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Contents / İçindekiler

Research Articles / Araştırma Makaleleri

- Migration Education Program for Teacher Candidates** 180-214
Öğretmen Adaylarına Yönelik Göç Eğitim Programı
Derya Göğebakan-Yıldız Gizem Engin
- Perception of Christianity and Christian Peers in the Drawings of Muslim Children: The Example of Pforzheim/Germany** 215-242
Müslüman Çocukların Resimlerinde Hristiyanlık ve Hristiyan Akran Algısı: Pforzheim/Almanya Örneği
Yasemin Güleç
- Opinions of Secondary School Teachers About the EBA Course E-contents: A Qualitative Study** 243-266
EBA Ders E-içerikleri Hakkında Ortaokul Öğretmenlerinin Görüşleri: Nitel Bir Çalışma
Talha Yıldız Şemseddin Gündüz
- Investigation the Effects on School in the Frame of Educational Change Processes of a Technology Support for Hearing Impaired Students** 267-295
Teknoloji Desteğinin İşitme Engelliler Okulu Üzerindeki Etkilerinin Eğitimde Değişim Süreçleri Çerçevesinde İncelenmesi
Lokman Şilbir Hasan Karal Gülbahar Merve Çakmak Şilbir Yasemin Karal Ekrem Bahçekapılı

Research Article

Migration Education Program for Teacher Candidates¹

Derya Göğebakan-Yıldız², Gizem Engin³

Abstract

This study aims to analyze Migration Education Program (MEP) developed for teacher candidates from the viewpoint of teacher candidates. MEP lasted 8 sessions and consists of topics: Migration phenomenon, Migrant Population in Turkey and World, Globalization and Multiculturalism, Migration and Poverty, Migration and Women, Migration and Children, Migration and Education, and Migration from the Viewpoint of Teacher Candidates. The participants of MEP are 34 volunteer teacher candidates. Case study method which is one of the qualitative research designs is used in this study. The data of the study is collected from teacher candidates' diaries and group interview forms carried out at the end of education program. The results of the study showed that at the end of MEP teacher candidates deepened their knowledge of migration phenomenon; they were able to make more detailed and extensive analysis and inquiries of topics such as migration and globalization, migration and multiculturalism, migration and poverty, migration and women, migration and children, migration and education; they were able to face their own prejudices and improve their viewpoints; and also they found materials used in the program effective. Additionally, the activities most appreciated by teacher candidates were film activity, creative writing, small and large group work activities and case analysis. Finally, it is possible to say that MEP is an educational program which can be used in the training of teacher candidates.

Keywords: *Migration, migration education program, teacher candidates, diaries.*

¹ This study was orally presented at the 6th International Congress on Curriculum and Instruction on October 11-13, 2018, Kars, Turkey.

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Öğretmen Adaylarına Yönelik Göç Eğitim Programı

Öz

Çalışmanın amacı öğretmen adaylarına yönelik olarak geliştirilen Göç Eğitim Programının (GEP) öğretmen adaylarının görüşleri açısından incelenmesidir. 8 oturum süren GEP , Göç Olgusu, Dünya’da ve Türkiye’de Göçmen Nüfus, Küreselleşme ve Çokkültürlülük, Göç ve Yoksulluk, Göç ve Kadın, Göç ve Çocuk, Göç ve Eğitim ve Öğretmen Adayının Perspektifinden Göç temalarından oluşmaktadır. GEP 34 gönüllü öğretmen adayıyla gerçekleştirilmiştir. Araştırmada nitel araştırma desenlerinden durum çalışması kullanılmıştır. Çalışmanın verileri, öğretmen adaylarının günlükleri ve eğitimin sonunda katılımcılarla yapılan grup görüşme formundan elde edilmiştir. Ulaşılan bulgulardan, öğretmen adaylarının bu GEP ile göç olgusu konusunda bilgilerini derinleştirdikleri, göç ve küreselleşme, göç ve çokkültürlülük, göç ve yoksulluk, göç ve kadın, göç ve çocuk, göç ve eğitim konularıyla ilgili daha derin analizler ve sorgulamalar yapabildikleri, kendi önyargılarıyla yüzleştikleri, bakış açılarını geliştirdikleri ve kullanılan eğitim materyallerini ve aktiviteleri etkili buldukları anlaşılmaktadır. Ayrıca, öğretmen adaylarının en çok beğendikleri aktivitelerin film etkinliği, yaratıcı yazma, küçük ve büyük grup çalışmaları ve durum analizleri olduğu tespit edilmiştir. Son olarak, GEP’in öğretmen adaylarının eğitiminde kullanılabilecek bir eğitim programı olduğu söylenebilir.

Anahtar Sözcükler: Göç, göç eğitim programı, öğretmen adayları, günlükler.

Introduction

Migration

The phenomenon of migration is one of the most prominent current issues. The phenomenon of migration is one of the most studied fields for years as it is directly associated with various other fields of study such as healthcare, education and finance. Various definitions were given to define the phenomenon of migration. Basically, migration can be defined as people's voluntary movement of leaving the environment they live in with groups of others or individually to settle some other places temporarily or permanently as a result of war, environmental deterioration, problems in access to educational facilities or due to political or financial problems (Başterzi, 2017, p.380; Doğanay, 1994, p.165; Kaştan, 2015, p.217;). The phenomenon of migration is a powerful fact affecting both people migrating themselves and people who already live in the migrated area. The most common concepts heard about migrating people are immigrant, refugee and defector. When we examine these concepts, it can be seen that there are some differences between them. Third Article of Turkish Settlement Law (2006) defines immigrant as; " *People who originate from Turkish lineage and affiliated to Turkish culture and come to Turkey for the purpose of settling down individually or collectively and are approved according to this law*". The people who live their country and apply to defect another country are named as defectors while their applications are in process (Başterzi, 2017); and people who leave or forced to leave their country because of certain aspects they possess such as race, religion, language, political views or being part of a certain group and not willing or not allowed to turn back to their homeland as they may be harmed are legally named as refugees (Başterzi, 2017; UNHCR,2018).

All migrating people, whether they are immigrants, refugees or defectors, go through radical changes in their lives. These changes mostly bring about some problems. It is possible to come across various studies carried out about the effects of migration on education, poverty, women, urbanization and multiculturalism (Çağlayan & Kemik, 2018; Özvarış, 2018; Yalçın, 2015). By the end of 2017, 68,5 million people are known to be forced to migration. 25,4 million of these people are refugees, 40 million are forced to relocate within their countries and 3,1 million people settled in some other countries as defectors (UNHRC, 2018). The numbers given

above can help us to understand the effects of migration. In this study the topics migration and women, migration and children, migration and education, migration and multiculturalism will be examined under the light of related literature.

Migration and Women

It is a known fact that the movement of migration deeply affects immigrants' financial situations, socialization patterns and family structures. This situation increases the burden of women's physical, psychological and financial efforts in the family. Women who work for family errands (farm work, house work, etc) before migrating from rural areas to the city usually tend to take paid jobs. However, as women do not get much help from other members of the family, they have to work for their paid jobs as well as non-paid house work which becomes a heavy burden crushing them (Çağlayan & Kemik,2018). Additionally, women are forced to work menial and low paid jobs (Korkmaz & Korkut,2012).

It is known that women become a part of this movement because of macro reasons like war, exploitation, violation of human rights as well as micro reasons like domestic problems, financial problems and sexual violence (Barın, 2015; Ünlütürk Ulaş & Kalfa, 2009). It is difficult to say that women have good standard of living in the places they settle after they immigrate to other countries. Women usually tend to work for home labor (Barın, 2015; Demirdizen, 2013; Ünlütürk Ulaş & Kalfa, 2009; Yalçın, 2015), child care (Barın, 2015; Demirdizen, 2013; Ünlütürk Ulaş & Kalfa,2009) and similar jobs and usually send some part of their income to their families (Barın,2015; Ünlütürk Ulaş and Kalfa,2009). Losing social support services after immigration, and lacking adequate knowledge of language, culture and legal status of their new country affect their living conditions negatively (Saraydın, 2007). It is also known that immigrant women are subject to financial, physical, emotional and sexual abuse (Yalçın, 2015). Immigrant women experience various problems like difficulty in communication, reaching information, making use of health services and besides they are subjected to more discrimination just because of their gender (Özvarış, 2018).

Migration and Children

As well as women, children are the most effected ones from migration (Aydın, Şahin & Akay, 2017; Gözübüyük et al., 2015; Özvarış, 2018). Migration causes children to be exposed to extensive problems such as sexual abuse or rape, suffering from illnesses because of deterioration of medical conditions, being unable to reach health services they need, and being bought and sold as if they are property (Özvarış, 2018).

As children are more vulnerable to external factors they suffer physically, socially and emotionally more seriously than others from the events during or post migration (Aydın, Şahin & Akay, 2017; Baş et al., 2017; IOM, 2012; Özvarış, 2018). The children that leave their environment may experience difficulties in fitting into a new environment. Immigrant children cannot reach adequate nourishment and sheltering due to financial insufficiency. UNICEF (2016), reported acute malnutrition (medium level) in 45 children among 2200 immigrant children after a health scan they carried out and intervened the situation (Aydın, Şahin & Akay, 2017). These children developmentally fall behind as they are undernourished or catch illnesses because of hygiene problems. These illnesses turn into epidemics in the migrated areas because of low rate of vaccination (Baş et al., 2017; Şener & Orakçı, 2014). Additionally, children experiencing compliance problems and feeling constantly threatened by the new environment develop negative feelings towards themselves and their environment thus increasing probability of criminal behavior (Aydın, Şahin & Akay, 2017; Kaştan, 2015).

Immigrant children's labor is also exploited. These children are used for menial jobs (Apak, 2014; Deniz, Hülür & Ekinçi, 2016; Kağnıcı, 2017). From very young ages they are forced to work for textile industry, construction, agriculture, animal husbandry (IOM, 2012), hawking (tissue papers etc.), collecting paper from dumpsters (Kaştan, 2015; Baş et al.,2017). Very young girls, who can be called as children, can be forced to marry with religious marriage (undocumented marriage) instead of attending their schools. It is known that so called child-brides may be as young as 11-12 years old (Türkay, 2016; Baş et al;2017).

Immigration and Education

Migrating parents cannot take care of their children's educational needs and provide them with opportunities to study their lessons as they have to deal with many other problems and sometimes they even have to force their children to work to contribute family budget (Baş et al.,2017; Kaştan, 2015;) or these parents may even force their children to get married (Türkay, 2016). Therefore, the number of immigrant children who cannot attend schools is increasing and even they can attend schools their achievement levels are low. For example, according to UNICEF 2016 July report, the number of Syrian immigrant children is 1.6 million and more than 500.000 of these children are out of school.

The children who have to change their schools after immigration and they can experience difficulties in fitting into their new schools. This situation causes unwillingness towards school (Aydın, Şahin & Akay, 2017; Kaştan, 2015). Another important reason for low achievement levels is indubitably language problem immigrant children experience (Apak, 2014; Deniz, Hülür & Ekinci, 2016; Kağnıcı, 2017).

As a result of rapidly increasing migration children from various national backgrounds can be in the same class. For example, 1 of every 2 children receiving education in Rotterdam and Amsterdam are immigrants (Papademetriou & Weidenfeld, 2007 cited in Schröttner, 2012). Other problems with immigrant children's education are as follows: they have to receive education with younger age students because of their language problem, they usually have to choose vocational programs, they may be subject to discrimination, they may have difficulty in gaining some cultural skills taught at schools, and having limited career options (Schröttner, 2012:1).

International organizations and governments work together to overcome above mentioned schooling and school achievement problems. For example, UNCHR (2018) stated that they focus on these problems together with Turkish Ministry of Education and universities. They also reported that 62% of all Syrian children in Turkey are involved in formal education, 20000 Syrian youngsters are enrolled in universities, 1152 students are supported by UNCHR with full scholarship, and 4292 students benefit from preparatory programs for higher education which are supported by UNCHR.

Migration and Multiculturalism

Today, it is widely known that there is a worldwide movement of people from different languages, religions, cultures, races and ethnicity as an outcome of globalization. With this aspect, globalization replaces cultural diversity and multiplism with the concept of local culture (Schröttner, 2012). This situation requires reviewing perception of national identity and new types of citizenship (e.g. world citizenship) in addition to national citizenship (Giddens, 2008). The concept of multiculturalism rejects assimilation because it views assimilation as dominant culture's taking minority's place. Instead, it proposes a structure in which each ethnic and racial element maintainins its distinctiveness just as a "saladbowl". (Kukhatas 2008:51 cited in Barn, 2016) The cultural diversity emphasis of multiculturalism emphasizes coexistence of nations with different languages and cultural features without losing their distinct characteristics (Damgacı & Aydın, 2013). These cultural characteristics are summarized by Banks (2001:76, cited in Damgacı & Aydın , 2013:329):

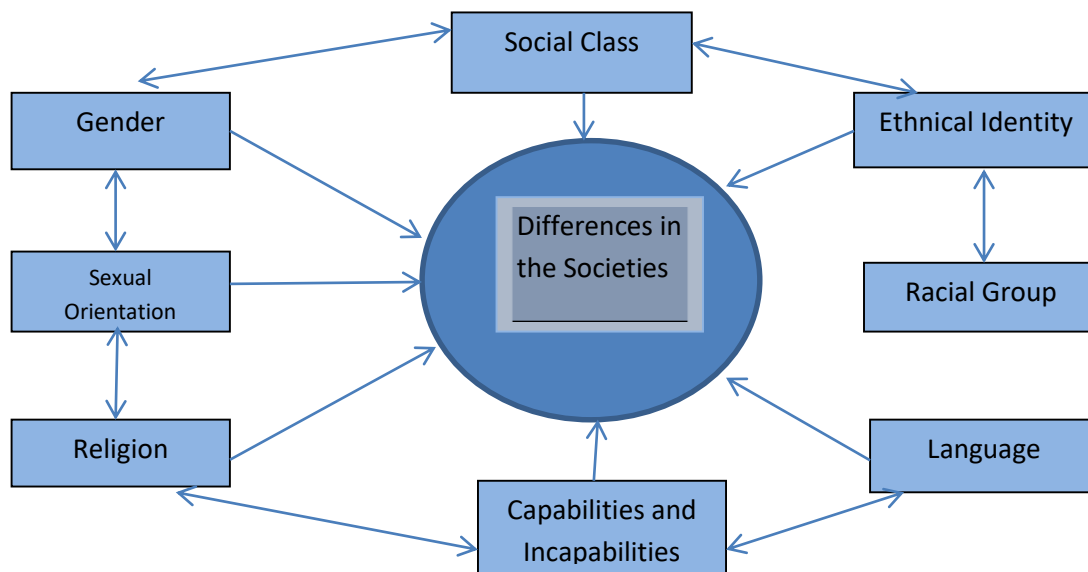


Figure 1. Cultural differences in societies

One of the most prominent factors increasing cultural diversity shown in table 1 is undoubtedly immigration (Başbay, 2014). It is necessary to make possible that this diversity coexist and

serve the whole community. There are examples of concerns in the literature that emphasis on diversity in multiculturalism weakens the concept of nation-state (Altınbaş, 2006). On the other hand, there are criticism about emphasis on unity leading way to cultural oppression (Yalçın, 2002). Therefore, diversity and unity must be approached very carefully in a multicultural country (Başbay, 2014; Damgacı & Aydın, 2013).

Lastly, the phenomenon of migration and its effects have surrounded the world and Turkey. Turkey has taken its place among the countries hosting the highest number of immigrants after experiencing major waves of mass migration. It is also known that 1.6 million of 3.6 million Syrian immigrants are at school age. It is obvious that the phenomenon of migration and its effects are going to have a major impact on Turkish educational system for many years. In this context, it is vital for teachers and teacher candidates to develop their knowledge and skills about the phenomenon of migration. For this reason, the aim of this study is to examine the MEP developed for teacher candidates from the viewpoints of teacher candidates. In relation to this aim, two research questions are posed:

- 1) How do teacher candidates evaluate MEP according to the answers they gave in the diaries?
- 2) How do teacher candidates evaluate MEP according to the answers they gave to the evaluation questions?

Method

Single-case embedded research design which is one of the case study research designs is used in this study. Case study takes place in the real environment of an up-to-date case and it is a comprehensive-qualitative research design preferred in cases in which the case and lived environment are nested and various data sources are available (Yıldırım & Şimşek, 2008). Teacher candidates, diaries and group interviews are used as data sources. The existing situation of Migration Education Program is described and possible contributions to the program are expected.

The Case

Migration Education Program is developed by researchers for teachers and teacher candidates. Aims, content, educational conditions and evaluation process of the developed are explained in the following paragraphs.

The Need for Education

The websites of various universities were examined but no course directly related to migration could be detected. However, some related courses such as: "Teaching Turkish to Foreigners" which is a mandatory course for Turkish teachers, "Children at Risk" which is an elective course in pre-school teaching departments of some universities, and "The History of Turkish Immigration" course in social studies departments were identified.

Specifying the Aims of Migration Education

The phenomenon of migration (Başterzi, 2017; Brettell, 2000 cited in.Pala,2013), migration and women (Barın, 2015; Çağlayan & Kemik, 2018; Korkmaz & Korkut,2012; Yalçın,2015), migration and children (Aydın, Şahin & Akay, 2017; Gözübüyük et al., 2015; Özvarış, 2018), migration and education (Apak, 2014; Aydın, Şahin & Akay, 2017; Deniz, Hülür & Ekinci, 2016; Kağnıcı, 2017; Kaştan, 2015), multiculturalism and globalisation (Giddens, 2008; Schröttner, 2012) were related literature reviewed for the study.

After the literature review the aims of Migration Education Program were specified and they are as follows:

1. Defines the phenomenon of migration.
2. Defines types of migration.
3. Explains causes and results of migration.
4. Explains concepts of immigrant, refugee and defector.
5. Examines characteristics of immigrant population in the world and Turkey.
6. Relates the phenomenon of migration with globalization and multiculturalism.
7. Analyzes the relation between phenomenon of migration and poverty.
8. Evaluates the effects of the migration on women.

9. Examines the characteristics of child immigrant population in the world and Turkey.
10. Evaluates the effects of the migration on children.
11. Defines the characteristics of educational systems sensitive to migration.
12. Expresses the characteristics of a teacher working in an immigrant populated school.
13. Uses conflict resolution skills in a migration sensitive school.
14. Reconstructs the effects of migration from different viewpoints.

Specifying the Content and Activities

The course content consists of articles, books, films and reports to ensure Migration Education Program reaches its goals. Themes and contents of Migration Education Program is given in Table 1.

Table 1
Themes and Contents of Migration Education Program

Theme Number	Content/Activity
1.Theme: The Phenomenon of Migration 28.03.2018	*Defining the concepts of migration, types of migration, causes and effects of migration, immigrant, refugee and defector. Article Activity: “ <i>Migration and Human</i> ” (Ekici and Tuncel, 2015)
2.Theme: Immigrant population in the world and Turkey 04.04.2018	* Characteristics of immigrant population in the world and Turkey Informative Text: Refugees in the world and Turkey (BMMYK, 2015).
3.Theme: Migration, globalization and multiculturalism 11.04.2018	*The relation between migration and globalization Article Activity: “ <i>The Changing Perception of Immigrants in the Relation of Globalization and International Migration</i> ” (Köşk ve Özbek, 2017). “ <i>World, The Place of Exiles: Migration, Multiculturalism and Othering</i> ” (Canbay Tatar, 2013)
4.Theme: Migration and Poverty 18.04.2018	*The relation between migration and poverty. Book Activity: The Land (Torres, 2017)
5.Theme: Migration and Women 25.04.2018	*The effects of migration on women Film Activity: Dancer in the Dark (VonTrier, 2000)
6.Theme: Migration and Children 02.05.2018	*Characteristics of immigrant child population in the world and Turkey *The effects of migration on children Survey of Reports: Turkish Immigration Report (GİGM, 2016) Children Uprooted: The growing crisis for refugee and migrant children (UNICEF, 2016)
7.Theme: Migration and Education 09.05.2018	* The characteristics of an educational system sensitive to migration * The characteristics of a teacher working in an immigrant populated school Article Activity:

Theme Number	Content/Activity
	<i>"An Evaluation of the Relationship of Immigration and Education: Education Needs of the Syrian Refugee Children and Challenges of Exposed Delays in Schooling Process"</i> (Gencer, 2017)
8.Theme: Conflict Resolution Skills/ Immigration from the Viewpoint of Teacher Candidate 16.05.2018	*Using conflict resolution skills in school and classroom. Activity: Creating conflict scenarios related to immigration. Application of conflict resolution skills based on the created scenarios. * Reconstruction of the phenomenon of migration by teacher candidates. Activity: Application of six thinking hats technique by teacher candidates.

Detailed information about articles, reports, books and movies included in the content of Migration Education Program is as follows:

Articles

The article "*Migration and Human*" (Ekici & Tuncel, 2015) is chosen to discuss the topics like definition of migration, basic concepts of migration, types and causes of migration. The articles "*The Changing Perception of Immigrants in the Relation of Globalization and International Migration*" (Köşk & Özbek, 2017), "*World, The Place of Exiles: Migration, Multiculturalism and Othering*" (Canbay Tatar, 2013) are chosen to examine the relation between phenomenon of migration, globalization and multiculturalism. The article "*An Evaluation of the Relationship of Immigration and Education: Education Needs of the Syrian Refugee Children and Challenges of Exposed Delays in Schooling Process*"(Gencer, 2017) is chosen to reveal the relation between migration and education.

