minimal age, gender, experience, and sport activity differences.

It was the similar case in Turkey, as Turkish version of PMQ (Oyar et al., 2001) was the most common questionnaire used in studies. For example, it was used for boys who play volleyball, basketball and handball in secondary school (Arslan and Altay, 2009), for different sport players ages at 11 to 12 (Altinbas and Bayar-Koruc, 2014), for university students (Ekmekci et al., 2010), for extreme sport players in high schools or at university (Simsek, 2010) to examine the motivation of sport participation. The results of these studies revealed that the main focus was just on psychological or social aspects, while some of them emphasized body and health or physical condition.

However, physical activity as a health-enhancing behavior should also include cognitive aspects from a holistic perspective. In this context, the absence of cognitive aspects as motivation factors in most scales for participation in physical activity led us first to develop a questionnaire which comprised this aspect as another motive for pupils in primary schools. And secondly, to explore and compare the motives for participating in various physical activities with respect to gender and age in pupils aged from 9 to 11 years in the Cappadocia region, Turkey.

METHODOLOGY

Participants

The participants comprised a total of 400 pupils (205 females and 195 males) aged 9 to 11 from a total of four public schools in the center of Cappadocia in Turkey. The participants of these ages were randomly selected from voluntary pupils who participated in different types of physical activity (leisure activities, recreation, exercise/fitness or competition) outside of the physical education class.

Measurement

First, the literature was examined in order to construct the

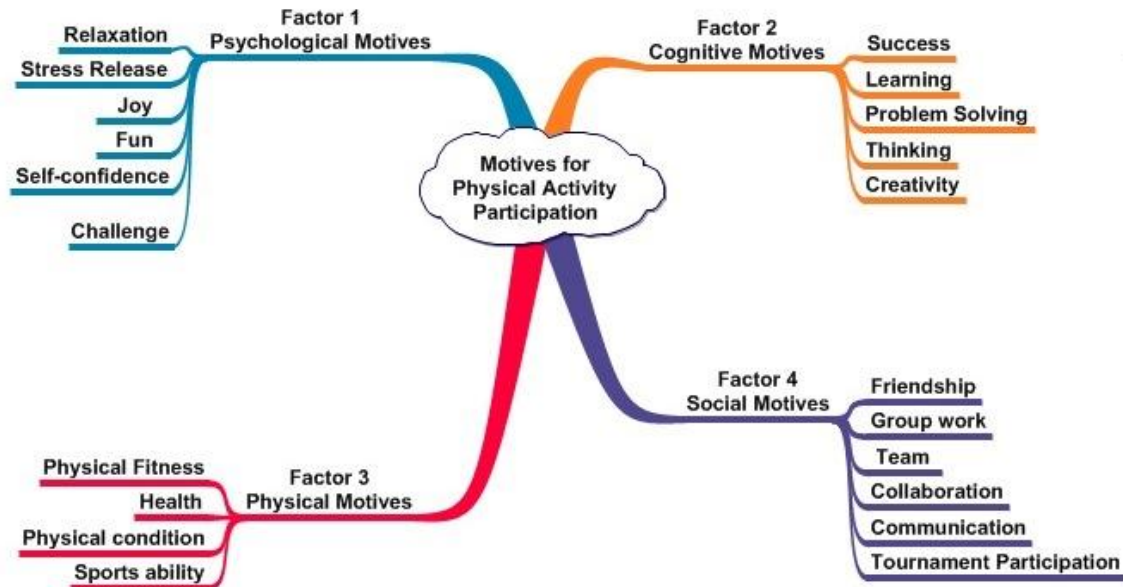


Figure 1. The structure of the QMPAP.

questionnaire to explore motives for physical activity participation in primary school students. On the basis of the literature and related research an initial 40-item questionnaire was designed, and submitted to rigorous analysis by two experts. After the suggested modifications, it was applied to 205 females and 195 males, aged 9 to 11, from four public schools. After analysis of the collected data, and in light of the psychometric properties of the scale, a final questionnaire was designed with 30 possible reasons for participating in various physical activities or being physically active in daily life. The form was a Likert-type with three categories per item (1 = *not at all important*, 2 = *quite important*, and 3 = *very important*).

