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Full Length Research Paper

A comparative analysis of general culture courses within the scope of knowledge categories in undergraduate teacher education programs “Turkey and the USA”

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In this study, general culture and general education courses within the scope of knowledge categories in undergraduate teacher education programs in Turkey and the USA are comparatively analyzed. The study is a comparative education study and uses a descriptive model. In the study, the general culture - general education courses taught in the elementary teacher education curriculum at the education faculties of Gazi, Ankara, Hacettepe, Anadolu and Marmara Universities in Turkey and Central Florida, Delaware, Utah State and Indiana Universities in the USA were examined. In the study, the document review method was used and the data were analyzed through the document analysis technique. The results of the study reveal that the general culture courses that are compulsory in Turkey were determined by The Council of Higher Education (YÖK) and they are applied in all of the undergraduate programs at education faculties. Yet, there are no explanations about what criteria are taken into consideration while determining these nine compulsory general culture courses. While YÖK puts emphasis on a teacher candidate being trained in a sophisticated manner, the results of the study ascertain that these compulsory courses within undergraduate teacher education programs are not diverse enough to serve the intended purposes. On the other hand, some universities suggest some elective general culture courses within knowledge categories; however, some of these are professional teaching knowledge and major courses. The compulsory courses within the category of general education in the USA are determined by the universities themselves whereas this is done centrally by The Council of Higher Education (YÖK) in Turkey, and the compulsory courses of each university vary in terms of content and number. However, the elective courses are grouped under certain themes and these themes are related to certain disciplines. It is compulsory for students to elect certain amounts of courses within each theme. This blocks electing similar courses under the same themes and directs the students to elect different courses.

Key words: Higher education, teacher education programs, elementary teacher education curriculum, general culture, general culture courses, general education, general education models.

INTRODUCTION

The most important functions of modern universities are to undertake qualified research, to manage education and training processes effectively and to be able to

integrate all of these works with society. The most important aim of education functions is to enable the graduates to have the desired knowledge and skills, and

to maintain all of these during their lifetimes. When the literature and the research by various institutions and organizations are analyzed, there are various views related to the knowledge, skills and competency especially required for the 21st century (Table 1).

Although the knowledge, skills and competences shown in Table 1 are emphasized as required qualifications for the 21st century person, the roots of these qualifications are from far in the past. For instance, in Barnett's (1992) study, which examines the purposes of higher education, these educational purposes are stated as *"supporting lifelong learning, developing individuals' autonomy and integrity, helping them to create intellectual skills and perspectives, and improving critical thinking"*. These are in parallel with the 21st century knowledge and skills mentioned above. This knowledge and these skills are included in the missions and visions of education faculties and teacher education programs that this study focuses on.

One may conclude from examining these missions and visions that the aim is to train teacher candidates who are modern, self-assured, innovative, questioning and productive (<http://gef.gazi.edu.tr/posts/view/title/neden-gef%3F-157712?siteUri=gef>); benefit from science, technology and accumulation of arts, produce in the education and service areas in the light of universal values

(http://www.egitim.hacettepe.edu.tr/html/misyon_vizyon.html); contribute to information production, examine the educational problems of society with respect to educational rights, equality and human rights and provide solutions to problems, lead the policies to be determined in this respect, and share their knowledge with the national and international academic community, public and private institutions, non-governmental organizations and individuals

(<http://www.education.ankara.edu.tr/misyon/>). It may be stated that these explanations are more general descriptions of the knowledge, skills and competences that are identified in detail in Table 1.

According to numerous studies, the effective teacher should be the one who thinks, questions, criticizes, innovates, derives pleasure from his job, establishes powerful communication, feels confident, has social skills, evaluates himself, guides students to learn throughout his life, works collaboratively, and who is cultured and transfers the cultural values of the society to young generations (Aydın et al., 2008; Clark, 1988; Çelikten et al., 2005; Hayes, 2004; Mendler, 2001; Kavcar, 1999; Özyürek, 2008; Paterson, 2005; Stronge et al., 2004;

Wyse, 2006).

There are three types of knowledge categories, which are Major Area Knowledge, Professional Teaching Knowledge, and General Culture in undergraduate teacher education programs, and it is aimed for teacher candidates to have the above-mentioned qualifications within the context of these knowledge categories (YÖK, 1998, 2007).

Major area knowledge includes the basic concepts, discussions, research and inspection methods for which the teachers are responsible and supposed to teach within the discipline they study. Professional teaching knowledge comprises teaching skills necessary for teaching and learning the knowledge, skills and attitudes related to a specific area. The general culture knowledge includes all the interdisciplinary experience to perform more effective teaching while the teacher is carrying out his professional roles (Baştürk and Ayas, 2012).

The percentages of knowledge categories in the undergraduate teacher education programs are determined as 50% for major area knowledge, 30% for professional teaching knowledge and 20% for general culture knowledge, and these rates and the percentages for each area may vary by different faculties and departments (YÖK, 2007).

As for the literature about teacher education systems, it can be stated that the studies related to the major area knowledge category (Aybek, 2007; Baki, 2001; Beşoluk and Horzum, 2011; Canbazoğlu, 2008; Coşkun et al., 2010; Çekbaş and Kara, 2009; Demir, 2012; Emrahoğlu and Öztürk, 2009; Gencel and Köse, 2011; Matyar et al., 2008; Özdemir, 2006; Özden, 2007; Öztürk et al., 2014) and professional teaching knowledge category (Altun, 2010; Aydemir and Çiftçi, 2008; Beşoluk and Önder, 2010; Bozdoğan and Altunçekiç, 2007; Çakır et al., 2006; Gürdal et al., 2000; Karaca, 2006; Maden, 2010; Özkılıç et al., 2008; Temizkan, 2008; Uçar, 2011; Yeşil, 2009; Yılmaz, 2007) are only a few examples of the numerous studies conducted in this field.

However, there are relatively few studies done in the general culture knowledge category (Kuzu, 2013; Senemoğlu, 1990). In undergraduate teacher education programs, in addition to the compulsory general culture courses included since 1980, it was stated that there would also be some elective general culture courses as part of curriculum development studies from 1997.

General culture knowledge has an important role in the modern university concept and it helps teacher candidates to be trained intellectually and qualitatively, which explains the reason for this change (YÖK, 1998).

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Table 1. 21st century know ledge, skills and competency.

21st century knowledge, skills and competency						
	1Knowledge	Communication	Ethics and Social Impact	-	-	-
Ananiadou and Claro (2009)	Know ledge as a source; Know ledge as a product	Effective communication; Collaboration and face-to-face interaction	Social responsibility; Social impact	-	-	-
	Thinking skills	Studying skills	Means of study	Experiential skills		
Binkley et al. (2012)	Creativity; Innovation; Critical thinking; Problem solving; Decision making; Learning (how) to learn; Metacognition	Communication; Collaboration; Team work	Information literacy and know ledge; Communication and technology literacy	Local and global citizenship; Life and career skills; Personal and social responsibility; Cultural awareness and competencies	-	-
	Core subjects	21st century subjects	Learning and innovation skills	Information, media and technology skills	Life and career skills	21st century educational support systems
Kay (2010)	English; Reading or language skills; World languages; Arts; Mathematics; Economics; Science; Geography; History; Government and civics	Global awareness; Financial; Economic; Business and entrepreneurship; Citizenship; Health and environmental literacy	Creativity and innovation; Critical thinking and problem solving; Communication and collaboration	Use of information; Media literacy; Information and communication technology (ICT) literacy	Flexibility and adaptability; Entrepreneurship; Social and cross-cultural skills; Productivity and accountability skill; Leadership and responsibility	21st Century competences and assessment; 21st Century curriculum and instruction; 21st Century professional development; 21st Century learning environments
Trilling and Fadel (2009)	Oral and w ritten communication; Critical thinking; Problem solving ; Team w ork			Professionalism and w ork ethic; Applying technology skills; Collaboration		
TÜSiAD (2012)	Critical thinking; Inquiry based problem solving; Innovation and creativity Team work; Environmental consciousness and nature conservation skills			Use of digital technology; Management of existing information; Communication in different languages and cultures; Democratic mind and behaviors; Healthy life awareness		
Kalkınma and Bakanlığı (2013)	Thinking, perception and problem solving skills; Democratic and national values; Communion and communication ; Arts and aesthetics			Self-confidence and responsibility; Entrepreneurship and innovation; Use and production of science and technology ; Productivity		

Source from Kalayci and Hayirsever (2016).

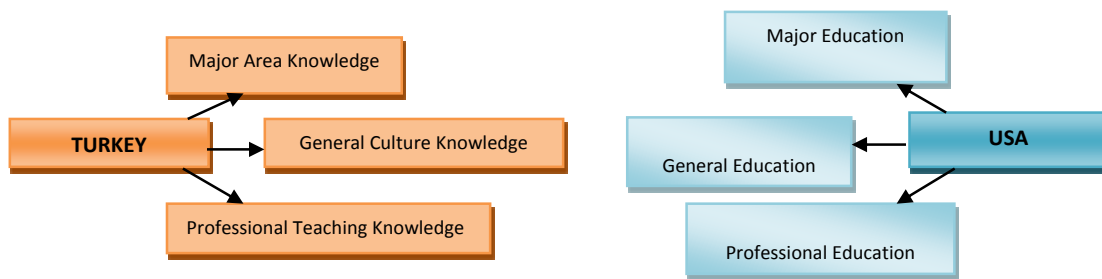


Figure 1. Knowledge categories of teacher education programs by country.

Furthermore, YÖK suggests that general culture courses should be comprised of courses other than the major areas that the students study. Apart from the courses determined by YÖK, it was emphasized that the elective courses are important in the undergraduate teacher education program developed in 2006 and suggested that universities could add different general culture courses into their own programs (YÖK, 2007). Although the Ministry of National Education (MEB) determined the generic and specific teacher competencies (MEB, 2006), the competencies related to the general culture knowledge category were ignored.

There are three knowledge categories in the undergraduate teacher education programs determined by YÖK; however, no competencies related to the general culture knowledge category have been determined by MEB. This result reveals that the explanations made by both institutions within the same field are not consistent with each other. On the other hand, in the undergraduate teacher education programs in the USA, there are three knowledge categories described as Major Studies, Professional Teaching Education and General Education. Figure 1 shows the knowledge categories in the undergraduate teacher education programs in Turkey and the USA. While major area knowledge and professional teaching knowledge have similar names, the third knowledge category is known as General Culture in Turkey and General Education in the USA.

To graduate from a university in the USA, all of the students have to take common core courses described as General Education, General Studies, Liberal Arts or Core Curriculum. In other words, the general education program is a core curriculum conducted by all the faculties at universities. Some of the courses in general education are compulsory and others are elective (Harvard University, 2007).

Determining the compulsory and elective courses within general culture and general education categories presents some data about whether they serve the desired knowledge, skills and competences in each category. Although there are limited studies in this issue especially in Turkey, its importance has been gradually increased.

In the teacher education programs prepared by Higher Education Council of Turkey, the importance of general culture information category has been emphasized on several occasions. For that reason, it is expected that the general culture courses will get the same level importance in practice, too.

This study has been regarded as important because it gives information about what kind of information and skills are aimed to be gained by prospective teacher's through the courses within the scope of general culture knowledge categories in the undergraduate teacher education programs. The results of the study will contribute to the development of undergraduate teacher training programs and the general culture knowledge category in Turkey, make a great contribution to the identification of courses within this category and provide support for the other studies that will be conducted in this field.

Purpose

The purpose of this study is to conduct a comparative analysis of the *general culture - general education* courses within the scope of knowledge categories in undergraduate teacher education programs in Turkey and the USA. The research questions are as follows:

1. Within the general culture and general education knowledge categories in undergraduate teacher education programs in Turkey and the USA;

- a. What are the compulsory courses?
- b. What is the number of compulsory courses?
- c. Who determines the compulsory courses?

1. Within the general culture and general education knowledge categories in undergraduate teacher education programs in Turkey and the USA;

- a. What are the elective courses?
- b. What is the number of elective courses?
- c. Who determines the elective courses?

d. What are the procedures for the students to select the elective courses?

METHODOLOGY

Research design

This study aims to define what courses exist within general culture – general education knowledge categories in the undergraduate teacher education programs in Turkey and the USA; therefore, this research is primarily designed as a descriptive study.

Furthermore, as it compares the common, similar and different points of the courses in both programs, it is also a comparative education study. It also has the characteristics of horizontal approach as it comparatively examines general culture – general education knowledge categories both in Turkey and the USA. Since it analyzes, compares and examines these categories to reach the results, it features evaluative approach (Demirel, 2000) characteristics. The document review method was used in the study and the documents are the undergraduate teacher education programs at the sampling universities. Therefore, the study is a form of qualitative research.

In the study, the criterion sampling method, which is one of the purposeful sampling methods, was used. According to this method, five universities (Gazi, Ankara, Hacettepe, Anadolu and Marmara) from Turkey and four universities (Central Florida, Delaware, Utah State and Indiana) from the USA were chosen, and the elementary teacher education curricula at these education faculties were examined. In the sampling procedure, some predetermined criteria in accordance with the purpose of the study were considered by the researcher (Yıldırım and Şimşek, 2009). The criteria for the chosen Turkish universities are having a well-established background and pioneering the education system in some respects.

On the other hand, due to the fact that the USA is one of the leading countries in the world in terms of the level of development; it can easily affect the education systems of other countries and the general education program, which is examined in this study, has an important role in the higher education system of the USA. The reason why the researchers have chosen these US universities is that they all have education faculties and apply the general education program.

Data sources and data collection

The documents analyzed as the source of data are the undergraduate elementary teacher education curricula published on the official websites of sampling universities in Turkey and the USA, and are primary and original sources.

Data analysis

The following steps are taken for the document analysis of the study:

1. The undergraduate elementary teacher education curricula were downloaded from the official websites of the universities chosen in Turkey and the USA.
2. The courses within the scope of knowledge categories, namely general culture (Turkey) and general education (the USA) were determined. While analyzing the pre-determined compulsory and elective courses, the following steps were followed:
The analysis of compulsory general culture and general education courses:

3. The courses within the scope of knowledge categories, namely general culture (Turkey) and general education (the USA) were determined. The analysis and tabulation of these courses were carried out based on the countries they belong to.

4. Because all of the compulsory general culture courses in Turkey are identical, the analysis and tabulation of these courses were carried out based on the years when important curricular changes on the undergraduate teacher education programs were made.

5. Because all of the compulsory general education courses in the USA are different, the analysis and tabulation of these courses were carried out based on the sample universities.

The analysis of elective general culture and general education courses:

6. The elective courses in the undergraduate teacher education programs of both the countries were determined.

7. As the elective general culture and general education courses in both countries differentiate in universities, the analysis and tabulation of these courses were carried out based on the sample universities.

8. Table has;

- a. all the elective courses in the 1st column,

- b. the number of elective courses determined to be opened by the department in that year in the 2nd column,

- c. the rate of all the open courses within all of the elective courses in the 3rd column,

- d. the distribution of courses according to the knowledge categories in the 4th column.

9. Three experts were asked whether the tables prepared were appropriate for the purpose of the study and whether they reflect the data clearly, and the tables were put into the final form in line with the suggestions made by the experts.

10. In order to provide external reliability, the data analysis steps were explained in detail. This detailed process decreases the possibility that the results of the study are affected by subjective assumptions and bias, and becomes a guide for future researchers conducting similar studies.

The role of the researchers in data collection and analysis

The researchers conducted the analysis procedure of the courses as part of general culture – general education knowledge categories by utilizing the document review method. Both of the researchers are specialists in their academic field which is curriculum and instruction.

RESULTS AND DISCUSSION

Findings about the compulsory courses within the scope of general culture and general education knowledge categories

Turkey

Table 2 shows the change of compulsory general culture courses taught in undergraduate elementary teacher education curricula by years.

The compulsory general culture courses within the undergraduate elementary teacher education curricula are determined by YÖK. Analyzing the table above, one may understand that the compulsory general culture courses determined in 1997 are still in force. In line with the development studies of undergraduate teacher education programs in 2006, five more courses were

Table 2. The change of compulsory general culture courses taught in undergraduate elementary teacher education curricula by years.

1980	1997-2006	2006- Present
Turkish - Composition	Turkish (Oral–Written Expression)	Turkish (Oral–Written Expression)
Foreign languages	Foreign language	Foreign Language
Introduction to economy	Computer	Computer
History of revolution	History of The Turkish revolution and Atatürk's principles	History of The Turkish revolution and Atatürk's Principles
History of thought	-	Philosophy
Research	-	Scientific research methods
-	-	Effective communication
-	-	History of Turkish Education
-	-	History of science

added to those four that already existed.

Increasing the number of general culture courses to nine was described as one of the most positive decisions about the curriculum development studies conducted in 2006. The purpose of that decision was to provide the teacher candidates with the intellectual qualifications that an intellectual person should have (YÖK, 2007) and to enable them to have the knowledge and skills related to general culture and information technologies (IT) to make scientific research taking advantage of these studies.

YÖK suggests that a teacher candidate should improve himself to be versatile; however, the compulsory courses in the undergraduate programs are not diverse enough to serve the intended purposes. Yet, there are no explanations about what criteria were taken into consideration while determining these courses.

When the literature regarding the disciplines in the general culture is analyzed, the knowledge and skills related to general culture include history, geography, citizenship, Turkish, mathematics, philosophy of science, psychology, sociology, economy, arts, basic health knowledge, science and technology, conservation of natural and cultural resources, civil defense etc. (Baştürk and Ayas, 2012). However, only a few are included as compulsory courses determined in the undergraduate elementary teacher education curricula decided by YÖK.

Another important factor is that Turkish, foreign languages, the history of the Turkish Revolution and Atatürk's principles are the common compulsory courses included in all the undergraduate programs at all the universities. This condition is specified in Article 5 of the Higher Education Law numbered 2547:

Article 5 – Higher education is organized, planned, and programmed in accordance with the following basic principles:

1) In the course of education in the institutions of higher education, Atatürk's Principles and the History of the

Turkish Revolution, the Turkish language and foreign languages are the compulsory courses. In addition, a non-compulsory course in physical education or in one of the fine arts shall be included in the curriculum. All of these courses are to be planned and implemented for a minimum of two semesters (YÖK, 1981).

In the 11th National Educational Council Convention (1982), which was about the Development of Teacher Education and states that education faculties undertake an extra mission about the common compulsory courses within undergraduate programs, the following explanation was made:

"Every teacher candidate should have a common general culture. Turkish, The History of Turkish Revolution, Foreign Languages are the common compulsory general culture courses and they aim to provide teachers with a general perspective." (MEB, 1982).

The courses under the name of compulsory courses in the undergraduate programs at all universities are called general culture courses at education faculties. Another problem regarding these courses concerns the content and procedure. Gömleksiz (2002) states that foreign language teaching at universities is insufficient and the class time is too short, and thus it is not suitable for written or oral communication skills to be improved.