National and International Reports

The reports Turkish Immigration Report (GİGM, 2016) and Children Uprooted: The growing crisis for refugee and migrant children (UNICEF, 2016) were examined to discuss the situation of children effected from migration in the world and Turkey.

Book and Film

"The Land" written by Antonio Torres (2017) and "Dancer in the Dark" directed by Lars Von Trier (2000) starring Björk are chosen to discuss the topics migration and women, migration

and men, migration and poverty. Teacher candidates carried out book reading and film watching duties out of the classroom and enough time was given them to carry out these tasks.

Design of Educational Experiences

It is emphasized that teachers working in multicultural environments created by phenomenon of migration have constructivist views of education. In these environments, students must be provided with opportunities to construct, inquire and interpret knowledge. It is quite likely that teacher candidates, who are not given the opportunity to interpret, solve problems, explain the results, defend their arguments, and discuss their arguments, will not be able to give these opportunities to their students (Başbay & Bektaş, 2009). For this reason, the implementation process of MEP includes large and small group discussions, sample case studies, creative writing, question-answer, brainstorming, generating ideas, talking circles, six hat thinking technique, conflict resolution and etc. Also, the film, the book, articles and other documents used in MEP were shared with teacher candidates before sessions to ensure that they have enough time to watch, read and get ready for sessions.

Evaluation of Procedures

MEP was carried out with volunteer teacher candidates for 8 sessions. The diaries written by teacher candidates were collected after each session. Additionally, focus group interviews were done to collect data about the efficiency of the program. The results of the interviews are presented in the results section.

Participants

The program was carried out with a total of 34 volunteer teacher candidates. 19 of the participant are females and 15 participants are male students and they were studying at departments of social studies, science, classroom teaching and psychological counseling and guidance. All of the participants attended all sessions during the eight week procedure.

Data Collection Tools

Diaries written by teacher candidates were collected from all participants after each session. Additionally, group interviews were done with teacher candidates to evaluate the effectiveness of the MEP at the end of the procedure.

Teacher Candidates' Diaries

Teacher candidates were required to keep diaries about each session in which they commented on and evaluated MEP sessions. Diaries they kept were collected right after each session.

Group Interviews

Group interviews with teacher candidates were done at the end of procedure to evaluate the effectiveness of educational activities. Three questions posed to teacher candidates at group interviews are as follows:

- 1) What do you think are the effects of MEP on teacher candidates participating in the program?
- 2) What is the activity you most favored in MEP?
- 3) What are your suggestions to improve MEP?

Data Collection and Analysis

The data of the research was collected continuously through the procedure. Teacher candidates expressed their views about each session in their diaries. These diaries were collected by the researcher. Additionally, participants were interviewed in three groups at the end of the program. Each interview took approximately 40-50 minutes. The diaries collected during MEP and data collected from interviews were analyzed using qualitative data analysis techniques. The data collected in the research was analyzed in accordance with thematic frame of MEP. Descriptive analysis was used in direct quotations (Yıldırım and Şimşek 2008). Teacher candidates were encoded as TC1, TC2....TC34 in direct quotations.

Validity and Reliability

Some special strategies were followed to ensure validity and reliability of the study. Long-term interaction method was used to ensure internal validity. Mutual agreement was established in group rules, break times of sessions, confidentiality and mutual trust. Secondly, participator approval was confirmed. To this aim, the interviews were written down and they were read by four randomly chosen teacher candidates. Thirdly, direct quotations were given without adding any comments to them. Fourthly, the data were collected in two different ways which are diaries and interviews and quotations are chosen from different participators. Fifthly, the structure of Migration Education program, research design and detailed information about collection and analysis of the data is included. Lastly, the researcher in qualitative studies is the one who spends time in his/her related field, experiences the events happening in the field, knows about the field and communicates with people participating in the study (Yıldırım & Şimşek, 2008). In qualitative research the researcher is also considered as a data collection tool (Mertens, 1998). For this reason, it is important to explain the role of researcher in the study. Researchers are experts academicians of educational programs and their fields of teaching. Both researchers in the study have comprehensive knowledge of curriculum development, evaluation, teacher training, and teaching-learning procedures. Additionally, both researchers carry out teacher training projects in coordination with governmental and non-governmental organizations.

Findings

The findings of the study are presented under two categories which are teacher candidates' diaries and interviews.

Analysis of Teacher Candidates' Diaries

The diaries written by teacher candidates after each session are analyzed under four main headings which are: Article and report examinations, book analysis, film analysis, conflict resolution and six hats thinking technique activities. The findings are as follows:

Findings related to article and report examination activities

Teacher candidates examined the articles and reports presented to them before sessions and they participated in activities in sessions. Some quotations written by participants after sessions are presented below.

The phenomenon of migration

Some quotations taken from sessions in which teacher candidates discussed about the phenomenon of migration, types of migration, immigrant, refugee, defector are given below.

A teacher candidate explaining the concept of refugee stated “ *refugees are people who are out of their countries and cannot turn back or not willing to turn back to their countries as they are scared of persecution because of their religion, language, religious sect, or political views*” (TC-3, 28.03.2018). Another teacher candidate expressed it as “*Defectors are people who appeal as international refugees but their formal status haven't yet been certified by authorities. Defectors cannot be forced to turn back to their home countries*” (TC-17, 28.03.2018)

Another teacher candidate defined inland migration in Turkey with these words “ *Internal migration in our country starting from 60s and 70s with sociological and financial reasons caused many problems especially in education, agriculture, husbandry, unplanned urbanization and economy...*” (TC-13, 28.03.2018) and another one explaining international migration expressed

“With the beginning of 19th century people from underdeveloped countries started to immigrate to developed countries for better living standards and starting from 1960s the world witnessed brain drain which is immigration of so called white-collar workers who made more qualified parts of population. However, with the beginning of 21st century re-sharing plans of the worlds resources caused civil wars in middle eastern countries forced people to flee from their countries” TC-2 (28.03.2018).

Given examples show that teacher candidates can define frequently confused concepts like migration, immigrant, refugee and defector suitable to their definitions in the literature and they

are aware of legal rights of these people. Additionally, they can analyze the current situation of internal and international migration in Turkey and in the world.

Immigrant population in the world, globalization and multiculturalism

The quotations made from teacher candidates diaries after the sessions about the characteristics of immigrant population in the world and analysis of the phenomenon of migration in the context of globalization and multiculturalism are as follows:

One of the teacher candidates examining reports of immigrant population addressed characteristics of immigrant population in the world and Turkey by stating:

“According to UN, the number of international immigrants have risen to 258 million. %48 of them are women and it is known that immigrant women have big problems in this harsh living conditions. The numbers also indicate that the number of immigrants or refugees in Turkey is 3 million 570 thousand in 2018. These huge numbers trigger many sociological, financial and educational problems both in Turkey and in the world.”(TC-9, 04.04.2018)

After the session about relation between globalization, multiculturalism and migration TC-30 (11.04.2018) stated that *“Globalization did not only bring along many major developments in technology, economy and information technologies but also caused problems in global justice, terror, unequal distribution of resources and migration”*.

Another teacher candidate summarized the conditions of immigrants by saying: *“Migration interrupts socialization of immigrants by invalidating their usual social norms and many other things they learnt”* (TC-17, 11.04.2018). Another teacher candidate indicating multicultural living culture as an important factor to minimize traumatic effects of migration by saying *“Any society that doesn't have a multicultural structure would have a dismissive attitude to immigrants. The solution is reconciling the society with multiculturalism”* TC-27 (11.04.2018)

A close examination of teacher candidates' diaries in this section shows that teacher candidates can analyze cause and effect relations between the phenomenon of migration, globalization and multiculturalism in technological and cultural context.

Immigrant children

After the session about immigrant children's situation in Turkey and in the world, teacher candidates summarized terrible condition of immigrant children in their diaries with following words: “ *Children under the age of 18 make 51% of all refugees. Human Rights Watch Organization reported that more than half of immigrant children are deprived of education. Especially orphan children are the ones most suffering from exploitation of human trafficking.*” TC-24 (02.05.2018). Another participant drawing attention to tragedies of refugee children expressed that “ So many children die during the process of immigration like Aylan the baby whose death made tremendous impact on the world” TC-24 (02.05.2018).

TC-12 drawing attention to the difficulties of refugee children in Turkey expressed that “*There are around 3.6 million Syrian individuals in Turkey and around 1.5 million of them are children. 350 thousand of these children are out of school system. Most of these children are open to abuse as they don't have some of their legal documents*” (TC-12, 02.05.2018). Another teacher candidate indicates harsh living conditions of immigrant children by saying

“Whatever the reason for their migration might be, these children are socially, culturally and physically negatively affected from migration. The families have to cope with various problems such as health, security, occupation and sheltering and they inevitably reflect these problems to their children which makes them disadvantaged against the hosting people. These harsh conditions may lead to traumas and compliancy problems. ” (TC-28, 02.05.2018)

Teacher candidates expressed that children are one of the most disadvantaged groups in migration. Additionally, they expressed that harsh living conditions after migration threaten many civil right of children like health, education and etc.

Migration sensitive educational system

Some quotations from the session in which a migration sensitive educational system was discussed and brainstorming activities were carried out are given below.

Characteristics of migration sensitive educational system

Characteristics of Migration Sensitive Educational System are reflected from the viewpoints of teacher candidates are as follows:

“Approaching all students with same manner can cause limiting students' skills and creativity. For this reason, the most important characteristic of migration sensitive educational system is creating an atmosphere in which diversity is respected.” (TC-6, 09.05.2018)

“Principally, basic problems of the children who experienced immigration must be dealt with. The most important ones of these problems are language, compliance, peer conflicts and indifference of parents.” (TC-21, 09.05.2018)

“In migration sensitive educational systems there must be adaptation programs and crisis response programs to efficiently avoid traumatic events.” (TC-34, 09.05.2018)

“Aside from academic skills, there must be plenty of sports and art activities which can help improvement of self-expression skills of immigrant children.” (TC-15, 09.05.2018)

“There have to be a system that can resolve the problem of inequality between immigrant children and other students.” (TC-1, 09.05.2018)

“It is vital to include intercultural learning activities in the curriculum. A migration sensitive educational system must focus on immigrant children's access to education, their participation and learning outcomes. Also, there have to be counseling psychologists who can help these children.” (TC-32, 09.05.2018)

“Because of various reasons like culture, gender and financial problems many immigrant children do not have access to education. The most disadvantaged groups in this case are girls and child workers whose labors are exploited. Governmental and non-governmental organizations must work very hard to put these children into schooling system.” (TC-4, 09.05.2018)

Analysis of diaries show that teacher candidates are aware of immigrant children's educational problems and they can have a deep understanding of migration sensitive educational systems.

Characteristics of teachers in migration sensitive educational system

Quotations from diaries written after the session about characteristics of teachers in migration sensitive educational system are given below.

“They must be sensitive to cultural differences and they must be world citizens who are open to a multicultural social structure. They must be able to emotionally connect with their students.”(TC-26, 09.05.2018)

“Teachers must be trained for peace education and human rights and also have skills for conflict resolution and mediation.”(TC-26, 09.05.2018)

“They must use educational games, creative drama, cooperative learning, problem solving techniques and etc. in the classrooms to increase communication between immigrant children and other children and help them actively participate in the classroom.”(TC-22, 09.05.2018)

“They must be critically thinking, peaceful, empathetic, open minded, non-discriminative, and they must have high moral values.” (TC-7, 09.05.2018)

We can understand from above quotations that teacher candidates can describe characteristics of teachers in migration sensitive educational system from a wide range of qualities which are professional competencies and personal qualities.

Findings related to book analysis (migration and poverty): The Land

The Land (2017) written by Antonio Torres was chosen to discuss the relation between migration and poverty. Quotations from teacher candidates diaries written after the session about migration and poverty are given in the following paragraphs.

One of the teacher candidates taking his ideas from Nelo's Story in The Land relates migration and poverty with these words: *“Poverty is one of the most important causes of migration. When poverty increase, people's desire to leave the places they live for better standards of living.”* (TC-30, 18.04.2018)

Another teacher candidate expresses how migration is viewed as a way of getting rid of poverty with these words: *“Poverty is one of the reasons why Nelo leaves his hometown. Because people want more than breathing or a life that offers them more than filling their stomach and they are right to do so. Nelo prefers to migrate to the city to as he thinks of improving his life standards instead of spending all of his life in poverty.”* (TC-2, 18.04.2018)

Another teacher candidate drawing attention to the reality that migration cannot be the only remedy for poverty by saying *“Individuals dream of getting rid of all negative consequences of poverty in the place they migrate. Unfortunately, carrying the burden of all hopes of a family, compliance problems, unemployment, insufficient social support and discrimination they face make them wake from these dreams.”*(TC-5, 18.04.2018)

Analysis of all diaries show that teacher candidates based on their experience from Nelo character in *The Land* and other major waves of migration in the world express that financial problems are the most important motives triggering immigration. However, they emphasize in their diaries that migrating to overcome poverty lays some very heavy burdens on these people.

Findings related to film analysis (migration and women): *Dancer in the Dark*

The film *Dancer in the Dark* (Von Trier, 2000) was chosen to discuss the effects of migration on women. Quotations from teacher candidates diaries they wrote after the film analysis are given below.

A teacher candidate viewing society from the point of gender inequality and migration states that *“Aside from being a difficult or even traumatic event, the phenomenon of migration becomes much more painful for women because of disadvantages brought to them by gender inequality ... ”* (TC-32, 25.04.2018) and another teacher candidate expresses that *“As in most other situations, women face more difficulty than men in migration. There are more job opportunities for men and they are paid more than women. People don't even look normally to single women or to single mothers. *Selma* challenges this viewpoint.”*(TC-8, 25.04.2018)

Another teacher candidate discussing migration and women topic in relation with *The Land* and *Dancer in the Dark* states that *“Nelo in *The Land* hates the county life and they live in and walks away from this place by himself without anyone's help. However, Nelo's sisters cannot leave the place though they hate it. They all run away with some men. In fact, as a women, I believe that we can overcome these issues just like *Selma*.”*(TC-20, 25.04.2018)

TC-13 viewing the relation between women and migration from the perspective of poverty expresses that *“Discrimination and prejudices towards women become more cruel towards a single immigrant mother...”* (25.04.2018)

Another teacher candidate refers to immigrant women's conditions by saying *“Vulnerability of immigrant women make them open to all kinds of sexual, financial and emotional exploitation and abuse. The story of Selma is the story of numerous immigrant women. Protecting immigrant from these kind of abuse must be responsibility of all institutions and organizations..”* (TC-9, 25.04.2018)

Lastly, teacher candidates were asked to draw emotions-time graphic line of Selma who is the main character in *Dancer in the Dark* movie and analyze an immigrant woman's emotions. Analysis of the graphics showed that the most dominant feelings in the movie were sorrow, fear, anger, confusion and disappointment. Music, rhythm and dreams are more prominent in all happiness scenes of Selma. Music is the only shelter she can find against the harsh conditions of life and she even goes to death by singing.

Analysis of the diaries written after film sessions showed that teacher candidates can make detailed analysis of financial, social, emotional and sexual traumatic effects of migration on women.

Findings related to conflict resolution and Six Hats Thinking Technique

In this activity, teacher candidates prepared various conflict scenarios which may emerge in schools affected from the phenomenon of migration. Later, these scenarios were acted using creative drama and conflict were tried to be resolved following conflict resolution stages. Quotations from teacher candidates diaries are given below.

A teacher candidate explains scenario creation process by saying: *“I and my group friends primarily tried to describe distinguishing features of the atmosphere of classrooms where immigrant children receive education and secondly we crated scenarios that can represent this atmosphere.”*(TC-12, 16.05.2018) Another teacher candidate emphasizes importance of conflict resolution skills in the resolution of conflicts by saying: *“Diversity inevitably brings*

out conflicts. The important thing is resolving these conflicts in a positive manner. I will teach these skills to my students too..”(TC-18, 16.05.2018).

The last activity in the last session of MEP is six hats thinking technique activity. The aim of this activity was reconstruction of immigration by teacher candidates. The analysis of teacher candidates' diaries after this session showed that impartial and objective information and data such as compliance problems, causes and effects of migration, characteristics of immigrant population in the world and Turkey were given under the title *white hat*.

The most recurrent positive feelings under the title *red hat* were having hope, happiness, delight and the most recurrent negative feelings were sadness, disappointment, unhappiness, loneliness, regret, yearning, social exclusion, poverty, stress, trauma, fear of hunger, fear of being unable to turn back to homeland.

Teacher candidates summarized positive sides of migration under the title *yellow hat* which included: Immigrants; can benefit from better educational, health, financial and social facilities and services; they may find opportunity to reach their desired lifestyle; open a blank page in their lives; culture and art opportunities and libraries can help them increase their cultural awareness and knowledge; they can increase their living standards; they can help growth of culture and economy of the place they migrate with cultural interaction and workforce.

Opportunities that can be created by phenomenon of migration were summarized under the title *green hat* with following words: Talented people from various fields like art, sports, literature can come together to create products; entrepreneurs can benefit from immigrants ideas to develop various projects and products suitable to multicultural life.

Teacher candidates summarized their ideas about phenomenon of migration under the title *blue hat* with these words: Migration has positive and negative social and financial effects on both immigrants and people living in the migrated country. It is essential to minimize negative effects of migration. The most important responsibility of all countries and civil society organizations in the world is securing all immigrants' and especially women and children's' safety, housing , health and educational needs.

Teacher candidates' diaries written after six hats thinking activity show that teacher candidates can carefully analyze the phenomenon of migration from its various aspects.

Finding related to group interviews

Three questions were posed in the focus group interviews in order to reveal how teacher candidates evaluated migration education program. The questions are as follows:

- 1) What do you think are the effects of MEP to teacher candidates participated in program?
- 2) What is the activity you most favored in MEP?
- 3) What are your suggestions for improvement of MEP?

1) To the question “What do you think are the effects of MEP to teacher candidates participated in program? ” all teacher candidates answered that they found MEP effective. Some of the answers given in the group interviews are given below.

“Our country is facing one of the biggest migration waves of its history. With this education program and similar other programs teachers can make their students social integration easier..” (Ö21)

“Teachers who have received such an education can more easily overcome cultural conflicts which will probably emerge in their classrooms. ” (Ö16)

“As a matter of fact, we also immigrate to other places to carry out our duties as teachers. I believe that this education will help us to integrate more easily in the places we will work in future.”(Ö8)

“I believe that such an education will empower teachers' classroom management skills in classes where there is a lot of individual differences.” (Ö29)

“ This program gave us the opportunity to view various aspects of migration in the world such as women, children and poverty. I believe that it made me aware of all of these” (Ö2)

“I believe that this kind of an education will strengthen teacher candidates' empathy.” (Ö13)

“MEP made me feel curious about other cultures and broadened my viewpoint.”(Ö22)

Teacher candidates expressed that with the help of MEP: They learned basic concepts and legal structure about migration; they increased their professional knowledge and skills which they can use in a multicultural context; they broadened their viewpoints about migration and its effects.

2) The second question posed in group interviews was “What is the activity you most favored in MEP? ” A general evaluation of the answers showed that teacher candidates found content and activities of MEP effective. The most effective activity was found to be film analysis (f:30). In addition to film analysis, creation and acting of conflict resolution scenarios and six hats thinking activity were the most appreciated activities by teacher candidates. Also, they found small and big group discussion of articles and reports beneficial.

3) Some of the answers teacher candidates given to the question “What are your suggestions for improvement of MEP? ” are given below.

“Some experts working in refugee camps can be invited to the sessions.” (Ö33)

“Creative drama activities about life scenarios of immigrants can be included more.” (Ö4)

“Documentaries about migration can be used. ” (Ö6)

“More case studies about traumas that immigrant children lived can be included.” (Ö25)

“Some visits to temporary education centers can be included to the content of MEP.” (Ö20)

“More films about immigration can be watched and analyzed.” (Ö17)

“MEP actually teaches us to effectively handle differences, accept multicultural education and carry these things to the classroom processes. I believe that I have started doing these with the help of MEP.” (Ö9)

Teacher candidates suggested watching more films and documentaries, inviting experts, arranging field trips, and including more creative drama activities in order to improve MEP.

Discussion and Conclusion

The aim of this study is to analyze MEP from the viewpoints of teacher candidates. The data of the study was collected from diaries which teacher candidates wrote after each session and group interviews which took place after the completion of MEP.

The first finding of the study is related to first sessions in which characteristics of immigrant population in the world were discussed. Analysis of teacher candidates showed that teacher candidates defined the phenomenon of migration, types of migration, causes and effects of migration, immigrant, refugee and defector consistent with related literature (Başterzi, 2017; Doğanay, 1994; Kaştan, 2015). In class discussions demonstrated that the topics were deeply analyzed. Teacher candidates also expressed that discussing current situation of immigrants in the world and Turkey in the light of reports was very beneficial to them and deepened their knowledge of the subject.

