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Competency level of geography students of the faculty of arts and science

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The present study aimed to determine the competency levels of geography students in their fields of study and reveal the relationship between their levels and some variables. Totally, 650 senior geography students studying in the faculties of arts and science in 10 different universities in 2013-2014 school term participated in the research. The results of the study suggested that sufficient level of knowledge in this field constituted statistically significant difference according to variables such as academic achievement, participation in social activities and field study, following scientific publications and activity in conferences, living with family in the same city and field of study in secondary school, while no significant differences were seen according to gender, choice of program, thought of teaching, anxiety, the school graduated from and the program followed in high schools. While increasing level of participation in field study influences positively level of competency, those not following any scientific publication in their field of study were reported to have lower levels of competency as compared to those who followed relevant publications.

Key words: Geography, education, candidate teacher competencies.

INTRODUCTION

Borders of science are expanding day by day, technology changes rapidly and 21st century, which is the age of knowledge, more are expected from individuals, consequently. Education sector needs to be in reconciliation with technology and must form competitive individuals in order to adapt to these rapidly changing conditions. In this respect, the role of teacher in education gets more and more important, which is the fundamental factor of education system since the quality

of education is in directly proportionate to qualities of teachers and their qualification in this system and functions accordingly.

To be a teacher is to take responsibility of educating a young generation on behalf of the community as teaching demands many good daily activities in the field of education (Sumbul, 2006). Teacher's understanding of generalization and inference in his/her own field, comprehension of differences from other fields,

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knowledge of these discrepancies between scientific thinking and criticizing or commenting about an art may lead to distinction in teaching and learning process (Ball and Cohen, 1999). Educational reforms conducted in the 1990s and 2000s suggested that in almost all of the countries, teachers passing through different types of education and teaching systems should have certain standards (Ozturk and Eroglu, 2013), which has become a hot topic in which various national and international researches are conducted and reports are prepared within the framework of educating teachers of the century, which is regarded as a future-based task.

Competency is defined as the core set of outcomes to be possessed (Sisman, 2000), ability needed, knowledge, skills and attitudes in order to overcome a task successfully (Alkan and Hacıoglu, 1997; Sahin, 2004). Competency can be explained as the level of qualification in any field.

The competencies expected from teachers in our country as in the rest of the world are one of the most controversial and studied topics. General competencies include knowledge, skills and attitudes in all teachers while professional qualifications are knowledge, skills and attitudes related to the relevant fields of study in order to implement duties of teaching effectively and efficiently (MEB, 2008). Teaching competency is an important factor that directly influences quality of education. Knowledge of teaching necessitates liberal arts and pedagogical knowledge and skills (Cakan, 2004). An individual who becomes a teacher as a result of reception of education in these fields is thought to have acquired competency in pioneering education of next generations (Kilic and Acat, 2007). In XIth national education council meeting, it was decided that 5/8th of teacher education curricula should be allocated for content knowledge (62, 5%); 2/8th for professional knowledge of teaching (25%) and 1/8th for liberal arts courses (12, 5%) (MEB 2006), which puts emphasis on the place of content knowledge. Content knowledge is regarded as a core component of teaching knowledge in all phases of education. All teachers, specifically, geography teachers are expected to give education defined by macro policies of the state. Therefore, geography teachers are strongly advised to have certain competencies and in case of lack of such competencies, they should be able to acquire them.

Content knowledge is the knowledge of teachers learned about the subject (Mishra and Koehler, 2006). A teacher whose content knowledge is sufficient is able to create necessary interest on the students, improve his/her own teaching method and strategies, and make the course more enjoyable. Teacher is responsible for several tasks such as selection of activities worth spending time, teaching in an explicative way, asking prolific questions, evaluating the students. Implementing these activities requires sufficient content knowledge on

the subject to be taught (Ball and McDiarmid, 1989). Shulman (1986) stated that the most distinguishing shortcoming to educate qualified teachers is the lack of content knowledge. Individuals are supposed to learn best about field in order to realize teaching activities. Being good in one's field is not a condition to be an influential teacher on its own but content knowledge is one of the most important elements.

The practice of teacher training at the faculty of arts and science first began at New York University and after criticisms against schools of education, it was decided that problems could be solved by giving the schools of arts and science the right to train teachers. In training teachers of primary and secondary schools, students are to get strong background in their fields at the schools of arts and science and teachers must know the topic to be taught, which would be possible only through the schools of arts and science (Carnegie Forum, 1986; Holmes Group, 1986; NCTAF, 1996).

The schools of arts and science increase students' level of knowledge in liberal arts and help students to improve their skills in questioning, analysis, critical thinking and decision and allow them to acquire content knowledge as well as teaching methods of teaching effectively (Petrie, 1986).

For Turkey to reserve its place in globally competitive arena and become competitive, "Geography Teacher Competencies" was published which consisted of 122 performance indicators with three principal areas of competency as well as teacher competencies in other fields in parallel with geography curriculum. "Competencies in Geography" were determined by Ministry of National Education (MEB) (2010) as follows:

1. Content knowledge
2. Knowledge of geography education
3. Possession of value and attitude of geography

Competency in content knowledge includes the use of geography methodology, doing position analysis, making applications related to climate, seizing geological formations, analyzing existence of water, evaluating existence of soil, comprehension of biogeography elements and demographic characteristics, analyzing inhabitation characteristics, assessment of economic system and processes and tourism phenomenon, and conducting culturally spatial analysis.