Procedure

The collection of data was carried out between October and December, 2014 by the researcher. The procedure of the study and the reasons for carrying it out were explained to pupils in their classrooms. After assuring them of absolute confidentiality of the results, the questionnaires were distributed and voluntary participants were given the time necessary for completing it. Authorization of parents, teachers and principals were ensured at all times.

Analysis

Descriptive statistics were used for determining the importance of the motives and principal components factor analysis with varimax rotation for studying the motivational structure. Internal consistency coefficients were calculated by Cronbach alpha. Mann-Whitney U Test and Kruskal Wallis Test were used in comparison of participation motives regarding gender and age.

RESULTS

In order to examine the structure of the Questionnaire of

Motives for Physical Activity Participation (QMPAP), an exploratory factor analysis with varimax rotation was performed on the data. Items and factors were selected by the criteria of factor loadings above .40 and eigenvalues above 1.0. A four-factor solution was revealed explaining 60.3% of the variance (Figure 1).

Factor 1 labeled psychological motives comprised seven items related with relaxation, stress release, joy, fun, self-confidence and challenge. Factor 2 labeled cognitive motives comprised eight items reflecting success, learning, problem solving, thinking and creativity. Factor 3 concerned with physical motives involved seven items with physical fitness, health, physical condition and sports ability. Factor 4 was the *social* aspects of motives for physical activity participation consisted of eight related items with friendship, group work, team, collaboration, communication and tournament participation. Internal consistency coefficients using Cronbach alphas were $\alpha=.88$ for all items and between $\alpha=.85$ and $\alpha=.93$ for subscales.

Descriptive statistics showed that the most important motives indicated by all students for being physically active were social factors ($M=2.28\pm.69$), it is followed in order of importance by psychological factors ($M=2.25\pm.63$), physical factors ($M=2.20\pm.51$), and cognitive factors ($M=1.82\pm.63$). The most indicated social motive was "to be and play with friends", while the least indicated social motives were "social events as tournament participation" and "to be well-known and popular". The most important psychological motive indicated for being physically active was "to explore one's best potential" while the least important one was "to get calm and relax". The most indicated physical motive was "to be physically stronger" while the least one was "to make progress and improve

Table 1. Factor structure of the QMPAP.

Motives for participation in PA Items (stem: 'I participate in physical activity because ...)	Factor 1	Factor 2	Factor 3	Factor 4
Psychological motives				
9. I enjoy doing physical activity	0.821	-	-	-
14. I want to reduce the stress of studies and exams	0.818	-	-	-
8. I want to explore my best potential	0.815	-	-	-
4. I feel more confident	0.805	-	-	-
2. I like being physically active	0.795	-	-	-
5. It is an exciting and fun to play	0.791	-	-	-
6. I want to get calm and relax	0.778	-	-	-
Cognitive motives				
19. I want to improve my learning capacity	-	0.766	-	-
27. I want to be successful in my classes	-	0.755	-	-
23. I want to learn strategic thinking	-	0.748	-	-
3. I want to learn solving problems	-	0.724	-	-
15. I want to make easier my learning	-	0.722	-	-
10. I want to create new and different movements	-	0.720	-	-
21. I want to refresh my brain	-	0.711	-	-
1. I want to think better	-	0.506	-	-
Physical motives				
12. I want to prevent illnesses	-	-	0.765	-
11. I want to be physically stronger	-	-	0.754	-
29. I want to stay healthy	-	-	0.750	-
7. I want to have a slim body	-	-	0.727	-
28. I want to be physically fit	-	-	0.724	-
13. I want to make progress and improve my sports ability	-	-	0.722	-
30. I want to stay in good physical condition	-	-	0.711	-
Social motives				
22. I like social events as tournament	-	-	-	0.760
18. Because I like to interact with others	-	-	-	0.751
20. Because I like to make new friends	-	-	-	0.745
24. To collaborate and cooperate with friends	-	-	-	0.728
17. Because I like the team spirit	-	-	-	0.658
16. Because I like to be and play with my friends	-	-	-	0.628
25. Because I like belonging to a team	-	-	-	0.620
26. To be well-known and popular	-	-	-	0.607
Eigenvalues	8.91	4.52	2.72	1.92
Percentage of explained variance	29.7	15.1	9.1	6.4
Percentage of total explained variance	29.7	44.8	53.9	60.3
Cronbach' Alpha	0.93	0.90	0.89	0.85