Another finding of the study is related to the session in which the phenomenon of migration was discussed in context of globalization and multiculturalism. The findings showed that teacher candidates mentioned both positive and negative aspects of globalization. Some of the teacher candidates viewed globalization as an important opportunity whereas others viewed it as a negative factor affecting citizens of both developed and developing countries. These teacher candidates stated that globalization is a power that turns the wheels of capitalism and causes wars which tears people off their homelands and forces them to migrate to other lands. Although they indicated that they see multiculturalism as a natural result of globalization and migration, most of the teacher candidates expressed their concern about people's readiness to it. They expressed that governmental institutions and civil society organizations must work together and create projects to solve this issue. Also, they viewed multiculturalism as the fastest remedy to heal traumas of immigration. These analysis of teacher candidates showed parallelism with related literature (Ateş & Yavuz, 2017; Görgün, 2017).

Another finding of the study is related to the relation between migration and poverty. Antonio Torres' book *The Land* (2017) was used in the survey of this topic. Teacher candidates discussed how poverty forced people to immigrate based on the story of Nelo who is the main character in the book. On the other hand, they expressed that migration can be a way to

overcome poverty, but there may be various social, psychological and financial problems which immigrants and their families have to face and poverty may still be a problem in the place they migrate. Teacher candidates' solution to this was social justice and fair distribution of world's resources.

Another finding of the study is related to the effects of migration on women. To this aim, the film *Dancer in the Dark* (VonTrier, 2000) was analyzed. Teacher candidates expressed that women immigrate for various reasons like family problems, poverty, sexual violence, wars, exploitation and violation of human rights which is consistent with related literature (Barin, 2015; Ünlütürk Ulaş & Kalfa, 2009). Also, they viewed the relation between immigration from the point of gender inequality in the society. Another issue emphasized was how migration made people, especially women and children, defenseless against abuse. Teacher candidates frequently expressed how poverty and other issues make life extremely harsh for women during the process of migration. All these conclusions made an emphasis on the fact that bad decisions given in a male-dominant world put the heaviest burden on women.

It is a known fact that immigrant women experience financial, physical, emotional and sexual violence (Yalçın, 2015). It is obvious that these conditions negatively affect their emotional world. In the film analysis activity, teacher candidates drew emotions-time graphic line of Selma who is the main character in *Dancer in the Dark* (VonTrier, 2000) movie. Analysis of the graphics showed that the most dominant feelings in the movie were sorrow, fear, anger, confusion and disappointment which were the feeling a women would most likely feel during the process of immigration. It was also pointed that the only shelter Selma could find were music and rhythm.

Another finding of the study is related to teacher candidates' views of immigrant children and their education. Children are severely affected from migration as well as women. During the process of migration, children also experience very serious problems which are being deprived of education and good living conditions and being vulnerable to sexual abuse and unhealthy conditions (Özvarış, 2018). Teacher candidates expressed that after the session which included current data and real life stories, they better realized seriousness of the situation and deeply felt the reality as prospective teachers.

Immigrant children have to work to contribute their families (Baş et al.,2017; Kaştan, 2015) and they are even forced to marriage (Türkay, 2016). Immigrant families neglect their children's educational needs as they have to deal with other problems caused by migration. This situation reveals how important it is to have migration sensitive educational systems and teachers. Teacher candidates summarized characteristics of migration sensitive educational systems with following words: It has to enable respect for diversity; it has to overcome various issues like compliance problems, peer conflicts and indifference of parents; it has to include sports and artistic activities; it has to be responsive to traumas caused by migration; it has to be equalitarian and multicultural; it has to provide schooling opportunities for immigrant children and help them effectively integrate with their schools.

Teacher candidates summarized characteristics of migration sensitive teachers with following words: They are sensitive to individual and cultural differences; they have a strong sense of empathy; they can think critically, they are respectful, peaceful, open minded, tolerant; their ethical values don't let them discriminate among people; they are open to global citizenship and multiculturalism; they are knowledgeable about children's rights, peace education, conflict resolution; they can actively use educational games, problem solution techniques, cooperative learning, creative drama and other teaching techniques; they are able to increase interaction between immigrant children and other children; they are aware of current event in their county and in the world; they are open to lifelong learning and educational innovations. These characteristics mentioned by teacher candidates are relevant to characteristics of multicultural teachers in related literature (Başbay & Bektaş, 2009).

The findings related to conflict resolution activities showed that teacher candidates found this session very effective. In this session, teacher candidates first created possible conflict scenarios which may emerge in immigrant children's schools using all skills and knowledge they obtained in prior sessions and then they acted these scenarios and resolved conflicts. Analysis of teacher candidates' diaries showed that they believed every teacher should be experienced about conflict resolution and mediation (Türnüklü, Kaçmaz, İkiz & Balcı,2009) and they should transfer these knowledge and skills to their students.

The findings of the last session of MEP which included six hat thinking activity showed that teacher candidates related: objective information about migration with white hat; all positive

and negative emotions such as hope, happiness, trauma, stress, loneliness, disappointment with red hat; better health, education, financial and living standards with yellow hat; all problems related to migration such as othering, unemployment, security, housing, exploitation with black hat; all creative projects in arts, sports, economy, etc. with green hat; and the reality that migration is an undeniable phenomenon which carries both opportunities and risks and for this reason world has to urgently prepare itself and its institutions to this phenomenon with blue hat. As a matter of fact, Turkey receives a lot of internal and international migration and as a result of its geographical location it is a transit point for migration (İçduygu, Erder & Gençkaya, 2014). It is known that this situation has major effects on social, economic, cultural and spatial structure of Turkey (Baş et al.,2017; Ekici & Tuncel, 2015; Kaştan, 2015; Özvarış, 2018; Tümtaş & Ergun, 2016). This finding of the study shows that teacher candidates can interpret various aspects of migration which are parallel to related literature.

Findings of group interviews can be grouped under three sections. Firstly, teacher candidates were asked “What do you think are the effects of MEP to teacher candidates participated in program? ”. All of the teacher candidates answered that they thought MEP was beneficial. The reason for importance of such an education was further explained by teacher candidates as: “Turkey is in the route of migration and currently hosts 4 million immigrants (GİGM, 2016), nearly half of these people are children but there aren't enough courses in education faculties about this issue”. For this reason they emphasized that this kind of programs can be very beneficial for teachers.

The second question posed in group interviews was “What is the activity you most favored in MEP?”. Findings of the study show that content and activities used in MEP was found effective by teacher candidates. I was found that film analysis (F:30), creation and acting of conflict resolution scenarios, and six hat thinking activity were the most favored activities. Review of literature also shows that using films in educational activities has positive effects on deeper analysis of characters and topics; making topics easier to understand; generating solutions; and including more real life experiences (Yakar-İnce, 2013). Additionally, various studies support that creative drama (Namdar & Çamadan, 2016), six hats thinking technique (Şahin & Çakmak, 2016), conflict resolution (Lane-Garon, Ybarra-Merlo, Zajac & Vierra, 2005) are effective methods in higher education.

The last question posed to teacher candidates in the interviews was “What are your suggestions for improvement of MEP? ” Teacher candidates' answers included following suggestions: Inviting specialists to sessions, visiting temporary education centers, and including more creative drama, film analysis and documentaries about migration.

In conclusion, Migration Education Program raised teacher candidates awareness of the phenomenon of migration; enabled them to describe characteristics of immigrant population in the world and Turkey, helped them to analyze various aspects of migration such as children, women poverty, globalization, multiculturalism; evaluate effects of migration on education; generate ideas related to migration sensitive education and teachers. In addition, the program was found effective by teacher candidates.

Suggestions for Future Research

- 1) Current study, which is about MEP, was designed using case study research method which is one of qualitative research methods. Further research can be designed using mixed methods by including various scales such as multiculturalism, global citizenship, democratic attitudes, etc. or written exams relevant to aims of education program.
- 2) The content of MEP can be further improved by including different films, documentaries, field trips, experts and other activities. By this way, the program can be suggested for implementation in education faculties and in-service training of teachers.

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Research Article

**Perception of Christianity and Christian Peers in the Drawings of Muslim Children:
The Example of Pforzheim/Germany¹**

Yasemin Güleç²

Abstract

The purpose of this study is to ascertain the perceptions of Muslim children aged between 9 and 15 years old about Christianity and their Christian peers via drawings they draw. In total, 57 students participated in this research. The pattern of the study is based on art-based research listed among the qualitative research methods. The data were collected by the descriptive analysis of semi-structured interviews as well as semiotic analysis of the drawings. It was observed that children use an “icon” the most in their drawings since it has a literal meaning, secondly the “index”, which implies a causal relation while the children use the “symbol” the least. It is comprehended that the drawings of children reflect the inner world of the children. The drawings of children, stating that the religion does not constitute an important factor and they are not bothered to live with people from other religions, reflect the indicators based on the tolerance. On the other hand, the drawings of those who expressed that they are not content to live in a Christian society and that the religion is important for them, reflect the indicators based on the prejudice.

Keywords: *Religious prejudice and tolerance, religious social categorization, perception of muslim minority group, children's drawings, semiotics.*

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**Müslüman Çocukların Resimlerinde Hristiyanlık ve Hristiyan Akran Algısı:
Pforzheim/Almanya Örneği**

Öz

Bu araştırmanın amacı, 9-15 yaş Müslüman çocukların, diğer dine ve diğer dinden akranları hakkındaki algılarını, resimleri yoluyla tespit etmektir. Bu araştırmaya 57 öğrenci katılmıştır. Araştırma, nitel araştırma yöntemlerinden; sanat temelli araştırma ve yarı-yapılandırılmış görüşme desenleriyle desenlenmiştir. Veriler, resimlerin göstergebilimsel analizi, yarı-yapılandırılmış görüşmelerin betimsel analizi ile toplanmıştır. Çocukların çizimlerinde, en çok düz anlamı içeren "görüntüsel gösterge"yi kullandıkları, ikinci olarak neden-sonuç ilişkisi içeren, "belirti göstergesi" ni kullandıkları, en az kullanılan gösterge türünün ise "simge" olduğu görülmüştür. Araştırmada çocukların iç dünyalarının resimlere yansıdığı görülmektedir. Arkadaşının dininin önemli olmadığını ve diğer dinin mensuplarıyla birlikte yaşamaktan rahatsızlık duymadığını ifade eden çocukların resimlerine, hoşgörü temelli göstergeler yansımıştır. Öte yandan arkadaşının dinin önemli olduğunu ve Hristiyan bir toplumda yaşamaktan memnun olmadığını ifade edenlerin resimlerine ön yargı temelli göstergeler yansımıştır.

Anahtar Kelimeler: Dini önyargı ve hoşgörü, dini sosyal kategorizasyon, müslüman azınlık grup algısı, çocuk resimleri, göstergebilim.

Introduction

Since the drawings are considered as a reflection of children's inner world, they help us understand the personality traits, interpersonal relationships, emotional problems, frustrations, fears, expectation etc. In children's drawings, while the emotions between the ages of 4 and 7, referred to as "pre-schema period", are expressed in a concrete form, the number of abstract expressions used in the drawings starting from the age of 9 seems to increase (Ives, 1984). Hence, the period between age 8 and 9 is called the "schematic period", in terms of development stages of children's drawing. In this period, children start to acquire a unique perspective. The schema is formed by the perception of the children, the emotional meaning attached to that thing as well as the experiences about the thing. The child addresses here not only the personal relationships but addresses the rational relationships with others as well (Yavuzer, 2013). This period is called the "period of realism" since children, who are between 9 and 12 years old, usually approach the drawing with a realistic understanding. Hence, the drawings drawn during this period are based on observations, specific to the adults. The child compares his/her drawings with what s/he observes in nature and intends to imitate what s/he observes. If s/he fails to imitate, s/he may feel desperate. The ages between 12 and 14 are characterized by "naturalism". Most of the adults cannot access this phase. Because the child abandons drawing, by getting discouraged since s/he cannot draw the realistic view of nature in the previous phase. When they are 13-15 years old, it is observed that the children, who continue drawing, may fully use and effectively the perspective. Hence, there are more details in the drawings. They start to create abstract images (Malchiodi, 1998).

People interpret with his/her own perspective the religious, cultural and symbolic images that have been recorded in the mind since the person is born, according to the positive or negative effect of many factors including the family structure, educational background, social environment, and many other similar factors. Drawing is possible by using the signs and these signs are generated from religious, symbolic, social and cultural backgrounds. Drawings, more than verbal modes of expression, provide the best means for projection of the unconscious levels of the individual's inner group (Abraham 1990). We may get help from the semiotic approach as the method to be used for analyzing and comprehending this language. That would help to comprehend the drawings in an integrated way (Ashwin, 1984).

While children's drawings are mostly used in the fields of psychology and psychotherapy (Frith & Law, 1995; Malchiodi, 2001; Bahçivan-Saydam, 2004; Sayıl, 2004) they are providing benefits in language (Demir, 2007) and mathematics (Bussi and Boni, 2003) education. In recent years, we observe that the children's drawings are used in many fields as a diagnostic tool to understand the children's knowledge and experiences from their point of view (Bayav, 2006; Cowan & Albers, 2006; Ekinci, 2008; Leitch, 2008; Ersoy & Türkkan, 2009; Ersoy & Türkkan, 2010; İşliyen & İşleyen, 2015; Öksüz, Güven, Baba & Kartal, 2015; Ersoy, 2016). There are many studies conducted by analyzing the children's drawing in order to understand the perceptions of children on violence (Yurtal & Artut, 2008; Akbulut & Saban, 2012) the effects of migration (Ekinci, 2008) and war (Ben-Asher, 2016), familial situation (Akalin 2008; Dülger, 2008; Türkcan, 2013) and hospitalization (Şen-Beytut, Bolışık, Solak, & Seyioğlu, 2009; Durualp, Çiçenoğlu, Mümüneoğlu, Kalkanlı, & Altuntaş, 2012).

Children's drawings are also used as a diagnostics method in researching the development of religious and moral concepts in children. Regarding children's religious development, some religious concepts such as god (Harms, 1944; Pnevmatikos, 2002; Zengin, 2010), heaven-hell (Koç 2008; Ulçay 2011) and death (Tümlü, 2013) have been examined in semiotic approaches.

In terms of moral development, in the context of tolerance and prejudice in children, the most important differences that may cause tension between groups, especially in multicultural societies, are race, ethnicity (White & Gleitzman, 2006; Lovini & Carlson, 1985; Doyle & Aboud, 1996; Kistner, Metzler, Gatlin, & Risi, 1993) and religious differences (Verkuyten & Thijs, 2010; Velasco González, Verkuyten, Weesie, & Poppe, 2008; Takriti, Barrett, & Buchanan-Barrow, 2006; van der Straten Waillet & Roskam, 2012a; van der Straten Waillet & Roskam, 2012b).

Comparisons have been made between children's drawings of different ethnic and racial groups to examine the impact of social status, political conditions and social concepts (Teichman, 2001; Teichman & Zafirir, 2003; Laor, Wolmer, & Cohen, 2004; Michael & Rajuan, 2009; Yedidia & Lipschitz-Elchawi, 2012). As far as we access, we have not found any study that

investigated the perceptions of Muslim children towards their Christian peers through the drawing method.

Religion is of great importance in many people's lives, and religious groups are among the more salient buttresses of identity (Altemeyer, 2002). Religious groups are of great importance in the lives of children in terms of supporting the development of both individual and group identity (Seul, 1999). Additionally, questions about religious diversity increase and may cause social divisions and new conflicts (Verkuyten, 2007). Studies in the field of religious group categorization and attitudes were fewer than those of race and ethnic groups. Therefore, it is important to conduct more research among religious groups. In this sense, the contribution of the present research to the literature is important. Because of the limited research on religious intergroup differences, other inter-group literature will also be utilized while discussing the results of the study.

The main purpose of this study, which strives to analyze the perceptions of children on other religions and members of other religions through their drawings and uses art as a diagnostic method, is to determine how students perceive Christianity and their Christian peers and reflect this perception in their drawings. Answers to the following questions are sought in the study: i. which types of indicators did the students use in their drawings? ii. What differences are there in the drawings of the students in terms of cognitive development and age? iii. How did the religious tolerance and prejudice perceptions of religious minority children living in multicultural societies reflect in their drawings?

The data were classified based on Peirce's semiotic theory, as "icon, index and symbol" (Erkman, 1987). It was firstly seen that the children used the "icon" which includes the direct and real meanings of the object. Secondly, they used the "index" which based on the reason-result relationship. Lastly, they used the "symbol" which based on the symbolic meaning of the object in their drawings.

In parallel with the literature on children's drawings, the children's inner worlds were reflected (Teichman, 2001; Teichman & Zafirir, 2003; Akalin, 2008; Michael & Rajuan, 2009; Akbulut & Saban, 2012; Yedidia & Lipschitz -Elchawi, 2012; Türkcan, 2013; Ben-Asher, 2016) on their drawings in this study. With age and cognitive development, it is seen that the details in drawings increase (Harms, 1944; Golomb, 1987; Brown, 1990;

Pnevmatikos, 2002; Cox, Perara, Koyasu, & Hiranuma, 2001; Ulçay, 2011; Tümlü, 2013; Zengin, 2010).

In some studies that reached the same conclusions as ours, it was seen that children's racial (Goodman, 1952; Aboud, 1988; Doyle & Aboud, 1993) and religious prejudices (van der Straten Waillet & Roskam, 2012a) decrease as their ages increases. This is because they develop the ability to empathize with others and recognize different perspectives. In the literature, there are conclusions that it is not enough to explain the development of perceptions of ethnic, racial and religious tolerance and prejudice in children and adolescents based only on age and cognitive development (Elkind, 1964, 1970). The development of tolerance and prejudice may be influenced by the heterogeneity and homogeneity of schools and classes, group status, contacts among groups and ethnic, racial and religious socialization practices of parents (Allport, 1954; Kistner et al., 1993; Pettigrew & Tropp, 2006; Takriti, Barrett, & Buchanan-Barrow, 2006; van der Straten Waillet & Roskam, 2012a; van der Straten Waillet & Roskam, 2012b; Verkuyten & Thijs, 2010).

Method

Sample

The criteria sampling method was used for selecting the students to take part in the study. Subjects were selected according to some criteria. i. Being born and raised in Germany ii. Being a Muslim iii. Being a child of a Muslim family, immigrated to Germany from Turkey iv. Being educated in German public schools v. Being between 9 and 15 years old vi. Willing to participate in the study. 57 students from the German school in Pforzheim and its surrounding participated in the study. Table 1 shows the distribution of the students by school, age and gender. While 39 students are female, 18 students are male.

Table 1

The Distribution of the Students by School, Age and Gender

School	Gender		Age	
	Female	Male	9 -10	11-15
Grundschule (Primary school)	10	3	13	-
Realschule (Secondary School)	19	6	-	25
Gymnasium	10	9	-	19
Total	39	18	13	44
Grand Total	57			

While 13 students are studying at level Grundschule (Primary School), 25 are studying at Realschule and 19 students are studying at Gymnasium³ level. While 13 of the students are between the ages of 9 and 10, 44 students are between the ages of 11 and 15.

Analysis of Data

The data was collected through children pictures, interview about pictures and semi-structured interview methods. The research was carried out in two stages. Firstly, the students were asked to draw the first thing that came to their minds when we mention "Christianity and Christian friends". Then, the students were interviewed about their drawings in order to comprehend what they really express with the drawing. Since most of the students have struggled to express their feeling and thoughts about Christian peers by using only symbols, we have asked 2 open-ended questions to the participants, as the part of the semi-structured interview: i. How do you feel about Christianity (good, bad, middle, very bad, hate, etc.) Can you explain us the reasoning behind your feeling? ii. Is the religion of your friend important for you? Why?

Classification of the icons used by students in their drawings has been determined according to the interviews conducted with the students on the drawings and the elements that the drawings contain. The data were classified according to Pierce's semiotic theory, as "icon, index, and symbol" (Erkman, 1987). If the elements included in the drawings are expressed with their lateral and real meaning, they are classified as "icon". If they include a cause-effect relationship, the drawings are classified as "index" while they are classified as

³The first step of a compulsory school education in Germany is Grundschule (Primary school). Usually covers a duration of 4 years (In Berlin and Brandenburg states, it lasts 6 years.) According to the level of success, the students are classified into schools; hauptschule, realschule or gymnasium. By taking into account the grades of the second semester in the 4th grade as well as the average of written and oral grades of the beginning of the second semester, an average is calculated and the selection is based on this average. The pupil is entitled to enter the Gymnasium, if the average of German and Mathematics grades in the second semester of 4th grade is between 1.0 and 2.5. If the average is between 2,6 and 3,0, the pupil is entitled to study in Realschule. Finally, if the average is below 3.1, the pupils study in Hauptschule. (Bildungsplan 2004, Grundschule, BW Ministerium für Kultus Jugend und Sport, Bildungspläne der Allgemein Bildenden Schulen. Cd document; quoted, Perşembe, 2010).

“symbol” if expressed in a symbolic sense. Two themes emerge from the answers given to the open-ended questions that were asked the students. Students' views adopting a tolerant or prejudicial approach to Christianity and Christian peers have been analyzed with descriptive analysis supported by the drawings of the children.

