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THE OPINIONS OF TEACHER CANDIDATES ABOUT THEIR TEACHER TRAINING COURSES

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ABSTRACT: This study was aimed to determined opinions of teacher candidates about their teacher training courses. Research sample consisted of 222 senior, who studied Science Education (n=170) and Mathematic Education (n=52) Departments. The data collected by asking courses that teacher candidates think they will not contribute to the teaching profession and think they should be in teacher training program. Teacher candidates' answers were analyzed by using content analysis. After content analysis, courses are considered that they do not contribute to the teaching profession were examined under four categories which are field, field training, liberal education, pedagogical knowledge. Also, courses are considered that should be in teacher education were examined under six categories that are art, personel development, sport, technology, field/ field training, foreign language. In the conclusion, it was seen teacher candidates in both departments want to learn basic concepts that they will use when they are teacher in their field.

Key words: Teacher training courses, science teacher candidates, mathhematics teacher candidates

INTRODUCTION

Constantly changing and evolving nature of science, innovations in knowledge and communication technology brings along. Developing technology with the growing needs of individuals also requires the exchange of qualities expected of individuals. Therefore, the ability of individuals also varies expected. These skills should be given with systematic and purposeful education. The success of an education system depends on the quality and quantity of teachers who will operate the system (Arı, 2010). In the development of the country, for the growing of skilled manpower, in ensuring peace and security in society, socialization of individuals and social life in preparing, the society's cultural values transferring to the younger generation plays a key role in teachers (Sahin et al., 2013). Thus, the changing needs of society, and changes in technology and developments in the subject area, training programs and teacher training system also makes it inevitable constant revision and renewal (Aksu, 2005). Because teacher education, in general, the basic elements of human breeding scheme and is decisive (Basturk, 2011). As teachers enable to create a positive impact on students, to give them the necessary information, and to make positive contributions to personality, these teachers need to teacher training programs that are well structured and will develop the teachers themselves (Sahin et al., 2013).

History of education in Turkey, many teacher education models has been tried and implemented (Arı, 2010). On the grounds of train being away from necessary qualifications teachers in terms of topics, content and completeness features of the courses in teacher education programs of Education Faculty, were required the setup changes or recalculations in the system (YOK, 1998). The solution of problems and needs in teacher training in order to eliminate, which started in 1994 and completed in 1998, YOK / World Bank within the framework of Pre-Service Teacher Education Project was the restructuring of the Faculty of Education (Yavuzer et al., 2006). In the light of these and similar reasons, the teacher training programs are constantly updated. As result of this the courses in the program and the content of this course, are expected to be held by gaining qualifications prescribed to teachers (Sisman, 2009). Teacher as the positions facilitator, guiding, sharing with students the responsibility and excitement of access to scientific knowledge, and a guide also directs the research process in the classroom e.g. must be cultivated to win these skills (MEB, 2013). Therefore, teacher education programs that will save these skills are seen to be a subject of many studies.

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Bastürk (2011) asked them to evaluate the teaching-learning process in faculties of education from mathematics teacher candidates. Teacher candidates stated that found more theory than the application of courses and their content it was uncertain. Arı (2010) have taken their opinions related to their level of knowledge and teacher candidates' skills won related to primary school curriculum in the education faculties, and concluded that teacher candidates graduated from without win this required skills. Inal and Buyukyavuz (2013) taken their views for the professional development of English teacher candidates and undergraduate education, and ultimately emphasized enough that the duration of internship, but the content was insufficient. Celik and Arıkan (2012) a qualitative work has been done about English teacher candidates how much prepared for foreign language teaching in to primary schools and has been stressed the weakest aspects of the program failure to prepare teachers in real classroom environment. Hismanoglu (2012) also have studied English teacher candidates teacher education programs and reached resultsabout the program that appropriate to teacher candidates' interests and needs, which provide a permanent learning, as appropriate to the level of development. Akbayır and Tas (2009) For mathematics education and teacher training in Turkey received the opinions of teacher candidates, and as a result of the data obtained through surveys, internship is successful and they are growing aware of the high school curriculum of teacher candidates were seen. Analyzing the relevant literature, it is seen that the majority of work for the program aimed at overall appearance opinions. Existing teacher training programs through the eyes of prospective teachers and teachers should be evaluated and have been made about the overall assessment.

Bulca et al. (2009) in the study were examined physical education teachers' opinions on the adequacy of teacher training programs. As a result of the study, teachers have found sufficient liberal education courses such as computer English and history and most of the pedagogical knowledge courses in terms of the content of professional experience. Yavuzer et al. (2006) have asked for evaluation courses in program to determine classroom teaching graduates the level of benefit from the teacher training program. Teacher candidates unable to take advantage of mainly science courses from Field Courses, foreign language from liberal education courses are determined. Sahin et al. (2013) asked them to evaluate of pre-school teacher candidates courses in the current program. Teacher candidates have been suggested in the method and content of the courses. Ozkan and Sahbaz (2011) examined Turkish teacher candidates for their opinions on the functionality of Field Courses. In conclusion, they were identified missing such as vocational content is not given and too many details. In these studies, it is seen that investigating teacher training courses in the program, the courses listed and the opinions and recommendations which have been asked. Among these studies, it was not found studies examined courses in teacher training programs in the science and math fields.

