academicJournals

Vol. 12(1), pp. 1-18, 10 January, 2017 DOI: 10.5897/ERR2016.3025 Article Number: F3AD5EA62270 ISSN 1990-3839 Copyright © 2017 Author(s) retain the copyright of this article http://www.academicjournals.org/ERR

Educational Research and Reviews

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"

Fahriye Hayirsever and Nurdan Kalayci*

Department of Education Sciences, Faculty of Gazi Education, Gazi University, Besever, Ankara, Turkey.

Department of Education Sciences, Faculty of Education, Duzce University, Duzce, Turkey

Received 1 October, 2016; Accepted 8 November, 2016

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/nedengef%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.h tml); 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).

*Corresponding author. E-mail: kalayci@gazi.edu.tr.

Authors agree that this article remain permanently open access under the terms of the <u>Creative Commons Attribution</u> <u>License 4.0 International License</u>



Table 1. 21st century knowledge, skills and competency.

21st century kno	w ledge, skills and compet	tency				
	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 w ork	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 aw areness; 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 written communication; Critical thinking; Problem solving; Team work			Professionalism and work	ethic; Applying technology s	kills; Collaboration
TÜSİAD (2012)	Critical thinking; Inquiry based problem solving; Innovation and creativity Team work; Environmental consciousness and nature conservation skills				Management of existing information in the languages and cultures; Design areness	
Kalkınma and Bakanlığı (2013)	Thinking, perception and problem solving skills; Democratic and national values; Communion and communication; Arts and aesthetics			Self-confidence and respo production of science and	nsibility; Entrepreneurship at technology; Productivity	nd innovation; Use and

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 undergraduate teacher education programs determined by YÖK; however, no competencies related to the 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?

METHODOL OGY

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 2^{nd} column,
- c. the rate of all the open courses within all of the elective courses in the $3^{\rm rd}$ column,
- d. the distribution of courses according to the knowledge categories in the 4^{th} 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

Research

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

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

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:

I) 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).

Scientific research methods Effective communication History of Turkish Education

History of science

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).

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

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

In another study (Jacobs and Hayırsever, 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		Major area
Creative writing activities	o	6 /6	knowledge
Problem solving at elementary school			
$Museum\ education\ at\ elementary\ s\ chool$			
Total 6			
Adult education			
Curriculum development			Professional
Educational economy	4	4 / 4	teaching
Curriculum literacy			knowledge
Total 4			
Educationalsociology			
Active teaching in instruction			
Ethics and human rights			
Philosophy			
Signlanguage			
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			General
Occupational ethics	3	3/31	culture
Educational culture and democracy			knowledge
Segregation in education			
Philosophyand human rights			
Speed reading techniques			
Logic and critical thinking			
Philosophyofeducation			
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	0.70	Major area knowledge
Adult education	1	2 /2	Professional teaching
Total	2		knowledge