According to the results of the studies conducted regarding History of The Turkish Revolution and Atatürk's Principles, it is stated that these courses appear in all grades and have the same purpose, and therefore, the topics are repeated (Safran, 2006); it is regarded as a formality as it doesn't have a relation to major area courses (Arslan, 2005); it doesn't arouse excitement or interest in the students and is based on memorization (Doğaner, 2005), and the courses are basically carried out as exam-oriented (Akbaba, 2008).

Table 3. The distribution of compulsory general education courses taught in undergraduate elementary teacher education curricula by years.

Compulsory courses	Indiana university	Utah state university	Central Florida university	University of Delaware
Composition I, II	X		X	-
Writing	-	X	-	-
Algebra	-	X	-	-
Introduction to statistics	-	X	-	-
Mathematics for elementary school teachers	-	X	-	-
English – critical reading and writing	-	-	-	X

In another study (Jacobs and Hayirsever, 2011) about the aforementioned courses, it is stated by the teacher candidates that the student-oriented approach is mostly used in major area courses, barely used in the professional teaching knowledge category and never used in the general culture knowledge category courses.

The United States of America (USA)

Table 3 shows the distribution of compulsory general education courses taught in undergraduate elementary teacher education curricula by years. In the USA, unlike Turkey, undergraduate teacher education programs don't have a central structure. Compulsory general education courses vary by university; however, they have some similarities with the compulsory general culture courses in Turkish undergraduate teacher education program but they are few in number.

Findings about the elective courses within the scope of general culture and general education knowledge categories

Turkey

The distribution of elective general culture courses in undergraduate elementary teacher education curriculum by universities is presented in Table 4.

Table 4 shows that elective courses are divided into three knowledge categories that are major studies, professional teaching and general culture. Some of these general culture courses (Ethics and Human Rights, Nature of Science, Gender and Education, Environmental Problems, Health Literacy, Creative Writing Techniques, Lifelong Sports, Theatre as a Lifelong Culture) are regarded as significant since they support teacher candidates' knowledge and skills in general culture.

The idea that the general culture category consists of more courses than the other two categories and satisfies the needs and interests of students more can be considered as important. However, when the courses are

analyzed, among these courses there are some that are related to professional teaching knowledge, too. These contrasts with the explanation made by YÖK (1998) that *the teacher education program should include as many elective courses as possible; comprise non-major courses in relation with the teacher candidates' interests, needs and skills*. Although there are 31 elective courses within the general culture knowledge category, the students can select only three of them, which is a negative situation in terms of their intellectual development and expected results. These three courses cannot provide an individual or a teacher with professional knowledge or general culture knowledge.

As seen in Table 5, there are only two elective courses in the Gazi University elementary teacher education curriculum and the students are expected to select them. They have to select two courses but no other offers; therefore, it is clear that this is not a choice. Furthermore, the proposed courses are actually major or professional knowledge courses. This condition shows that there is not a concept of elective or general culture courses.

Gazi University Gazi Faculty of Education, whose history dates back to 1926 and was previously known as Secondary Teacher Training School and Civility Institute, is an established education faculty maintaining its position in teacher education. Instead of traditional education, it has taken modern education as a goal to provide students with a great number of skills, attitudes and values (<http://gef.gazi.edu.tr>). However, regarding the procedure explained above, it is hard to achieve those expected objectives.

As seen in table 6 658 elective courses were determined by the Elective Courses Coordination Unit for all students and 23 of them were determined by Hacettepe University for the elementary teacher education curriculum. The courses determined by the department are not categorized according to the knowledge categories. This may cause problems for the students to select courses from only one knowledge category; therefore, this condition conflicts with the objectives of general culture courses. In addition

Table 4. The distribution of elective courses in the Ankara University undergraduate elementary teacher education curriculum.

Elective courses	The number of elective courses in undergraduate programs	The percentage of elective courses in undergraduate programs	Knowledge category	
Behavioral problems of children				
Parents education				
Differentiated instruction	6	6 / 6	Major area knowledge	
Creative writing activities				
Problem solving at elementary school				
Museum education at elementary school				
Total	6			
Adult education				
Curriculum development				
Educational economy	4	4 / 4	Professional teaching knowledge	
Curriculum literacy				
Total	4			
Educational sociology				
Active teaching in instruction				
Ethics and human rights				
Philosophy				
Sign language				
School-based health development programs				
Learning styles				
Chess education				
Ceramics education				
Bicycle				
Sociological foundations of education				
Critical education philosophers				
Nature of science				
Environmental problems				
Gender and education				
Educational economy				
Occupational ethics	3	3/31	General culture knowledge	
Educational culture and democracy				
Segregation in education				
Philosophy and human rights				
Speed reading techniques				
Logic and critical thinking				
Philosophy of education				
Project-based instruction				
Health literacy				
Creative writing techniques				
Transition from school to work: procedure and techniques				
Lifelong sports				
Sensitivity training in children and youth literature				
Theatre as a lifelong culture				
Child neglect and abuse				
Total 31				
Grand total 41	13	13 / 41		

Table 5. The distribution of elective courses in the Gazi University undergraduate elementary teacher education curriculum.

Elective courses	The number of elective courses in undergraduate programs	The percentage of elective courses in undergraduate programs	Knowledge category
Problems and solutions in elementary education	1	2 /2	Major area knowledge
Adult education	1		Professional teaching knowledge
Total	2		

Table 6. The distribution of elective courses in the Hacettepe University undergraduate elementary teacher education curriculum.

Elective courses	The number of elective courses in undergraduate programs	The percentage of elective courses in undergraduate programs	Knowledge category
Choir			
Curriculum development at elementary education			
Informal learning activities in elementary education			
Environmental problems in Turkey			
Philosophy for children			
Values education			
Thinking education			
Turkish of Turkey			
Tourism geography of Turkey			
Subject area textbook analysis			
World literature			
Total quality management in education	No restrictions in the number of courses the students can select		Not specified
Creativity			
Training for a trade		Lower Bound 19 ECTS	
Creative drama in education			
Sexual health knowledge education in elementary education			
Current problems in Turkish language			
Diction			
Economic geography of Turkey			
Educational legislation			
Environment education			
Philosophy of education			
Sociology of education			
Total 23			
Courses determined by the elective courses coordination unit			Not specified
Total 658			
Grand total 681	-	-	-

to this, when these courses are analyzed, it is clear that most of them are from the major area and professional teaching knowledge categories.

In terms of the studies conducted in line with the Bologna Process, the Elective Courses Coordination Unit was founded and it was stated that students can select

Table 7. The distribution of elective courses in the Anadolu University undergraduate elementary teacher education curriculum.

Elective courses	The number of elective courses in undergraduate programs	The percentage of elective courses in undergraduate programs	Knowledge category
Cultural activities			
Current approaches in Teaching			
Funny science	1	1 /5	Not specified
Introduction to gifted education			
Effective teacher			
Total 5	1		

as many courses as they would like on condition that they complete 19 ECTS among 658 elective courses. As a result of this implementation, all university students were enabled to select a variety of courses apart from their major areas. This is one of the implementations through which the university can actualize its vision. However, not categorizing these courses under a certain theme may result in choosing courses from similar categories although the students may complete 19 ECTS; therefore, it may hinder the students from being trained as multi-perspective individuals.

There are only five elective courses in the Anadolu University undergraduate elementary teacher education curriculum, and the students can select only one elective course. These courses are not categorized according to the knowledge categories. As seen in table 7 when the courses are analyzed, it is clear that most of them may be sorted under professional teaching knowledge. Therefore, the decision made by YÖK (1998) that the students can select courses in line with their interests and needs is refused by this program.

As seen in Table 8, the elective courses in the Marmara University undergraduate elementary teacher education curriculum are divided into four categories as major area, professional teaching knowledge, general culture knowledge and university courses. There are fewer elective courses in the category of general culture knowledge compared to the other three categories, and being able to select only one course makes it clear that the courses in this category are undervalued. The only positive point about the general culture category in the program is that these courses provide students with diversified knowledge and skills.

The United States of America (USA)

The distribution of elective general education courses in the undergraduate elementary teacher education curriculum by university is presented in Table 9.

It is clear that the elective general education courses in the Central Florida University undergraduate elementary

teacher education curriculum are considerably different from the elective general culture courses taught in the Turkish undergraduate elementary teacher education curricula. The differences are as follows;

All of the elective courses in Table 9 are the ones that are appropriate for the objectives of general education under the general education category.

The courses are sorted in certain themes that are related to certain disciplines. The students have to select a certain number of courses from each category. This hinders students from choosing similar courses within the same category and directs them to different courses. They have to select 10 courses out of 15.

It is clear that the undergraduate elementary teacher education curriculum of this faculty aims to provide general knowledge and build an intellectual capacity for students apart from professional or technical programs (Yüksek and Grubu, 2000). The general education program has different models. There are different courses under the headings of Biology, Social Sciences and Humanities, and this constitutes the basis of the Great Books Model (Wehlburg, 2010). Furthermore, this model emphasizes that the traditions and heritage of Western Civilization should be taught in order to contribute to students improving their cultural values (Brint et al., 2009). The themes and courses above indicate that Central Florida University uses the Great Books Model in its undergraduate elementary teacher education curriculum.

As shown in table 10 there are 25 elective general education courses in the Delaware University undergraduate elementary teacher education curriculum and students are expected to select 12 courses. The program has five themes each of which has sub-themes, and there are related courses under the themes. Students have to select at least one course from a theme and a sub-theme. This guides the students to select a course more deliberately. In these selections, the students are guided to different subject areas.

Table 8. The distribution of elective courses in the Marmara University undergraduate elementary teacher education curriculum.

Elective courses	The number of elective courses in undergraduate programs	The percentage of elective courses in undergraduate programs	Knowledge category
Formations of plays and toys in education			
Child and psychological health			
Phonetics and speaking skills			
Teaching reading and writing with games			
Methods of communication with children			
Effective communication skills			
Textbook analysis			
Health culture and environmental problems	4	4 /14	Major area knowledge
Orff instruction			
Reading and writing instruction in special education			
Classical and modern arts approach			
Republican period Turkish literature			
Citizenship knowledge			
Musical games and dance			
Total 14			
Elementary school curriculum and instruction			
Early childhood education			
Educational sociology			
Educational philosophy			
Values education in elementary school	3	3/7	Professional teaching knowledge
History of Turkish education			
Self-regulated learning			
Total 7			
Traffic and first aid			
Modern dance and Turkish folklore			
Computer II: Advanced applications	1	1 /3	General culture knowledge
Total 3			
Modern instruction approaches in elementary education			
Developing thinking skills in children	1	1 /3	University studies
Sign language			
Total 3			
Grand total 27	9	9 /27	

In the middle of the 20th century, humanities, natural sciences and social sciences began to be included in the general education programs of both private and state

higher education institutions. Then, arts were added to these fields (Brint et al., 2009). It is quiet important that Delaware University has the themes and courses related

Table 9. The distribution of elective general education courses in the Central Florida University undergraduate elementary teacher education curriculum.

Elective courses	The number of elective courses in undergraduate programs	The percentage of elective courses in undergraduate programs	Knowledge category
Communication foundations			
Fundamentals of oral communication	1	1/1	
Total 1			
Historical and cultural foundations			
U.S. History: 1492-1877	2		
U.S. History: 1877-present		3/5	
History of Western Art I			
History of Western Art II	1		
Enjoyment of Music			
Total 5			
Mathematical foundations			
College Algebra			General education courses
Finite mathematics	1		
Explorations in mathematics		2/5	
Basic statistics using Microsoft excel			
Principles of statistics	1		
Total 5			
Social foundations			
American national government		2/2	
General psychology	2		
Total 2			
Science foundations			
Physics science	2	2/2	
Biology principles			
Total 2			
Grand total 15	10	10 / 15	

to both science and arts, because these themes, especially arts, will enable students to be art-literate, think intellectually and critically, and evaluate the world within an artistic perspective.

The general education in the undergraduate elementary teacher education curriculum of Utah State University consists of three basic fields table 11. The breadth theme has sub-themes and each theme has more than one course. The program has 47 courses and

students are required to select 12. It is compulsory for students to select different courses from the themes and sub-themes.

The distinctive feature of Utah State University from others is that it includes the Breadth Requirements theme. This theme has a particular importance for general education programs. Brint et al. (2009) emphasized that American colleges, universities and faculties that accepted putting general education

Table 10. The distribution of elective general education courses in the Delaware University undergraduate elementary teacher education curriculum.

Elective courses	The number of elective courses in undergraduate programs	The percentage of elective courses in undergraduate programs	Knowledge category
English			
Critical reading and writing	1	1 / 1	
Total 1			
Fine Arts			
Arts			
Architecture			
Dance	1	1 / 6	
Music Education			
Musicology			
Theater			
Total 6			
Mathematics			
Numbers and operations			
Rational numbers and probability	3	3 / 3	
Geometry, algebra and measurement			
Total 3			
Sciences			
Principles of biology	1		
Introductory biology I		3 / 4	
Earth science	1		
Physics science	1		
Total 4	-		
Social studies			
Economy			
Economic issues and policies	1		General education courses
Introduction to microeconomics			
Civics and economics for teachers			
Geography			
Human			
World regional	1		
Cultural geography		4 / 11	
Economic geography			
History			
World history	1		
U.S. history			
Political sciences			
Civics and economics for Teachers	1		
American political system			
Total 11			
Grand total	25	12 / 25	

Table 11. The distribution of elective general education courses in the Utah State University undergraduate elementary teacher education curriculum.

Elective courses		The number of elective courses in undergraduate programs	The percentage of elective courses in undergraduate programs	Knowledge category
Communication literacy				
Introduction to writing				
Intermediate writing		2	2 / 2	
Total		2		
Quantitative literacy				
College Algebra				
Mathematics for elementary school teachers		3	3 / 3	
Introduction to statistics				
Total		3		Education courses
Breadth requirements	Courses			
American institutions	4	1		
Social sciences	13	1		
Humanities	9	1	7 / 42	
Creative arts	2	1		
Life sciences	6	1		
Physical sciences	8	1		
Total	42			
Grand total	47	12	12 / 47	

programs into practice in the 1940s and 1950s including breadth requirements adopted this criterion for their success. Furthermore, persuading students that these courses are inseparable parts of general education is another important success of the American higher education institutions.

Some scientists who study in the higher education field regard general education as a breadth part of undergraduate programs (Brint et al., 2009). Correspondingly, Dressel (1971) states that general education is not a kind of information that is integrated into modern subjects but breadth requirements. Varış (1996) states that the objective of integrating the courses into breadth requirements is to produce ideas as a whole instead of an eclectic combination of the knowledge, and the breadth requirements remove the borders of the disciplines and broaden the fields of study.

As seen in table 12 the general education program in the Indiana University elementary teacher education curriculum comprises four themes that have 915 courses with the subthemes included. Students have to select 14 of them during the undergraduate education period. As the numbers of courses are great, the students may gain knowledge and skills from different general culture areas. Similarly, this chance will enable them to get a start in

professional life without having competitors and to create their individual differences. Therefore, it cannot be wrong to state that this implementation is one of the current examples of individualized teaching philosophy. Unlike other American universities, Indiana University includes the World Languages and Cultures theme, which is of great importance in terms of general education objectives.

There is a dilemma regarding whether western cultural heritage should be emphasized or other cultures apart from western culture should be included in designing the content of the general education program. Despite the fact that western culture is important for the development of American institutions and values, and it strongly affects other cultures to gain similar values, it is emphasized that preparing students for cultural diversity should also be an aim of general education. This request of change reveals the fact that it is necessary to focus more on cultural diversity, multiculturalism and gender (Newton, 2000).

This condition is considered in terms of diversification that is one of the basic social powers compelling general education to change. This diversification occurred because of the equality requests made by women, minority groups and non-profit organizations. In 2000, 30% of all students in the American education system

Table 12. The distribution of elective general education courses in the Indiana University undergraduate elementary teacher education curriculum.

Elective courses		The number of elective courses in undergraduate programs	The percentage of elective courses in undergraduate programs	Knowledge category
Foundations	Courses			
English composition	3	1	2 / 14	
Mathematical modeling	11	1		
Total 14				
Breadth of inquiry	Courses			
Arts and humanities	198	2		
Social and historical studies	236	2	6 / 538	
Natural and mathematical Studies	104	2		
Total 538				
World languages and cultures	Courses			General education courses
Language studies	208	1	2 / 359	
World cultures	151	1		
Total 359				
Shared goals for the school of education				
Intensive writing		1		
Information fluency		1		
Diversities in the USA		1	4/4	
Enriching of educational experiences		1		
Total 4				
Grand total 915		14	14/915	

were from ethnic minorities. As a result, higher education institutions couldn't be indifferent to a type of education that provides all undergraduate students with academic competency, and responds to their cultural needs (Brint et al., 2009).

Morin (2013) states that cultures should learn from each other. According to Morin (2013), in order for cultures to meet on common ground, the existence of democracy and open societies is required. This is both an objective and means of interpersonal communication; therefore, it not possible for the people and societies to maintain a relationship without mutual understanding.

Results of the courses within the scope of the general culture knowledge category in Turkey

Compulsory general culture courses in Turkey were determined by YÖK and are taught in all of the education

faculties' undergraduate programs. However, there is no explanation about what measures were taken into consideration while determining the nine compulsory general culture courses. Although YÖK emphasizes that teacher candidates should be trained as multi-perspective individuals, the compulsory courses in the teacher education program do not serve this objective.

Despite the suggestion that the elective courses within teacher education programs should be comprised of different courses apart from students' major areas, most of the universities suggested elective courses that could still be considered within their major areas or professional teaching knowledge categories. Furthermore, the number of elective courses available for students in the general culture knowledge category is limited.

According to the views of teacher candidates and instructors in Tanrıverdi and Apak (2013) study, the most important characteristics that a teacher should have are

personal and professional competencies. However, being culturally cumulative is not seen as a competency. One of the reasons for this view may be the current implications related to the general culture knowledge category.

Both educators' views on the general culture knowledge category and implementations on this subject show that there is still some concern about whether the teaching profession has walked away from its responsibilities and become imprisoned within the classroom borders as Yıldız and Ünlü (2013) state.

Results of the courses within the scope of the general education category in the USA

The compulsory courses within the category of general education at USA universities are determined by the universities themselves whereas this is done centrally by the Council of Higher Education (YÖK) in Turkey, and the compulsory courses of each university vary in terms of content and number.

The elective courses are grouped under certain themes and these themes are related to certain disciplines. It is compulsory for students to elect a certain amount of courses within a certain theme. This prevents the students from electing similar courses under the same theme and forces them to elect different courses.

While the number of elective courses in the general culture knowledge category is limited at most universities in Turkey, students in the USA can select as many courses as they like providing that they select the minimum number of courses determined by their universities. It is clear that the general education program conducted by US universities aims to provide the students with knowledge, skills and competencies along with their major areas or professional knowledge. However, it is obviously seen that there are some problems in the process of course selection by students and in the determination of general culture courses for undergraduate programs at the education faculties in Turkey.