Results

Use of Indicators by the Students

Table 2
Distribution of Indicators Used in Drawings by Schools

Indicator Type	Type of School			Total
	Grundschule (Primary school)	Realschule	Gymnasium	
Icon	7	18	7	32
Index	-	2	5	7
Symbol	-	-	2	2
Icon + Index	5	5	5	15
Icon + Index + Symbol	1	-	-	1
Grand Total	13	25	19	57

As observed in Table 2, students preferred to express their perceptions of the concepts of "Christianity and Christian peers" by using the icons the most. The second visual indicator that the students used is the "icon and index" indicator. The third indicator used by the students is the “index” icon. However, the visual indicator that was used the least is the “symbol”. There is only 1 student, who used all the indicators together. When the information in Table 2 and Table 3 are evaluated together, 6 out of 13 Grunschule students have drawn a single icon (the sign of the cross). Of the 25 Realschule students, 4 students only draw a sign of the cross. Only one of the 19 gymnasium students used the “sign of the cross” as the single icon. Almost all of the students of Realschule and Gymnasium schools used more than 2 icons together. However, none of the Grundschule (primary school) students, who use the icon indicator in their drawing, had used more than 2 icons together.

Table 3
Distribution of Visual Indicators by Schools

Icons	Type of School		
	Grundschule (Primary school)	Realschule	Gymnasium
The sign of the cross	6	9	1
The sign of the cross + Crucifixion	-	2	5
The sign of the cross + Bible	-	-	1
The sign of the cross + Pig	5	4	4
Church	1	-	1
Church + The sign of the cross	-	1	1
The sign of the cross + Crucifixion + Church			
Bell + Jesus			
Alcoholic Beverage + Candle			
Bible + Pope			
God + Christmas			
Pig	-	4	4
Christian Friend	-	3	1



Figure 1. Student 1 (S1) Male/12 Gymnasium

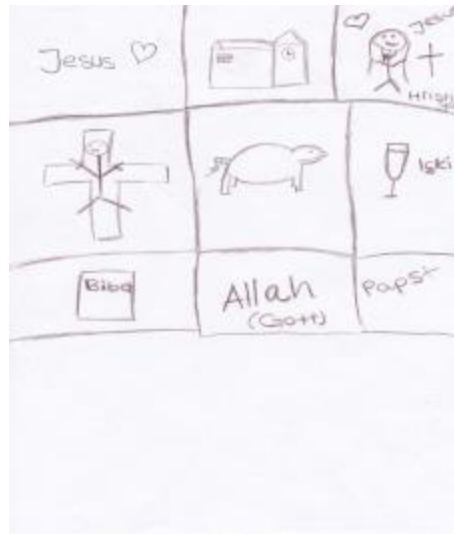


Figure 2. Student 2 (S2) Female/13 Gymnasium

Above you may find the examples of interviews and semi-structured interviews with two students, using at least 4 icons together. As observed in Figure 1, S1 has used several visual indicators together with the concept of "Christianity and Christian peer". When interviewed, S1 stated, "when you mention Christianity, the things the come to my mind are, the sign of the cross, the Bible, the church, the pews in the church, praying hands, the fact that they

drink a lot of alcoholic beverages and they eat pork meat.” S1 replied to the open-ended question as follows, “when Christianity and my Christian friend are mentioned, good feelings are evoked. Because they are mostly good people. Because the religion of the person that I want to be friend with is not important, but the morality of the person matters to me.” S2 stated, "What the Christianity evokes; I have drawn these images for Jesus, the sign of the cross, the Crucifixion, the Bible, the church, the pig, the Pope, the God. ". When replying the open-ended questions, S2 answered, “I am happy to live in a Christian society. Because I have many good Christian friends. I always learn something from them.”



Figure 3. Student 3 (S3) Male/11 Gymnasium



Figure 4. Student 4 (S4) Female/13 Gymnasium

Above is an example of the interviews of two students using their "icon" as the indicator in their drawings and their interviews with their semi-structured interviews. S3 states during the interview, “Jesus is believed to be a Prophet. And they brought gifts from gold to celebrate his birth.” When we asked where he learned this information, he responded, “One day I attended a religious lesson for Christians and the teacher told me about it, For this reason, I remembered when you asked about the Christianity and I drew this drawing.” It is understood here that S3 uses an “index” as the indicator since he established a causal connection between the birth of Jesus and gold gifts. When replying the open-ended questions, he replied, “I am not bothered to live here. Because I have many very good friends. The religion is not important for me as long as my friend is a nice human being.” During the interview with S4, she states, “The sign of the Cross explains the suffering of the Prophet Jesus. That is why I put some blood on the sign of the cross. R. I. P (rest in peace), this is something people say for Jesus. I drew a boy and a girl being friends since flirting is not a sin for Christianity. I also added Bible, these are all that come to my mind.” Here, the student used “index” since she established a causal relationship between the

suffering of Jesus and blood drops and the friendship between the girl and boy and the fact that flirting is allowed. She responded the open-ended questions as follows, "I remember good things when I think about Christianity. I do not know the reason why. It is enough for me if my friends are nice."



Figure 5. Student 5 (S5) Male/11 Gymnasium



Figure 6. Student 6 (S6) Female /11 Realschule

Above is an example of the interviews and semi-structured interviews of the two students, who used the "icon and index" indicators together. S5 explains his drawing by saying, "People are singing in the church and there is a very beautiful sound in the moonlight." The student draws a church and benefits from an icon in the first place. However, since S5 states that a divine voice is coming from the church in the moonlight, it is understood that he establishes a positive causal relationship (the divine voice coming from the church – a beautiful voice) and hence, he uses the "icon and index" indicators together. When replying the open-ended questions, he said, "I do not feel anything bad when Christianity is mentioned. In fact, I have a beautiful and nice feeling about this. It is enough for me if my friends are nice because there are many Muslims, who are not nice." S6: "The sign of the Cross is struck by lightning. Because they have changed the Bible.", she replied. Here the S6 used the icon, the most well known visual indicator among others. However, she establishes a causal relationship between the sign of the cross, struck by lightning and the fact that the Bible being changed. The student asked open-ended questions by stating, "I do not have a good feeling about Christianity, I never thought of becoming a Christian. However, the most important thing for me in a friendship is behavior." As mentioned above, only 2 Gymnasium students, out of 57 students, used the "symbol" indicator in their drawings.



Figure 7. Student (S7) Female/12 Gymnasium



Figure 8. Student 8 (S8) Female/12 Gymnasium

Above, you may find the interviews and semi-structured interviews conducted with these students. As you can observe in Figure 7, S7 completely scribbles the whole page and scribbles an ellipse in the middle of the page in a darker color. When replying during the interview, she states that she had bad feeling and thoughts about Christianity and that is why she scribbled the page. She responded to the open-ended question by saying, "I do not like Christians and I do not have good feelings for them, they are not like us, I like my own cultural values. It is important to me that my friend shares my culture." When we looking at the drawing of S8, we observe a black heart figure. During the interview, S8 explains her drawing by saying, "I do not trust Christians, that is why I draw a black heart". When responding the open-ended questions, she states, "I do not have a good feeling about Christians. Because they do not trust me." Here, both students expressed their perception by using "a black page and a black heart", as they perceive the subject in their own world.

Religious Tolerance and Prejudicial Perceptions of Students

Table 4

Students' Approach to Christianity and Christian Peoples by Age

Age	Tolerant Approach	Prejudicial Approach	No-idea
9-11	10	11	2
12-15	22	7	5
Total	32	18	7

Table 4 contains the distribution by age of the answers to the open-ended questions in terms of tolerant and prejudicial approach. Of the 57 students, who participated in the study, 32

expressed their perspectives on "Christianity and Christian peer" with a tolerance-based approach. 18 students have a prejudicial approach in this regard. 7 students did not disclose any ideas. It appears that students become more tolerant as they grow older. While 10 out of 21 students (aged 9-11) (48%) have a tolerant approach, 22 out of 29 students aged 12-15 (76%) adopt a tolerant approach.



Figure 9. Student (S9) Female/13 Gymnasium



Figure 10. Student 10 (S10) Female/13 Gymnasium

Above, we have given examples of drawings and semi-structured interviews of some students, who have adopted a tolerant approach in their perceptions of other religions and peers of other religions. S9 explains her drawing by stating, "Some Christians do not accept and respect Islam as religion, while others would like to stop Islam since they think this is a dangerous religion." She responded to the open-ended question as follows, "Although some of my German friends do not like Muslims, I consider Christians as nice people. I do not feel bad when someone mentions Christianity. I prefer to be friends with people of a different religion. Because I am curious about different cultures and I want to learn new things." When we asked S10 about the portrait in the drawing and the sign of the cross, she replies, "I love my Christian friend. Because she is a very good person. That's why I drew her and decorated the drawing with the sign of the cross for my friend." Hence, it is understood that the student uses the "index" indicator in his drawing, establishing a causal relationship between Christianity and her beloved Christian friend. In addition, the student responded in the same way to the open-ended questions that were asked of her. She expressed that she was happy with his Christian friends and that she was considering the morality of the persons as the criteria to be friends. Thus, from the points of view shared with us, we understand that S10 has a tolerant approach.

Perception of Christianity and Christian Peers in the Drawings of Muslim Children: The Example of Pforzheim/Germany



Figure 11. Student 11(S11) Female/14 Realschule

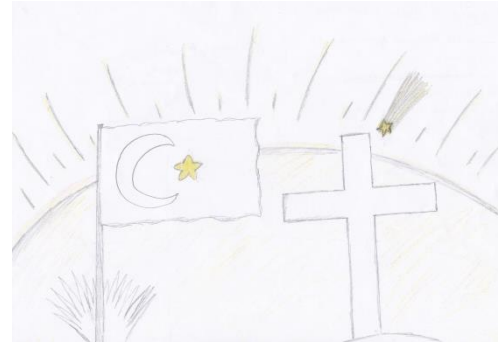


Figure 12. Student 12 (S12) Female/13 Realschule

It seems that S11 and S12 have drawn the same theme (tolerant approach) in their drawings. Both S11 and O12 explain their drawings by saying, “There are unity and cooperation between Turkey and Germany.” Here, the two students draw the sign of the cross and the Turkish flag side by side and express the unity between Turks (Muslim) and Germans (Christian) with their "index" indicator. S11 answered open-ended questions as follows, "I do not have a bad feeling for Christians. According to me, the religion of my friend is not important." S12 states, “Let people believe whatever they like to believe. In the end, we are all human and we will be the same after death.” Hence, both students adopt a tolerance-based approach to other religions and members of other religions.



Figure 13. Student 13 (S15) Female/9 Grunschule



Figure 14. Student 14 (S14) Female/9 Grunschule

In Figures 13 and 14, two students⁴ sitting together have drawn the above pictures in such a way that they complement each other on two separate papers. It has been observed that

⁴ Separate seats are provided for students so that they freely reflect their independent perceptions on paper and they are not affected by each other. However, it was observed in the weekly lessons of the researcher that these two students were always sitting and studying together. These students were allowed to sit together since they insisted on drawing together.

students have the same perceptions about the subject when we interviewed the students. "The Muslim girl has a headscarf while the Christian girl has a sign of the Cross at her head. The girls in the drawing are friends and love each other very much." When asked the students the meaning of the heart, they replied, "The two friends do not want to be separated because they love each other so much." S13 and S14 replied to open-ended questions as follows, "We are friends with everyone who is nice, we have many Christian friends in school. We do not like Muslims, who are not nice."

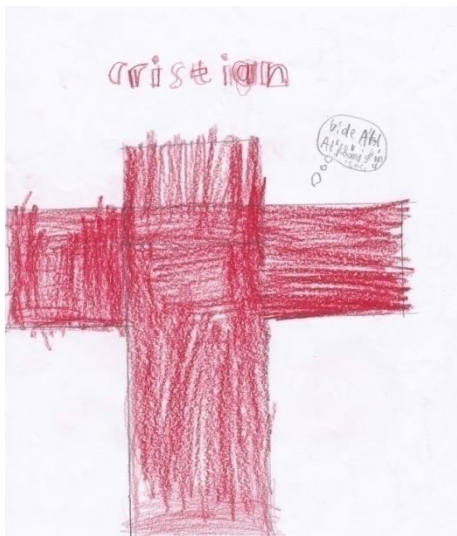


Figure 15. Student 15 (Ö15) Male/9 Grundschule

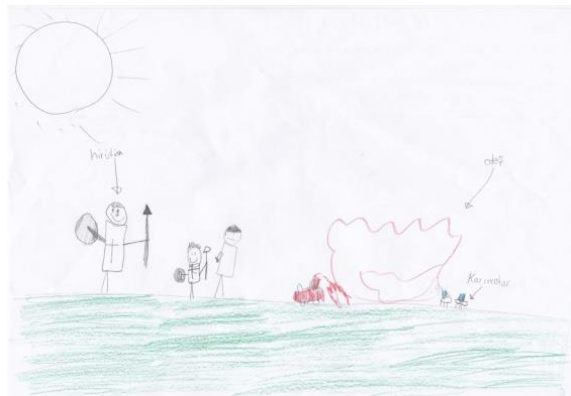


Figure 16. Student 16 (S16) Male/9 Grundschule

Above, you may find the drawings and interviews as well as semi-structured interviews of 2 students, adopting a prejudicial approach against other religions and members of other religions. Drawing 15 belongs to a Grunschule (primary school) student as shown above. S15 explained his drawing as follows, "The sign of the cross and the sound of the horses come to my mind. Because when Christians and Muslims were fighting, the Christians were unfair." When we asked how he acquired this information, he answered, "My mother told me while I was watching a movie." If we evaluate together the expressions and drawing, we can conclude that he uses the icon – the sign of the cross – and index (cause-effect, the unfairness of Christians, the war between Christians and Muslims) indicator together. When we asked the reason why he painted red the sign of the cross, S15 replied, "When I think about Islam, the green is the appropriate color to me. For Judaism, it is blue, and it is red for Christianity. That is why I painted the cross in red." S15 replied to open-ended questions by saying, "I feel bad about the sign of the cross". Likewise, the drawing 16 is drawn by a

Grundschule student. S16 explained the drawing by saying, “The Christians wanted to throw the Prophet Abraham into the fire. The ants carried water to protect the Prophet, Abraham. I believe they do not believe in Prophet Muhammad.” When we asked S16 how he acquired this information, he responded, “Before going to bed, my dad tells me stories. He told me about the story as well. That’s why I drew it.” When we evaluate his expressions and his drawing, we can conclude that S16 uses the icon – the sign of the cross, the index indicator (cause-effect/the Christians are mean and they throw Prophet Abraham into the fire) together. In addition, S16 prefers to express his thoughts with a symbol that is not directly related to the Christians today, like throwing Abraham on fire. In this sense, it is possible to state that S16 uses the icon, index and symbol indicators together. The student replied to open-ended questions by stating, “I feel bad when I thought about Christianity. According to me, the religion of the people is important, but it is also important to be nice.” These results indicate that both S15 and S16 have a prejudicial approach.

Discussion

Use of Indicators by the Students

It is comprehended that the drawings of children reflect the inner world of the children. The students expressed their perception about the subject by using different icons, indexes, and symbols. While a student expresses a situation with “a sign of the cross”, another student expresses the same situation by drawing a black heart. One states something by decorating with a sign of the cross; another student expresses the same situation by a lightning strike. These findings of the research resemble the findings of many researchers, which have ascertained that children's drawings reveal their inner worlds and their psychological states (Akalin, 2008; Şen-Beytut et al., 2009; Akbulut & Saban, 2012; Türkcan, 2013; Öksüz et al., 2015; Ben-Asher, 2016). The studies of Ulçay (2011) reveal that many cases like separated families, unhappiness, fights, unity, etc. are reflected in children’s drawings when they draw heaven and hell. When a boy draws himself with his mother in heaven while he draws his stepmother and his father in hell, we may think that the child stays with this father and he was forced to be separated from his mother and he contemplates about the day he is going to meet his mother in heaven.

As it is possible to observe from the analysis, when we compare the drawings of the students between the ages of 9 and 10 and the students between the ages of 11 and 15, we realize that the drawings of students, who are between 11 and 15 years old, have more details in their drawings. Correspondingly, the findings of Brown (1990) and Golomb (1987) reveal that the number of detail used increases with age. When we analyze the drawings of children between 7 and 12 years old, we realize that the older children and girls use more details than the younger children and boys (Cox et al., 2001). Ulçay's (2011) study reveals that children intend to draw hell rather than heaven when they get older. When they are 7 and 8 years old, the children think, "I have never been in hell so I can't draw it." Then, when they are 9, they commence thinking, "I will be the one to draw the most horrible hell". Finally, they change their perspective when they are 12 and consider the concept in a more educational and informative way and they tend to ask, "who is going to hell" and "why she/he is going to is going to hell". In addition, the children depicted both sexes in heaven and hell, without gender discrimination when they are 7-8-year-old, although they painted their fellows in heaven and opposite sexes in hell when they are 9-11 years old. Since the age 12, the ability to think abstractly begins to develop as well as the understanding of justice. Hence, the children begin to depict the fair judgment for the whole humanity in their drawings. A 14-year-old child has drawn a hell, presented the concept in a humorous way and enriched the drawing with speech bubbles: "When people follow the plate with the word "Welcome to Paradise" on the straight path, the Devil is entertained for fooling people by saying "Hello, babies are welcome". When the girl arrives at the heaven's door, she is happy and says "hurrah", but at the same time, as she has an altruist character, she prays for the persons on the bridge by saying "God help you!".

Tümlü's (2013) study reveals that most of the children between 5 and 12 years old expressed their perception of death with "religious elements" and "violent elements" while only children between 5 and 6 years old expressed their perception by using the monsters, dead cartoon characters, ghosts, skeletons, and non-living creatures.

Pnevmatikos (2002) classified the primary school students' drawings based on the basic ontology of the God concept: i. God is a real man living on earth. ii. ii. God is a spirit living in the universe. iii. God is a spirit. iv. God is a spirit, which lives in positive conditions (goodness, love, peace). It is observed that the conceptual hierarchy of young children is simpler than the conceptual hierarchies of older children. 55% of 1st Grade students

contemplate God as a real man living on earth while 56% of 2nd Grade students believe the same thing. This rate falls to 3.7% in the fifth grade. The rate of students, who consider that God needs a material structure in the sky to live, is 15% in the first grade, but the ratio increased to 66,7% in older children. The proportion of those, who depict God as a spiritual being remains the same at 15-30% in all classes. Those, who contemplate God as a good soul, constitute only 6.3% of the class in the 4th grade.

According to Harms, children between the ages of 3 and 6 draw God as follows; Either as a king or father of all children, with long beard or no beard, either in a house made of gold on the clouds or in a house made of clouds, either in the shape of Crucified Jesus or in the shape of cloud with a polar bear depicted as the word “God”, the formal language in which the divine experience is expressed in this period is always like a “fairy tale”. However, children at the age of 7 and 11 do not have fairy tale elements in God's imaginations. Metaphysical imagination in the child was replaced by the reality. In this period, the child, in general, depicts the concept of God with religious symbols. In particular, every child used the Crucifix in his/her imagination. In addition, the Star of David, the priests as well as the intermediaries of God are among the most preferred symbols. Jesus prophet was drawn quite traditionally. Harms emphasizes that the formal character of children in this period is also observed in other artworks of children, in this sense the emotions of children reflected indirectly through symbols. Harms found many big differences when analyzing the drawings of 4,000 adolescents, aging between 12 and 18. This period is considered in three groups: the first group tends to experience the dominant religion in the society where the children live. The children of this group drew the sign of the cross, Mother Mary, the gates of heaven (doors to heaven), angels, the synagogues, Moses and burning bush. The children in this group do not have the religious imagination. The second group drew something original and personal. They described their thoughts with abstract, semi-abstract and symbolic drawings. They used abstract symbols such as light or sunlight, lightning in the dark sky. Finally, the third group of children has reflected their minds in astonishing ways. They have produced drawings, regenerating the religious and sectarian motifs, different from their own religious beliefs that the children have never experienced (Harms, 1944).

This study also proves that analysis of drawings can be used as a diagnostic method for determining the cognitive processes of children. When we compared the drawings of

Realschule and gymnasium students in the same age range, it is observed that the gymnasium students use more visual indicators together than the Realschule students do. Moreover, it is also ascertained that gymnasium students use more than one visual indicator together, while at the same time the students that use the “symbol” indicator are gymnasium students. In this sense, it is possible to state that the students with a high level of academic knowledge have more advanced capabilities in terms of abstract thinking and for reflecting this thought. The study of Ulçay (2011) has found a positive relationship between the development of heaven and hell imagination and mental development, in parallel to the cognitive development of children. When the children are getting older, we observe the drawings with complex meaning, depicting abstract concepts including humor as well. When we analyze the drawings drawn by Muslim and Christian children about the concept of “God”, we observe that the concept of God remains physical even though the Islamic education explains to the children in an abstract way a concept of God, who knows, sees and hears everything, who is free from space and who is everywhere. Because the cognitive development of the children is not yet sufficient to comprehend the abstract concept (Zengin, 2010).

Religious Tolerance and Prejudicial Perceptions of Students

Within the context of this study, we have discussed above the religious tolerance and prejudicial perceptions of students in the context of tolerance. In the analysis, there is a similarity between the answers given by the students to the open-ended questions and the perceptions reflected in their drawings. If we examine the drawings of the students stating that the religion is not important for friendship and they are happy to live together with members of other religions, we observe tolerant icons and symbols in their drawings. Similarly, the drawings of those, who say that religion is important for the friendship and they are not happy to live in a Christian society, include prejudicial icons and symbols. Hence, as mentioned above, the feelings, thoughts, and attitudes of children in terms of religious tolerant and prejudicial approach are reflected in the drawings, since the drawings constitute the reflection of children’s inner world.