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 Philosophyfor children			
Values education Thinking education Turkish of Turkey			
Tourism geography of Turkey Subject area textbook analysis			
World literature Total quality management in education Creativity	No restrictions in the number of courses the students can select		Notspecified
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			
Philosophyofeducation			
Sociology of education			
Total 23			
Courses determined by the elective courses coordination unit Total 658			Not specified
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 Introduction to gifted education	1	1 /5	Not specified
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 multiperspective 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 deliberatively. 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			Major area
Health culture and environmental problems	4	4 /14	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			
Elementaryschool curriculum and			
instruction			
Early childhood education			
Educational sociology			Professional
Educational philosophy	3	3/7	teaching
Values education in elementary school	·	3/1	knowledge
History of Turkish education			
Self-regulated learning			
Total 7			
Traffic and first aid			
Modern dance and Turkish folklore		4 10	
Computer II: Advanced applications	1	1 /3	General culture
Total 3			knowledge
Modern instruction approaches in elementary education			
Developing thinking skills in children	1	1 /3	
Sign language	•	. 70	University studies
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		0.5	
History of Western Art I		3/5	
History of Western Art II			
Enjoyment of Music	1		
Total 5			
Mathematical foundations			
College Algebra			General education
Finite mathematics	1		courses
Explorations in mathematics	·	2/5	
Basic statistics using Microsoft excel			
Principles of statistics Total 5	1		
Social foundations			
American national			
government		2/2	
General psychology	2		
Total 2			
Science foundations			
Physics science	2	2/2	
Biology principles	2	212	
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	. 5		
Critical reading and writing	1	1 / 1	
Total 1	Į.	17 1	
Fine Arts			
Arts			
Architecture			
Dance	1	1/6	
Music Education	ı	176	
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 biologyI	·	3 / 4	
Earth science	1	3/ 4	
Physics science	1		
Total 4	-		
Social studies			
Economy			
Economic is sues and policies	1		General
Introduction to microeconomics			education
Civics and economics for teachers			courses
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	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 literal Introduction to writing Intermediate writing Total 2	су	2	2/2	
Quantitative literacy College Algebra Mathematics for elemes school teachers Introduction to statistic Total 3	•	3	3/3	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 Total 42	8	1		
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	27 17	
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	4		
Total 359		1		
Shared goals for the seducation	school of			
Intensive writing		1		
Information fluency		1	4/4	
Diversities in the USA		1	4/4	
Enriching of educations	al			
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 multiperspective 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 inkılâp 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). İnkılâp tarihi derslerinde başarı nasıl sağlanabilir? In M. Saray & H. Tosun (Ed.), İlk ve Orta Öğretim Kurumlarında Türkiye Cumhuriyeti İnkılâp 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. Kıroğlu, & 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 ŠP, 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 tanecikli yapısı ünitesine ilişkin pedagojik alan bilgilerinin değerlendirilmesi. Unpublished Master's Thessis, 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 özyeterlik 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 Thessis, Gazi Üniversitesi, Ankara.
- Demirel Ö (2000). Karşılaştırmalı eğitim. Ankara:PegemA.

🔼 للاستشار ان

- Doğaner Y (2005). Yükseköğretimde Atatürk ilke ve inkılâplarının öğretimiyle ilgili düşünceler. In M. Saray & H. Tosun (Ed.), İlk ve Orta Öğretim Kurumlarında Türkiye Cumhuriyeti İnkılâp 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 yanılgılarının 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
- Gencel İE, Köse A (2011). Fen bilgisi öğretmen adaylarının öğrenme stilleri, öğrenme ve ders çalışma stratejileri ile fen bilgisi öğretimi özyeterlik inançları arasındaki ilişki. Eğitimde Kuram ve Uygulama, 7(2):311-333.
- Gömleksiz MN (2002). Üniversitelerde yürütülen yabancı dil derslerine ilişkin öğrenci görüşlerinin değerlendirilmesi. Fırat Üniversitesi Sosyal Bilimler Dergisi, 12(1):143-158.
- Gürdal A, Sağırlı M, Üredi L (2000). Okul deneyimi-l'in öğretmen adayı ve uygulama öğretmeni üzerindeki etkileri. In Z. Gökçakan (Ed.), VIII. Ulusal Eğitim Bilimleri Kongresi Bilimsel Çalışmaları (pp.559-568), Trabzon: Karadeniz Teknik Üniversitesi.
- Hacettepe Üniversitesi Eğitim Fakültesi (2016). Misyon ve vizyon. Retrieved from:
- http://www.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, Hayırsever 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.
- Kuçuradi 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 Ś (2010). Türkçe öğretmenlerinin drama yöntemini kullanmaya yönelik öz yeterlikleri. 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.
- Mendler 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.
- Mili 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.
- New ton 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 Thessis, 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). İnkılâp 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://w ww.tusiad.org/bilgimerkezi/21--yuzyıl-becerileri-ve-egitimin-niteligi-toplanti-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: Alkım.
- 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/web/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://w w w .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.