sports ability". The most indicated cognitive motive was "to think better", while the least was "to improve learning capacity" and "to be successful in classes" (Table 1).

Kruskal Wallis test showed that mean ranks on cognitive and physical motives were significantly different according to age, increasing in importance from age 9 to

11 ($p < .05^*$). Although mean rank differences were not significant for the other two main motives, it can be said that psychological motives were becoming less important while social motives were becoming more important by age ($p > .05$), (Table 2).

Although the results of Mann-Whitney U test showed

Table 2. Comparison of motives for physical activity participation regarding age.

Participation motives	Age	n	Mean RANK	X ²	df	p
Psychological	9	135	205.46	0.578	2	0.75
	10	135	201.05			
	11	130	194.78			
Cognitive	9	135	163.39	24.411	2	0.00*
	10	135	206.90			
	11	130	232.40			
Physical	9	135	183.60	6.013	2	0.04*
	10	135	200.54			
	11	130	218.01			
Social	9	135	192.16	0.987	2	0.61
	10	135	200.62			
	11	130	206.02			

(p<.05*).

Table 3. Comparison of motives for physical activity participation regarding gender.

Participation motives	Gender	n	Mean rank	Sum of ranks	U	Z	p
Psychological	Female	205	190.84	39122.00	1.801	-1.726	.08
	Male	195	210.66	41078.00			
Cognitive	Female	205	207.91	42622.50	1.847	-1.320	.19
	Male	195	192.71	37577.50			
Physical	Female	205	208.14	42669.50	1.842	-1.373	.17
	Male	195	192.46	37530.50			
Social	Female	205	202.64	41339.00	1.915	-.562	.57
	Male	195	196.20	38062.00			

(p>.05).

that there was no significant difference on participation motives regarding gender (p>.05), the most important reason indicated for being physically active was physical motives for females, while it was psychological motives for males. Although it was followed in order of importance by cognitive, social, and psychological motives for females, it was followed in order of importance by social, physical, and cognitive motives for males (Table 3).

DISCUSSION

The study was strengthened by other research results (Chin and Edginton, 2014; Douglas et al., 1997; Edginton et al., 2013; Ludwig, 2007) on importance of physical activity participation among children. In addition to physical, social and psychological effects of physical

activity (Hallal et al., 2006; Twisk, 2001) a strong need was expressed in the literature for improving cognitive side of the children by promotion of active living (Castelli et al., 2007; Lindner, 2002; Sibley and Etnier, 2003; Tremblay et al., 2000). As a health-enhancing behavior from a holistic perspective, such research requires reliable and valid measures for the accurate measurement of all aspects of children's physical activity motivation including cognitive side as well as other sides. This study firstly aimed to develop and validate a scale, titled *Motives for Physical Activity Participation in Primary School Students (MPAP)* for the measurement of children's motivation on participation in physical activity. Secondly, to make comparison between participation motives with respect to gender and age in pupils aged from 9 to 11 years in Cappadocia region of Turkey.