Conclusion

According to Kuçuradi (1988), *human education is not to form a behavior but to contribute to them being humanized*. In order to achieve this aim, it is not enough to provide an individual with professional knowledge. Reboul (1999) emphasizes that the role of education is not only to produce adults but also to provide every individual with the chance to create his own nature in a humanistic culture. These views can be explained better with an understanding expressed as *educere*. This concept is based upon making an individual competent, allowing the students to discover the world and

themselves, and following and developing ideas and skills not because they are pragmatic but because they are valuable. Another concept, which is *educare*, includes teaching the knowledge and skills related to one profession (Billington, 2002).

However, Billington states that *educare* is better accepted than *educere* in the current curricula. The biggest problem of the education system is that there is no time or space for *educere* in a system designed for *educare* (Billington, 2002). Although the general culture knowledge category is necessary to provide the teacher candidates with the intellectual qualifications that an intellectual person should have and train them to form multi-perspective teachers (YÖK, 2007), the implementations in the undergraduate teacher education programs are not in this manner.

On the other hand, Durkheim defines the teacher as *a person who socializes the children* (Akyüz, 2006); Giroux (1988) as *an intellectual*; Freire (1998) as *a cultural worker* (Çermik et al., 2010). Kuçuradi (1988) describes the teacher as *a person who can evaluate himself in multiple areas and show other people how to do this by meeting all the requirements for that*. She also states that teaching is a profession that helps to humanize others.

These explanations and results that emphasize the intellectual capacity of the teaching profession reveal that paying attention to the general culture category in teacher education programs and determining the courses carefully within this category are necessary.

Based on the results of this study, future researchers may find value in making qualitative research on the content and implementations of general culture courses within undergraduate teacher education programs that vary according to university. Also, the implementations at different universities that have effective curricula in this field may be analyzed.

Conflicts of Interests

The authors have not declared any conflict of interests.

REFERENCES

- Akbaba B (2008). Atatürk ilkeleri ve inkılap tarihi dersinin öğretiminde karşılaşılan sorunlar (Gazi Üniversitesi Örneği). *Gazi Akademik Bakış*, 1(2):177-197.
- Akyüz Y (2006). *Türk eğitim tarihi*. Ankara: PegemA.
- Altun M (2010). *İlköğretim ikinci kademede (6, 7 ve 8. sınıflarda) matematik öğretimi*. İstanbul: Alfa Basım.
- Ananiadou K, Claro M (2009). 21st century skills and competences for new millennium learners in OECD countries. *OECD Education Working Papers*, 41, OECD.
- Ankara Üniversitesi Eğitim Bilimleri Fakültesi (2016). *Vizyon ve misyon*. Retrieved from: <http://www.education.ankara.edu.tr/misyon/>
- Arslan A (2005). *İnkılap tarihi derslerinde başarı nasıl sağlanabilir?* In M. Saray & H. Tosun (Ed.), *İlk ve Orta Öğretim Kurumlarında Türkiye Cumhuriyeti İnkılap Tarihi ve Atatürkçülük Konularının Öğretimi: Mevcut Durum, Sorunlar ve Çözüm Önerileri*, Ankara: Atatürk Araştırma Merkezi. pp. 65-71.

- Aybek B (2007). Konu ve beceri temelli eleştirel düşünme öğretiminin öğretmen adaylarının eleştirel düşünme eğilimi ve düzeyine etkisi. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 16(2):43-60.
- Aydemir Y, Çiftçi Ö (2008). Edebiyat öğretmeni adaylarının soru sorma becerileri üzerine bir araştırma (Gazi Üniversitesi Eğitim Fakültesi Örneği). *Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi*, 5(2):30-61.
- Aydın R, Şahin H, Topal T (2008). Türkiye'de ilköğretime sınıf öğretmeni yetiştirmede nitelik arayışları. *Türkiye Sosyal Araştırmalar Dergisi*, 12(2):119-142.
- Baki A (2001). Bilişim teknolojisi ışığı altında matematik eğitiminin değerlendirilmesi. *Milli Eğitim Dergisi*, 149:26-31.
- Barnett R (1992). The idea of quality: Voicing the educational. *Higher Educ. Q.* 46(1):3-19.
- Baştürk S, Ayas C (2012). Öğretmenlik mesleği. In K. Kiroğlu, & C. Elma (Ed.), *Eğitim Bilimine Giriş* (pp.272-309). Ankara: PegemA.
- Beşoluk Ş, Horzum MB (2011). Öğretmen adaylarının meslek bilgisi, alan bilgisi dersleri ve öğretmen olma isteğine ilişkin görüşleri. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 44(1):17-49.
- Beşoluk Ş, Önder İ (2010). Öğretmen adaylarının öğrenme yaklaşımları, öğrenme stilleri ve eleştirel düşünme eğilimlerinin incelenmesi. *İlköğretim Online*, 9(2):679-693.
- Billington R (2002). *Living philosophy: An introduction to moral thought* (3rd ed.). London: Routledge.
- Binkley M, Erstad O, Herman J, Raizen S, Martin R, Miller-Ricci M, Rumble M (2012). Defining twenty-first century skills. In P. Griffin, B. McGaw, & E. Care (Ed.), *Assessment and Teaching of 21st Century Skills*. (pp.17-66). Dordrecht: Springer.
- Bozdoğan AE, Altunçekiç A (2007). Fen bilgisi öğretmen adaylarının 5E öğretim modelinin kullanılabilirliği hakkındaki görüşleri. *Kastamonu Üniversitesi, Kastamonu Eğitim Dergisi*, 18(1):147-158.
- Brint S, Proctor K, Murphy SP, Turk-Bicakci L, Hanneman RA (2009). General education models: Continuity and change in the US undergraduate curriculum, 1975–2000. *J. Higher Educ.* 80(6):605-642.
- Canbazoğlu S (2008). Fen bilgisi öğretmen adaylarının maddenin taneçikli yapısı ünitesine ilişkin pedagojik alan bilgilerinin değerlendirilmesi. Unpublished Master's Thesis, Gazi Üniversitesi, Ankara.
- Clark CM (1988). Asking the right questions about teacher preparation: Contributions of research on teacher thinking. *Educ. Res.* 17(2):5-12.
- Coşkun E, Özer B, Tiryaki NE (2010). Türkçe öğretmeni adaylarının özel alan yeterlik algılarının değerlendirilmesi. *Dokuz Eylül Üniversitesi, Buca Eğitim Fakültesi Dergisi*, 27:123-136.
- Çakır Ö, Kan A, Sünbül Ö (2006). Öğretmenlik meslek bilgisi ve tezsiz yüksek lisans programlarının tutum ve yeterlilik açısından değerlendirilmesi. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 2(1):36-47.
- Çekbaş Y, Kara İ (2009). Fen bilgisi öğretmen adaylarının mezun oldukları lise türlerinin ve cinsiyetlerinin temel fizik alan bilgileri üzerine etkisi. *e-J. New World Sci. Acad.* 4(2):549-557.
- Çelikten M, Şanal M, Yeni Y (2005). Öğretmenlik mesleği ve özellikleri. *Erciyes Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 19(2):207-237.
- Çermik H, Doğan B, Şahin A (2010). Sınıf öğretmenliği öğretmen adaylarının öğretmenlik mesleğini tercih sebepleri. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 28(2):201-212.
- Demir S (2012). Eğitim fakülteleri programı kapsamında yer alan öğretmenlik meslek bilgisi derslerinden "öğretim ilke ve yöntemleri" dersinin değerlendirilmesi. Unpublished Master's Thesis, Gazi Üniversitesi, Ankara.
- Demirel Ö (2000). *Karşılaştırmalı eğitim*. Ankara: PegemA.
- Doğaner Y (2005). Yükseköğretimde Atatürk ilke ve inkılaplarının öğretimiyle ilgili düşünceler. In M. Saray & H. Tosun (Ed.), *İlk ve Orta Öğretim Kurumlarında Türkiye Cumhuriyeti İnkılap Tarihi ve Atatürkçülük Konularının Öğretimi: Mevcut Durum, Sorunlar ve Çözüm Önerileri* (pp.281-286). Ankara: Atatürk Araştırma Merkezi.
- Dressel PL (1971). *General education: Explorations in evaluation. The Final Report of The Cooperative Study of Evaluation in General Education of The American Council on Education*, Westport, Conn.: Greenwood Press.
- Emrahoğlu N, Öztürk A (2009). Fen bilgisi öğretmen adaylarının astronomi kavramlarını anlama seviyelerinin ve kavram yanlışlarının incelenmesi üzerine boylamsal bir araştırma. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 18(1):165-180.
- Gazi Üniversitesi Gazi Eğitim Fakültesi (2016). Neden GEF? Retrieved from: <http://gef.gazi.edu.tr/posts/view/title/neden-gef%3F-157712?siteUri=gef>
- Gencil İE, Köse A (2011). Fen bilgisi öğretmen adaylarının öğrenme stilleri, öğrenme ve ders çalışma stratejileri ile fen bilgisi öğretimi özyeterlilik inançları arasındaki ilişki. *Eğitimde Kuram ve Uygulama*, 7(2):311-333.
- Gömlüksiz MN (2002). Üniversitelerde yürütülen yabancı dil derslerine ilişkin öğrenci görüşlerinin değerlendirilmesi. *Fırat Üniversitesi Sosyal Bilimler Dergisi*, 12(1):143-158.
- Gürdal A, Sağırılı M, Üredi L (2000). Okul deneyimi'nin öğretmen adayı ve uygulama öğretmeni üzerindeki etkileri. In Z. Gökçekan (Ed.), *VIII. Ulusal Eğitim Bilimleri Kongresi Bilimsel Çalışmaları* (pp.559-568), Trabzon: Karadeniz Teknik Üniversitesi.
- Hacettepe Üniversitesi Eğitim Fakültesi (2016). Mısyon ve vizyon. Retrieved from: http://www.w.w.egitim.hacettepe.edu.tr/misyon_vizyon.html
- Harvard Üniversitesi (2007). Report of the task force on general education. Cambridge, Massachusetts, USA.
- Hayes D (2004). A student teacher's guide to primary school placement: Learning to survive and prosper. Taylor & Francis e-Library.
- Jacobs D, Hayirseven F (2011). "Öğrenci merkezli öğrenme" öğretmen adayları bakışı ile ne ifade ediyor, nasıl gerçekleştiriliyor? I. Uluslararası Eğitim Programları ve Öğretim Kongresi (5-8 Ekim 2011)'nde sunulmuş bildiri. Anadolu Üniversitesi, Eskişehir.
- Karaca E (2006). Öğretimde planlama ve değerlendirme dersine yönelik bir tutum ölçeği geliştirme. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, 16:213-230.
- Kavcar C (1999). Nitelikli öğretmen sorunu, eğitimde yansımalar. V. 21.Yüzyılın Eşiğinde Eğitim Sistemi Ulusal Sempozyumu'nda sunulmuş bildiri, Ankara.
- Kay K (2010). 21st century skills: Why they matter, what they are, and how we get there? In J. Bellanca, & R. Brandt (Ed.), *21st Century Skills: Rethinking How Students Learn*. Bloomington: Solution Tree Press.
- Kuçuradı İ (1988). *İnsan ve değerleri*. İstanbul: Yankı.
- Kuzu TS (2013). Öğretmen adaylarının okumaya karşı tutumları ile genel kültür düzeyleri arasındaki ilişkinin değerlendirilmesi. *Dil ve Edebiyat Eğitimi Dergisi*, 2(6):55-72.
- Maden S (2010). Türkçe öğretmenlerinin drama yöntemini kullanmaya yönelik öz yeterlilikleri. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 7(14):259-274.
- Matyar F, Denizoğlu P, Özcan M (2008). Sınıf öğretmenliği ABD'de okuyan 4. sınıf öğrencilerinin ilköğretim birinci kademe fen ve teknoloji dersine ilişkin alan bilgilerinin belirlenmesi, (Çukurova Üniversitesi Örneği). *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 17(1):303-312.
- Mender AN (2001). *Connecting with students*. Alexandria VA: Association for Supervision and Curriculum Development.
- Milli Eğitim Bakanlığı [MEB]. (1982). Onbirinci Milli Eğitim Şurası. Retrieved from: http://ttkb.meb.gov.tr/meb_iys_dosyalar/2014_10/02113508_11_sura.pdf.
- Milli Eğitim Bakanlığı [MEB]. (2006). Öğretmenlik mesleği genel yeterlikleri, Ankara: MEB Öğretmen Yetiştirme ve Eğitimi Genel Müdürlüğü.
- Morin E (2013). Geleceğin eğitimi için gerekli yedi bilgi. İstanbul: İstanbul Bilgi Üniversitesi.
- Newton RR (2000). Tensions and models in general education planning. *J. General Educ.* 49(3):165-181.
- Özdemir Z (2006). Fen bilgisi öğretmen adaylarının bazı biyoloji konularındaki alan bilgisinin değerlendirilmesi. Unpublished Master's Thesis, Gazi Üniversitesi, Ankara.
- Özden M (2007). Kimya öğretmenlerinin kimya öğretiminde karşılaştıkları sorunların nitel ve nicel yönden değerlendirilmesi: Adıyaman ve Malatya illeri örneği. *Pamukkale Üniversitesi Eğitim*

- Fakültesi Dergisi, 22(2), 40-53.
- Özkılıç R, Bilgin A, Kartal H (2008). Öğretmenlik uygulaması dersinin öğretmen adaylarının görüşlerine göre değerlendirilmesi. İlköğretim Online, 7(3):726-737.
- Öztürk C, Keskin SC, Otluoğlu R (2014). Sosyal bilgiler öğretiminde edebi ürünler ve yazılı materyaller. Ankara: PegemA.
- Özyürek M (2008). Nitelikli öğretmen yetiştirmede sorunlar ve çözümler: Özel eğitim örneği. Türk Eğitim Bilimleri Dergisi, 6(2):189-226.
- Paterson K (2005). 55 Teaching dilemmas: Ten powerful solutions to almost any classroom challenge. Markham, Ontario, Canada: Pembroke.
- Reboul O (1999). Eğitim felsefesi. (I. Gürbüz, Trans.), İstanbul: İletişim.
- Safran M (2006). İnkılap tarihi öğretiminde yaklaşım sorunları. In Tarih Eğitimi Makale ve Bildiriler, (pp.99-111). Ankara: Gazi.
- Senemoğlu N (1990). Ortaöğretime öğretmen yetiştirmede "genel kültür" bakımından fen edebiyat fakültelerinin etkililiği. Çağdaş Eğitim, 15(157):28-33.
- Stronge JH, Tucker PD, Hindman JL (2004). Handbook for qualities of effective teachers. USA: ASCD.
- Kalkınma Bakanlığı TC (2013). Onuncu Kalkınma Planı (2014-2018). Retrieved from: <http://www.kalkinma.gov.tr/Pages/KalkinmaPlanlari.asp>.
- Tanrıverdi B, Apak Ö (2013). Öğretmen yeterlikleri açısından eğitim fakültesi programlarının değerlendirilmesi. Ankara Üniversitesi, Eğitim Bilimleri Fakültesi Dergisi, 46(2):297-318.
- Temizkan M (2008). Türkçe öğretmeni adaylarının öğretmenlik mesleğine yönelik tutumları üzerine bir araştırma. Türk Eğitim Bilimleri Dergisi, 6(3):481-486.
- Trilling B, Fadel C (2009). 21st century skills: Learning for life in our times. San Francisco, CA: Jossey-Bas.
- TÜSİAD (2012). 21. yüzyıl becerilerinin eğitim yoluyla kazandırılması: Eğitimde içerik ve yöntem. Retrieved from <http://www.tusiad.org/bilgi-merkezi/21-yuzyil-becerileri-ve-egitimin-niteligi-toplantı-dizisi>.
- Uçar ZT (2011). Öğretmen adaylarının pedagojik içerik bilgisi: Öğretimsel açıklamalar. Turk. J. Comput. Mathe. Educ. (Turcomat), 2(2):87-102.
- Varış F (1996). Eğitimde program geliştirme, teori ve teknikler. Ankara: Alkim.
- Wehlburg CM (2010). Integrated general education: A brief look back. New Directions for Teaching and Learning, 121(Spring), 3-11.
- Wyse D (2006). Becoming a primary school teacher. London and New York: Taylor & Francis Group.
- Yeşil R (2009). Sosyal bilgiler aday öğretmenlerinin sınıf içi öğretim yeterlikleri (Kırşehir Örneği). Türk Eğitim Bilimleri Dergisi, 7(2):327-357.
- Yıldırım A, Şimşek H (2009). Sosyal bilimlerde nitel araştırma yöntemleri. Ankara: Seçkin.
- Yıldız A, Ünlü D (2013). Metaforlarla öğretmenliğin dönüşümü: "Dün heybetli bir şelaleydik, bugün ise kurumaya yüz tutmuş dere". III. Uluslararası Eleştirel Eğitim Konferansı'nda sunulmuş bildiri. Ankara Üniversitesi, Eğitim Bilimleri Fakültesi, Ankara.
- Yılmaz M (2007). Sınıf öğretmeni yetiştirmede teknoloji eğitimi. Gazi Eğitim Fakültesi Dergisi, 27(1):155-167.
- Yükseköğretim Kurulu [YÖK]. (1981). 2547 sayılı yükseköğretim kanunu. Retrieved from: <http://www.yok.gov.tr/w eb/denklikbirimi/2547-sayili-kanun>.
- Yükseköğretim Kurulu [YÖK]. (1998). Eğitim fakültesi öğretmen yetiştirme lisans programları. Retrieved from: <http://www.yok.gov.tr>.
- Yükseköğretim Kurulu [YÖK]. (2007). Eğitim fakültesi öğretmen yetiştirme lisans programları. Retrieved from <http://www.yok.gov.tr>.
- Yükseköğretim, Toplum Çalışma Grubu (2000). Gelişmekte olan ülkelerde yükseköğrenim-sorunlar ve çözüm umutları. İ. Mısırlı & Y. Tanık (Ed.), (M. Delikara, Trans.). Dünya Bankası, Washington, D.C., USA.

Full Length Research Paper

Mathematical modelling research in Turkey: A content analysis study

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The aim of the present study was to examine the mathematical modelling studies done between 2004 and 2015 in Turkey and to reveal their tendencies. Forty nine studies were selected using purposeful sampling based on the term, “mathematical modelling” with Higher Education Academic Search Engine. They were analyzed with content analysis. Publication Classification Form (PCF) was used as data collection tool. The studies were evaluated based on publication year, research model, sampling method, sampling size, sampling group, data collection tools, number of data analyses methods and subject areas. Descriptive statistical calculations like frequency and percentages were used for data analysis and the findings are shown in tables. From the findings of this study, the followings were observed: the studies are generally qualitative research model, purposeful sampling method is prominently used as a data collection tool, university students were taken more in the sampling, the sampling size ranged from 1 to 30 and data analysis method was preferred more. Besides, “the effect of modelling method on modelling ability” variable is the area mostly treated in the subjects studied. In this research, applying mostly quantitative and combined research methods in mathematical modelling and using other student groups apart from university students as sample group in these studies are suggested.

Key words: Model, modelling, mathematical modelling, mathematical modelling process.