According to the findings, While 48% of students between 9 and 11 years old are adopting a tolerant approach, 76% of students between 12 and 15 years old adopt a tolerant approach. In parallel with the results of some previous studies, the perception of religious tolerance

increases as the students' ages increase (van der Straten Waillet & Roskam, 2012b; van der Straten Waillet & Roskam, 2012a)

While 51% of the students between the ages of 9 and 11 years have a prejudicial approach, this rate drops to 24% in children between the ages of 12 and 15 years. It is possible to explain the decreased level of prejudice when the children grow older, by the development of children's abstract thinking ability and social interactions. Indeed, the 13-year-old S9 states; "Although some of the Christians do not consider Muslims well, I consider the Christians as good people. When I become a friend with someone from another religion, I learn a lot of things". We realize that S9 has interiorized a tolerant approach even most of the adults are not capable of. In the same way, the 13-year-old S10 decorates the drawing with the sign of the cross, to express the love for her friend. Moreover, S11 and S12 emphasize unity and solidarity by reminding everyone that they are human beings, ignoring the concept of other religion and race.

Van der Straten Waillet and Roskam's studies suggested that young children do not seem to be able to understand that their social environment could be categorized based on religious beliefs. This understanding is only reached in the middle of childhood at about 8 or 9 years of age while the vast majority of children growing up in a heterogeneous environment are likely to be aware of religious difference at 9 years of age, some children from religiously homogeneous environments do not acquire this awareness until 11 years of age. Children younger than 9 may know about some religious labels, but their understanding of these labels is likely to be inaccurate probably because of their cognitive limitations. Most young children think religious groups, like social groups, are based on physical or behavioral qualities, rather than the shared belief of group members (van der Straten Waillet & Roskam, 2012b). While religious discrimination is often seen in childhood, it decreases in pre-adolescence and adolescence (van der Straten Waillet & Roskam, 2012a).

In this study, the religious homogeneity and heterogeneity of the schools where the children attend were not asked. Attending homogeneous schools (Kistner et al., 1993; Rotenberg & Cerda, 1994; van der Straten Waillet & Roskam, 2012a; Verkuyten & Thijs, 2010) may lead to greater confidence among the groups and development of positive relationships (Allport, 1954; Bornstein, 1989; Pettigrew & Tropp, 2006; Velasco González et al., 2008).

In this study, we observe some stereotypes in the drawings of the students, who adopt a tolerant approach. In the drawings of the students, there are evidently the usual symbols belonging to the Christianity such as the sign of the Cross, Church, Crucifixion, Jesus, Bible, Bell, etc. However, we observe in the drawings of some students some icons and symbols that are not directly related to Christianity, such as pigs and alcoholic beverages. Hence, we can say they include the alcoholic beverages since they are prohibited in Islam and the students reflect this in the drawings based on a religious stereotype, “Christians drink alcoholic beverages”. Indeed, those who consume alcoholic beverages are not the Christians. Similarly, we can contemplate that the use of the pig symbol is because of a religious and cultural “stereotype”. However, there are many other orders that are prohibited in Islam and allowed in the Christian lifestyle. In this sense, it is possible to say that the use of pig in the drawings reflects a cultural stereotype rather than a religious stereotype (since Muslims do not like pigs, think that the pigs are dirty and they would be appropriate for the Christians).

As mentioned above, many factors are effective in the development of prejudice and tolerance in children in addition to age and cognitive development. Prejudices are formed in children at very early stages by the influence of misconceptions and behaviors in the family, then reinforced by some discourses and social relationship, as well as media factors such as television and internet games (Allport, 1954; Hirschfeld, 1993; Bar-Tal, 1996; van der Straten Waillet & Roskam, 2012a). In fact, when we asked about their sources of information to S15 and S16 (see the drawings 15 and 16), they stated that they learned from their parents. However, different results were reached in some studies that investigated the relationship between parent and child ethnic attitudes. While parent-child prejudices were associated with adolescence (White & Gleitzman, 2006), small or insignificant correlations were found in childhood (Aboud & Doyle, 1996; Carlson & Iovini, 1985). Therefore, the effect of familial factors on the development of perceptions of religious prejudice and tolerance should be investigated in detail.

Limitations

It was planned to conduct this study bilaterally (Muslim / minority religious group - Christian / majority religious group). However, some difficulties were encountered in

getting permission from the families of the Christian students. So, the study was conducted unilaterally (only on Muslim students). The focus of the study was to inquire about the pictorial indicators of the majority group's religion and the effects of age and cognitive development on these indicators. For this reason, information could be obtained about the other factors affecting children's perceptions on religious tolerance and prejudice as much as the students expressed these.

Conclusion and Suggestions

This study attempted to determine the reflection of the perceptions of Muslim children aged between 9 and 15 years about Christianity and their Christian peers and used the students' drawings as a diagnostics method. The study revealed that semiotic analysis may be used as a diagnostics tool to comprehend students' feelings and thoughts in their inner world. In parallel to the age and cognitive development of the students, we observed that abstract thinking skills developed and they reflected this development better through drawing. In this sense, the art of drawing may be used as a diagnostics method in more studies in determining the development of religious and moral concepts in children.

In parallel to the results of some previous studies, in this study, the students' perceptions on religious tolerance increased, and their religious prejudice levels decreased with their age and cognitive development. There are conclusions in the literature that it is not enough to explain only with age and cognitive development the development of perceptions on ethnic, racial and religious tolerance and prejudice in children. For this reason, detailed research is needed to expand and integrate cognitive and social theories in the development of social understanding in children. Religious identity was measured by elements commonly used in social psychological research. However, the literature on different dimensions of religious identity is quite limited in terms of relationships, behaviors, and practices among religious groups. Future studies could be conducted on a variety of faiths and religious groups in different countries to investigate the development of religious categorization in children and various factors that affect this development.

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Research Article

**Opinions of Secondary School Teachers About the EBA Course E-contents:
A Qualitative Study**

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Abstract

The EBA Course e-contents taking place within the Educational Information Network (EBA), which is one of the important components of the Enhancing Opportunities and Improving Technology Movement (FATİH) Project, has been presented to the use of teachers and students by the Ministry of National Education. This research aims to reveal the opinions of secondary school teachers about EBA Course e-contents. The research data were collected in the academic year of 2017-2018 by semi-structured interviews from 12 teachers who work in various secondary schools in the city center of Tokat and use e-contents. The data were analyzed using content analysis and the resulting findings were interpreted based on the research questions. Teachers have pointed out that there are no e-contents of many acquisitions in the secondary school curriculum in the system, they have problems with the internet connection when using e-contents during lessons at school and cannot find the e-contents they look for quickly, e-contents have short durations, there are outdated parts and the designs of e-contents are insufficient to attract the attention of the students. Teachers also remarked that rewarding active users of e-contents would increase the frequency of e-content usage in general.

Keywords: *Fatih project, EBA (Educational Information Network), EBA course, e-content*

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EBA Ders E-içerikleri Hakkında Ortaokul Öğretmenlerinin Görüşleri: Nitel Bir Çalışma

Öz

Fırsatları Artırma ve Teknolojiyi İyileştirme Hareketi (FATİH) Projesi'nin önemli bileşenlerinden biri olan Eğitim Bilişim Ağı (EBA) içinde yer alan EBA Ders e-içerikleri, Milli Eğitim Bakanlığı tarafından öğretmenler ve öğrencilerin kullanımına sunulmuştur. Bu araştırma, ortaokul öğretmenlerinin EBA Ders e-içerikleri hakkındaki görüşlerini ortaya çıkarmayı amaçlamaktadır. Araştırma verileri 2017-2018 eğitim öğretim yılında Tokat il merkezinde çeşitli ortaokullarda görev yapan ve e-içerikleri kullanan 12 öğretmenden yarı yapılandırılmış görüşmelerle toplanmıştır. Veriler, içerik analizi kullanılarak çözümlenmiş ve elde edilen bulgular araştırma sorularına dayalı olarak yorumlanmıştır. Öğretmenler, sistemde ortaokul müfredatında yer alan birçok kazanıma ait e-içeriklerin olmadığını, e-içerikleri okulda ders esnasında kullanırlarken internet bağlantısı kaynaklı problemler yaşadıklarını, aradıkları e-içerikleri hızlı bir şekilde bulamadıklarını, e-içeriklerin sürelerinin kısa olduğunu, güncel olmayan bölümlerin var olduğunu, e-içeriklerin tasarımlarının öğrencilerin dikkatini çekmekte yetersiz olduğunu belirtmişlerdir. Öğretmenler, ayrıca e-içerikleri aktif kullananların ödüllendirilmesinin, e-içerik kullanım sıklığını genel anlamda arttıracığını söylemişlerdir.

Anahtar Sözcükler: *Fatih projesi, EBA (Eğitim Bilişim Ağı), EBA ders, e-içerik.*

Introduction

In today's world, the use of Information Technology (IT) has increased noticeably in educational environments as well as in every other field. In many countries, IT-supported projects are carried out to support education and training either locally or nationally. The most comprehensive IT-supported project in our country in this sense is the Enhancing Opportunities and Improving Technology Movement (FATİH) Project. FATİH Project is a national project sponsored by the Ministry of Transport and Communications and carried out by the Ministry of National Education.

FATİH Project, which aims to provide an effective training by using advanced technologies, is an extremely comprehensive initiative (Ekici & Yılmaz, 2013). In order to provide equal opportunity in education, FATİH Project is the most comprehensive project in the world already implemented to enable all students in primary and secondary public schools to access quality education content in IT-supported classrooms or out-of-school time.

FATİH Project will provide economical support for the provision of hardware and software infrastructure in classrooms, delivery of the broadband internet to all classrooms, provision of e-contents related to the courses and establishment of web platforms for content development and similar activities (MEB, 2017). For this reason, it is useful to investigate all phases and all aspects of such a multidimensional project carried out all over the country, in terms of productivity and sustainability one by one.

Within the scope of the FATİH Project, a web based social education platform called Educational Information Network (EBA) has been formed in order to support teaching activities both in the classroom environment at schools and outside the school. There are various sections in EBA such as EBA Course, Content Modules, Competitions and Applications (MEB, 2017). EBA is a system that includes educational content, as well as educational tools that both teachers and students can use. Resources in the form of video narration as well as resources in text, audio and image formats are included in EBA. Uploading files and providing digital space, organizing competitions, tailor-made courses for different

stages, announcements and file sharing by users are some of the features that enrich the EBA system (Aktay & Keskin, 2016).

EBA is a web page where many changes have been made in the design as well as in its content since the beginning of its publication life and many new versions have been published (see Figure 1). One of the latest innovations in EBA is the publication of EBA mobile applications in addition to the EBA web page.

The screenshot displays the EBA website interface. At the top, there is a search bar with the text "ne aramıştınız?" and a "giriş" (login) button. Below the search bar is a navigation menu with options: "EBA DERS", "İÇERİK", "YARIŞMA", "UYGULAMALAR", "E-KURS", and "UZAKTAN EĞİTİM". A "DUYURULAR" (announcements) section indicates "EBA, Mobil Uygulamasıyla da Yanınızda..". The main content area features a large banner for the "3. eba FEN DENEYLERİ Video Yarışması SONUÇLANDI!" (3rd EBA Science Experiments Video Competition Results Announced!). To the right, there is a "BİR VIDEO / BİR SÖZ" (One Video / One Word) section with a video player and a "SAYILAR TEORİSİ 5" (Number Theory 5) video. Below the banner, there are four columns of content: "EBA DERS" (EBA Lessons) with a video titled "Çokgenlerin Dış Açları Toplamı" (Sum of Exterior Angles of Polygons); "VIDEO LİSTELERİ" (Video Lists) with a video titled "KUR'AN Kuran Öğreniyorum" (Quran Learning); "SİZİN İÇİN SEÇTİKLERİMİZ" (Our Selections for You) with a video titled "9-12. Sınıf Etkileşimli Matematik Sözlüğü" (Interactive Mathematics Dictionary for 9-12th Grade); and "HABERLER" (News) with a video titled "Sen de umut ol" (You too, have hope). The bottom of the page shows a grid of smaller video thumbnails with titles like "Bitkilerin Fotosentez İçin İhtiyaçlarının Belirlenmesi" (Determination of Plant Requirements for Photosynthesis), "Değerler Eğitimi" (Values Education), "EBA Üniversite Seçimim" (My EBA University Selection), "Anne Sevgisi" (Mother's Love), "Erasmus + Suriyeli Çocukların Eğitim ve Öğretme Kazandırılması" (Education and Training of Syrian Children through Erasmus), and "Temiz çevre huzurlu eğitim" (Clean environment, peaceful education).

Figure 1. EBA web page (Access date: 23.10.2017)

The EBA Course in EBA is offered for the free use of the students who are studying at state schools affiliated to the Ministry of National Education and the teachers who work in these schools. In this context, teachers and students are required to log in to the system in order to use EBA Course. Teachers can log in to EBA Course with their e-Government Portal

passwords, MEBBİS user information or with their EBAKOD codes which are created for 15 minutes in EBA mobile applications, and students can log in with their e-School student info (see Figure 2).



Figure 2. EBA Course login screen (Access date: 23.10.2017)

There are links to "My Wall", "Courses", "My Classes and Groups", "My Files", "Content Production System" and "Help" in the main page opening for teachers entering EBA Course. Lesson and subject-based e-contents for teachers' use are found under the link "Courses" (see Figure 3). Teachers can perform the following tasks and operations by using these connections:

- They can create groups and classes of students and teachers in their schools. In these groups, they can make educational shares, and they can open a questionnaire or a discussion on any subject.
- They can send the e-contents in EBA Course as an assignment to their students and they can get feedback of the assignments they submitted from the reports section. In addition, teachers can share their activities in the events calendar of the group they choose, or they can view the events calendar of the groups they follow.
- Teachers can also create e-contents with the web 2.0 tools included in EBA Course and share these e-contents with all the students and teachers in their school.

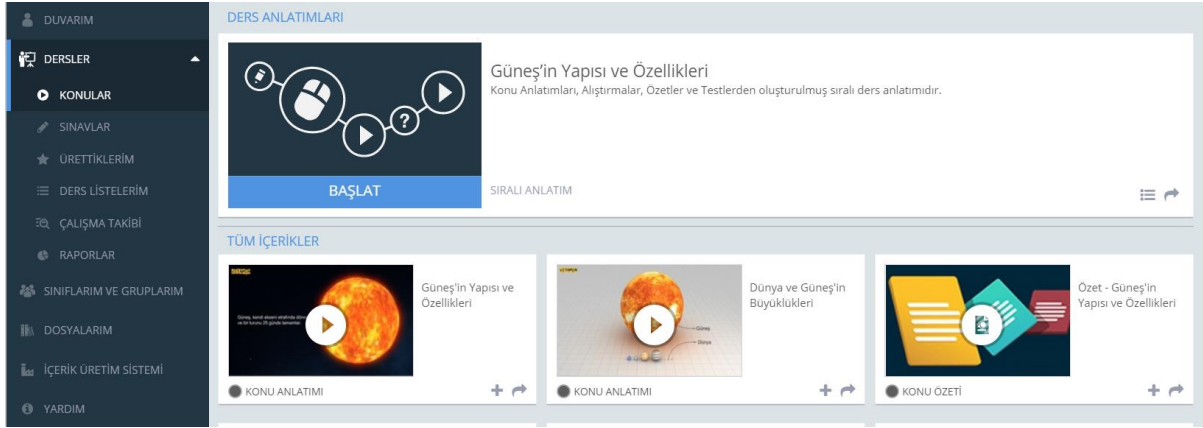


Figure 3. EBA Course teacher e-content page (Access Date: 23.10.2017)

There are links to "My Wall", "Courses", "My Classes and Groups" in the main page opening for students entering EBA Course. Lessons and subject-based e-contents offered for use by teachers and students are available under the link "Courses" (see Figure 4). Students can perform the following tasks and operations by using these connections:

- Students can work and share something with their friends and teachers in the classes and groups they are involved in EBA Course.
- They can follow the assignments submitted by their teachers from here in the events calendar and do them on time.
- They can watch EBA Course e-contents to revise at school or at home whenever they want.
- They can share something on their own wall, and participate in voting and events.

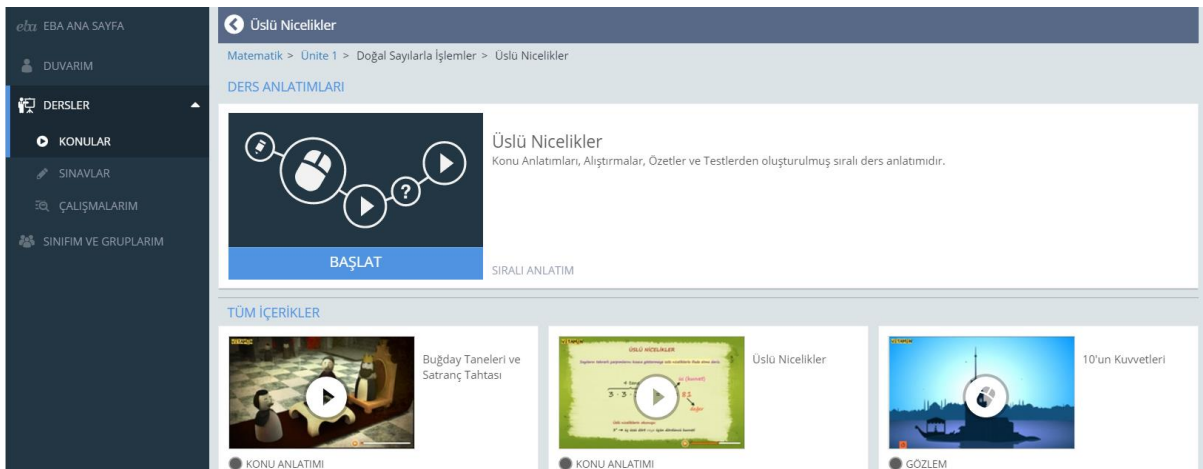


Figure 4. EBA Course student e-content page (Access Date: 23.10.2017)

The e-contents prepared for teachers and students can be grouped as follows:

- Lecture videos,
- Lecture animations,
- Interactive applications,
- E-exams in the form of exercises and subject tests.

In addition, there are e-contents specific for teachers in this section. Teachers can use them during classes or share them with their students in off-school hours.

EBA Course continues to update e-contents in order to cover more topics and acquisitions for teachers and students to use them more frequently and more efficiently. So as to get the feedback of these updates in EBA Course and e-contents, their usage rates by teachers and students are monitored by National Education Administrators in weekly, monthly and three-month periods on “EBA Reports” page. However, according to the EBA usage rates that can be followed by the Provincial/District Directorates of National Education and School Principals, EBA Course and e-contents are not considered to be of interest by teachers and students at an expected level currently. The investigation of reasons for the Course and e-contents of EBA, which is an important component of FATİH Project, not being at the expected level is important for the success of the project.

Teachers, who are considered to be the main practitioners of the project, bear the most substantial responsibility in the implementation of FATİH Project. It is possible to say that teachers play a key role in this process. In order to ensure sustainability of the project in all aspects, it is beneficial to ensure that teachers are actively involved in the implementation process (Akıncı, Kurtoğlu, & Seferoğlu, 2012). It can be said that one of the ways to achieve this is to consult opinions and suggestions of teachers about the project contents that they are using.

When the literature is examined, a lot of researches on the FATİH Project and its components can be found under different headings. Some of their research topics are EBA and EBA Course e-contents. Altın and Kalelioğlu (2015) have tried to find out what the thoughts of teachers and students are about the components of the FATİH Project. At the end of the research, the

students stated that they did not consider EBA as a teaching tool in general and they did not find EBA contents to be sufficiently interesting for their age. Teachers emphasized that they considered EBA useful as a teaching portal but that e-contents are not enough to match the acquisitions of the curriculum, e-contents should be updated and the amount of e-contents should be increased. Tüysüz and Çümen (2016) tried to determine the opinions of secondary school students about EBA Course e-contents. As a result of the research, it was found that the students thought that the e-contents of the EBA Course were interesting and that e-contents were beneficial for reinforcing the subjects they learned. However, they emphasized that while using EBA content e-contents, they experienced problems due to insufficient internet connection and the number of the contents should be increased. Tanrıkulu (2017) investigated the opinions of teachers about the extent to which the e-contents prepared for teaching Turkish Course in EBA covers the course's acquisitions. As a result of the research, based on the opinions of the teachers, it was concluded that EBA e-contents were insufficient in covering the acquisitions of the Turkish Course. Timur, Yılmaz and İşseven (2017), in their study for the opinions of secondary school students about the use of EBA, revealed that EBA e-contents should be improved, increased in number, and games containing interaction should be added. Çakmak and Taşkıran (2017) have tried to reveal the views of Social Studies teachers about EBA. As a result of the study, they stated that EBA e-contents increased the interest of the students in the course, e-contents helped to make the education permanent and provided benefit to the students to reviewing the subject. They stated that EBA e-contents would be useful in teaching all courses. However, they emphasized that EBA e-contents, in their current form, should be enriched and the internet connection in schools needed to be increased to a sufficient level. In conclusion, it can be seen that opinions of teachers and students are frequently used in the studies about EBA and e-contents in the literature. The point to be noted here is that teachers and students have close views about the inadequate quality and quantity of e-contents with the current situation. In this respect, it is important to encourage teachers to use the EBA Course and e-contents specific to EBA, which is one of the components of the FATİH Project, to reinforce learning during or after the class, and to consult teachers' thoughts on EBA Course e-contents. Thus, it is believed that significant feedback will be provided for decision-makers and content providers to improve the quality of e-contents which is an important element of the project, and it is expected to make significant progress in this regard.