In this study physical activity was tackled as a health-

enhancing behavior from a holistic perspective, so the MPAP was developed based on the reasons why children participate in physical activity in their life even if they do not play any professional sports. In developing process, there were several questionnaires and resources contributing to the understanding of the reasons of children's involvement in physical activity (Biddle, 1998; Frederick and Ryan, 1993; Gill et al., 1983; Markland and Hardy, 1993; Rickel et al., 2012; Sallis and Owen, 1997; Sallis et al., 2008; Sit and Lindner, 2007; Zahariadis and Biddle, 2000). Exploratory factor analysis revealed four factors as labeled psychological, cognitive, physical and social, respectively. *Psychological motives* comprised of relaxation, stress release, joy, fun, self-confidence and challenge. *Cognitive motives* comprised of success, learning, problem solving, thinking and creativity. Physical fitness, health, physical condition and sports ability merged under the *physical motives*. Friendship, group work, team, collaboration, communication and tournament participation merged under the *social motives*.

The results of this research are consistent with the common reasons for participation in physical activity which were identified in these studies (Frederick and Ryan, 1993; Cecchini et al., 2002; Markland and Hardy, 1993; Oyar et al., 2001; Sit and Lindner, 2007; Zahariadis and Biddle, 2000) and show that the structure of incentives for participation is dominated by psychological factors such as stress release, entertainment, self-confidence, and social factors such as friendship and group work. The most indicated social motive in this study was "to be and play with friends", psychological motive was "to explore one's best potential", physical motive was "to be physically stronger" and cognitive motive was "to think better", respectively. There was also similarity with the results of athletic participating in adolescent, the most important reasons for them were to improve skills, have fun, learn new skills, be challenged, and be physically fit in Gill and Williams (2008) and Gill et al. (1983)'s studies.

Psychological motives such as self-confidence and challenge were supported by Bandura (1986)'s social cognitive theory affirming the idea that if the children perceive themselves as physically able and possessing a high degree of confidence and self-efficacy, they tend to participate in physical activity. Although the participants in this study were not athlete, the results were similar with sport participants who rated enjoyment and competence as their primary motivators in Frederick and Ryan (1993)'s study, whereas exercise participants most often cited body-related motives. In order to create a movement culture in society, recently physical activity prescription has shifted from structured, intense aerobic exercises to less structured and lifestyle forms of exercises, such as walking, climbing stairs and jumping rope (Chin and Edginton, 2014). The ACSM (1998) is also recommending specifically that people use lifestyle forms of physical activity, such as hiking, walking, and gardening, as means of reaching many health and fitness

goals. Because these forms of physical activity are more enjoyable and more closely to have desirable participation motivation.

As the motivational factors compared according to age and gender, it was found that cognitive and physical motives were significantly different according to age, increasing in importance from age 9 to 11. The results were consistent with others on minimal age and gender differences in sport participation (Cecchini et al., 2002; Oyar et al., 2001; Sit and Lindner, 2007). However, adolescent girls primarily participated in sport for fun and friendship, while boys generally participated for achievement and status in their study results of Gill et al. (1983) and Gill and Williams (2008). In this study, participants were randomly selected and non of them were playing any professional sports, they approached physical activity as a health-enhancing behavior, which was a broad concept refers to any bodily movement produced by skeletal muscles that results in energy expenditure, including elective forms of activity, such as sport and exercise, and required forms of activity, such as labor (Sallis and Owen, 1999; Centers for Disease Control and Prevention, 1996). The physical activity habit begins with an interest in participation by children. Age differences on cognitive and physical motives may arise from the increased knowledge and experience with education level. As stated in many researches, physical activity has positive effects on cognitive development such as academic performance, including achievement in math tests and reading, academic grades and perceptual skills (Castelli et al., 2007; Lindner, 2002; Sallis and Owen, 1999; Sibley and Etnier, 2003; Tremblay et al., 2000), as well as physical effects (Hallal et al., 2006; Twisk, 2001).

The results, more over, is consistent with those obtained in Turkey by other authors worked with adolescent athletes (Oyar et al., 2001), authors worked with boys who play volleyball, basketball and handball in secondary school (Arslan and Altay, 2009), with different sport players ages at 11 to 12 (Altinbas and Bayar-Koruc, 2014) even these authors worked with samples aged over 18 years (Ekmekci et al., 2010; Simsek, 2010). The findings of the present study revealed that the most important motives for being physically active were social, psychological, physical, and cognitive factors, respectively for the children at ages 9 to 11 in Cappadocia region of Turkey. Cognitive and physical motives were significantly increasing by age, while motives of physical activity participation do not change with respect to gender at this population.