In this context, the aim of this study was to determine opinions of science and mathematics teacher candidates on undergraduate courses in teacher training program. Starting from this idea, sub-problems of the research are as follows:

1. Which are the courses Science Teacher Candidates and Mathematics Teacher Candidates think that they will not contribute to teaching profession, even thought they are in their teacher training program?
2. Which are the courses Science Teacher Candidates and Mathematics Teacher Candidates think that they should be in the teaching training program?

METHODS

In this study was used survey method. The most important feature of this research model is the definition an existing event or situation as it exists (Cepni, 2012). The main purpose is to observe without getting up to change. That is, this research approach aims to describe and define as it exists in the past or currently existing situation (Karasar, 2013).

Participants

Purposive sampling was used in sample selection. Purposive sampling is the most appropriate section of the research questions of the universe means to make a section of observation (Sencer, 1989). Thus, teacher candidates were selected last year students in order to evaluate their teacher training program. Research sample consisted of 222 senior, who studied Science Education (n=170) and Mathematic Education (n=52) Departments.

Data Collection Instruments and Data Analysis

The data collected by asking: Which are courses do you think that they will not contribute to teaching profession, even thought they are in your teacher training program? Which are courses do you think that they should be in your teacher training program? Teacher candidates' answers were analyzed by using content analysis.

FINDINGS and DISCUSSION

Findings Related to the First Sub-Problem of the Research

The teacher candidates were asked to evaluate teacher training program and were asked to indicate courses do not contribute to the teaching profession. Teacher candidates' answers on the basis of department analyzed separately, the following table has been created as a result of content analysis. Determination of the category in the content analysis, we were utilized the category of YOK which used to evaluate courses in the undergraduate program (Table 1).

Table 1. Courses will not Contribute on Teaching Profession

	Science Teacher Candidates			Mathematics Teacher Candidates		
Category	Courses	f	%	Courses	f	%
Field	Genetics and Biotechnology (1), Astronomy (29), Analytical Chemistry (24), Introduction to Modern Physics (18), Earth Science (26), General Physics (2), General Chemistry (5), Human Anatomy and Physiology (26) Evolution (5), Statistics (16), Organic Chemistry(6)	158	44,5	Topology (22), Functional Analysis (13), Real Analysis (10), Numerical Analysis (16), Abstract Mathematics (1) Abstract algebra (8), Complex Variable Functions (2), Linear Algebra (4), Analysis (2), Differential Equations (2), Partial Differential Difefansiyel Equations (2), Physics (6)	88	49,7
Field Training	Special Topics in Physics (18), Special Topics in Chemistry (12), Special Topics in Biology (3), Science Teaching Laboratory Practice (4) Nature of Science and History of Science (26)	63	17,7	Subject Area Textbook Review (8), Research Project in Field Education (1) History of Science (6)	15	8,5
Liberal Education	Scientific Research Methods (4), Service Learning Course (7), Ataturk's Principles and History (18th), Foreign Language-Eng. (14), Turkish (7) Computers (5), Elective Courses (37), History of Turkish Education (13)	105	29,6	Geometry-elective (2), Applied Mathematics- elective (1), Basic Concepts on Mathematics-elective (1), Elective Courses (7), Basic Computer Sciences (1), Computer Programming (6), Foreign Language (2), Ataturk principles and History of Revolution (2), Sevice Learning Course-choice (6), Scientific Research Methods-elective (3), Health Information and First Aid (24), Democracy and Human Rights (6)	61	34,5
Pedagogical Knowledge	Introduction to Educational Sciences (3), Teaching Principles and Methods (1), Educational Psychology (1), The Turkish Education System and School Management (13), Guidance (4), Special Education (4), Instructional Technology and Material Design (2) , Science and Technology Program and Planning (1)	29	8,2	Instructional Technology and Material Design (3) Introduction to Educational Sciences (1), Program Development and Training (5), the Turkish Education System and School Management (1), School Experience (3)	13	7,3

In Table 1, it is observed that both science teachers (44.5%) and mathematics teachers (49.7%) think will not contribute to the teaching profession field category more than others. It can said that Science teacher candidates

not deems necessary in terms of the teaching profession field courses such as Astronomy (29), Analytical Chemistry (24), Earth Science (26), Human Anatomy and Physiology (26). Also, Mathematics teacher candidates not deem necessary in terms of teaching profession field courses such as Topology (22), Functional Analysis (13), Numerical Analysis (16). Özkan and Sahbaz' (2012) studies examine the opinions of prospective teachers for the courses, and ultimately most of the courses' content has said they thought it was too much detail. In Table 1, it is observed that there are liberal education courses that they think will not contribute to the teaching profession. A liberal education is a system or course of education suitable for the cultivation of a free human being. Both science teacher candidates and mathematics teacher candidates find it not necessary to be said courses such as Scientific Research Methods, Service Learning Course, Ataturk's Principles and History, Foreign Language-Eng., Computers, Elective Courses for the teaching profession.