The aim of this research is to reveal the opinions and suggestions of the teachers working in the state schools affiliated to the Ministry of National Education about the e-contents of the EBA Course.

Methodology

Research Model

This study, which aims to reveal the opinions of teachers about the e-contents in the EBA Course, which is one of the components of the FATİH project, was carried out according to the case study approach of qualitative research methods. Perceptions and events are tried to be presented naturally in a realistic and holistic way in the qualitative researches. One or more cases are investigated deeply in case studies. (Yıldırım & Şimşek, 2013). In this study, teachers' different opinions about the e-contents of the EBA Course and suggestions about what can be done in the name of more cultivated and efficient use of these contents are taken from teachers who are the practitioners in teaching. In the end, the qualitative research design was used in order to describe the opinions and suggestions of the teachers about the topic in more detail and in depth.

Participants

Participants in the study consist of 12 teachers working in various secondary schools in the city centre of Tokat. An easily accessible case sampling which is a purposive sampling method used in qualitative research was used in the research. This sampling enables the research to be carried out faster and more economically. Because, the sampling is chosen from the ones physically close and easily accessible for the researchers (Yıldırım and Şimşek, 2013). In the survey conducted before the study, since the EBA Course e-contents differed in the secondary school level compared to the high school level in the form of lecturing videos, subject narrative animations, interactive applications, interactive exercises and subject tests, the research was conducted with secondary school branch teachers.

As it can be understood from Table 1, 6 of the participants were female and 6 of them were male. Participants' seniority in the teaching profession changed between 6 and 20 years. At the beginning of the research, EBA Course was examined in detail by the researcher in terms of the completion rate of the e-contents on the basis of branches, and e-contents were seen to be present in Turkish, Mathematics, Science, Social Studies, English and Religion and Ethics. Participants of the study were selected among teachers of branches that of EBA Course e-contents were totally or partly completed and who log in to EBA Course and use the e-contents.

Table 1

Table of Participants' Gender, Teaching Branch, Professional Seniority Info

Participant	Gender	Teaching Branch	Professional Seniority (Year)
Participant 1	Male	Mathematics	12
Participant 2	Male	English	8
Participant 3	Female	Social Studies	20
Participant 4	Female	Science	11
Participant 5	Female	Turkish	8
Participant 6	Male	Religion and Ethics	16
Participant 7	Male	Social Studies	13
Participant 8	Female	Mathematics	11
Participant 9	Female	English	8
Participant 10	Female	Religion and Ethics	6
Participant 11	Male	Science	11
Participant 12	Male	Turkish	12

Data Collection

In order to collect the data in the research, a semi-structured interview form which was formed by the researcher and presented to the expert opinion was used. The research questions were prepared in a certain order and in such a clear and understandable way and excluding directing elements that participants could easily express opinions and suggestions about the topic. In the interview form, there are 5 key questions and probe questions related to them.

Within the scope of the research we tried to find out about teachers;

- In which stage and for what purposes they use EBA Course e-contents,
- What factors can play a role in increasing the frequency of using EBA Course e-contents,

- The problems they encounter when using EBA Course e-contents,
- Whether they are willing to add e-contents to EBA Course and receive a training for e-content creation,
- Whether they use other web-based e-content pages similar to EBA Course e-content web page, if any, to define their advantages comparing to EBA Course.

Appointments were made with the participants for the interviews for appropriate times for them outside school hours. During the interview time, participants were given a few minutes to review the interview form before the interview began. Interviews were carried out in quiet and calm surroundings. Each interview lasted approximately 10-15 minutes and all interviews were recorded with a voice recorder with the permission of the participants. Subsequently, all the interviews were converted to text in the digital environment without any changes in the content. The analysis of the data was carried out on this text.

Data Analysis

Analysis of the data in the research was done by the content analysis method which is a kind of qualitative data analysis. At this stage, themes were formed in a conceptual framework on the digital texts of the interview records and these data were coded. When new themes appeared in the process, they were added to the code list and the old codes were changed according to the newly created codes. The frequency of use of the detailed codes that occurred when the examination of the data was completed was determined and interpreted in this frame.

In the analysis of qualitative data, it is very difficult to remove the individual influences of the researchers while coding the obtained data. In order to eliminate this situation, the same data must be encoded by different encoders and the encoded data set is expected to show similarities between encoders. With this respect, an inter-encoder reliability study was performed on the themes generated as a result of the content analysis of the data obtained from the interviews. The ratio of the opinion body to the total view was calculated when the reliability of each created theme was determined. While analyzing qualitative data, it is considered that reliability should be achieved at the level of at least 70% in cases where more than one researcher is working (Yıldırım & Şimşek, 2013). The reliability for each theme was calculated 82% and

above in the research. In this case, it is accepted that an agreement was achieved for the created themes.

In accordance with the research ethics, the participants were informed about the purpose of the research in the data collection process. In this context, interviews were carried out after obtaining a verbal approval from the participants. Confidentiality of the information obtained from participants was provided within the scientific ethics framework in the research. In this context, codes such as T1, T2 were used when making quotations from the opinions of the teachers participating in the research.

Findings

In this study, where teachers' opinions about EBA Course e-contents were collected, the answers from the participants were analyzed and the most frequently mentioned opinions were turned into tables after being transformed into themes, and interpreted.

Findings about Using EBA Course e-contents in Classes

Within the scope of the research, it has been tried to find out in what stage and for what purposes teachers use EBA Course e-contents. The answers given by teachers were analyzed and the most frequently mentioned opinions have been transformed into themes and shown in Table 2.

Table 2

Categories and Themes Opinions on the Use of the EBA Course E-Contents during Classes

Themes	Related Views	Number of Comments
At the beginning of the class	To attract attention (4)	4
During the course of the class	For exercise purposes (2) For interim evaluation As reinforcement (3) Teaching with fun For concretization	8
At the end of the class	To make it permanent To make a revision (4) To summarise (2) To assign as homework (3)	10

As it can be understood from Table 2, the answers, given by teachers when they were asked in what stage of the class and how much they used EBA Course e-contents in the classroom environment, are gathered in three themes as "to draw attention at the beginning of the class", "during the course of the class" and "at the end of the class". As it can be seen in Table 2, teachers expressed the opinion that they use EBA Course e-contents at the end of the class most frequently. However, the use of EBA course e-contents during the course of the class is seen to be more repeated than at the beginning of the class.

It has been revealed that the teachers, who expressed opinion that they use EBA Course e-contents at the end of the course, do it to make a revision of the topic:

"I often use it in order to recall the topic again before distributing tests and to create a template in their minds ... I create a template about topics in their minds before teachings, then I give them a test about it." (T11- Science)

It was also observed that teachers use EBA Course e-contents to send students assignments for homework at the end of the class: *"... I also send them as homework after the class." (T7- Social Studies)*

Teachers who expressed opinion that they use EBA Course e-contents during the course of the class stated that they do it most frequently to reinforce the students about the topic just taught: *"I use them as reinforcement at the end of the class to make what I just taught concrete and more permanent." (T6-Religion and Ethics)*

All of the teachers who expressed opinion that they use EBA Course e-contents at the beginning of the class say that they do it to draw attention to the topic: *"I use it at the first phase of the class. I use it in the introduction phase of the topic. I mean, I think it attracts attention of the students." (P10- Religion and Ethics)*

Findings about cases that can affect the EBA Course e-content Use Frequency

Within the scope of the research, it was tried to find out what factors could play a role in increasing the frequency of use of EBA Course e-contents by teachers. The answers given by

teachers were analyzed and the most frequently mentioned opinions have been transformed into themes and shown in Table 3.

Table 3

Opinions on Cases that will Contribute to Increasing the Frequency of use of the EBA Course e-Contents

Themes	Related Opinions	Number of Comments
Giving Incentives	Rewarding active use (4) Giving service score Giving certificate of achievement	6
Sample Lesson Presentation	Sample lesson presentation (3)	3
Design and Technical Elements	Offline usage availability Being related to the real life (2) More attractive contents (5) More interactive contents (3)	11
Structure of the contents	Prolonged Lecturing (3) Completion of the contents (4) Contents divided into subjects Relating the contents with textbooks	9

Teachers' responses about the change of which situations related to e-contents may result to the increase the EBA Course e-contents use frequency are grouped in four themes as "giving incentives", "sample class presentation", "design and technical elements", "structure of the contents". As it can be seen in the table, teachers have expressed opinion that the increase of the EBA Course e-contents use frequency will be possible with changes in the design and technical aspects of e-contents the most.

Teachers who expressed opinion about the design and technical aspects of EBA Course e-contents stated that it would be possible by enhancing the attractiveness of the contents: "... *Animation style might be more effective. Due to the age group, if there were more remarkable animations, it would be possible.*" (T9- English)

Some of the teachers stated that the contents which are related to real life will increase the frequency of e-contents use:

"I would prefer to have a documentary sub-structure within the EBA Course. I think it would be useful to have documentary contents for students in terms of linking the issues to real life. This would affect the use in a positive way." (T4- Science)

It has been emerged that teachers expressing their opinion on the general structure of the EBA Course e-contents stated that it would be possible by completing the contents the most:

"There is no separate activity for each acquisition, there are basic activities. If they were more determining, it would be more practical for us. Because, we don't have much chance to search during the classes. It causes time loss." (T12- Turkish)

It has been observed that most of the teachers who expressed the opinion that the incentives were important as an element to increase the EBA Course e-contents use frequency, stated that it would be possible by awarding the active periods spent in EBA Course the most: "... Teachers can be awarded after calculating his/her active stay periods in EBA Course." (T2-English)

Findings Related to the Problems Encountered during the Use of EBA Course E-contents

Within the scope of the research, it was tried to determine the problems faced by teachers while using EBA Course e-contents. The answers given by teachers were analyzed and the most frequently mentioned opinions have been transformed into themes and shown in Table 4

Table 4
Opinions on the Problems Encountered during the Use of EBA E-Contents

Themes	Related Opinions	Number of Comments
Technical Problems	Unable to use without internet	11
	Internet speed problems (5)	
	Finding contents takes time (5)	
Content	Problems in the question contents (3)	12
	Lack of parallelism with the textbook (2)	
	Outdated contents (2)	
	Short duration of contents (4)	
	Contents are not in the animation style	
Design	Difficult usage	4
	Limited interaction	
	Not noticeable (2)	

The opinions expressed by teachers about the problems they encounter during the use of EBA Course e-contents are grouped in three themes as "Technical problems", "Content" and "Design" (see Table 4). As it can be seen in the table, teachers expressed the view that the problem they encounter while using EBA Course e-contents is about their content the most.

Teachers who expressed opinion about the content problems encountered while using e-contents emphasized the short duration of e-contents most frequently: "... *The subject narrations are short, the activities are short, and they finish quickly. They finish in the halfway. It can be enriched a bit more.*" (T11- Science)

Some of the teachers used expressions that emphasize that the questions used for practice and evaluation in the e-contents were problematic: "*I see that the questions in the contents are sometimes out of acquisition and above the level of the students.*" (T1- Mathematics)

Teachers who expressed opinions about the technical problems encountered when using EBA Course e-contents emphasized that finding the e-content they look for takes time most frequently: "... *I cannot find exactly what I look for in time; it's a waste of time for me.*" (T7- Social Studies)

Another issue that teachers emphasize most frequently about the technical problems they encounter when using EBA Course e-contents is the problems with internet speed: "*It just takes a while to open EBA Course, which might sometimes originate from our internet. I think that is because of the internet.*" (T8- Mathematics)

Findings Related to Elements to Promote E-content Adding to EBA Course

It has been tried to determine whether the teachers are eager to add e-contents to EBA Course and to receive training to create e-contents or not.

11 of the 12 teachers who participated in the study said that they were willing to prepare e-contents for EBA Course and they would take it if they were offered training for it. In this context, they pointed out that in addition to providing training on adding e-contents, there must be encouraging factors as well. Therefore, the answers given by teachers on the incentive elements were analyzed and the most frequently mentioned opinions have been transformed into themes and shown in Table 5.

Table 5
Opinions on the Elements that Encourage E-Content Adding in EBA Course

Themes	Related Opinions	Number of Comments
Financial incentive	A family holiday Pay (2)	3
Score	Service Score (4)	4
Document	Document for the active stay duration Document for motivation Certificate of appreciation/achievement	3

The opinions expressed by teachers about the elements that will encourage the addition of e-contents to EBA course are grouped in three themes as "Financial Incentive", "Score" and "Document". At this point, it can be seen that teachers emphasized the view of giving teachers scores the most frequently among the incentive elements:

"... The teacher who adds 5 contents on a regular basis per month may be given an additional 2 service scores per year. This may be encouraging. Thus, many teachers might carry out works on these issues." (T8- Mathematics)

Some of the teachers expressed opinion that financial elements would be encouraging to add e-contents:

"Teachers can be given financial incentives for adding contents. For instance, teachers who add a certain amount of content in a standardized quality for a year can receive additional increased pay for the extra work." (T5- Turkish)

Some of the participating teachers have emphasized that documents with reward elements can encourage teachers to add e-contents:

"In the name of motivation, incentives such as a certificate of appreciation or achievement can be given. I believe it is important to appreciate the work done." (T4- Science)

Findings Related to the Advantages of Other Web-based E-content Pages comparing to EBA Course

In the research, it has been tried to determine whether the teachers use other web-based e-content pages or not, if yes, their advantages comparing to EBA Course.

10 out of 12 teachers participating in the study stated that they used one or more web-based e-content pages similar to EBA Course e-content page. 9 of the teachers said they used another web-based e-content website. Three of the teachers stated that they used another web-based e-content website beside EBA Course.

The answers of the teachers about the advantages of the mentioned websites comparing to EBA Course e-content page are analyzed and the most frequently stated opinions have been transformed into themes and presented in Table 6.

The opinions teachers expressed about the advantages of other web-based e-content pages comparing to EBA Course have been grouped in two themes as "Quality Design" and "Wide Content". As it can be seen from the table, teachers emphasized the opinion that the designs of other web-based e-content pages are better quality than EBA Course more frequently.

Table 6
Teachers' Opinions on the Advantages of other Web-Based E-Content Pages Compared to EBA Course

Themes	Related Opinions	Number of Comments
Quality Design	Quality animations (4)	11
	Enjoyable activities (5)	
	Student preference (2)	
Wide Content	Extensive Lecturing (3)	10
	Cover acquisitions (3)	
	More activities (4)	

The opinion teachers emphasize more frequently about the quality elements of other web-based e-content pages is that their activities are more enjoyable: "... *Events and activities (in other e-content web pages) are more enjoyable. Students like them very much.*" (T3- Social Studies)
Some of the teachers stated that their students wanted them to use other web-based e-content pages:

"I think, the other e-content pages have advantages. Because, when I attempt to open EBA Course, they (students) ask me to open an activity fromor.... (another e-content page). In this sense, I can say that students like especially(another e-content page) more." (T5- Turkish)

As it can be seen in the table, it appears that teachers emphasize the opinion that other web-based e-content pages have wider contents comparing to EBA Course.

The opinion teachers frequently emphasize is that other web-based e-content pages have more activities than EBA Course e-contents:

"For their activity content is more. I mean they have more number of activities. As I just said they have more multiple-choice questions and fill in the gaps exercises. Matching questions, right wrong questions, these are a bit more in other e-content pages comparing to EBA, still I do not prefer them anyway." (T11- Science)

Discussion and Conclusion

The research find out the results of the teachers' use of the EBA Course e-contents with the aim to inform students about the subject at the beginning of a lesson and to use them to draw their attention to the subject, reinforce the subject during the lesson and summarize it by repeating the lesson at the end and send them to the students as homework. As a matter of fact, this situation shows parallelism with the research result of Kurtdede Fidan, Erbasan and Kolsuz (2016) that most of the teachers think that the interest and attendance of their students will increase when they use the EBA. In addition, the results of the researches conducted by Çakmak and Taşkıran (2017) and Tüysüz and Çümen (2016) on EBA e-contents, using EBA e-contents during the lesson is increasing the interest of the students, making the education permanent, and making repetition of the subject show similarity with the results obtained in our study.

The research has revealed that for EBA Course e-contents in order to be used more often by teachers, it is necessary to increase the striking elements of the e-contents and be related to real-life and provide more opportunities for student interaction. It has also been noticed that the completion of the contents on course basis and increasing the duration of the lecture parts of the existing contents will increase teachers' use of e-contents. This situation supports the results of the study conducted by Altın and Kalelioğlu (2015) regarding the FATİH Project, in the context of the fact that the contents stated in the study should be updated frequently and the number of materials presented to students in the website is not sufficient. The results of the study are in line with the results of Keleş and Turan (2015) obtained from their research aimed

to reveal teachers' opinions about FATİH Project, saying that teachers use EBA Course e-contents during their classes but find it difficult to find enough contents about the subjects. In addition, the results obtained in different studies in the context that EBA e-contents are not at a sufficient level, the necessity of enriching and increasing their number with the elements that will enable interaction goes in line with the findings obtained from this study (Çakmak & Taşkıran, 2017; Timur, Yılmaz, & İşseven, 2017).

It has been seen that practical demonstration of sample course presentations by teachers or their colleagues about how to use the e-contents would be beneficial for teachers. As a result of the research, it has been argued that rewarding teachers in various forms for active using the e-contents will increase the frequency of e-content usage in general.

The results of the research show that teachers have internet connection-related problems when using EBA Course in particular e-contents during school lessons, they cannot find the e-contents they look for quickly, the durations of e-contents are short, there are outdated sections, there are mistakes in questions presented for evaluation purposes of e-contents and that the designs of the e-content are insufficient to attract the attention of the students. It was observed that the mentioned situation did not change during the past period, coinciding with the result of Kurt, Kuzu, Dursun, Güllüpnar and Gültekin's (2013) research studying the opinions of teachers about FATİH Project, and observing that teachers stating that the course contents did not suffice to meet their needs. In another survey on EBA materials, the result of Erensayın and Güler (2017) finding that branch teachers having difficulties in reaching activities and examples suitable for students' levels, supports the findings of the research. The findings of Tüysüz and Çümen (2016) and Çakmak and Taşkıran (2017) revealing that there are problems with the internet connection during the use of EBA e-contents and the need to correct this situation is similar with the results of this research. In addition, the research findings of Altın and Kalelioğlu (2015), revealing that EBA is not found sufficiently interesting by students, and that e-contents are not in line with the acquisitions in the teaching programmes, therefore they need to be updated, are similar to the findings of this study.

In the current situation, EBA Course e-contents are available for teachers as ready. Participating teachers expressed their willingness to receive in-service training to create e-

contents. Additionally, another result of the research that comes out is that it is important to offer various incentives to teachers to add e-contents to EBA Course.

It has been observed that teachers use different web-based e-content pages in order to increase the effectiveness of teaching and students' interests against the course in their lessons. The e-contents on these web pages being more extensive than the e-contents of the EBA Course, and the higher quality of their designs have resulted in the fact that they make these contents more useful for the teachers.

Suggestions

In the light of the findings obtained from the research, the following suggestions have been made to experts and decision makers about the e-contents of EBA, which is one of the important components of the FATİH Project:

The research findings were obtained from the teachers' opinions and suggestions about EBA Course e-contents, working in the city center of Tokat. This case is one of the limitations of the study. In this regard, it is important that the same research should be conducted in different regions where the views and suggestions of the school administrators, students and parents as well as the teachers are taken, and the comparison of the findings be obtained to reveal healthier and clearer results about the subject.

The research results show that teachers have awareness about EBA Course e-contents at a sufficient level. It is observed that teachers try to use e-contents at every stage of teaching but in the present situation the lack of e-contents for many acquisitions is an obstacle for teachers to use EBA Course and the e-contents. It is thought that this situation may be overcome by increasing the amount and duration of e-contents.

One of other important results of the research is that teachers use different web-based e-content pages as an alternative to EBA Course e-contents. From the opinions of the teachers, it has been concluded that the design and technical elements of EBA Course e-contents cause this

situation. In the course of the process, it will be beneficial to consider that e-contents to be added to EBA Course have more eye-catching designs and enable more student interaction.

It was seen that teachers were willing to take an active role in the creation of e-contents and they can participate voluntarily if in-service training is given. In the declaration of these opinions, it can be thought that the teachers might have seemed to be willing in order not to feel bad. However, we think that instead of directly benefiting from teachers for e-content creation, taking advantage of the teachers' views during the design phase of e-contents will positively affect their quality and usability in teaching environments.