INTRODUCTION

To raise a generation that can access, interpret, process and use knowledge easily is the most important target of the education programs of any country because of its political, economic, and education benefits. For this purpose, educational institutions try to make individuals active in education by making them to understand and process knowledge. The future of a given people depends on their ability to access and use knowledge in today's world where technology and knowledge develop faster. One of the most important factors for adopting to

the changes brought by science, technique and technology is being able to use the mind processes. It is a common knowledge that individuals who are able to use their mind processes effectively and creatively can get and give meaning to knowledge and thereby move their society forward more than their contemporaries.

Mathematics is a whole knowledge and technics which are formed of realities and abilities (Baki, 2014: 269). One way of being opened to developments and changes in technology and science is the ability to use

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mathematical technique and mind processes as well. A person who understands mathematics and uses it has more chances of shaping his or her future in this changing world. There is a necessity to use and understand mathematics. Mathematics and mathematics education with changes need to be reviewed and redefined in the direction of determined requirements (Ministry of National Education [MEB], 2009). Becoming skillful and sustaining it is possible by raising people who can use technology, are interdisciplinary, have the abilities to create model, and can solve problems not by memorizing knowledge but by processing (Thomas and Hart, 2010). MEB emphasized in Primary Education Mathematics Program (2009) that individuals who can use mathematics in daily life, solve problems, share solutions and thoughts, have self-confidence and positive attitudes must be raised. A way of up skilling is to benefit from the modelling and mathematical modelling.

Complicated model systems and structures are defined as a whole that is formed of conceptional structures in mind and external representations of these, while modelling is defined as the period served for problem matter model (Doruk, 2010). Models describe our beliefs about how the world functions. In mathematical modelling, we translate these beliefs into the language of mathematics (Lawson and Marion, 2008). Modelling in students' mathematics education is accepted as an important component. One of the important subjects of learning with mathematical model and education literature is the process of mathematical modelling because every mathematical model is an output of mathematical modelling process in principle (Kaiser et al., 2006). Mathematical model is to state the circumstances in real life as mathematical (Çiltaş and Yılmaz, 2013). Modelling is a multiple problem solving process such as reading and communicating, designing and applying problem solving strategies, or working mathematically (Niss, 2003). To choose a rational model in mathematics teaching will provide opportunity for students to think differently and create a series of meaning about the concept (Çiltaş and Yılmaz, 2013). Mathematical modelling helps students to use mathematical terms and apply them (Sokolowski, 2015). Mathematical modelling starts to gain much importance in students' mathematics education off late (Galbraith, 2012). Mathematical modelling is a dynamic method that makes it easier for us to see the relations in problems in every part of life, to state them with mathematics terms, to classify, generalize and draw conclusions (MEB, 2013: 4). It is defined as a mathematical process that comments on the model, has mathematical results like equality-equation and symbolic structures, approves mathematical analyses, estimates relations, and observes a fact. And there are benefits from many examples of real world that fit the mathematics own structure during these transactions (Lingefjård, 2006).

According to the report of International Mathematics Teaching Commission, the purpose of mathematical modelling is to make students to understand mathematical concepts better, teach them to solve original problems, make them involve in critical and creative thinking and have a positive attitude towards mathematics (Blum, 2002). For most teachers, mathematical modeling represents a new way of "doing" mathematics that makes the addition of modeling activities into instruction seem daunting. This is especially true since modeling, when done properly, requires significant time and effort. In turn, some may be reluctant to include modeling activities into classroom time. It is essential to keep in mind that modeling is one of the eight Standards for Mathematical Practice given in the Common Core State Standards for Mathematics (CCSSM) for all grades and is a required conceptual category in high school. Because of this, modeling cannot be set aside or employed only during spare time. Class time that previously may have been spent using more traditional teaching methods should be converted to time spent on modeling. The integrated nature of mathematical modeling, and in turn, the number of curricular standards covered when working through a modeling activity, make modeling activities a very efficient use of class time (Chair et al., 2012).

Mathematical modelling concept is especially about International Student Consideration Program (PISA); it is the keystone of international researches that constitute the structure of mathematics. In the last decade, the awareness about mathematical modelling in Turkey increased and mathematics education researches started to center on mathematical modelling (Aztekin and Şener, 2015). In the studies on mathematical modeling and mathematical modelling in Turkey, the teacher candidates fail to satisfy in the mathematical modelling processes (Çiltaş and Yılmaz, 2013; Tuna et al., 2013). Research has shown that teachers do not apply the activities of mathematical modelling enough despite stating the necessity of using the mathematical modelling activities in education process (Dede and Güzel, 2013; Özdemir and Işık, 2015). Deniz and Akgün (2014) noted in the result of their study on mathematical modeling that the students adopted the mathematical modelling method and they converted their daily life problems to equation and formula. Tabak et al. (2010) extrapolated in their study that students have the ability to apply some modelling methods and are unable to apply others as well as the result of the modelling process; while Biber and Ulaş (2013) stated in their studies on modelling abilities of students in sets subject that most of them use modeling method to solve problems. When the researches in modelling area are evaluated, the study of English (2006) which was made with primary school children shows that students could create and improve their own mathematics processes, create reusable and generalizable systems by mathematical modelling method

in contrast to solving problem.

Mathematics is a part of life; sometimes a key, sometimes a game and entertainment for the “learner” that sees patterns, draws relationships, sees the reason behind what he/she has discovered, knows how to behave and makes decisions by himself/herself (Umay, 2007). Therefore, in mathematics instruction, the primary principles must be to make students realize the problem or requirement; make the students contemplate how to find a solution; and make them find the exit on his/her own if he/she can (Çiltaş and Işık, 2013). The aim of mathematics instruction is to inculcate in people mathematical knowledge and skills required for daily life; teach them how to solve problems; and make them think of how to deal with situations using problem solving approach (Altun, 2012).

Firstly, intangible information needs to be given meaning when looking at mathematics as a whole. In this respect, the importance of mathematical modeling is undeniable. Mathematical model is a pedagogic tool that provides the connection to school mathematics with an activity which is actually not a mathematics problem. It needs to be scrutinized if a sufficient level is reached or not by evaluating the researches from past till date for developing the modelling studies in mathematics education. Within this context, we can increase the use of modelling-based education in different class levels and obtain different information and perspectives about mathematical modeling in all studies evaluated in general terms in this research.

In the literature survey, there are few studies on the trends of the studies done in the field of mathematical modelling by the content analysis method. For this reason, it is necessary to examine the post-graduate theses and articles in mathematical modeling from the point of view of the general situation in the field. A study to be carried out in this context will re-analyze the various findings of the researches related to the previous subject to ensure that the hidden findings are revealed. Furthermore, this research will provide an insight to researchers in new postgraduate thesis, doctoral thesis and other studies about mathematical modeling. The main purpose of research with this information is to examine the scientific studies carried out in Turkey in the field of mathematical modeling between 2004 and 2015 and to determine their trends. In this respect, the answers to the following sub problems were searched:
Researches in mathematical modelling;

1. What is the distribution of the studies according to publication type and publication year?
2. What is the distribution of the studies according to research model?
3. What is the distribution of the studies according to sample selection method?
4. What is the distribution of the studies according to

sample groups and sample sizes?

5. What is the distribution of the studies according to number of data collection tools used?
6. What is the distribution of the studies according to number of data analysis methods used?
7. What is the distribution of the studies according to subject fields?

METHODOLOGY

Research design

In this research, content analysis was preferred for examining the studies conducted regarding the mathematical modeling. Content analysis is a systematic, renewable technique in which some words of the articles could be summarized with smaller content categories and decoding based on rules (Büyükoztürk et al., 2006, p.250). This method is a research method in which some procedures are used for valid deduction of the text. These deductions are about the message sender, and the message itself of the intended population of the message. The rules of inferential process depend on the theoretic and basic profits of researcher (Weber, 1990). In this research, content analysis indicates the systematic analysis of mathematical modelling studies. This study provides a content analysis of the mathematical modelling studies, which are thesis and articles, obtained from Higher Education Institution (YÖK) academic database in Turkey.

Data collection tool

In the present study, the Publication Classification Form (PCF) developed by the researchers was used as a data collection tool. Related studies are coded based on PCF by differential features. This form comprising 11 parts are based on: publication type of studies, year released, data collection tools, sampling group and selection method, sampling size, data analysis method, used keywords, research method and affected subject areas. These parts are classified as the published studies, and then coding is done.

Review and selection criteria

To determine the studies to include in the present study, researcher used YÖK search engine with some advanced review and selection criteria such as selection of studies which the key words are found together in the title of study that was examined, searching in higher education search engine and publication year. Then, completed text papers and theses, published between 2004 and 2015 containing "mathematical modelling" and "modelling process in mathematics" words together in the title was searched. Then 29 articles and 29 theses (post graduate and doctoral thesis) that were published between these years were scanned. Seven thesis were excluded because they were rejected by writers, and two articles were excluded because they were not relevant to the research. Thereby, the research is limited to 49 studies: about 27 full text articles and 22 permitted theses (12 post graduate and 10 doctoral theses).

The purpose of content analysis is to reach concepts and relationships that can explain the collected data (Yıldırım and Şimşek, 2013, p. 228). In this context, the studies that are included in the scope of research are summarized in the table according to

Table 1. Distribution of studies according to publication year.

Year	Publication type			Total	Percentage
	Article	Post Graduate	Doctorate		
2004	1	0	0	1	2.0
2005	0	1	0	1	2.0
2007	0	1	0	1	2.0
2008	0	2	1	3	6.1
2009	1	0	0	1	2.0
2010	3	1	4	8	16.3
2011	4	1	2	7	14.3
2012	0	2	0	2	4.1
2013	9	3	0	12	24.5
2014	4	0	1	5	10.2
2015	5	1	2	8	16.3
Total	27	12	10	49	100

the criteria of "publication year, research model, sampling method, sampling size, sampling group, data collection tools, distribution of studies by number of data analysis methods and distribution of studies by subject areas".

Analysis of data

The data are formed by coding the studies in research analyzed by SPSS-21 program. Descriptive statistical calculations like frequency, percentage are used in the data analysis. The obtained results are shown in tables.

FINDINGS

In this part, the studies on mathematical modeling are evaluated based on publication year, research model, sampling method, sampling size, sampling group, data collection tools, distribution of studies by number of data analysis methods and distribution of studies by subject areas. The obtained findings are shown in tables.

Distribution of studies according to publication year

Distribution of the examined studies on mathematical modeling based on publication year and publication type is shown in Table 1 with the frequency and percentages.

According to Table 1, the studies on mathematical modeling were done in the year 2013 (f=12) in maximum number, while minimum number of studies were done in 2004, 2005, 2007 and 2009 (f=1); but it is determined as well that no study was done in 2006 in this subject area. Moreover, maximum number of studies on mathematical modeling was done in articles, while minimum ones were doctoral thesis.

Distribution of studies according to research model

The distribution of studies on mathematical modelling according to research model is shown in Table 2. It is determined that researchers mostly adopted qualitative method (f=27) while few adopted quantitative method (f=10) for the studies on mathematical modelling. Moreover, it could be easily seen that the researchers used qualitative (f=17) and quantitative (f=8) methods in articles on mathematical modeling more than their post graduate (f=1) and doctoral thesis (f=1) studies; but they preferred mixed methods (f=2) less.

Distribution of studies according to sampling method

The distribution of the studies on mathematical modeling within the scope of the research based on sampling method is given in Table 3. The data in Table 3 shows that the sampling method used is not mentioned in most of the studies (f=27) generally. Otherwise, it is determined that the researchers mostly use purposeful sampling method (f=14) in studies on mathematical modeling and few use cluster sampling method (f=1). Besides, the researchers prefer purposeful sampling method for post graduate (f=8) and doctoral thesis (f=5) studies more to the studies in articles; but they never adopt convenience sampling and cluster sampling method.

Distribution of studies according to sampling size

The distribution of the studies on mathematical modeling included in the study according to sampling size is presented in Table 4. It could be seen in Table 4 that

Table 2. Distribution of studies according to research model.

Research model	Publication type			Total	Percentage
	Article	Post graduate	Doctorate		
Quantitative	8	1	1	10	20.4
Qualitative	17	7	3	27	55.1
Mixed	2	4	6	12	24.5
Total	27	12	10	49	100

Table 3. Distribution of studies according to sampling method.

Sampling method	Publication type			Total	Percentage
	Article	Post Graduate	Doctorate		
Convenience sampling	2	0	0	2	4.1
Cluster sampling	1	0	0	1	2.0
Purposeful sampling	1	8	5	14	28.6
Criterion sampling	4	0	1	5	10.2
Unstated	19	4	4	27	55.1
Total	27	12	10	49	100

Table 4. Distribution of studies according to sampling size.

Sampling size	Publication type			Total	Percentage
	Article	Post graduate	Doctorate		
Between 1-30	16	4	3	23	46.9
Between 31-100	8	7	5	20	40.8
Between 101-200	2	0	2	4	8.2
201 and more	1	1	0	2	4.1
Total	27	12	10	49	100

researchers generally prefer the sampling size range between 1 and 30 ($f=23$). Sampling sizes are between 31 and 100 ($f=20$), between 101 and 200 ($f=4$) and finally 201 and more ($f=2$). The researchers have the tendency to work with more sampling numbers in article studies more than post graduate and doctoral thesis studies.

Distribution of studies according to sampling group

The distribution of the studies on mathematical modeling is shown in Table 5 based on sampling group. In Table 5, the researchers realize their studies on mathematical modeling mostly with university students. Teacher ($f=9$), primary school students ($f=8$), secondary school students ($f=8$), others ($f=3$) and high scholars with fewest number ($f=1$) follow this gradation. In addition to this, the researchers mostly include university students in their

sampling group for article studies more than post graduate and doctoral thesis studies.

Distribution of studies according to numbers of data collection tools

The distribution of the studies on mathematical modeling based on numbers of data collection tools is shown in Table 6. According to Table 6, the researchers prefer to use "One Data Collection Tool ($f=30$)" more than "Two ($f=13$)" and "Three Data Collection Tools ($f=6$)".

Distribution of studies according to number of data analysis methods

The distribution of the studies on mathematical modeling

Table 5. Distribution of studies according to sampling group.

Sampling group	Publication type			Total	Percentage
	Article	Post graduate	Doctorate		
Primary school students	4	3	1	8	16.3
Secondary school students	4	1	3	8	16.3
High-scholars	1	0	0	1	2.0
University students	10	6	4	20	40.8
Teacher	8	1	0	9	18.4
Others	0	1	2	3	6.1
Total	27	12	10	49	100

Table 6. Distribution of studies according to numbers of data collection tools.

Data collection tool	Frequency (f)	Percentage
One data collection tool	30	61.22
Two data collection tools	13	26.53
Three data collection tools	6	12.25
Total	49	100

Table 7. Distribution of studies according to number of data analysis methods.

Number of data analysis methods	Frequency (f)	Percentage
One analysis method	27	55.10
Two analysis methods	11	22.45
Three analysis methods	4	8.16
Unstated	7	14.28
Total	49	100

based on number of data analysis methods is shown in Table 7. It is seen in Table 7 that the researchers prefer One Analysis Method ($f=27$) more than Two Analysis Methods ($f=11$) and Three Analysis Methods ($f=4$). Moreover, there are studies ($f=7$) that do not specify the data analysis method as well.

Distribution of studies according to variables of subject areas

Distribution of the studies on mathematical modeling based on variables of subject areas is shown in Table 8. When the data in Table 8 were examined, it was determined that the researchers mostly concentrated on the variable ($f=22$) "effect of modelling method on modelling abilities" in the studies on mathematical modeling. Furthermore, it is determined that the researchers work less on "effect of modelling method on

the abilities of attitude, view and modelling ($f=3$)".

DISCUSSION

In this research, current situations and general tendencies of studies in Turkey on mathematical modelling between 2004 and 2015 are evaluated. These studies are classified according to publication year, research model, sampling method and size, sampling group, number of data collection tools, number of data analysis methods of studies, variables of subject area. Then, sufficient/insufficient, advantageous/disadvantageous and important/unimportant sides of these studies could be understood. The frame that we create here will contribute to literature by making extensive and confidential solution in future studies on mathematical modelling.

It was determined by this research that most studies about mathematical modelling were done in 2003, and

Table 8. Distribution of studies according to variables of subject areas.

Subject area	Frequency (f)	Percentage
Effect of modelling method on modelling abilities	22	44.9
Effect of modelling method on success	7	14.3
Effect of modelling method on attitudes and views	11	22.4
Effect of modelling method on attitudes and views and modelling ability	3	6.1
Effect of modelling method on success and modelling ability	6	12.2
Total	49	100

least studies were done in 2004, 2005, 2007 and 2009. When both articles and thesis are considered, it is determined that most theses and articles were published in 2003 even though none of the studies were published in 2006. It is known that the studies in Turkey on mathematics education continue for about 20 years. In this period, the studies in mathematics area significantly increased and reconstructing of education faculties by YÖK played an important role (Türkmen, 2007). It is mentioned in a study on mathematics education that the number of studies in Turkey about mathematics education peaked up in 2005, but it started to decrease and got to the lowest point in 2009. This could be due to the inability to keep up with the standards of acceptance criteria, difficulty in making current studies, and increased cost percentage for abroad researches (Çiltaş et al., 2012).

In this research, researchers generally prefer qualitative research methods more than quantitative and mixed research methods. Hart et al. (2009) evaluated the researches in mathematics education area and determined that half of them used qualitative method. But, there is a study with the opposite (Çiltaş et al., 2012). Again quantitative method is used in article studies more than thesis studies and mixed method is preferred less at the same time. This could result from their unwillingness to step out of classic methods in studies related to mathematical modeling and their self-efficacy perceptions about applying it, even if they have enough theoretical and practical knowledge to use these methods. This finding is parallel to that of Aztekin et al. (2015), who reported that a small number of methods used are the requirement for obtaining more weight such as creating a parallel where inference is made and mixed research method is used like phenomenology and theory.

It can be seen in the findings of this research that purposeful sampling method is mostly used in studies on mathematical modeling and cluster sampling method is used less. And it is found that purposeful sampling method is preferred in post graduate and doctoral thesis studies more than article studies, but they did not adopt convenience sampling and cluster sampling method. Sampling might be an important way to get significant

results besides the problem of content analysis, method and data collection tool. By this means, the researchers who use related sampling method could contribute to literature by showing an original and innovator approach.

Sampling size should be selected as large as possible in terms of increasing the power of representing the population (Büyüköztürk et al., 2016). In these studies, sampling size chosen is the range between 1 and 30. Sampling sizes of 201 and more are the least preferred. The findings show that the studies on mathematical modeling are generally realized by small samplings. However, the number of qualitative studies is higher than the number of quantitative studies for articles than thesis. That means, the researchers of articles prefer small sample sizes in qualitative researches because of the nature of this type of research. The reasons for choosing small samplings are shown by Sert and Seferoğlu (2012), as researchers must receive permission to meet the people who work in public enterprises and this makes the process difficult. That is why the studies are realized with the people who can be reached easily. So, making arrangements with officials to eliminate these difficulties or diminish them will make scientific research easier.