CONCLUSION AND RECOMMENDATIONS

The results showed that the most important motives in being physically active for the kids were social, psychological, physical, and cognitive factors, respectively. The most indicated reasons were followed by

being and playing with friends, exploring their own best potentials, being physically stronger, and thinking better. Furthermore, the importance of cognitive and physical motives increased with the age, and participation motives do not change regarding to gender for this population in Cappadocia region of Turkey.

It is important to understand the main reasons of childrens for participation in physical activity to motivate them towards lifelong involvement. From the literature analysed, most children seem to have positive attitude towards being physically active for multiple reasons, however, their perception of and participation in activity become complicated and decline with age. The results of this study indicated a necessity of fostering the cognitive aspects of participation motivation in physical activity for the younger age groups and sustaining that as a lifelong habit.

Although the promotion of physical activity participation at all levels as a means of increased active lifestyle in the world, exact programs are not available in Cappadocia region of Turkey to motivate the children from a holistic perspective. It is believed that results from this study would have a directive role in the development or revision of school physical education programmes, extracurricular physical activity programmes, recreation and health-related activity programmes and other programs have similar purposes all across the region and the country. For this purpose, community initiatives including cooperation among all stakeholders can be suggested for universities, schools, municipalities, parents, researchers, physical education teachers and coaches to improve the holistic development of the children.

As a product of the study, a reliable and valid instrument titled *Motives for Physical Activity Participation in Primary School Students (MPAP)* was developed, which has four components as social, psychological, physical, and cognitive motives. This current study opened the door for determining motives in physical activity participation from a holistic perspective with the inclusive of cognitive factors.

This instrument can be used all over the world, especially in conducting cross-cultural studies with different populations. It can be also suggested to reaching out to the larger populations by incorporating different dimensions in the future studies.

Quantitative methodology was beneficial for this study to develop a questionnaire on and determine the motivational factors affecting childrens' decisions about participating in physical activity. However, qualitative methods including observation and interviewing for future studies would give a deeper understanding the participation motives of the kids.

Conflict of Interests

The author has not declared any conflicts of interest.

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Questionnaire of motives for physical activity participation in primary school students

According to the importance level, please tick (✓) appropriate box regarding the reason why you want to be physically active in your daily life.

S/N	I participate in physical activity because ...	Very important	Quite important	Not at all important
		3	2	1
1	I want to think better	-	-	-
2	I like being physically active	-	-	-
3	I want to learn solving problems	-	-	-
4	I feel more confident	-	-	-
5	It is an exciting and fun to play	-	-	-
6	I want to get calm and relax	-	-	-
7	I want to have a slim body	-	-	-
8	I want to explore my best potential	-	-	-
9	I enjoy doing physical activity	-	-	-
10	I want to create new and different movements	-	-	-
11	I want to be physically stronger	-	-	-
12	I want to prevent illnesses	-	-	-
13	I want to make progress and improve my sports ability	-	-	-
14	I want to reduce the stress of studies and exams	-	-	-
15	I want to make easier my learning	-	-	-
16	Because I like to be and play with my friends	-	-	-
17	Because I like the team spirit	-	-	-
18	Because I like to interact with others	-	-	-
19	I want to improve my learning capacity	-	-	-
20	Because I like to make new friends	-	-	-
21	I want to refresh my brain	-	-	-
22	I like social events as tournament	-	-	-
23	I want to learn strategic thinking	-	-	-
24	To collaborate and cooperate with friends	-	-	-
25	Because I like belonging to a team	-	-	-
26	To be well-known and popular	-	-	-
27	I want to be successful in my classes	-	-	-
28	I want to be physically fit	-	-	-
29	I want to stay healthy	-	-	-
30	I want to stay in good physical condition	-	-	-



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