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Research Article

Investigation the Effects on School in the Frame of Educational Change Processes of a Technology Support for Hearing Impaired Students¹

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Abstract

The main purpose of this research is to examine the effects of a technology-based project (ALIS-T) for hearing impaired students on the educational change processes. This qualitative study, where the case study method was applied, was conducted in a hearing impaired primary school. Participants of the study consisted of a school administrator, a vice school administrator, thirteen teachers and the parents of four students in the 3rd and 4th grades. Semi-structured interviews, unstructured observations and documents were used as data collection tools, with data analyzed by descriptive and interpretive analysis. The findings are grouped under the personal change, internal change, and external change model, based on Goodson's educational change model. Teachers, who believe that the technology support is necessary in the education of the hearing impaired, are an important indicator of individual change during the project. The internal change have appeared in six different themes. These themes are respectively understanding of education, in-school interaction, change in school, teaching methods, the structure of school and school's success themes. Also, the external change category has appeared in three different themes. These themes are dissemination, cooperation and organization, and the political importance of the school themes.

Keywords: *Hearing impaired education, Processes of educational change, Use of ICT*

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Teknoloji Desteğinin İşitme Engelliler Okulu Üzerindeki Etkilerinin Eğitimde Değişim Süreçleri Çerçevesinde İncelenmesi

Öz

Araştırmanın amacı, işitme engelli öğrencilere yönelik yürütülen teknoloji tabanlı bir projenin (İşitme Engelli Bireyler İçin Grafik Sembollerini Temel Alan Teknoloji ile Desteklenmiş Öğrenme Ortamları Tasarımı: ALİS-T) okul üzerindeki etkilerinin eğitimde değişim süreçleri çerçevesinde incelenmesidir. Durum çalışması yönteminin uygulandığı bu çalışma, 2014 - 2015 ve 2015 - 2016 eğitim öğretim yıllarında Doğu Karadeniz Bölgesinde yer alan bir İşitme Engelliler İlköğretim okulunda yürütülmüştür. Çalışmanın katılımcıları belirtilen okulda görev yapan bir okul müdürü, bir okul müdür yardımcısı, on üç öğretmen ve bu okulda 3. ve 4. sınıfta öğrenim görmekte olan dört öğrencinin velisinden oluşmaktadır. Veri toplama aracı olarak, yarı yapılandırılmış mülakatlar, yapılandırılmamış gözlemler ve dokümanlar kullanılmıştır. Veri toplama araçlarından elde edilen veriler betimsel ve yorumlayıcı analiz yoluyla analiz edilmiştir. Verilerin analizi sonucunda elde edilen bulgular Goodson'ın Eğitimde Değişim Süreçleri Modeli temel alınarak "Bireysel Değişim", "İçsel Değişim" ve "Dışsal Değişim" olmak üzere üç kategori altında toplanmıştır. İşitme engelliler ilkokulunda teknoloji tabanlı olarak yürütülen projenin, okul üyelerinde meydana getirdiği bireysel değişimlerin, kişilerin projenin işitme engelliler eğitimindeki ihtiyacına yönelik inançları üzerinde meydana gelen değişimler olduğu görülmüştür. Teknoloji desteğinin işitme engelliler eğitiminde gerekli olduğuna inanan öğretmenlerin proje süresi boyunca bireysel olarak çaba göstermeleri bireysel değişimin önemli bir göstergesidir. İçsel değişimin, kişilerin eğitim anlayışlarında meydana gelen değişimlerin, okul içi etkileşimlerin yönünün, okul içinde oluşan değişimlerin, projenin öğretim yöntemlerine katkılarının, okulun yapısı ve nihayet tüm sürecin bir çıktısı olan okulun başarısı üzerindeki değişimlerden meydana geldiği görülmüştür. Dışsal değişim açısından ise projenin Milli Eğitim Bakanlığı'nın EBA sisteminde yer almasıyla okul içerisinde yürütülen teknoloji destekli eğitim öğretim faaliyetlerinin ülkedeki işitme engelliler eğitimine farklı bir boyut kazandırdığı anlaşılmıştır.

Anahtar Sözcükler: *İşitme Engelliler Eğitimi, Eğitimde değişim süreçleri, BİT kullanımı*

Introduction

School development and changes in education aim to plan and maintain appropriate educational environments by focusing on students' academic achievements and social skills (Çalık & Er, 2014). Lodge and Reed (2003) stressed the need for schools to continuously focus on learning, emphasizing that schools need educational changes in order to respond to the expectations of the community. In the case of educational change, it is not right to talk about the change in technology or structure. Instead, the advancement of technology, process, structures, and systems, especially human factors, will be appropriate for the change (Balcı, 2000).

Fullan (1993) describes educational change as follows: In order to assist schools in achieving their goals, introducing a number of structures, programs or practices that are more effective than the existing system. Cohen (1996) expressed the role of ICT in educational change as follows: "Information and Communication Technology came as a revolution in knowledge. With the long-term use of ICT, new horizons and approaches will be created in the field of teaching and learning". J. Underwood and G. Underwood (1990) likewise predicted that the computer would be successfully integrated into classroom environments and that in the future it would increase educational opportunities. Based on these definitions and studies conducted in educational environments in recent years, it is possible to say that the use of ICT in schools has become widespread and the ICT has become functional in the learning-teaching process (Altun, 2006; Kırıkkaya, Dağ, Durdu & Gerdan, 2016).

When the education of the hearing impaired is examined, it is seen that the academic success of the students depends on many variables such as family, teacher, school program and curriculum, as well as individual characteristics (Blackorby & Knokey, 2006). While most of these students have educational difficulties in reading and writing, some adults cannot even reach a fourth grade reading level (Dillon, de Jong, & Pisoni, 2012). Research conducted in both Turkey and other countries reached several general judgments to explain the causation of these findings. General education programs used in schools for the hearing impaired (Uzuner, İçden, Girgin, Beral & Kırcaali-Iftar, 2005; Uzuner et al., 2011; Turnbull, Turnbull, Wehmeyer & Shogren, 2013)

- The education curriculum is language-based and focuses on providing direct language and contact information (Karchmer & Mitchell, 2003)
- Limitations on communication with family (Turnbull et al., 2013)
- Lacking social cues from the surrounding: like talking (Cole, Cutler, Thobro & Haas, 2009)
- Lack of adequate and appropriate training programs (Krestchmer & Kretschmer, 1986; Uzuner et al., 2011)
- Disruptions in critical periods of language acquisition: model taking, imitation (Krestchmer & Kretschmer, 1986; Marschark, Sapere, Convertino, Mayer, Wauters & Sarchet, 2009)
- Lack of natural language input (Pinar, 2006; Tüfekçioğlu, 1998)

These factors, which are shown to cause the language skills of the hearing impaired to not improve, can be overcome with planned and systematic education services in the educational environment, tailored to the individual needs of the student. In addition to the verbal (oral) method and sign language traditionally used in the education of hard of hearing students, appropriate methods are being investigated to improve students' literacy and language development (Mayer & Leigh, 2010). Technological tools are beneficial for teaching hearing impaired students who have problems learning by traditional methods (Shepherd & Alpert, 2015; Snoddon, 2010).

The role of current educators is to design a learning environment suitable for the individual characteristics of hearing-impaired students and encourage their learning (Shepherd & Alpert, 2015; Tüfekçioğlu, 1998). However, it is quite complicated to integrate technology into hearing impaired education, to overcome existing educational problems, and to ensure that schools adopt these processes of change in education. Educators therein have many tasks, such as choosing the technologies they will use in learning environments, to developing their existing mental, cognitive and affective skills. In addition, tasks such as determining teaching methods, strategies, and resources and initiate change in education (Beycioğlu & Aslan, 2010; Fullan, 1993). The educational change also has a comprehensive process, such as the adoption of a new system to be used in the school by both school members (management, teacher, student, family, staff), the school's stakeholders (ministry, governorship, municipality), and the students, to adapt to innovation (Çalık, 2003; Goodson, 2001; Stiggins, 2002). The factor

critical to the success of the change in the structure of education is working simultaneously and in cooperation with internal and external stakeholders (Fullan, 1999). While considering these situations, it is seen that the educational change should involve a systematic and planned process.

Researchers trying to explain the systematic structure of the educational change processes have introduced models in this regard (Fullan, 2002; Goodson, 2001). In Goodson (2001), there are three types of changes in the processes of educational change: internal, external and personal change. Internal change refers to change activities within the school, external change relates to the changes affecting the whole education system, and personal change refers to changes in individuals' beliefs and ideas. (Figure 1).

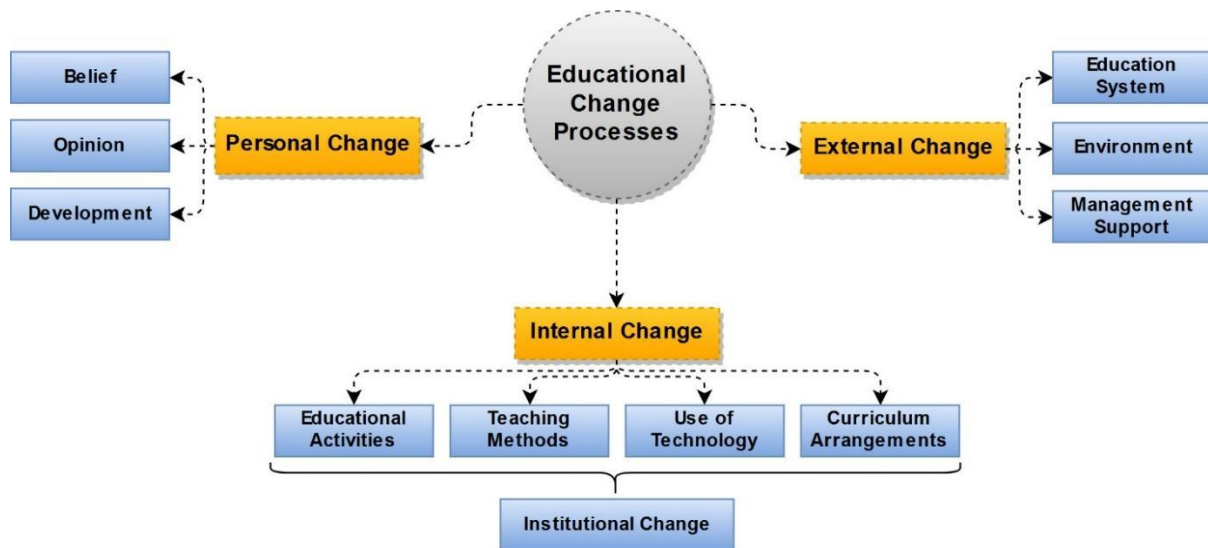


Figure 1. The model of educational change processes (Goodson, 2001)

In terms of change activities in the educational environment, Goodson says that the various educational activities carried out within the school have a complete impact on the education system and that the ideas, beliefs and attitudes of individuals within the school need to adapt to change. When internal, external and personal types of change are in equilibrium, it ensures the success of the change within the school. Notably, the perception of change in the individuals within the school and their efforts for change are essential regarding the educational change processes. In this context, the change activities should be carried out in a systematic working environment should be established between teachers, school management and school stakeholders (Fullan, 1999).

To investigate the processes of change in the education of hard of hearing individuals, it is necessary to look at the elements that come to the fore in solving the educational problems of the students. These can be listed as (i) individual differences and special needs of hearing-impaired students, (ii) technology as a learning-teaching tool and (iii) learning materials in which visual elements are highlighted (Şılbr, 2011; Karal & Çiftçi, 2008; Karal, 2014; Karal et al, 2014). It is clear that educators, researchers or teachers who successfully bring together these three elements will make a significant contribution to the educational environment of hard of hearing individuals.

The Alternative Communication System (ALIS-T) project is a system developed to solve the problems in the field of education of the hearing impaired. Starting from 2010 to 2016, the educational needs of the hearing impaired students were determined by the projects carried out sequentially, and technology-supported learning environments were developed with graphic symbols and used in the courses of hard of hearing students. With the project of ALIS-T supported by TUBITAK (113K717), the focus is on the inclusion of technology in the educational environment and the systematic structure to improve the students' successes by solving the problems experienced by the hearing impaired students in their education process. It is emphasized in the literature that innovative approaches are adopted, useful methods are used for education, and systems, where information and communication technologies are integrated with education, are necessary for the development of schools (Hopkins, 2001; Schein, 1992). Hence, the main purpose of the study is to examine the effects of the technology-based ALIS-T project on hearing-impaired students within the framework of the educational changes processes. For this purpose, the following research problems will be sought in the study:

1. What are the impacts of the technology-based project for hard of hearing students on individual changes in school members?
2. What are the effects of the technology-based project for hard of hearing students on the internal change of the school?

What are the effects of the technology-based project for hard of hearing students on the external change of the school organization?

Methodology

Qualitative research used in the field of special education plays an essential role in understanding the current situation, providing a conceptual framework for natural events and analyzing the facts in detail (Obiakor & Rotatori, 2010). It was stated by Brantlinger et al. (2005) that qualitative research provides researchers with an opportunity to understand the essential nature of the phenomenon and follow a systematic approach. For this reason, the qualitative research approach is used in this study. The process of collecting data in qualitative research is a very important and time-consuming process. Describing the situation in detail, understanding the behavior of people and conducting analyzes by ethical principles require an extended period (Shank, 2006). In this context, when the purpose of the study is taken into consideration, the case study method, one method of qualitative research, has been used for detailed and in-depth follow-up to the researched situation. Considering the possibilities of the case study method, such as looking at a situation from different angles, using different data collection techniques and investigating the situation in detail, is thought to be helpful in explaining research problems.

Participants

Participants in this study were selected by the purposeful sampling method, taking into consideration the theoretical framework of the study, the purpose of the research and the research problems. Patton (2002) refers to the diversity of purposive sampling methods and discusses the existence of 16 different purposeful sampling methods. Maximum diversity sampling, which is one of the sampling methods of Patton (2002), was determined as the type of purposive sampling methods in this study. According to this method, participants are of a wide variety with the researcher aiming to investigate commonalities and patterns therein. For this purpose, not only one group but many individuals were included in the study to ensure the maximum variety of individuals from the school in the selection of the study group.

The participants of the study consisted of 1 principal, one principal assistant and 13 teachers working in a Hearing Impaired Primary School and four parents. School administrators and school vice administrators coded in A1 and A2, teachers' coded in from Ö1 to Ö13, and student

parents coded from P1 to P4. It was observed that 6 of the teachers (T1, T2, T11, T12, T13) in the study group applied the project on demand and two teachers (T3, T4) carried out the courses on the project. The other teachers were selected from the teachers who did not use the project applications in their lessons but had information about what the project was and how it was conducted.

Data Collection Instruments

During the data collection process, semi-structured interview, unstructured observation, and document analysis techniques were used. The semi-structured interviews were conducted with the school principal, vice principal, teachers, and parents. The focus of the questions used in the interviews was based in literature on the framework of educational change processes. In this context, the scope of the interview questions addressed personal change, internal change, and external change areas, which are frequently mentioned in research on change processes in education. The educationists considered these participant groups in preparing questions to be used during the interviews. The interview questions were presented to the participants one day in advance, and a pilot study was conducted. After the pilot study, new questions were added to the interview questions to get more detailed answers.

The unstructured observations were made by the researchers who carried out doctoral and graduate studies within the scope of the project. The researchers, as participant observers, made observations in project implementation classes and the school. An observer role as participant refers to a person who does not interact with the observers in the observed environment but is known by the group in which he/she is a researcher (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz & Demirel, 2010). The purpose of the unstructured observation technique is to provide the observer with the freedom to collect and record information (Büyüköztürk et al., 2010). In this context, the researchers made notes by writing, taking photographs, taking video recordings or recording their voice during observations carried out in the school.

Finally, the documents obtained during the research consist of 2015-2019 Strategic Plan of the hearing impaired primary school, notes written by the parents to the teacher, the material suggestions of the teachers individually prepared for the project, published news in various media organizations (TRT News, internet news, activity news posted on the websites).

Data Analysis

The qualitative data obtained through interviews and observations were analyzed through descriptive analysis. The descriptive analysis approach is defined as analyzing the data within the framework of the themes determined in the research questions (Yıldırım & Şimşek, 2005). In order to avoid data loss in the analysis of the data, the statements transferred to the text should be measured and discussed by several experts (Milne & Adler, 1999). In this respect, interview records and observation notes obtained by the research problems of the study were read and analyzed by two experts from the project team. In the analysis process, the transcript of the data, open coding, core coding, inter-code compliance (0.89), theme and direct quoting were followed. In this process, a qualitative data analysis program called MAXQDA © was also used. The documents were analyzed according to the personal, internal and external change categories discussed in the framework of the research and analyzed by interpretive analysis. As a result of coding of the data and comparing it with other data, the documents which are in accordance with the relevant category are presented under the categories in the findings section and related to the findings obtained from other data.

Findings

In this part of the study, the findings obtained from the analysis of the obtained data are presented. In this context, the findings are given under the main categories of Personal Change, Internal Change, and External Change, based on research problems. Data collection tools, the themes related categories and main categories are presented in Figure 2 with a conceptual network.

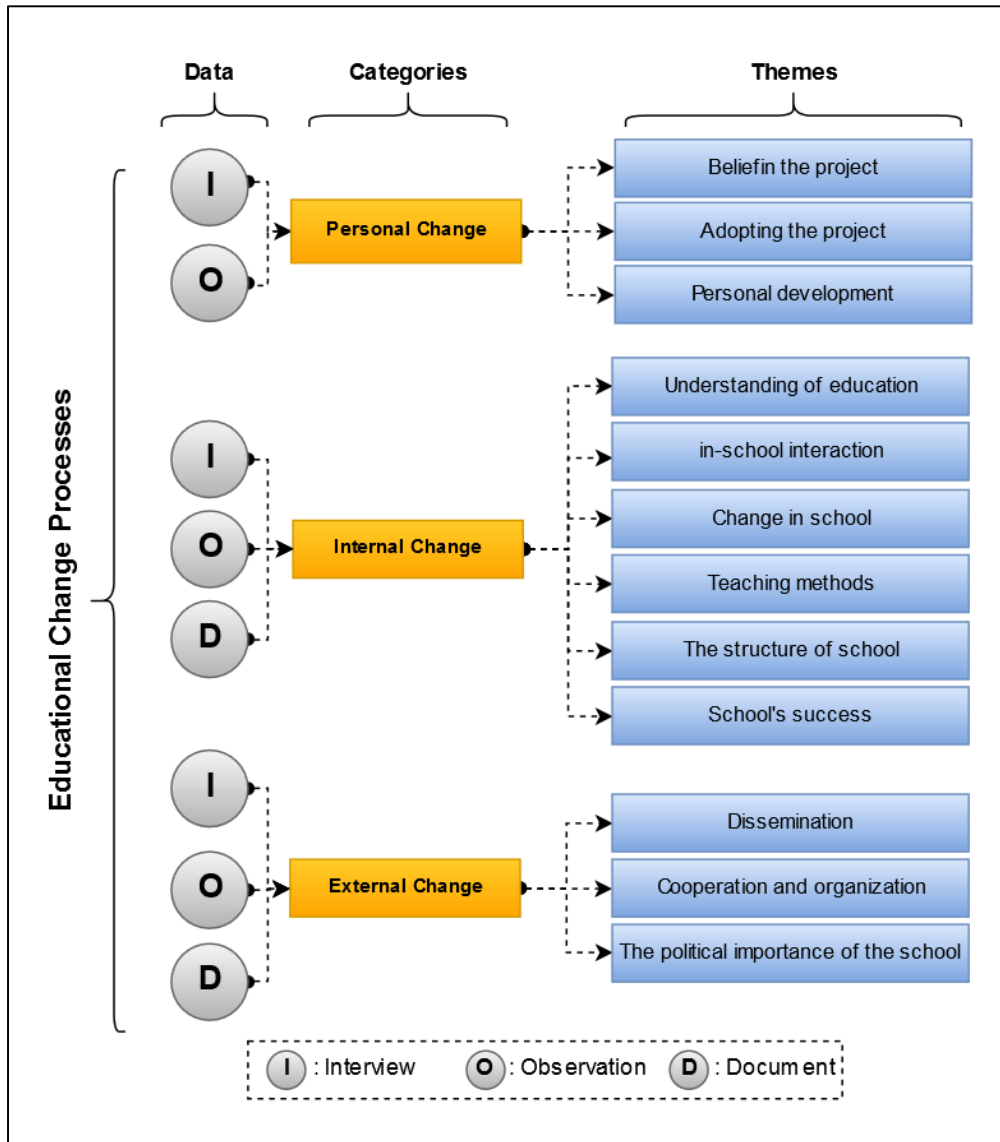


Figure 2. The conceptual network of educational change processes.

As a result of interviews with teachers, school management and parents about the technology-based project conducted for hearing impaired students, it is seen that the changes of the project on individuals are collected in belief in the project, adopting the project and personal development titles. Within the scope of internal change category, it is seen that internal changes of the school are grouped under educational understanding, in-school interaction, change in school, teaching methods, the structure of school and success of the school headings. It is seen that the external changes of the school organization are grouped under dissemination, cooperation, and organization and the political importance of the school headings.

Findings Related to Personal Change Category

The category of personal change is discussed in three different themes. These themes are, respectively, belief in the project, adopting the project and personal development themes. Themes, sub-themes and participant codes for each theme are listed in Table 1.