It is stated in research that mostly university students are included in sampling group, while primary school students and high scholars are preferred less. University students are preferred for researches more than other sampling groups (Aztekin and Şener, 2015; Güzel and Uğurel, 2010; Sokolowski, 2015). University students are mostly preferred for sampling groups in article studies more than post graduate and doctoral thesis studies. The reason why researchers choose them is because they are easily accessible and they have more knowledge and equipment than others. Another reason is that it is easy for researchers to get permission from their own university and faster than receiving permission from other departments. Mathematical modeling is a method that any person can use at every education level, and that is why there is need to do research on any person at every education level. It means, much things could be done more than concentrating on the same sampling group. Consequently, people at every level of education should be considered when choosing the sampling group for

future research.

Using more than one data analysis method and data collection tool require a large statistical method knowledge and application ability. In this research, it was determined that researchers used one data analysis method and one data collection tool in studies on mathematical modeling. This result shows that using only one data analysis method and one data collection tool will be enough for next studies on mathematical modeling. It will help to develop the data collection tool that will be used for future studies. So, using different analysis methods will be improved. High quality and original studies could be realized with these methods.

The research shows that the teaching process of mathematical modelling enhances the success and usage of mathematics in daily life (English and Watters, 2004; Sağırlı et al., 2010; Yıldırım and Işık, 2014). It is difficult to analyze the effects of mathematical modelling more systematically and in detail due to limited research and insufficient details relating to the teaching process of mathematical modelling. That is why it is stated that the teaching of mathematical modelling needs to be done under certain circumstances and conditions (Aztekin and Şener, 2015).

Mathematical modeling studies mostly concentrate on the "effect of modelling method on modelling abilities", and few concentrate on the "effect of modelling method on attitude, view and modelling abilities". This tendency shows that the studies in mathematics education on modelling center on how to improve the modelling ability. The studies in this direction contribute to improving modelling ability. It is concluded that this tendency should be continued because learning by modelling could be provided by developing modelling ability. In Turkey, there are several studies on mathematical modelling after adopting a constructivist learning concept. This is seen in the study of Aztekin and Şener (2015), who evaluated all research as a whole. From this point, this research becomes more of an issue in terms of considering the studies on mathematical modeling generally, discussing the results and finally leading to future research.

Conflict of Interests

The author has not declared any conflicts of interests.

REFERENCES

- Altun M (2002). Mathematics teaching book. Istanbul, Turkey: Alfa Publishing Distribution.
- Aztekin S, Şener AZ (2015). Content analysis of mathematical modelling researches in mathematics education area in Turkey: A meta-syntheses study. *Educ. Sci.* 40(178):139-161.
- Baki A (2014). History of mathematics and philosophy. Ankara, Turkey: Pegem Academy.
- Biber AÇ, Ulaş YM (2013). Evaluating the abilities of student's in set problems. *Turkish Studies* 8(8):287-298.
- Blum W (2002). ICMI Study 14: Applications and mathematical modeling education discussion document. *Educ. Stud. Math.* 51(1/2):149-171.
- Büyükoztürk Ş, Çakmak EK, Akgün ÖE, Karadeniz Ş, Demirel F (2016). Scientific research methods (20th edition). Ankara, Turkey: Pegem Academy.
- Chair HG, Murray DR, Sanfratello A (2012). Mathematical modeling handbook. The Consortium for mathematics and its applications Bedford, MA 01730. Retrieved February 22, 2016 from <http://www.comap.com>
- Çihtaş A, Yılmaz K (2013). Mathematical models by primary education teacher candidates for statements of theorems. *J. Educ. Teach. Res.* 2(2):2146-9199.
- Çihtaş A, Güler G, Sözbilir M (2012). Mathematics education researches in Turkey: Study of a content analysis. *J. Pedagogy Theory Application* 12(1):565-580.
- Dede TA, Güzel BE (2013). Reviewing the designing process of creating model activity of mathematics teachers: Obesity problem. *Primary Educ. Online* 12(4):110-111.
- Deniz D, Akgün L (2014). Secondary education student's views about modelling method interclass applications. *Trakya University J. Educ.* 4(1):103-116.
- Doruk BK (2010). The effect of mathematical modelling on transferring the mathematics to daily life (Unpublished doctoral dissertation). Hacettepe University, Pedagogy Institute, Ankara, Turkey.
- Doruk BK, Umay A (2011). The effect of mathematical modeling on transferring mathematics into daily life. *Hacettepe University J. Educ.* 41:124-135.
- English LD (2006). Mathematical modeling in the primary school: Children's construction of a consumer guide. *Educ. Stud. Math.* 63:303-323.
- English LD, Watters J (2004). Mathematical modelling with young children. In: Hoines, M.J. & Fuglestad, A.B. (Eds.), 28th Conference of the International Group for the Psychol. Math. Educ. 2:335-342.
- Galbraith P (2012). Models of modelling: Genres, purposes or perspectives. *J. Mathe. Modelling Applications* 1(5):3-16.
- Güzel EB, Uğurel I (2010). The relationship between pre-service mathematics teachers' academic achievements in calculus and their mathematical modelling approaches. *Ondokuz Mayıs University J. Educ.* 29(1):69-90.
- Hart LC, Smith SZ, Swars SL, Smith ME (2009). An examination of research methods in mathematics education: 1995-2005. *J. Mixed Methods Res.* 3(1):26-41.
- Kaiser G, Blomhøj M, Sriraman B (2006). Towards a didactical theory for mathematical modeling. *Zentralblatt für Didaktik der Mathematik*, 38(2):82-85.
- Lawson D, Marion G (2008). An introduction to mathematical modelling. Retrieved May 24, 2016 from www.maths.bris.ac.uk/~madjl/course_text.pdf
- Lingefjärd T (2006). Faces of mathematical modelling. *ZDM. Int. J. Mathe. Educ.* 38(2):96-112.
- Ministry of National Education (2009). Primary education school mathematics lesson (6-8 grades) education program. Ankara, Turkey: Headship of Public Books Printing House.
- Ministry of National Education (2013). Secondary education mathematics lesson teaching program. Ankara, Turkey: Headship of Public Books Printing House.
- Niss M (2003). Mathematical competencies and the learning of mathematics: The Danish KOM Project. In: Gagatsis, A./Papastavridis, S. (Eds), 3rd Mediterranean Conference on Mathematical Education. Athens: The Hellenic Mathematical Society, pp. 115-124.
- Özdemir G, Işık A (2015). Teacher views about teaching the areas and volumes of solids by mathematical model and mathematical modelling method. *Kastamonu Educ. J.* 23(3):1251-1276.
- Sağırlı ÖM, Kırmacı U, Bulut S (2010). The effects of mathematical modelling method on secondary school students' academic achievements and self-regulated learning skills. *Institute Sci. Technol. J.* 3(2):221-247.

- Sert G, Seferoğlu SS (2012). A look to the researches evaluate using technology situations of teachers: study of a content analysis. *Comput. Educ.* 14:46.
- Sokolowski A (2015). The Effects of mathematical modelling on students' achievement-meta-analysis of research. *The IAFOR J. Educ.* 3:1.
- Tabak H, Ahi B, Bozdemir H, Sarı MH (2010). Modelling abilities of primary education students in mathematics lesson. *E-J. New World Sci. Acad.* 5(4):1C0216.
- Thomas K, Hart J (2010). Pre-service teacher perceptions of model eliciting activities. In R. Lesh et al. (Eds.), *Modeling students' mathematical modeling competencies* (531-539). New York, NY: Springer Science & Business Media.
- Tuna A, Biber AÇ, Yurt N (2013). Mathematical modeling skills of prospective mathematics teachers. *GEFAD / GUJGEF* 33(1):129-146.
- Türkmen L (2007). The history of development of Turkish elementary teacher education and the place of science courses in the curriculum. *Eurasia J. Math. Sci. Technol. Educ.* 3(4):327-341.
- Umay A (2007). *Our old school friend is the new face of school math*. Ankara, Turkey: Aydan Web Facilities.
- Yıldırım Z, Işık A (2014). The effect of mathematical modelling activities on 5th class student's academic success in mathematics lesson. *Kastamonu Educ. J.* 23(2):581-600.
- Weber RP (1990). *Basic content analysis* (2nd ed.). Londra: Sage Printing.

Full Length Research Paper

An investigation of Turkish elementary social studies textbooks in terms of social emotional learning

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Social emotional learning (SEL) is very important to the well-being of students and their academic achievement in school. The purpose of this study was to search any relation between social studies text books and social emotional learning. This study was conducted as a qualitative study. 9 SSTBs were investigated by 21 fourth grade pre-service teachers from Faculty of Elementary Education in the last semester from Sinop Education Faculty in Turkey. University students have common knowledge that SSTB contains SEL content. Physical feature, content and applicability are the three main themes found in this study. The research method has high validity and reliability. Future studies should be conducted on the intensity, number of activity and distribution of skills of SEL in SSTB. Do the activities in SSTB affect SEL of students? How do the teachers teach the activities of SEL? Besides teachers' teaching strategies, how parents and peers at home and school are occupied with SSTB' activities on SEL are the other issues that should be born in mind in future studies.

Key words: Social emotional learning, social studies textbook workbook, pre-service teacher.

INTRODUCTION

Educating the mind without educating the heart is no education at all, as Aristotle declared that education, teaching and learning is an emotional process a great deal. Without affiliation between school, teacher, instructional material and student, there is apparently going to be big troubles. Social emotional learning (SEL) seems to be the core for all problems which arise from emotional gap in educational process.

SEL focuses on emotion and knows duties and responsibilities. This umbrella term is not easy to explain with many words. SEL is defined as the series process of gaining knowledge, skills, attitudes, abilities and beliefs to identify and manage emotions, caring about others, making good decisions, behaving ethically and

responsibly (moral aspects of behaving), developing favorable inter relations and setting up interaction with others, and avoiding undesired behaviors. SEL is directly related to academic achievement that is why skills requiring classroom success are applied in social situations such as school, family, work life or any place that human beings take part in (Elieas and Mocer, 2012: 424).

The fundamentals of SEL depend on Goleman's (1995) emotional intelligence book (Elias and Mocer, 2012; Elias, 2004; Elias et al., 1997; Vadeboncoeur and Collie, 2013; Poulou, 2007). Moreover, the known fundamentals of SEL used by Salovey and Mayer (1990) arose from past background, even if more past studies such as

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assertiveness (Alberti and Emmons, 1998; Deluty, 1981), self-esteem (Harter, 1983), and friendship formation (Hartup, 1984) are assumptions of SEL structures.

Khun (2016) starts SEL studies from very old times. According to her, the background of SEL roots from ancient Greeks especially Plato. In the 1960s, James Comer in 1980s, Roger Wissberg and Timothy Shriver are the key people in SEL. From the 1990s, Daniel Goleman's Collaborative for Academic, Social, and Emotional Learning (CASEL, 2016) studies are the pioneers in SEL studies.

SEL is very important to the well-being of students and their academic achievement in school. So social emotional learning is a very important concept. In the United States or European countries and Australia, SEL has been conducted via a wide range of packed programs. In Turkey, there are lacks of programs centered on SEL. The aim of this study was to search any SSTB and SEL. The basic research question was, Is there relation between Turkish elementary social studies text books and social emotional learning? This study was conducted as a qualitative study. 9 SSTBs were investigated by 21 fourth grade pre-service teachers from Faculty of Elementary Education in the last semester from Sinop Education Faculty, Turkey. The working group of this qualitative study is selected from Sinop Education Faculty 2015 to 2016 Spring Semester fourth grade students.

There are two main parts in SEL: emotional education and social education. SEL combines these two different and distinct concepts. Social and emotional education (Cefai and Cooper, 2009) is defined as the educational process by which an individual develops intrapersonal and interpersonal competence and resilience skills in social, emotional and academic domains through curricular, embedded, relational and contextual approaches.

CASEL is a working organization of social emotional learning in scholarly life, whose philosophical foundations depend on Goleman's works (Goleman, 1995, 1998). SEL promotes mental health and academic success in the classroom (Merrell and Gueldner, 2010: xii).

SEL is the process through which children and adults acquire and apply knowledge effectively, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. CASEL spreads five core skills known also as CASEL: self-awareness, self-management, social awareness, relationship skills, and responsible decision making (CASEL, 2016).

Zins et al. (2004) person-centered SEL framework includes the following key elements:

(1) Self-awareness: This competence is characterized by the ability to identify and recognize emotions, gather

accurate self-perceptions, recognize strengths, needs, and values, having a sense of self-efficacy, and developing a sense of spirituality, which is usually defined as recognition of one's place in the world and relation to other things, including the possibility of a higher power or greater creative force.

(2) Social awareness: Social awareness, in other words, realm of relating effectively to other people, includes the ability to take the perspective of another person and to have empathy for him or her (the ability to take a different emotional perspective), an appreciation of human diversity in its various forms, and a healthy and appropriate respect for other people.

(3) Responsible decision making: This skill is about developing the capacity to make decisions in a responsible way; it includes the ability to identify problems and evaluate the situations in which problems arise, use effective problem-solving skills, evaluate and reflect on various alternatives in life, and the development of a sense of personal, moral, and ethical responsibility.

(4) Self-management: Characterized by internal self-regulation skills and the ability to translate them into overt action, self-management includes impulse control, stress management, self-motivation and personal discipline, and the ability to set appropriate goals and organize one's actions to attain those goals.

(5) Relationship management: Having successful interpersonal relationships requires more than just social awareness; it also requires effective overt skill enactment. Within this realm of SEL competencies, stressed communication, social engagement, cooperation, negotiation, conflict management, as well as help-seeking and help-providing skills were stressed (Merrell and Gueldner, 2010: 9; Zins et al., 2004).

Educators, parents, and policymakers who recognize that the core SEL competencies are necessary for effective life functioning also know these skills can be taught. Learning more about how extensive research demonstrates that school-based SEL programs can promote and enhance students' connection to school, positive behavior, and academic achievement (CASEL, 2016). For example, a meta-analysis of 213 studies evaluating SEL programming efforts demonstrates its benefits to youths from elementary through high school and across urban, suburban and rural schools in the US (Durlak et al., 2011).

Promoting Alternative Thinking Strategies (PATHS) is a SEL program for preschool and elementary school designed to increase social and emotional competence; prevent violence, aggression, and other behavior problems; improve critical thinking skills, and enhance classroom climate (Greenberg et al., 1998). Major progress in SEL will likely not happen until the reauthorization of Elementary and Secondary Education Act is passed into law which holds schools accountable

for the social and emotional development of students (Bracket and Rivers, 2014).

Those that should attend are teachers, school administrators, counselors, psychologists, family therapists, social workers, clergy, youth workers, pediatricians, and childcare professionals (Dunkelblau, 2016). There are many studies' result on the importance and effectiveness of SEL in experimental explications teaching programs from kindergarten to college level ages such as improved attitudes about the self and others, increased prosocial behavior, lower levels of problem behaviors and emotional distress, and improved academic performance (Catalano et al., 2002; Durlak et al., 2011; Greenberg et al., 2003; Zins et al., 2004).

Caring school community, I can solve problem, PATHS, raising healthy children, safe and caring schools, second step: A violence prevention curriculum, social decision, thinking, feeling, and behaving are the successfully conducted SEL programs in the United States (Merrell and Gueldner, 2010: 32-33).

In Turkey, there are a few or no SEL programs. As SEL programs are mainly centered on pre-school and elementary education, it is highly important to find out clue from courses especially textbooks. In Turkish education, pupils devote a good time to social studies.

From elementary school pre-service teachers, social studies course and books, the primary school teacher education program aims to train teachers for public and private schools belonging to the Ministry of Education. Primary School Teacher Education Program lasts for four years. Primary School Teacher Education Program is one of the undergraduate programs provided by the Division of Basic Education. The program lasts for 4 years with 2 semesters per year. Each semester is comprised 15 weeks. The students must complete 4 years of study acquiring 240 ECTS (European credit transfer and accumulation system) credits.

Social studies is the integrated study of the social sciences and humanities that promote civic competence. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world (NCSS, 1994). Within the school program, social studies provides coordinated, systematic study drawing from such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. Social studies is the interdisciplinary integration of social science and humanities concepts for the purpose of practicing problem solving and decision making for developing citizenship skills on critical social issues.

Zarrillo (2008) indicates that social studies should help students acquire knowledge, master the processes of

learning, and become active citizens. The researcher also sums up the main ideas on social studies: it should promote the acceptance of cultural diversity; focus on major events and important individuals; should be issues centered, as students search for answers to problems and dilemmas confronted by people today and in the past; should develop democratic citizens who are more than loyal and patriotic; should focus on the big ideas of social science disciplines, and the essential activity for children is problem solving; should be child centered and permit students to pursue topics of personal interest (Zarrillo, 2008: 4-6). The aim of this study was find out content of social emotional learning in Turkish elementary social studies text books. This study conducted as qualitative.

METHODOLOGY

This study is designed as qualitative research. 21 students from the Department of Elementary Education participated in this study. This university students were selected from Sinop Education Faculty in Turkey 2015 to 2016 Spring Semester. The working group is familiar with SEL as they had five different courses. These are Educational Psychology, Guidance, School Practice, Teaching Practice (I, II), School Experience and Self-Esteem Teaching. The group is highly skilled with the author's studies (Uşaklı, 2015a, b).

Data collection

Twenty one university students closely investigated 9 social studies textbooks in terms of SEL. The textbooks are related to three different grades. Each grade has three separate books. 21 participants were divided into three different groups which consist of 7 students each.

Five questions were asked to the groups. Every group answered the questions separately according to grade levels of books. All groups answered the questions in written format. "Could you indicate which activities are suitable for social emotional learning elements or skills", so:

- (1) Which activities are suitable for self-awareness?
- (2) Which activities are suitable for self-management?
- (3) Which activities are suitable for social awareness?
- (4) Which activities are suitable for relationship skills?
- (5) Which activities are suitable for responsible decision making?

There were three questions asked to participants as open-ended. These individual interviews were recorded. The interviews duration mean is 10 min. 210 min interview records were transcribed as 32 pages of written data (Times New Roman 12, spacing 1.5).

- (1) Do social studies textbooks contain social emotional learning activities in respect to number?
- (2) Do social studies textbooks contain social emotional learning activities in respect to intensity?
- (3) Do social studies textbooks contain social emotional learning activities in respect to applicability?

Data analysis and reliability

The two terms are sine qua, non for all researches not only quantitative but also qualitative ones. Reliability is a term used in

quantitative research to indicate the consistency of measurement. The term is also applied to some qualitative research, particularly that which adopts a realist epistemology. In qualitative research, the evaluative criteria that are applied are more commonly transparent and trustworthy. Validity is the extent to which research measures or reflects what it claims; what is most meaningfully used in research with a realist epistemology (Forest, 2011: 108).

The thematic model can be applied to a wide range of narrative text, including narratives produced in interviews and written documents. The analyst can start the thematic analysis by coding of data openly. The steps in the categorical content analysis described by Lieblich et al. (1998) can be used in the process of thematic analysis. The categorical content analysis focuses on thematic similarities and differences between narratives generated in interviews. The analytical approach of Lieblich et al. (1998: 112–113) involves breaking the text into smaller units of content.

Forest (2011) states four steps of application of thematic model: (1) Selection of the subtext/segments; (2) Definition of thematic categories; (3) Sorting the material into categories; (4) Drawing conclusions (Forest, 2011: 108).