Examining pedagogical knowledge courses, it can said that teacher candidates think that courses such as Instructional Technology and Material Design, Introduction to Educational Sciences, the Turkish Education System and School Management do not contribute to the teaching profession.

In field training courses, it would be seen that Science teacher candidates Nature of Science and History of Science (26) and Maths teacher candidates the Subject Area Textbook Review (8) think do not contribute to in terms of teaching profession more than other courses.

Findings Related to the Second Sub-Problem of the Research

Teacher candidates were asked courses should be in the teacher education program. Examining the responses, the resulting categories are shown in the Table 2.

Table 2. Courses Should be in Teacher Training Program

	Science Teacher Candidates			Mathematics Teacher Candidates		
Category	Courses	f	%	Courses	f	%
Art	Art (1), Picture (17), Music (12), Caricature (1), Guitar (2), Piano (1), Photography (5) Theatre (1), Handcraft (1), Dance (1) , Sculpture(1)	43	24	Picture (2), Photography (2) Theatre (2), Radio and Television (2), Cinema (1)	9	10,2
Personal Development	Current Scientific Information (4) Personal Development (1), diction (12), Body Language (5), Fashion (1), Communication (3), Fine Writing (1), Mind Development (1), Reading Habits (1) Social Activity(1)	30	16,8	Liberal Education (3), Declamation-Diction (4) Ability for Empathy (1), Different Thinking Training (1), Social Activities-Trip (4)	13	14,8
Sport	Physical Education (20), athletics (2), Swimming (2), Mountaineering(1)	25	14	Swimming (1), Sports (1)	2	2,3
Technology	Information Technology Courses (1), Computer Programming (2), Animation Preparation (5), Smart Board Use (2)	10	5,6	Mathematical Programming (5), Web Design (4)	9	10,2
Field- Field Training	Food Science (2) Physiology (1) Quantum Physics (1), Basic Science Concepts (18), School Experience (14), Experimental Activity (6), Misconceptions in Science (9), Basic Physics (3), elementary Chemistry (2), Nature of Science (8)	64	35,7	Simple level / basic Math (17), Analysis (2), Basic Geometry (4), Misconceptions in Mathematics (8), Philosophy of Mathematics (2), History of Mathematics (2), Computer Aided Mathematics (1), More Teaching Practice (3)	39	44,3
Foreign Language	English (2), German (1), Multiple Languages (4)	7	3,9	English (1), Professional English (14), French (1)	16	18,2

Analyzing Table 2, the teacher candidates want to add to their teacher training program to the field/field training category more than others. It is seen that Science teacher candidates want to add to their program courses most often such as Basic Science Concepts (18), School Experience (14), and Misconceptions in Science (9). Mathematics teacher candidates mostly said that they wanted to add courses such as the level Simple / basic Math (17), Basic Geometry (4), and Misconceptions in Mathematics (8) to teacher training program. In addition, it can said that teacher candidates think courses such as arts, personal development and sports should be in their

program. In Table 2, Even though teacher candidates have already received English lessons in their teacher training program, it is added in their program thinking that in the program should be. This situation may be due to they think that the content of the course needs to be replaced or increased hours of course. Mathematics teacher candidates use the expression that "vocational English" is noteworthy. As stated by Şahin et al. (2013), despite some of teacher candidates think that some courses are necessary for teacher training courses, its contents are to be organized according to the needs.

CONCLUSION

Results obtained by examination of the findings may be listed as follows:

1. It was determined that teacher candidates thought field courses more than others will not contribute to the teaching profession.
2. It was determined that courses such as Scientific Research Methods, Service Learning Course, Ataturk's Principles and History, Foreign Language-Eng., Computers, Elective Courses in liberal education category were common, and these courses were written by thinking that they will not contribute to the teaching profession.
3. It was seen that courses such as Technology and Material Design, Introduction to Educational Sciences, the Turkish Education System and School Management in pedagogical knowledge category were common, and these courses were written by thinking that they will not contribute to the teaching profession.
4. It was seen that Science teacher candidates thought Nature of Science and History of Science will not contribute teaching profession, mathematics teacher candidates thought Subject Area Textbook Review courses will not contribute to teaching profession in field training category.
5. It was seen that teacher candidates in both departments wanted to learn basic concepts such as basic science concepts, basic maths which will be used when they were teacher.
6. Even though they have already received courses such as English, art, music, school experiences, the nature of science in their teacher training programs, it was seen that these courses were added again in their trainin program.

RECOMMENDATIONS

At the end of the study, the following suggestions may be submitted:

1. Considering courses identified in the study, the reasons why think they will not contribute teaching profession can be ascertained.
2. It may be questioned why again added to the program courses such as English, art, music, school experiences, the nature of science.
3. Pedagogical knowledge courses are basic of teacher training program and are located in the teacher educational process. It is one of the interesting results that Teacher candidates think that Pedagogocal knowledge will not contributing to the teaching profession. Thinking that why not contribute to this course may be the subject of future research.

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