Table 1

Findings Related to Personal Change Category

Category	Theme	Sub Theme	Participants	
Personal Change Category	Belief in the project	Belief to the dissemination of the project	T2, T3, T4, T6, T10, T11, T12, T13, A1, A2, P2	
		Contribution to students' education	T1, T2, T4, T5, T6, T8, T9, T10, T11, T12, A1, A2, P3	
		Bringing innovation to the educational environment	T2, T3, T4, T6, T7, T10, T11, T13, P3, P4	
		Benefits of using graphic symbol	T1, T3, T11, T12, T13	
	Adopting the project	Willingness to contribute to the project	T2, T8, T11, T12	
		Use of project products by other classes	T5, T11, T12	
	Personal development	Personal development	Personal development of practice teachers	T4, T5, T8, T10, T13
			Development in students	T2, T3, T4, T5, T11, T12, T13, A2
		Personal development	Attendance	T3, T5, T11, P2, P4
			Transfer to daily life	P3, P4

When Table 1 is examined, it is seen that the category of individual change is divided into three main themes. Sub-themes related to the theme of belief in the project have been shaped in these subjects: belief to the dissemination of the project, contribution to students' education, bringing innovation to the educational environment and benefits of using the graphic symbol. Based on the data obtained from the interviews, it is seen that the participants believe that the project should be developed and applied to both primary and secondary school levels and in other handicapped groups should be use this system for their education. T2 stated the views on this subject as follows:

“although ALİS appears only to address the hearing impaired, ALİS is a system that can be used for students with learning disabilities, students with low intelligence levels and students with attention problems”. (T2)

There is a change in the opinions of the participants about the contribution of the ALİS project to the education of the students. Expressing that students' sentence building skills increase, A1

believes this is a great success for students. In this respect, the views of A1 are as follows: *"...for example, you are aware that students learn concepts better, for instance, in making sentences. Some students can create a sentence of 3-4-5 words. This is a great success..."*. In the classroom observations, it was determined that a student with a low literacy level compared to his classmates had, with the project implementations, achieved almost grade level literacy, and that there was an increase in course attendance, interest, and motivation. During interviews participants suggested their beliefs that the project implemented in the hearing impaired elementary school brought innovation to the educational environment.

The sub-themes of the theme of adopting the project are the willingness to contribute to the project and use of project products by other classes. T12's desire to contribute to the project is expressed in the following words: *"...because I care about the project, I felt responsible for its development. The school also gave importance to the project..."*.

Depending on the theme of individual development, it is seen that sub-themes are shaped in the personal development of practice teachers, development in students, attendance, and transfer to daily life subjects. It was stated by the participants that on the teachers who applied the ALIS-T project had individual development. In this regard, the views of T10: *"...I saw the development of Turkish branch teachers. There's a lot of progress..."*. Other participants stated a similar situation. It was stated by the participants that the ALIS-T project created a change on the students. T4 stated his opinions on this subject as follows:

"our lessons were much more enjoyable because of the animation. Students increased the demand for the course. As soon as the animation was opened, the students were motivated. They started to form a sentence". (T4)

It was also observed by the observer that the students were willing to participate in the lessons with the ALIS-T project applications. On the other hand, it was stated by the parents of students that there was an increase in the students' desire to go to school, while their desire to go to rehabilitation centers decreased. Also, the parents of the students stated that the students started to transfer the information they learned to daily life. V2 stated his views on this subject as follows: *"...there's been a lot of progress since the project started. This year is much better. Now he knows the objects and answers them well..."*.

Findings Related to Internal Change Category

The internal change category is discussed in six different themes. These themes are respectively, understanding of education, in-school interaction, change in school, teaching methods, the structure of school and school's success themes. Themes, sub-theme and participant codes for each theme are listed in Table 2.

Table 2

Findings Related to Internal Change Category

Category	Theme	Sub Theme	Participants
Internal change	Understanding of education	Regulation of teaching plans	T2, T3, T4, T6, T11
		Dictionary provided with graphics	T1, T2, T3, T4, T11
		Planning to use in different branches	T2, T5, T6, T9, T11, T12, T13
	in-school interaction	Exchange of ideas within the school about the project	T1, T3, T4, T9, T11, T12, T13, M1
		School support to the project	T1, T3, T4, T6, T7, T11, T12, T13, M1
		Interpersonal communication	T3, T11
	Change in school	Change observed in classrooms	T1, T2, T3, T4, T11, T12, M1, M2
		Efficient use of time in teaching	T1, T3, T5
		Change observed at school	T5, M1
	teaching methods	Use of graphic symbols in teaching	T1, T2, T4, T5, T11
		Use of animations in teaching	T1, T2, T4, T5, T11
		Concretization of abstract concepts	T2, T9, T11, M2
		Using interactive games in repeating work	T1, T2, T3, T4, T13
		Use in student evaluation studies	T1, T3, T4, T12
		Use in reading and writing	T1, T2, T3, T4, T5, T11, T13, M2
		The proximity of teachers to current teaching methods	T2, T3, T5, T13
	The structure of school	Technical infrastructure	T5, T12, M1, M2
		Physical Infrastructure	T4, T8, M1
	School's success	Students' academic achievements	T3, T4, T5, T10, T12, M1, M2, V2
		Social skills of students	T1, T3, T4, T11, T12, T13, M2

When Table 2 is examined, it is seen that the sub-themes related to the theme of understanding of education are shaped within the framework of regulation of teaching plans, dictionary provided with graphics and planning to use in different branches titles. The participants also shared their opinions about the planning of the instructional plans and the idea that the project

should be included in the school's annual plans, and that the graphic symbols, which are the basis of the project, could form a common language among the students. In this regard, T1 stated the following views: "...A standard dictionary for our students. Symbols have been standardized and speeded up children's use of the word. Words didn't feel the same in children, but symbols helped us to overcome this obstacle. I saw the benefit of the project...". Finally, it is seen that teachers make plans to use the project products outside of Turkish, Mathematics and Life Science courses. Also, in the observation data, apart from the project implementation teachers, T12 has used project outcome in their own courses. In the documents obtained within the scope of the research, it was seen that the material that T12 prepared with the 5N1K method using the project products supports this situation (Figure 3).

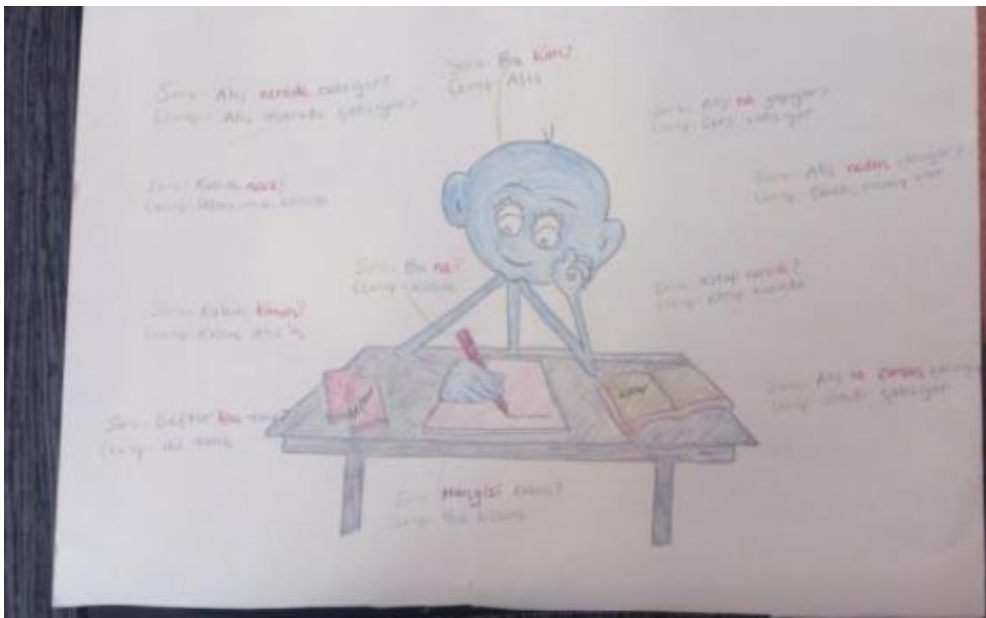


Figure 3. Material developed by T12 using project applications.

It was determined that the school management and teachers exchanged ideas about the application and development of the project. A1 expressed his views in this regard: "...we often speak between us. We have different ideas that we are trying to make something different about it. I hope it will be even better in the future...". In observations by the observer during the implementation of the project, it was determined that teachers exchanged ideas about project products. In this exchange of ideas between teachers, it was seen that the application teachers were consulted by the other teachers about the project and the ideas were exchanged about how to follow the project products to their courses. It was also stated by the participants that the

school administration encouraged both project activities and teachers to implement the project. Another aspect of the project's interactions within the school is the increase in communication among students, the students' starting to create sentences between each other and the rise in the share of the students in the two different classes.

It is seen that the sub-themes related to the theme of in-school interaction are shaped within the framework of the exchange of ideas within the school about the project, school support to the project, and interpersonal communication titles. There is a common belief that there is a positive change in the class of the participants in the project implementation classes and in the classes that apply the project products voluntarily. In addition to this, it was stated by the participants that the project applications were in a practical structure and the teacher saved time by providing efficient use of time in teaching. In this regard, T3 stated his views as follows:

“to tell the truth, the material comes are ready. The teacher does not spend much effort. We're just wasting effort while telling the content. It was necessary to add drama beforehand, but it is not necessary because it is ready. Reduced the teacher's burden. This system was beneficial to the teacher”. (T3)

With the project related to the observed change in the school, opinions have been obtained that a positive atmosphere is formed within the school. A1 expressed his views as follows:

“there was a vitality in school. Due to the project, we did some activities, and both our activity and the participation of the project became different activities. I mean, I believe it brings vitality to school. The project also brought vitality to our teachers”. (A1)

Also, in the findings obtained from the documents related to the sub-theme of the change observed in the school, it is seen that the project is seen as an opportunity for the school in the Strategic Plan of the school and that the institution will progress towards becoming a model school in the future.

It is seen that the sub-themes formed within the framework of the teaching methods are merged under the title of innovations of project products for the education of hard of hearing. The closeness of graphic symbols, animations, interactive games, rework studies, evaluation studies, reading and writing exercises, and all of these methods used in ALIS project to teachers' current teaching methods has become prominent. Participants emphasized that such

Investigation the Effects on School in the Frame of Educational Change Processes of a Technology Support for Hearing Impaired Students

environments are useful for the education of hard of hearing students. In the classroom observations, it was seen that project applications were beneficial in terms of teaching methods. Figure 3 presents an image of the use of interactive games accompanied by teachers.



Figure 4. An image of interactive gaming applications

Headings in technical and physical infrastructure examined under the theme of the structure of the school show that there is a change in the project both technically and physically within the school. In addition to the technical support provided to the school for the project implementations, the fact that teachers equip the school corridors with the graphic symbols included in the project shows that their physical infrastructure is strengthened too (Figure 4).



Figure 5. Images created in the 3rd and 4th class doors of painting works created using graphic symbols.

It was observed that there was an increase in both the academic and social skills of the students about the success of the school. Participants stated that students generally came to the fore in subjects such as sentence formation, literacy, an increase in vocabulary. Also, it was also stated that students contributed to their communication skills and the students tried to make communication by establishing sentences with each other. In this regard, T1 stated his opinions as follows: "...I think it helps students express themselves. During the playtime, I observed the help of project for a student (a 4th class student) ...".

Findings Related to External Change Category

The external change category is discussed in three different themes. These themes are, respectively, dissemination, cooperation and organization, and the political importance of the school themes. Themes, sub-theme and participant codes for each theme are given in Table 3.

Table 3

Findings Related to Category of External Change

Category	Theme	Sub Theme	Participants
External Change	Dissemination	Dissemination activities throughout the country	T1, T3, T4, T5, T13, M1
		Raising awareness about the project	T1, T2, T5, T9, T13
	Cooperation and organization	University-school cooperation	T1, T2, T3, T4, T5, T11, T12, M2
		School-family cooperation	T2, T3, V2, V3, V4
		University-school-family cooperation	M1, M2
	The political importance of the school	Top management's support	T4, M1, M2
		School's recognition	T4, M1

Table 3 shows that sub-themes related to the theme of dissemination are shaped under the titles of dissemination activities throughout the country and raising awareness about the project. Participants have given various views on the expansion of the project to include the country as a whole. Similarly, it was stated by the participants that the project should be used in all Hearing Impaired Primary Schools in the country. In this regard, the comments of Ö5 are as follows: "...I think other hearing impaired primary schools should be aware of this project and start practicing...". Based on the observation data, it was seen that various activities were carried out within the school for the dissemination of the project. In this context, one of the essential

dissemination activities observed in the school is the demonstration of the project activities carried out in the school on National News channels (Figure 6).



Figure 6. Project's broadcast on a national channel.

For the dissemination of the project, the media developed under the project were published in the Education Information Network platform of the National Education Directorate. In this context, a protocol was signed between the project executives and the Directorate of National Education Directorate of Special Education and the project's product was provided to all hard of hearing people.

In the context of cooperation and organization theme, it is seen that sub-themes are shaped in university-school cooperation, school-family cooperation, and university-school-family cooperation. It is emphasized by the participants that university, school, and family cooperation are essential for the implementation of project applications. A1's views are as follows: "...we also made evaluations of ALIS with our parents and teachers at each meeting. Both the researcher and the teacher are critical to us...". The contribution of the parents to the project, the documents, and observations obtained are supported this situation. This is stated in a letter written by A3 to T3. Finally, it is understood that the school has strengthened its relations with the environment and sets an example for other schools with project implementations. In this regard, T4 stated his views as follows: "...The project contributed a lot to the promotion of the school. This was proof that students could succeed. It was a good example among the other hard of hearing students...".

Discussion and Conclusion

This study was carried out to examine a technology based project carried out for hearing impaired students within the framework of the educational change processes. In this section, the effects of the technology-based project on school members' individual changes, the general structure of the school (internal) and external change of school organization are discussed, and the results and recommendations are presented.

The Effects of a Technology-Based Project on Individual Changes of School Members

In the personal change, which is a form of educational change, the changes in the ideas and beliefs of the people in the education organization are discussed (Goodson, 2001). Kondakci (2005), in his study on the effect of the change on individuals, emphasized that individuals' readiness for change to have some effects on individual change. In this study, it is seen that the project, which is carried out in technology school in the school for the hearing impaired, is more likely to be seen on the personal changes of the members of the school, in their belief to the project, their adoption of the project and their personal development. In this context, when the literature is examined, Goodson (2001) states that individual change needs to be addressed in the context of changes in individuals' beliefs, opinions, and personal development. Also Sheehy (1981) states that the adoption of change will take place with an internal change in the beliefs and plans of individuals.

Awbrey (2005) stated that the changes on the values and beliefs of the individuals in the schools in terms of the success and the sustainability of the change, depend on the adoption of the ideas about the necessity of this change. From this point of view, it can be said that the individual change taking place in the processes of change in education is a complicated process. Teachers' beliefs about the need for the project implemented in the hearing impaired primary school, enables individual efforts. Based on this finding, it can be said that the individual changes of the members of the educational institutions should not be ignored in order to achieve success in the change studies.

The beliefs of individuals in the educational activities carried out within the school are the key to the success of the educational changes (Goodson, 2001). At this point, Fullan (2002)

emphasizes the importance of the possible change in the beliefs of individuals and asserts that the change of beliefs is difficult to achieve, but the change in the beliefs of individuals is vital for the processes of educational change. From this point of view, changes in the beliefs of the members of the activities carried out within the scope of the research have been carefully determined. In this context, it is understood from the findings of the research that individuals have positive beliefs towards the project that the project should be widespread, students contribute to their education, bring innovation to educational environments, use of graphic symbols, and benefit the parents. From this point of view, it can be said that technology-based educational activities cause a change in the beliefs of individuals in the application school.

In the study conducted, it was seen that the school administration, especially the school principal, had high faith and expectations. The fact that the school director's belief and expectation for the project is high enabled the teachers to participate in the project and work devotedly. At this point, it is stated that administrators working in special education schools have important tasks such as creating an interactive environment within the school and pushing teachers to research and study according to students learning needs (DiPaola & Walther-Thomas, 2003).

Teachers may find it difficult to respond to changing student needs, emerging technology, and socially emerging innovation. the teacher has a great deal of responsibility regarding improving himself/herself and acting by the necessity of educational change (Harris, 2008). So much so that the scientific studies that ignore the personal development of the teacher are difficult to reach success (Goodson, 2001). At this point, teachers in the school where the study was conducted believed in integrating project applications into their courses as they realize that change is a necessity, to solve problems that arise during applications, and to improve themselves professionally. As a result, it has been observed that the individuals in the project implementation school are open to innovation and show willingness for development in their personal behaviors and beliefs and attitudes towards project applications in this process. In this context, it has been seen that project implementations lead to changes in the individuals in the application school, their belief in the project, their adoption of the project and their individual development.

The Effects of a Technology-Based Project on Individual Changes of School Members

In the study conducted, it was seen that the changes in the academic success and social skills of the students with technology supported environments gained an accelerating momentum. There are a lot of studies that will provide the students with the help of technology-supported learning environments to solve the communication problems experienced in the hard of hearing (Bayrakdar & Çuhadar, 2015; Çiftçi, 2009; Girgin, Çoklar, Kurt & 2009; Şılbır, 2011; Karal et al., 2014; Karal, 2015). In these studies, it has been seen that technology is a useful tool for the solution of the problems experienced by the students and they can increase the success of disabled students when used correctly.

Today, schools are expected to be aware of innovations and opportunities and to have an identity that creates environments to work in cooperation (NSBA, 2003). The dimension of internal change that deals with the general structure of the school are seen in many fields ranging from the cooperation of teachers and administrators in the school, communication between school members, in educational activities carried out in the school, in-class change, family and planning effective learning and teaching methods. From this point of view, the versatility which arises in relation to the change category within the school is also thought to be the source of the changes in the future education systems.

In this study, it has been shown that change has an effect on all members of the organization and has entered a planned change in the educational activities of the school with the solution of the problems in the current educational environment. The educational facilities in the current structure of the school should provide an environment that facilitates educational activities. At this point, it is essential in the study that the physical and technological infrastructure of the school is organized or procured according to educational activities regarding the success of the educational change processes (Erdoğan, 2012; Yalçın-Tepe, 2015). It was thanks to the coordinated work of the project team and the school members that the necessary infrastructure and support for the project applications affected the internal transformation processes of the school.

School members' participation in decisions in education processes is seen as an important factor affecting change in schools. Salvason (2005) states that the participation of teachers in the

education environment has a positive effect on the acceptance of change in schools, whereas, in a contrasting situation, the sense of responsibility and therefore the cooperation towards the implementation of the decisions made by others is decreasing. Aksoy (2005) states that school administrators are authoritative to keep communication channels active and to convince teachers, parents and other staff to change in the process of change. The key point in this situation is the school administration. Kaya (2013), in his study, states that school administrators are generally the ones who manage change but are not affected by the change processes. However, this study shows that the school principal's attitude towards change affects both the change in school and the individual change of the principal. While the manager took an active role in school-related activities in order to create an impact on individuals, it was observed that the change in the school was also affected him/her too. This result does not coincide with the finding of Kaya (2013).

The Effects of a Technology-Based Project on Individual Changes of School Members

As the environment has external effects on the changes in the school, the changes in the school also have an impact on the environment. On this subject, Hargreaves and Fullan (1998) state that schools cannot live separately from their environment. In the project carried out in the hearing impaired primary school, the school organization developed ideas for the dissemination of the project. It is known that the support of the senior management is important in the promotion of the school. In this respect, Sağ (2003) emphasized the importance of politicians to support the process because it educates individuals who protect both the culture of the society and those who are open to innovation. At this point, the support given to the project by the Governorate and the National Education Directorate accelerated the change process in education and played an encouraging role on the external change of the school. In addition, the promotion of the project within the school through the media has made a difference in terms of the recognition of the school. The school organization also conveyed this awareness to the change process positively. The Ministry of National Education's participation in the EBA system, which includes educational materials, is an important support for the dissemination of the project. In this way, the technology supported education activities carried out within the school have brought a different dimension to the education of the hearing impaired in the country.

The fact that the school principal is open to change, supports teacher the development and shows a solution-oriented attitude to the problems in education is seen as important in the change processes (Goddard & Bohac-Clarke, 2007). The process of change in education has a comprehensive and comprehensive process that requires the new system to be used at school (school, teacher, student, family, staff), school stakeholders (ministry, governorate, municipality), and students to adapt to innovation (Çalık, 2003; Goodson, 2001; Stiggins, 2002). As a result of this study, it was seen that educational change processes were affected by many different subjects.

Considering the results of the research and literature review, it was observed that the opinions of the school administrators, teachers, and parents in the planning of change for the education of the hearing impaired was related to the successful outcome of the change. Especially in studies aimed at hearing impaired students, teachers' teaching methods should be examined, and appropriate plans should be made by the education concept that is dominant in the school. Also, training activities should be promoted with various media organizations to increase the interest of the individuals in the school towards the change activities carried out. In addition, taking the support of the senior management may cause changes in the perspectives of the people. In future studies, determining the level of influence and the relationship between the three main categories of educational change processes can be useful in understanding the processes of change.

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