Therefore, reliability, validity and triangulation, if they are to be relevant research concepts, particularly from a qualitative point of view, have to be redefined as we have seen in order to reflect the multiple ways of establishing truth (Golafshani, 2003: 604).

The answers of the groups' questions are gathered as tables. The mean of the answers were calculated. For example, answers of the first grade students on self-awareness indicated page one activity is suitable for self-awareness in the first grade book. So two groups indication were enough for the evaluation of any activity. Written data of individual interviews are coded by three specialists. All specialists have PhD in education.

RESULTS

Nine different Turkish elementary school social studies textbooks were carefully scrutinized by fourth grades university students from Elementary Education Department on SEL. They are: Elementary School Social Studies 1 Grades Course and Student Workbook the first book: 11-62 pp, Special Days and Weeks 128-131 pp, workbook 13-54 pp, dictionary and 43 references; Elementary School Social Studies 1 Grades Course and Student Workbook the second book: 63-100 pp, Special Days and Weeks 131 p, Workbook 55-86 pp, dictionary and 43 references; Elementary School Social Studies 1 Grades Course and Student Workbook the third 101-114 book: 101-127 pp, Workbook 88-114 pp, dictionary and 43 references; Elementary School Social Studies 2 Grades Course and Student Workbook the first book: 10-62 pp, Workbook 10-45 pp, dictionary and 18 references; Elementary School Social Studies 2 Grades Course and Student Workbook the second book: 63-116 pp, Workbook 46-87 pp, dictionary and 18 references; Elementary School Social Studies 2 Grades Course and Student Workbook the third book: 117-152 pp, Workbook 88-113 pp, dictionary and 18 references; Elementary School Social Studies 3 Grades Course and Student Workbook the first book: 1-40 pp, Workbook 1-46 pp, dictionary and 21 references; Elementary School Social Studies 3 Grades Course and Student Workbook the

second book: Writer: No info, Textbook 41-80 pp, Special Days and Weeks 81-84 pp, Workbook 47-96 pp, dictionary and 21 references; Elementary School Social Studies 3 Grades Course and Student Workbook the third book: Writer: No info, Textbook 85-118 pp, Special Days and Weeks 119-122 pp, Workbook 97-122 pp, dictionary and 21 references.

Totally, 707 pages from nine different 1-3 elementary school textbooks and workbooks were closely investigated. 21 students educated in SEL expressed their ideas on which pages are related to SEL in three different sub-groups. Table 1 (at the end of the manuscript) illustrates grade, book and page number distribution of elementary social studies textbooks and workbooks activities in terms of social emotional learning factors. There are three grades from first to third. Nine books are course and workbooks of social studies course. Self-awareness, self-management, social awareness, relationship skills, responsible decision making are the factors of social emotional learning.

Table 1 indicates the distribution of SEL competencies in terms of grades and books. From the first to the third grades in nine books, there are about 77 self-awareness, 69 self-management, 130 social awareness, 78 relationship skills, and 54 responsible decision making activities. These numbers were obtained from 21 participants' ideas in three groups. Each member presented his or her own idea on any activities in books.

Table 2 illustrates (at the end of the manuscript) the themes, samples, frequencies and percentiles of pre-service teachers' ideas on social studies textbooks and workbooks in respect to social emotional learning. 20 out of the 21 participants agree that there are activities on SEL in social studies text and work books. 18 students from the study group indicate that those activities in books are related with the CASEL' competencies in SEL. These mean that there are activities about self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Finally, a great deal of the students, that is, 15 students underline that those activities in books are applicable in the classroom setting.

In addition to Table 2, there is an in-depth idea on physical features of activities. For example, one female participant states that, "we examined three years curriculum of social studies lesson. I know that there are 36 school weeks and 4 hours social studies lesson. In the social studies program, if we multiply 36 with 4, we have 144 hours lessons in the first grade. I think that yes, there are activities on SEL, but not enough. Social studies lessons' hours are not enough weekly, from democratic life, friendship, human rights everything in the program." A male participant states his ideas: "I participated in Dr. Usakli's study in 2015 for 14 weeks. I really learned that there is an order in SEL. These are self-awareness, self-management, social awareness, relationship skills, and

Table 1. Grade, book and page number distribution of elementary social studies textbook and workbooks activities in terms of social emotional learning factors.

Factors	Grades	1			2			3			Total
		1	2	3	1	2	3	1	2	3	
		Books									
					Page Numbers						
Self-awareness	12,13, 14,26, 28,31, 25, 44	67,72, 84,88, 93, 94	103, 106	20,22, 23,26, 28,32, 34,41, 42	64, 65, 66, 68, 69, 71, 74, 75, 76, 77, 78, 80, 84, 85, 86, 89, 92, 97, 98, 101, 102,103, 104	118,125, 126,127, 128,129, 132,133, 136,140, 143	5, 11, 13,14, 24,25, 29, 30	43,44, 48,49, 58,74, 76	86, 87, 98		
Total	8	6	2	9	23	11	8	7	3	77	
Self-management	12,13, 14,26, 28,31, 16,17, 18,19, 20,21, 42,46, 52	64,70, 71,72, 74,75,	124	12,13, 14,15, 24,25, 35, 50	66, 68, 69, 76, 78, 80, 83, 87, 88, 92, 93, 95, 100,106, 107, 108	129,132, 133,135, 139,141, 142, 143	2, 6, 11,23, 24,28, 30	50,59, 61,65, 66, 69	89, 90		
Total	15	6	1	8	16	8	7	6	2	69	
Social awareness	12,13, 14,26, 28,31, 16,17, 18,19, 20,21, 42,46, 52,25, 44,	76, 78, 80, 83, 84	104,105, 107,108, 109,110, 111,112, 114,118, 119,120, 121,122, 123	16,17, 21,27, 29,30, 31,36, 38,43, 44,45, 46, 47	64, 65, 71, 74, 75, 77, 80, 81, 83, 84, 87, 88, 92, 94, 97, 104, 109,	118,120, 121,122, 125,126, 127,128, 130,131, 134,136, 137,138, 140,143	3, 4, 7, 8, 10,12, 13,14, 17,18, 19,20, 26, 31	42,45, 47,48, 52,54, 56,57, 62,64, 70,71, 72,75, 76	88, 94, 95, 96, 97, 98, 95, 100, 102,103, 104,105, 106,108, 109,110, 111		
Total	17	5	15	14	17	16	14	15	17	130	
Relationship skills	12,13, 14,26, 28,31, 16,17, 18,19, 20,21, 42,46, 52,25, 44	66, 67, 77, 85, 87, 91		19,21, 37, 47	64, 66, 70, 71, 72, 73, 74, 77, 81, 82, 89, 90, 92, 94, 97, 98, 102,103, 105,	120,123, 124,125, 126,130, 131,134, 136,137, 138,142, 144	4, 5, 8, 15, 16, 31	53,63, 67,68,	92, 93, 96, 99, 100,101, 107,110, 111		
Total	17	6	0	4	19	13	6	4	9	78	
Responsible decision making	12,13, 14,26, 28,31, 25,44,	64,70, 71,75, 81,91, 95		18,23, 24,36, 49	82, 91, 93, 95, 100,101, 103,105,	119,121, 122,123, 124,130, 131,134, 135,137, 138,139, 141,142, 144	7, 11, 18,22, 23,26, 28, 29	46, 51	91		
Total	8	7	0	5	8	15	8	2	1	54	
										408	

Table 2. The themes, samples, frequencies and percentiles of pre-service teachers' ideas on social studies textbook and Workbooks in respect to social emotional learning.

Theme	Sample	Frequency	Percentile
Physical	As a small group member and individually I had closely read social studies books. I feel that there are so many activities on SEL.	20	95
Content	Activities seem to be suitable for SEL. When we categorized the activities as a group we really deeply think that whether or not any activities are match to self-awareness or others. Eventually we accomplished categorizing.	18	85
Applicability	Many drawing illustrations on books about SEL. I think they are easy to group. Apparently understandable feelings, group works and duties.	15	71

responsible decision making. These are five basic skills or competence as that association in America (he means CASEL) says. The course books in our country have many activities on SEL and they have these five basic skills that lack order. I think pupils can be muzzy by activities. The main philosophy of SEL is to make order. Selection of activities is important but order is also important. I believe that it is better to bombard studies than to point to SEL in meaningful order." Lastly, a female participant's idea on applicability is as follows: "After intense workshop on SEL, I really became familiar with SEL. In SEL, I think that the most important point is how we teach the SEL. In some classrooms, there are about 15 students, in others, there are up to 40 students. Young children easily lose their attention. SEL is teaching packed programs in USA, perhaps some special schools can buy such kind of education. What do we teach, how do we teach, when do we teach, are the important questions awaiting our answers."

DISCUSSION

SEL is a very important umbrella term that covers assertiveness, friendship, emotional reading and others (Ellias and Weissberg, 2000). There are a few studies on SEL in Turkey unlike in USA (Uşaklı, 2015a). Social studies lesson seems to be highly related to SEL.

Twenty one teacher candidates from elementary school education faculty joined in this intense study on SEL activities in Turkish elementary school social studies text and work books. Social studies is the interdisciplinary integration of social science and humanities concepts for the purpose of practicing problem solving and decision making for developing citizenship skills on critical social issues.

Some important points can be seen as macro issues such as promoting the acceptance of cultural diversity, focusing on major events and important individuals in history and seeking to transmit to young people concepts of liberty and equality, searching for answers to problems and dilemmas confronted by people, developing

democratic citizens who are more than loyal and patriotic; good citizens are also critics of, and participants in, their government, focusing on the big ideas of the social science disciplines, and the essential activity for children is problem solving and being child centered and permitting students to pursue topics of personal interest (Zarrillo, 2008). These are macro issues compared to the social emotional learning basic micro competencies of social emotional learning that are self-awareness, self-management, social awareness, relationship skills, and responsible decision making (CASEL, 2016).

SEL is concerned with the broad, multidimensional nature of learning and teaching, including the biological, emotional, cognitive and social aspects of learning and teaching (Cooper et al., 2011). It underlines a pedagogy for building social, emotional and resilience skills as well as an 'intervention structure which supports the internalization and generalization of skills over time and across contexts according to the child's development and with the contribution of educators, parents, peers and other significant people (Elias and Mocerri, 2012: 427).

SEL is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. Brandt's (1999) comment on the necessity for universal SEL in schools strikes an agreeable chord: social and emotional learning is both a new and very old idea. In all cultures and in every generation, educators and parents have been concerned with children's sense of well-being and ability to get along with others. Certainly in today's social environment, teachers have no choice but to attend to their students' personal and social development, even when their first priorities are academic knowledge and skills.

SEL is not only knowledge, but also skill that every teacher should give students and every student has to acquire it. The research clearly states that scientific evidence supports the use of SEL in schools. Three primary areas of research-based positive outcomes of

SEL include school attitudes, school behavior, and school performance (Merrell and Gueldner, 2010: 17).

SEL concepts can be integrated into academic programming by capitalizing on the issues that develop during the course of a normal school day. Academic content, such as information presented through literature, can also be applied to social and emotional issues and be used to illustrate SEL concepts. Students may then be asked in a social studies class to use a similar framework for discussing historical or current events, and again in a health class where they are asked to consider how lifestyle choices may affect a variety of health factors and generate possibilities for alternative actions that can lead to positive mental and physical health (Merrell and Gueldner, 2010: 17).

In this study, 21 education faculty elementary departments in fourth grades eighth semester students evaluated nine social studies text and work books in 14 weeks with meeting two hours in a week. University students, selected from Sinop Education Faculty 2015 to 2016 Spring Semester. These students were educated in social emotional learning by author of this manuscript in five different lectures. SEL has an important place in Turkish education system. But the intensity and method of SEL are not arranged in order. From USA to Europe or Australia, SEL has been taught by a wide range of programs (Merrell and Gueldner, 2010; Uşaklı, 2015a). There are many studies on the importance and effectiveness of SEL in experimental explications teaching programs from kindergarten to college level ages results such as improved attitudes about the self and others, increased prosocial behavior, lower levels of problem behaviors and emotional distress, and improved academic performance (Catalano et al., 2002; Durlak et al., 2011; Greenberg et al., 2003; Zins et al., 2004).

Goleman (1995) started a new understanding based on emotional intelligence. Many researchers point out the importance of social emotional learning to students, not only for their well-being, but also their academic success (Elias, 2004; Weissberg, 2004). From United States to Europe and Australia, there are many wide ranges of SEL programs supply on need (Elias and Mocerri, 2012; Dracinschi, 2012; Haxby Brady, 2010; Schonert-Reichl and Hymel, 2007). There is shortage of SEL studies in Turkey (Uşaklı, 2015a).

The purpose of this study is to examine whether or not Turkish elementary school social studies textbooks contain SEL contents. What is the opinion of the group who scrutinizes this purpose on SSTBs? Twenty one Turkish fourth grade students from Faculty of Elementary Education participated in this study during the spring semester. This working group is familiar with SEL. Four different university courses containing SEL were delivered by these students. The data were collected from 9 different SSTBs. In addition to this, the working group wrote semi structured questionnaire. Content

analysis was used to analyze individual forms and transcribed group interviews. Triangulation was used to ensure that the idea from individual forms and group interviews suits each other. Three specialists' code confirmation was another technique used to detect reliability. Randomly selected three participants' check was used for reliability. There is a great deal of SEL activities in SSTBs according to the pre-service students. Physical, content and applicability are the three different main themes found in this study. Order, intensity and instruction are sub-themes related to the main themes. Disorder, random, inequality understanding, insufficiency, surface, and exhausting are also found in this study as cell units. These findings provide some evidence that the importance of SEL is known by Turkish educator so they devote their attention to SSTBs. Although, there are many activities in SSTBs, some problems are apparent. According to the university students, these problems in SSTBs arise from physical, content and applicability of SEL activities scrutinized. The balance between activities about SEL in SSTBs should be supplied. Careful selection must be done according to experimental research. The kind of techniques such as brain storming, group work, discussion or drama that will be used in teaching SEL activities to elementary students should be determined. Turkish elementary school social studies text book and work books can be remedial for the gap in any comprehensive SEL program in Turkey. There are activities about self-awareness, self-management, social awareness, relationship skills, and responsible decision making activities in the books. Physical, that is, number of activities; content, that is, conformity of activities to the CASEL basic competencies; and applicability, that is, whether any activity from book can be conducted in classroom setting are the issues investigated in this study.

Future studies should be conducted on the intensity, number of activity and distribution of skills of SEL in SSTB. Do the activities in SSTB affect SEL of students? How do the teachers teach the activities of SEL? Besides teachers' teaching strategies, how are parents and peers at home and school occupied with the SSTB's activities, are the other issues that should be born in mind in future studies. Apart from pictures, short videos, classroom games, real life situations and drama with SEL can be other research interests for SEL to be taught effectively.

Conflict of Interests

The author has not declared any conflicts of interest.

REFERENCES

- Alberti R, Emmons M (1998). *Atilganlık Hakkinızı Kullanin*. Çev. Katlan, S. (7. Baskı). Ankara: HYB Yayıncılık.
Bracket MA, Rivers SE (2014). *Tranforming students' lives w ith social*

- and emotional learning. In R. Pekrun & L. Linnenbrink-Garcia (Eds.), *International Handbook of Emotions in Education*. New York: Routledge. pp. 368-388.
- Catalano RF, Berglund ML, Ryan JAM, Lonczak HS, Hawkins JD (2002). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *Prevention Treatment*, 5:15. doi: 10.1037/1522-3736.5.1.515a.
- Cefai C, Cooper P (2009). What is emotional education? *Int. J. Emotional Educ.* 1(1):1-7.
- Collaborative for Academic, Social, and Emotional Learning (2016). *Social and Emotional Learning Core Competencies*. <http://www.casel.org/social-and-emotional-learning/core-competencies/>. Accessed 16 August 2016.
- Collaborative for Academic, Social, and Emotional Learning (2016). *What Is Social and Emotional Learning?* <http://www.casel.org/social-and-emotional-learning/>. Accessed 16 August 2016.
- Deluty RH (1981). Adaptiveness of Aggressive, Assertive, and Submissive Behavior for Children. *J. Clinical Child Psychol.* 10:155-158.
- Dunkelblau (2016). *The Institute for Emotionally Intelligent Learning* Retrieved on August 10, 2016, from <http://www.teacheq.com/programs.html>
- Durlak JA, Weissberg RP, Dymnicki AB, Taylor RD, Schellinger KB (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82:405-432. doi: 10.1111/j.1467-8624.2010.01564.x
- Elias MJ, Mocerri DC (2012). Developing social and emotional aspects of learning: the American experience. *Res. Papers in Educ.* 27(4):423-434, DOI: 10.1080/02671522.2012.690243
- Elias MJ (2004). The connection between social-emotional learning and learning disabilities: Implications for intervention. *Learning Disability Quarterly* 27:53-63.
- Elias MJ, Zins JE, Weissberg RP, Fery KS, Greenberg MT, Haynes NM, Kessler R, Schwab-Stone ME, Shriver TP (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Elias MJ, Weissberg RP (2000). Primary prevention: Educational approaches to enhance social and emotional learning. *J. School Health*, 70(5):186-190.
- Golafshani N (2003). Understanding reliability and validity in qualitative research. *Qualitative Report* 8(4):597-606.
- Goleman D (1995). *Emotional intelligence*. New York, Bantam Books.
- Goleman D (1998). *Working with emotional intelligence*. New York, Bantam Books.
- Greenberg MT, Kische CA, Mihalic SF (1998). *Promoting alternative thinking strategies (PATHS)*. Boulder, CO: Center for the Study and Prevention of Violence, University of Colorado.
- Harter S (1983). Developmental Perspectives on the Self-System. In: P. Mussen & E. M. Hetherington (Eds.), *Handbook of Child Psychology: Socialization, personality, and social development (4th Ed.)*. New York: Wiley 4:275-385.
- Hartup WW (1984). *Development during middle childhood The Years Six to Twelve*, Washington, D.C.: National Academy Press.
- Khun C (2016). *Social Emotional Learning 1* Retrieved on August 10, 2016, from <https://vimeo.com/165044480>
- Lieblich A, Tuval-Mashiach R, Zilber T (1998). *Narrative Research: Reading, Analysis and Interpretation*. London: Sage Publications.
- Merrell KW, Gueldner BA (2010). *Social and emotional learning in the classroom: Promoting mental health and academic success*. New York: Guilford Press.
- National Council for the Social Studies (1994). *Task Force on Standards for Teaching and Learning in the Social Studies, Expectations of excellence: Curriculum standards for social studies*. Washington, DC: NCSS.
- Poulou M (2007). Student-teachers' concerns about teaching practice. *Eur. J. Teacher Educ.* 30(1):91-110.
- Salovey P, Mayer JD (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9:185-211.
- Uşaklı H (2015a). Sınıf Öğretmeni Adaylarının İlkokul Öğrencilerine Sosyal Duygusal Öğrenme Becerilerini Tanıtma ve İlişkin Görüşleri. *Bartın Üniversitesi Eğitim Fakültesi Dergisi (USOSOzelsayi)*, 19-31., Doi: 10.14686/BUEFAD.2015USOSOzelsayi13195
- Uşaklı H (2015b). Enhancing Social Emotional Learning: Drama with Host and Refugee Children in Turkey. *Int. J. Hum. Behavioral Sci.* 1(2):22-29.
- Vadeboncoeur JA, Collie RJ (2013). Locating Social and Emotional Learning in Schooled Environments: A Vygotskian Perspective on Learning as Unified, Mind, Culture, and Activity, 20(3):201-225, DOI: 10.1080/10749039.2012.755205
- Zarrillo JJ (2008). *Teaching elementary social studies: principles and applications (3rd ed.)* Columbus, OH: Prentice Hall.
- Zins JE, Weissberg RP, Wang MC, Walberg HJ (Eds.) (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.

Full Length Research Paper

The effects of family leadership orientation on social entrepreneurship, generativity and academic success of college students

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In this study, the effects of family leadership orientation on social entrepreneurship, generativity and academic education success were examined with the views of college students. The study was conducted at a state university in Central Anatolia in Turkey. 402 college students who attending at three different colleges and at various grade levels voluntarily participated in this study. Data were collected by the utilization of *Family Leadership Orientation Scale, Social Entrepreneurship Scale, Generativity Scale and Grade Points of Average (GPA) of the students*. Data were analyzed by quantitative analysis techniques. The findings showed that college students were pretty under the influence of economic family leadership with 4.52 average score. Social entrepreneurship (3.71), generativity (3.61) and academic achievement (3.03) were evaluated by the students as good level. There were statistically significant differences in terms of gender and academic achievement for economic and social family leadership orientation. The results of regression analyses showed that the family leadership orientation explains 27% of social entrepreneurship; 16% of generativity and 5% of academic achievement. The family leadership perception, which constitutes three dimensions, namely social, cultural and economic, affects the students' social entrepreneurship and this consequently influences their generativity and academic achievement. This theory was verified by means of structured equation model test. Model fit indices were $CMIN/df = 1.60$; $NFI = 0.99$; $RFI = 0.95$; $IFI = 0.99$; $TLI = 0.98$; $CFI = 0.99$ and $RMSEA = 0.04$. The findings were discussed on the basis of relevant literature.

Key words: Family leadership, social entrepreneurship, generativity, academic success.

INTRODUCTION

Leadership occurs when one affects others and it is critical to the life of a family because it brings about a higher level of personal involvement on the part of each family member (Davis, 2000:14). The family is a form of organization where members seek inspiration, motivation,

and reward as well as individualization (Bass, 1990). Family leadership can be seen as the conscious effort of parents in order to influence social, cultural, economic and political aspirations for the benefit of their children. "It can also be defined as a process of establishing and

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maintaining an environment in which members of a family feel part of a unified system with a sense of cohesion, work towards common goals in a cooperative manner, and develop as healthy individuals" (Galbraith, 2000:15; Upko, 2009).

Leadership is no longer simply described as an individual characteristic or difference, but rather is depicted in various models as dyadic, shared, relational, strategic, global, and a complex social dynamic (Avolio, 2007, Yukl, 2006). To study family leadership, a theoretical framework is proposed by the researchers for several reasons. First, although a family has distinct characteristics that set it apart from a business or organization, it is a very important unit having very large effects on human life, and minimal work has been done in applying concepts and propositions from the field of organizational behavior to the family field. Second, a family leadership framework is appropriate because it has the potential to fill a need that, to a large extent, has been overlooked—a well-functioning executive. Finally, it is hypothesized that through the use of leadership practices that correspond to transformational leadership and the adoption of a leadership paradigm or philosophical orientation, couples and families can develop and maintain characteristics and processes associated with healthy marriages and families (Galbraith, 2000:5-6).

Parents as leaders, those charged with the responsibility of guiding children through life, should be one of life's givens, not a novel concept. After all, parenting has a long established history of followers, children, whose parents have served as leaders either intentionally or unintentionally through the ages (Walker, 2009). It is important to recognize that parents as leaders are faced with the primary task of leading their family team. In addition this, from our families we learn skills that enable us to function in larger and more formal settings, such as school and the workplace. Family experiences also shape our expectations of how the larger world will interact with us (Kern and Peluso, 1999).

The concept of family leadership orientation is stated by Baloglu and Bulut (2015:191) as an influencing and directing power of parents on children or family members to social, economic, politic and cultural goals. A typical demonstration of social family leadership orientation is to train and direct the members to family values. Economic family leadership orientation in the family occur when a family leader effects the children's financial decision, their productivity, saving and spending behavior and promotion of their quality of life. As to cultural leadership, it emerges with custom or any cultural practice such as celebrations, ceremonies and cultural activities in the family tradition.

Social entrepreneurship means different things for different persons. Many management writers have presented a lot of theories for entrepreneurship (Dees, 1998). Many definitions were made to highlight the different aspects of social entrepreneurship. For example,

Schumpeter (1934) used words of "the carrying out of new combinations" and Drucker (2014) saw it as exploiting the opportunities in order to create change in technology, consumers' preferences, social norms, etc. Some authors have explained the non-profit properties of these activities as a different feature of social entrepreneurship, too (Mair and Marti, 2006; Mair et al., 2006; Mair and Noboa, 2006; Austin et al., 2006).

Dees (1998) argues that the first aim of social enterprises, just like businesses, must be to create a high social value. The best indicator of this in the competitive market structure is to use resources more effectively rather than racing. Social entrepreneurs should investigate innovative ways. According to Dyer and Handler (1994), the transfer of leadership to the next generation has become an important subject for some researchers. There are different perspectives about family and entrepreneurial dynamics.

Generativity is a concept with different definitions containing interests, requirements and tasks. This concept is particularly associated with 7 features. These include cultural demands, inner desire, generated interest, belief, commitment, and personal narration to produce action. Erikson's theory of psychosocial development (1963) explains the eighth grades in human life. Generativity with Erikson's perspective is a building and consisting of the future of individuals, and the basic task of the parents is to educate their children according to these stages.

People can learn to be productive in life from different sources and the primary source is educational institutions. In addition, beliefs, political views and culture have an important impact on generativity behavior. Like these factors, professional lives of individuals affect their generativity behavior as well. According to McAdams and Aubin (1992), our neighbors, friends and our leisure activities also have important effects on our generativity behavior.

McAdams (2003) asserts that people have to create skills in their individual life stories. Generativity is the meaning of life and this reality can be said to be the most important role in their life. People transform many negative events into positive events with the positive generativity. Hart (2001) claims there are strong relations between generativity and behavior of adults in terms of psychological and social concepts and these concepts affect the relationship of people with their families, neighbors, friends and the community.

Due to the socio-personal resource, generativity is an important mission to ensure social continuity. It can be said that it is also important in sustaining the quality of the community development. Generativity is the main psychological factor in the change of the society and it also shapes the emotions and thoughts of people (Keyes and Ryff, 1998: 233-234).

The relationship between generativity and social

Table 1. Demographic information of the group.

Parameter		n	%
Gender	Female	304	76.57
	Male	93	23.43
Grade	3rd	108	26.87
	4th	294	73.13
Colleges	Educational Faculty	269	66.91
	Faculty of Arts and Sciences	84	20.90
	Health College	49	12.19

indicators is examined by many researchers (Peterson and Stewart, 1993; Peterson and Klohn, 1995; Peterson et al., 1997; Pratt et al., 1999; 2006; Huta and Zuroff, 2007; Hofer et al., 2008; Hamby et al., 2015; Carmeli et al., 2016) A study conducted by Nakagawa (1991) in the state and private schools showed that the more productive families are, the more information they need to get about their children's school life and they also tend to be more helpful in their children's homework.

Academic achievements of the students are assessed in different ways, as competence and proficiency. Tests are among these ways. In the education literature, academic achievement is usually to meet short and long-term educational goals (Harackiewicz et al., 2000).

Primary school researchers generally use classroom observation techniques in the collection of data to determine the academic success (Biggs and Collis, 2014). However, many researchers utilized standardized cognitive- ability tests in secondary and high schools so as to determine the academic success. "There are many academic studies on the academic achievements of students in higher education institutions and there are also many variables and estimators that determine the academic success in these institutions (Dennis et al., 2005:223-235)".

The interest, participation and involvement of parents in their children's education have always had a positive effect on their school performance (Topor et al., 2010). However, there is no any study on how the family leadership affects social entrepreneurship, generativity and academic success concerning college students. Forming a theoretical structural equation model including "entrepreneurship" "generativity" and "academic achievement" not only sheds light on the distinctive nature of the family leadership but it also indicates direct and indirect relations among these concepts. The current study addresses this issue.

METHODS

The study was designed in a causal relationship and a theoretical model to explain the cause and effect relationship among the *Family Leadership Orientation* and its sub-dimensions with *Social Entrepreneurship*, *Generativity* and *Academic Success*.

Participants

This study was conducted on a university in central Anatolia in Turkey. To explain the relations among the variables 3 colleges randomly selected. The study group, consisted of 3rd and 4th grade students was defined by cluster sampling method. A total of 402 voluntary students, who were in the process of graduation from university, took part in the study. The mean age of the participants was 22.45 years old and the standard deviation for the age was 1.76. The age range was 19 to 38. The mean family income of the participants was 2456.79 TL (Turkish Lira) and the standard deviation of the income was 1303.23 TL. The income range was 250 to 10000 TL. Further information about the study group is presented in Table 1.

As shown in Table 1, "76.57% of the participants were women" and "73.13% of the participants were the 4th year students. 66.91% of them were students at the Faculty of Education and this was followed by Faculty of Arts and Sciences (20.90%) and Health College (12.19%).

Data collecting tools

In this study, three scales and a demographic information form were used to collect the data. *Family Leadership Orientation Scale* was developed by author and his colleague. Permission for the applications of *Social Entrepreneurship Scale* and *Generativity Scales* were taken from authors via e-mail. Detailed information about the tools is given as follows.

Family Leadership Orientation Scale (FLOS)

FLOS was developed by Baloğlu and Bulut (2016). This scale, a five point Likert type and ranging from 1 (strongly disagree) to 5 (strongly agree), consists of 28 items and four factors. Factors were named as economic (8 items), social (5 items), political (6 items) and cultural (9 items). The cultural factor consists of three sub-factors called 'directing to activities' (3 items), 'influence on lifestyle' (3 items) and 'sustentation of tradition' (3 items). In a survey conducted by Baloglu and Bulut (2016), the internal consistency coefficient, Cronbach's Alpha, was found as 0.89. For factors, the coefficient was: economic = 0.91, social = 0.88, political = 0.89 and cultural; directing to activities = 0.83, influence on lifestyle = 0.79 and sustentation of tradition = 0.77. For this study group, while the internal consistency coefficient Cronbach's Alpha was 0.84, the coefficient of the factors was: Economic = 0.91, social = 0.84, political = 0.86 and cultural; 0.73. Split-half coefficient is 0.91.

Social Entrepreneurship Scale

This scale consists of 35 items and 6 subscales. The subscales

Table 2. Means and standard deviations.

Parameter	Mean	Std. deviation
Economic family leadership orientation	4.52	0.67
Social family leadership orientation	4.12	0.80
Political family leadership orientation	2.35	0.99
Cultural family leadership orientation	3.72	0.57
Social entrepreneurship	3.71	0.40
Generativity	3.61	0.45
Academic success (GPA)	3.03	0.34

were named as follows: Having social mission, creating social value, being innovative, seeing social enterprise opportunities, creating resources and ensuring sustainability, benefiting from social network. Scale was adopted in Turkish culture by Kirilmaz (2012) based on the study of Onyx and Bullen (2000), the study of Schuyt et al. (2010), the study of Bateman and Crant (1993), from the study of Schwer and Yucelt (1984). The internal consistency coefficient Cronbach's Alpha was 0.89. A five-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used in this study while the internal consistency coefficient Cronbach's Alpha was 0.86. Split-half coefficient was 0.84.

Generativity scale

McAdams (2001) has extended Erikson's theorizing and developed a series of measures of individual variability in generativity in adulthood, as well as a broad model of how generativity operates in the personality (McAdams and de St. Aubin, 1992). A core element of McAdams' model focuses on the construct of generative concern, as measured by the Loyola Generativity Scale, a 20-item questionnaire designed to index variations in commitment to generative roles and activities (Pratt et al., 2006). Adaptation study of this scale in Turkish culture was made by Karacan (2007). The internal consistency coefficient Cronbach's Alpha was 0.76. A five-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used in this study while the internal consistency coefficient Cronbach's Alpha was 0.78. Split-half coefficient was 0.80.

Academic success

To determine the academic success of the participants, Grade Point Average (GPA) was used. It is a 4.00 scale used to define the students' success. The level of academic success was assumed as: 2.00-2.5, 49 fairly well; 2.5-2.99 medium and 3.00-4.00 is good.

Data collection and analyses

Data were collected from September 2016 through October 2016. The questionnaire was applied during the breaks of the students taking into account their willingness. Before the application, the purpose of the study was explained by the researcher and it was instructed that the participants could skip any questions that they do not want to answer.

Quantitative analysis techniques were used to analyze the data. The parametric properties of the data were taken into account. A Structural Equation Model (SEM) formed by researcher consisted of "The family leadership perception, which constitutes three dimensions namely social, cultural and economic, affects the

students' social entrepreneurship and this consequently influences their generativity and their academic achievement as well". This theory was verified via the Structured Equation Model Test.

FINDINGS

The mean and standard deviation results of the sub-dimensions of the family leadership social entrepreneurship, generativity and academic success are given in Table 2.

The mean and standard deviation rates of the variables are shown in Table 2, which shows that the economic family leadership orientation of the students has the highest mean score with 4.52. This is followed by social family leadership orientation (4.12) and cultural family leadership orientation (3.72). The lowest mean score is the political leadership orientation with 2.35. The mean of the social entrepreneurship is 3.71 and the mean of generativity is 3.61. Academic success was found as 3.03 at the good level.

The results of regression analyses to indicate estimate rate of family leadership on social entrepreneurship are given in Table 3.

As shown in Table 3, the results of regression analyses show that the economic family leadership orientation explains 30%; social family leadership orientation explains 0.14% and cultural family leadership orientation explains 0.17% of the social entrepreneurship. In this statistical result, the explained variance was "R²= 0.27" and adjusted "R²= 0.26".

The results of regression analyses for generativity are given in Table 4. As shown in the table, the economic family leadership orientation of the students explains 0.14% and cultural family leadership orientation 0.16% of the generativity. In this statistical result, the explained variance was found as (R²=) 0.12 and adjusted (R²=) 0.11. The results of regression analyses for academic success are given in Table 5. As shown in the table, economic family leadership orientation of the students explains 0.18% of the academic success. The explained variance was found as (R²=) 0.05 and adjusted (R²=) 0.04.

The results of correlation among the variables are shown in Table 6. The table show that economic family

Table 3. Regression analysis for social entrepreneurship.

Parameter	Beta	t	p
Economic family leadership orientation	0.30	5.52	0.00
Social family leadership orientation	0.14	2.56	0.01
Political family leadership orientation	-0.07	-1.61	0.11
Cultural family leadership orientation	0.17	3.29	0.00

Table 4. Regression analyses for generativity

Parameter	Beta	t	p
Economic family leadership orientation	0.14	2.25	0.03
Social family leadership orientation	0.12	1.95	0.05
Political family leadership orientation	0.02	0.36	0.72
Cultural family leadership orientation	0.16	2.94	0.00

Table 5. The results of the regression results for academic success.

Parameter	Beta	t	p
Economic family leadership orientation	0.18	2.62	0.01
Social family leadership orientation	0.00	0.04	0.97
Political family leadership orientation	-0.11	-1.90	0.06
Cultural family leadership orientation	-0.01	-0.12	0.91

leadership orientation has a positive correlation with social entrepreneurship ($r=0.46$, $p<0.01$), generativity ($r=0.27$, $p<0.01$) and GPA ($r=0.20$, $p<0.01$). Social family leadership orientation has a positive correlation with social entrepreneurship ($r=0.41$, $p<0.01$), generativity ($r=0.28$, $p<0.01$) and GPA ($r=0.12$, $p<0.05$). Political family leadership orientation has a negative correlation with social entrepreneurship ($r=-0.12$, $p<0.05$) and GPA ($r=-0.13$, $p<0.05$). Cultural family leadership orientation has a positive correlation with social entrepreneurship ($r=0.36$, $p<0.01$) and generativity ($r=0.28$, $p<0.01$). Social entrepreneurship has a positive correlation with generativity ($r=0.68$, $p<0.01$) and GPA ($r=0.11$, $p<0.05$). Economic family leadership orientation has positive correlations with factor 1 ($r=0.48$, $p<0.01$); factor 2 ($r=0.45$, $p<0.01$); factor 3 ($r=0.10$, $p<0.05$); factor 4 ($r=0.22$, $p<0.01$); factor 5 ($r=0.35$, $p<0.01$); factor 6 ($r=0.22$, $p<0.01$). Social family leadership orientation has positive correlations with factor 1 ($r=0.39$, $p<0.01$); factor 2 ($r=0.32$, $p<0.01$); factor 3 ($r=0.15$, $p<0.01$); factor 4 ($r=0.24$, $p<0.01$); factor 5 ($r=0.33$, $p<0.01$); factor 6 ($r=0.20$, $p<0.01$). Political family leadership orientation has negative correlations with factor 2 ($r=-0.18$, $p<0.01$) and factor 3 ($r=-0.12$, $p<0.05$). Cultural family leadership orientation has positive correlations with factor 1 ($r=0.35$, $p<0.01$); factor 2 ($r=0.29$, $p<0.01$); factor 4 ($r=0.25$, $p<0.01$); factor 5 ($r=0.29$, $p<0.01$) and factor 6 ($r=0.19$,

$p<0.01$). Generativity has positive correlations with factor 1 ($r=0.45$, $p<0.01$); factor 2 ($r=0.42$, $p<0.01$); factor 3 ($r=0.47$, $p<0.01$); factor 4 ($r=0.54$, $p<0.01$); factor 5 ($r=0.38$, $p<0.01$) and factor 6 ($r=0.42$, $p<0.01$). GPA has positive correlations with factor 2 ($r=0.15$, $p<0.01$) and factor 4 ($r=0.17$, $p<0.01$).

As indicated in Table 7, there are significant differences among the economic family leadership orientation, social family leadership orientation and academic success in terms of the gender of the participants. Women's economic family leadership orientation mean score ($\bar{X}=4.57$) is higher than men's mean score ($\bar{X}=4.36$). Women's social family leadership orientation mean score ($\bar{X}=4.18$) is higher than men's mean score ($\bar{X}=3.93$). Women's academic success ($\bar{X}=3.09$) is higher than men's score ($\bar{X}=2.84$).

The findings for theoretical models

In this study, it is theorized that "The family leadership perception, which constitutes three dimensions namely social, cultural and economic, affects the students' social entrepreneurship and this consequently influences their generativity and their academic achievement as well". This theoretical model was visualized by a structural

Table 6. Correlation.

Parameter	1	2	3	4	5	5(1)	5(2)	5(3)	5(4)	5(5)	5(6)	6	7
1.Economic family leadership	-												
2.Social family leadership	0.59**	-											
3.Political family leadership	-0.14**	-0.10*	-										
4.Cultural family leadership	0.41**	0.49**	0.02	-									
5.Social entrepreneurship	0.46**	0.41**	-0.12*	0.36**	-								
5(1).Factor1	0.48**	0.39**	-0.03	0.35**	0.71**	-							
5(2).Factor 2	0.45**	0.32**	-0.18**	0.29**	0.65**	0.32**	-						
5(3).Factor 3	0.10*	0.15**	-0.12*	0.08	0.62**	0.29**	0.20**	-					
5(4).Factor 4	0.22**	0.24**	-0.03	0.25**	0.68**	0.44**	0.20**	0.34**	-				
5(5).Factor 5	0.35**	0.33**	-0.02	0.29**	0.69**	0.46**	0.28**	0.26**	0.48**	-			
5(6).Factor 6	0.22**	0.20**	-0.04	0.19**	0.65**	0.39**	0.29**	0.23**	0.42**	0.49**	-		
6.Generativity	0.27**	0.28**	-0.01	0.28**	0.68**	0.45**	0.42**	0.47**	0.54**	0.38**	0.42**	-	
7.GPA	0.20**	0.12*	-0.13*	0.07	0.11*	0.03	0.15**	0.00	0.17**	0.05	0.01	0.08	-

F1, Having social mission; F2, Creating social network; F3, being innovative; F4, seeing social enterprise opportunities; F5, creating resources and ensuring sustainability; F6, benefiting from social networks. * p < 0.05 ** p < 0.01.

Table 7. Independent samples t-test for gender.

Parameter	Gender	M	S.D	t	p
Economic family leadership orientation	Women	4.57	0.64	2.70	0.01
	Men	4.36	0.74		
Social family leadership orientation	Women	4.18	0.78	2.61	0.01
	Men	3.93	0.87		
Political family leadership orientation	Women	2.35	0.98	0.08	0.94
	Men	2.34	1.01		
Cultural family leadership orientation	Women	3.73	0.57	1.36	0.18
	Men	3.64	0.59		
Social Entrepreneurship	Women	3.73	0.38	1.86	0.06
	Men	3.65	0.45		
Generativity	Women	3.63	0.42	1.00	0.32
	Men	3.57	0.54		
GPA	Women	3.09	0.32	5.81	0.00
	Men	2.84	0.33		

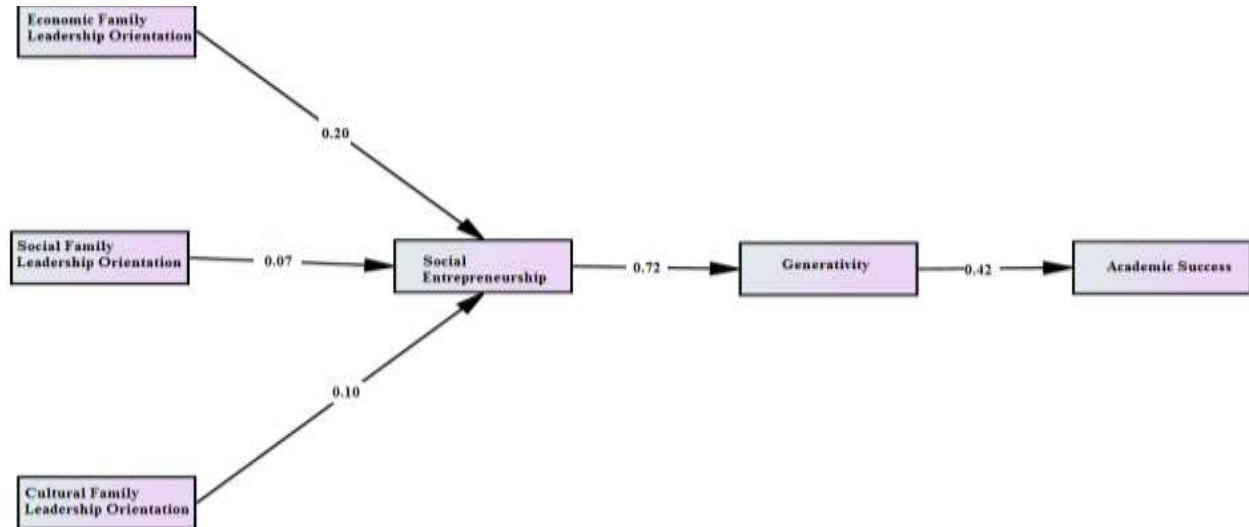


Figure 1. The proposed model of this study.

equation model in the Figure 1. This theory was verified by means of structured equation model test.

The basic idea of the structural equation model composed by the researcher was that the sub-dimensions of the economic, social and cultural family leadership affect the social entrepreneurship of the college students and this affects their generativity and academic success as well. The analysis results of SEM showed that this model was verified. The model fit indexes were found CMIN/df = 1.60; NFI: 0.99; RFI: 0.95; IFI: 0.99; TLI: 0.98; CFI: 0.99 and RMSEA: 0.04.

DISCUSSION

This research finding indicates that the economic family leadership orientation of the college students has the highest mean score with 4.52. This is followed by social family leadership orientation (4.12) and cultural family leadership orientation (3.72). The lowest mean score is in political family leadership orientation with 2.35. This means that the students are under the influence of the most economic leadership, at least the political leadership, in their families. These results concerning the family leadership orientation of the participants are quite consistent with the findings of the research conducted by Baloglu and Bulut (2015, 2016). The high scores of the economic family leadership orientation show that the economic structure in the family is very important and the economic leadership in the family has a great influence on the children. This may be due to the fact that financial aspect is a fundamentally defining factor of family life in Turkish culture. On the other hand, the political leadership orientation has the lowest mean with 2.35, which may show that families are trying to keep their children away from the political fluctuations, which may also include military coups, riots, and protests and so on.

In this study, the participants evaluated themselves in terms of social entrepreneurship (\bar{X} =3.71 over 5), generativity (\bar{X} =3.61 over 5) and academic success (\bar{X} =3.03 over 4) at good levels. The high scores in social entrepreneurship and generativity mean that the participants see themselves active. According to Schlenker (1980), people in general want to make good impressions on others during self-presentation. These results may be an indication of this opinion.

There are positive relations between family leadership (namely, economic, social and cultural) and social entrepreneurship. This relationship between leadership and social entrepreneurship was discussed by many researchers. For example, Eyal and Kark (2004) found that there was strong relationship between different leadership styles and alternative entrepreneurial strategies. Juliet and George (2005) considered that the charismatic leadership is very important in social entrepreneurship. Jensen and Luthans (2006) investigated the relationship between entrepreneurs and their authentic leadership. Bhutiani et al. (2012) explored the similarities between social entrepreneurship and transformational leadership and they found that transformational leadership provides an important managerial basement for entrepreneurship.

According to regression analysis results, economic, social and cultural family leadership orientation of the students explain social entrepreneurship significantly; economic and cultural family leadership orientation explain generativity significantly and finally economic family leadership explains academic success significantly. The outstanding result here is that economic family leadership estimates all of the variables of this study (social entrepreneurship, generativity and academic success). This may mean that economic family leadership plays an important role in Turkish family life.

They are likely to expect their children to be economically independent and this can be seen in all of the results. The results of correlation analysis show that while the economic, social and cultural family leadership orientation is in a positive relation with social entrepreneurship and generativity; political family leadership orientation has a negative correlation with social entrepreneurship and GPA. This means that, except for political family leadership orientation, the other dimensions of family leadership orientation have positive impacts on participants. The economic, social and cultural family leadership orientations foster social entrepreneurship and generativity whereas political family leadership hinders social entrepreneurship and academic success. As mentioned above, political aspects could be seen as dangerous, negative and risky activities in Turkish society and culture (Güler, 2004). Consistent with the results of this study, Kümbül (2008) found a positive correlation between social entrepreneurship and academic success as well.

There are significant differences between economic family leadership orientation, social family leadership orientation and academic success in terms of gender. The mean scores of women in economic family leadership orientation, social family leadership orientation and academic success are higher than men's. According to these results, it can be concluded that family leadership affects women more than men in Turkish culture. Likewise, women are seen to be more successful than men with regard to academic success. According to Duckworth and Seligman (2006), the reason why women are more successful than men is that women have a stronger sense of responsibility when compared to men.

The main claim of the research was that the family leadership orientation of the college students affects their social entrepreneurship, which consequently affects their generativity and academic success. This theory was tested and verified by structured equation model. The statistical results verify the proposed model of this study. The fit indices are CMIN/df = 1.60; NFI: 990; RFI: 950; IFI: 996; TLI: 981; CFI: 996 and RMSEA: 0.04. All the fit indices are within the acceptable limits (Byrne, 2001; Tabachnick and Fidell, 2001; McDonald and Moon-Ho, 2002; Schermelleh-Engel, Moosbrugger and Müller, 2003; Brown, 2006). This verification means that the family leadership orientation is an important concept to define social entrepreneurship, generativity and academic success in the life of individuals.

As a conclusion, the college students took part in this study are effected the most by economic leadership in their family. They see themselves at a good level in terms of social entrepreneurship and generativity. The sub-dimensions of the family leadership orientation estimate the participants' social entrepreneurship, generativity and academic success at a significant level from 0.14 to 0.30. From this perspective, it could be said that the family leadership orientation is an important factor in the lives of the students. Finally, it can be

suggested that the family leadership concept should be tested with the same variables in other western and eastern countries.

In addition, a family is a social unit characterized by social, cultural and economic features. From this point of view, family leadership can be seen as a new and fundamental leadership area in which all leadership theory' can be applied or on which empirical research can be conducted. The main contributions of this study to the field of leadership can be seen this way.

Conflicts of Interests

The authors have not declared any conflict of interests.

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REFERENCES

- Austin JE, Stevenson H, Wei-Skillern J (2006). Social entrepreneurship and commercial entrepreneurship: Same, different, or both. *Entrepreneurship Theory Practice* 30(1).
- Avolio BJ (2007). Promoting more integrative strategies for leadership theory-building. *Am. Psychol.* 62:25-33
- Avolio BJ, Walumbwa FO, Weber TJ (2009) Leadership: Current Theories, Research, and Future Directions, *Annu. Rev. Psychol.* Contents 60:421-451.
- Baloğlu N, Bulut MB (2015). Aile Liderliği. *Uluslararası Avrasya Sosyal Bilimler Dergisi* 6(18):185-197.
- Baloğlu N, Bulut MB (2016). Aile Liderlik Yönelimi Ölçeği (ALYÖ): Geçerlik Ve Güvenirlik Çalışması. *J. Int. Soc. Res.* 9(42).
- Bass BM (1990). Bass and Stogdill's transformational leadership handbook of leadership: Theory, research and managerial application (3rd ed.). New York: The Free Press.
- Bateman TS, Crant JM (1993). The proactive component of organizational behavior: A measure and correlates. *J. Organ. Behav.* 14(2):103-118.
- Bhutiani D, Flicker K, Nair P, Groen A (2012). Is social entrepreneurship transformational leadership in action. *Patterns in Social Entrepr. Res.* 110 p.
- Biggs JB, Collis KF (2014). Evaluating the quality of learning: The SOLO taxonomy (Structure of the Observed Learning Outcome). Academic Press.
- Brown TA (2006). Confirmatory factor analysis for applied research. New York: Guilford.
- Bulut MB, Baloğlu N (2016). Üniversite Öğrencilerinin Aile Liderlik Yönelimleri ile Bazı Demografik Değişkenler Arasındaki İlişkilerin İncelenmesi. *J. Kirsehir Educ. Faculty* 17(2).
- Byrne, B. (2010). Structural equation modelling with AMOS: Basic concepts, application, and programming. New York: Routledge Taylor & Francis Group.
- Carmeli A, Jones CD, Binjamin G (2016). The power of caring and generativity in building strategic adaptability. *J. Occupational and Organ. Psychol.* 89(1):46-72.
- Clay MM (1993). An observation survey of early literacy achievement. Heinemann, 361 Hanover St., Portsmouth, NH 03801-3912.
- Davis D (2000). Supporting parent, family, and community involvement in your school. *North west Regional Educational Laboratory* pp. 1-38.
- Dees JG (1998) 'The Meaning of Social Entrepreneurship', <https://entrepreneurship.duke.edu/new s-item/the-meaning-of-social-entrepreneurship/>

- Dennis JM, Phinney JS, Chuateco LI (2005). The role of motivation, parental support, and peer support in the academic success of ethnic minority first-generation college students. *J. College Student Dev.* 46(3):223-236.
- Drucker P (2014). *Innovation and entrepreneurship*. Routledge.
- Duckworth AL, Seligman MEP (2006). Self-discipline gives girls the edge: Gender in self-discipline, grades, and academic achievement test scores. *J. Educ. Psychol.* 98(1):198-208.
- Dyer WG, Handler W (1994). *Entrepreneurship and family business: Exploring the connections*. *Entrepreneurship Theory Practice* 19:71-71.
- Erikson EH (1963). *Childhood and society* (2nd rev. ed). New York: Norton (Original work published 1950).
- Eyal O, Kark R (2004). How do transformational leaders transform organizations? A study of the relationship between leadership and entrepreneurship. *Leadership and Policy in Schools*, 3(3):211-235.
- Galbraith Kevin A (2000). "Family Leadership: Constructing and Testing a Theoretical Model of Family Well-Being" All Graduate Theses and Dissertations. Paper 2810.
- Güler A (2008). *Türk toplumunda korku kültürü*. Ankara: Punto Tasarım.
- Harackiewicz JM, Barron KE, Tauer JM, Carter SM, Elliot AJ (2000). Short-term and long-term consequences of achievement goals: Predicting interest and performance over time. *J. Educ. Psychol.* 92(2):316.
- Hamby SL, Thomas LA, Banvard VL, de St Aubin E, Grych J (2015). Generative roles: Assessing sustained involvement in generativity. *American Journal of Psychology and Behavioral Sciences*.
- Hart HM (2001) Generativity and Social Involvement among African Americans and White Adults. *J. Res. Pers.* 35:208-230.
- Helgesen S (2005). Why mattering matters. Retrieved October 14, 2007, from <http://www.leighbureau.com/speakers/SHelgesen/essays/mattering.pdf>
- Hofer J, Busch H, Chasiotis A, Kärtner J, Campos D (2008). Concern for Generativity and Its Relation to Implicit Pro-Social Power Motivation, Generative Goals, and Satisfaction with Life: A Cross-Cultural Investigation. *J. Pers.* 76(1):1-30.
- Huta V, Zuroff DC (2007). Examining mediators of the link between generativity and well-being. *J. Adult Devel.* 14(1-2):47-52.
- Jensen SM, Luthans F (2006). Relationship between entrepreneurs' psychological capital and their authentic leadership. *J. Managerial Issues*, 254-273.
- Juliet R, George C (2005). Leadership, learning and human resource management the meanings of social entrepreneurship today.
- Karacan E (2007). *Effects of parenting on adult development and generativity* (Doctoral dissertation, Middle East Technical University).
- Kern RM, Peluso PR (1999). Using individual psychology concepts to compare family systems processes and organizational behavior. *Family J.* 7(3):236-244.
- Keyes CLM, Ryff CD (1998). Generativity in adult lives: Social structural contours and quality of life consequences.
- Kırmaz S (2012) Study of success factors of social entrepreneurship in terms of entrepreneurial individuality and transformational, Doctoral dissertation, Çanakkale Onsekiz Mart University, Çanakkale.
- Kümbül GB (2008). Sosyal girişimciliği etkileyen faktörlerin analizi. Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü, Çalışma Ekonomisi ve Endüstri İlişkileri, Doktora Tezi.
- Mair J, Marti I (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *J. World Bus.* 41(1):36-44.
- Mair J, Robinson J, Hockerts K (Eds.). (2006). *Social entrepreneurship* (p. 3). New York: Palgrave Macmillan.
- Mair J, Noboa E (2006) *Social Entrepreneurship: How Intentions to Create a Social Venture are Formed*.
- McAdams, DP (2003). Identity and the life story. In: R. Fivush & C. A. Haden (Eds.), *Autobiographical memory and the construction of a narrative self: Developmental and cultural perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates. pp. 187-207.
- McAdams DP, de St Aubin ED (1992). A theory of generativity and its assessment through self-report, behavioral acts, and narrative themes in autobiography. *J. Personality Soc. Psychol.* 62(6):1003.
- McDonald RP, Moon-Ho RH (2002). Principles and practice in reporting structural equation analyses. *Psychol. Methods* 7(1):64-82.
- Onyx J, Bullen P (2000). Sources of social capital. *Social Capital and Public Policy in Australia*, Australian Institute of Family Studies, Melbourne, pp. 105-134.
- Peterson BE, Stewart AJ (1993). Generativity and social motives in young adults. *J. Personalit Soc. Psychol.* 65(1):186.
- Peterson BE, Klohnen EC (1995). Realization of generativity in two samples of women at midlife. *Psychol. Aging* 10:20-29.
- Peterson BE, Smirls KA, Wentworth PA (1997). Generativity and authoritarianism: Implications for personality, political involvement, and parenting. *J. Personality Soc. Psychol.* 72:1202-1216.
- Pratt MW, Norris JE, Arnold ML, Filyer R (1999). Generativity and moral development as predictors of value-socialization narratives for young persons across the adult life span: From lessons learned to stories told. *Psychol. Aging* 14: 414-426.
- Pratt MW, Arnold ML, Pratt MW, Arnold ML (2006). Growing into Generativity: Adolescent Roots of a Generative Self in Emerging Adulthood. In *Notre Dame Symposium on Personality and Moral Character*, Centre of Ethical Education.
- Schuyt T, Bekkers R, Smit J (2010). The Philanthropy Scale: A sociological perspective in measuring new forms of pro social behaviour. *Soc. Work Society*, 8(1):121-135.
- Schwartz RK, Yucelt U (1984). A study of risk-taking propensities among small business entrepreneurs and managers: An empirical evaluation. *Am. J. Small Bus.* 8(3):31-40.
- Schermelleh-Engel K, Moosbrugger H, Müller H (2003). Evaluating the fit of structural equation models: tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Res. Online*, 8(2):23-74.
- Schlenker BR (1980). *Impression management: The self-concept, social identity, and interpersonal relations*. Monterey: Brooks/Cole.
- Schumpeter J (1934). *Capitalism, socialism and democracy*. New York: Harper and Row.
- Tabachnick BG, Fidell LS (2001). *Using multivariate statistics*. MA: Allyn & Bacon.
- Topor DR, Keane SP, Shelton TL, Calkins SD (2010). Parent involvement and student academic performance: A multiple mediational analysis. *J. Prevention Intervention Community* 38(3):183-197.
- Walker TD (2009) *Parents as leaders: a trans relational approach to intentional family leadership and poverty intervention*. (Doctoral Dissertation. Seattle University).
- Yukl GA (2006). *Leadership in Organizations*. Upper Saddle River, NJ: Pearson/Prentice Hall. 542 p.

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