Geography curriculum (CDOP) was revised in 2005. Geography curriculum covers approaches depending on the developments in other countries such as student based learning, learning by experience, constructivist teaching, multiple intelligence theory based learning, active learning, research based teaching, problem-solving based learning and use of information and communication technology in geography (CDOP, 2005). Kent (2004)

argued that training of geography teachers is an academically controversial topic while no one pays enough attention to it. Kent states that the future of geography would be complicated unless there are “energetic, enthusiastic, inspiring and influential geography teachers”. In this respect, one should have very strong content knowledge to be a good geography teacher. Knowledge in geography teaching based on information consists of sub-competencies such as teaching knowledge, curriculum knowledge, organization knowledge and approach to geography of people to be taught geography. Candidate geography teacher receives background knowledge during his bachelor’s degree education (Karabag, 2007).

Advisable and useful geography education is possible only by means of well-trained geography teachers. Training people for teaching knowledge and skills and knowing what kind of competencies they have are essential since the most important dimension in functionality of geography is geography teachers (Karabag, 2002).

Most students that choose the schools of arts and science are candidate teachers of geography and therefore their level of competency in content knowledge is to reach a reasonable extent. Geography is not static but continuously changing and developing so it is necessary for geography teachers to get training in order to keep pace with such improvements. Contemporary and functional geography education is supplied only by well-trained teachers. What kind of knowledge, value and attitude to be taught in geography is crucial in which competencies are to be possessed or what kind of people to train as geographical consciousness appears in core content knowledge and what type of relations to have. Geographical consciousness can be acquired only through well-trained geography teachers (Karabag, 2007).

Aim and importance of the study

Most of the studies on education have concentrated on the students of the faculties of education. Although, most students studying at the faculties of arts and science prefer teaching as a profession, their reception of formation related to attitude, opinion and competency concerning teaching is very limited (Acat et al., 2005; Ozturk et al., 2005; Gurbuz and Kisoglu, 2007; Karagol et al., 2011; Tuna, 2013; Akar, 2014; Sezginet al., 2014). The present study was conducted to reveal competency in content knowledge of the senior geography students studying at the faculties of arts and science and who plan to work as teachers of geography after graduation. This study is expected to fill the gap in this field and contribute to the research on this subject and to teacher education programs at higher education institutions through

assessment of the role of major area course.

METHODOLOGY

Survey method was used in this study, a research approach generally used to describe an existing situation as it is, compare the relations between the variables and collect data at a given time (Karasar, 2008).

Participants

Totally, 650 senior geography students at the faculties of arts and science in 10 different universities studying in 2013-2014 school year voluntarily participated in the research. The faculties of letters of Ataturk University, Ege University, Istanbul University and the faculties of arts and science of other universities (Kahramanmaraş Sutcu Imam University, Kilis 7 Aralık University, Afyon Kocatepe University, Harran University, Canakkale Onsekiz Mart University, Ondokuz Mayıs University and Balıkesir University) were enrolled in the study. The fact that the study is limited to senior students is as a result of the fact that they are the last year students because the field competencies of these candidates to pedagogical training in the last year are to be examined according to the objectives of the study before they become teachers.

Data collection tools

Personal questionnaire

The personal questionnaire contain gender, the reason for the choice of the department, thought of teaching, anxiety level, alma mater, program at high school, grade point average, participation in social activities and field study, follow-up of scientific publications, participation in conferences, the place of residence inhabited with family and field variables at secondary school.

Special field competency scale

Taking geography curriculum put into act in 2005 and geography field competency criteria of MEB as fundamental criteria, “Pre-service Teacher’s Knowledge Competency in Geography” scale developed by Karademir (2013) was used. 5 point likert type scale was used and each item was scored as 5 for “strongly agree”, 4 for “agree”, 3 for “somewhat agree”, 2 for “disagree” and 1 for “strongly disagree”. The data were analyzed depending on their properties and SPSS program was used for the analysis.

Data analysis

Analyzing the data collected in the study, independent sample test (t-test) was used for binary comparisons in which independent variables are based on dependent variables while one-way variance analysis (ANOVA) was conducted for group comparisons. In analysis of variables that are not to meet parametric test assumptions for binary comparisons, Mann Whitney U test and for group comparisons, Kruskal Wallis test were used.

In the case of difference between groups, to find the source of this difference, LSD and Mann Whitney U test were used. Cronbach Alpha reliability coefficient of the data obtained for field knowledge was found to be 0.949. Statistical significance level was assumed as $p < 0.05$.

Table 1. Distribution of students and their scores in content competence in the participating universities.

Name of the University	n	%	Mean	SD
Kahramanmaras Sutculmam University	89	13.7	141.70	19.16
Kilis 7 Aralik University	39	6.0	143.28	13.64
Afyon Kocatepe University	85	13.1	145.70	22.93
Harran University	60	9.2	148.76	18.77
Ataturk University	119	18.3	153.27	20.36
Ege University	38	5.8	148.42	24.56
Istanbul University	38	5.8	142.94	24.16
Canakkale Onsekiz Mart University	35	5.4	150.80	15.26
Ondokuz Mayıs University	63	9.7	148.25	23.97
Balikesir University	84	12.9	137.53	21.14
Total	650	100.0	146.14	21.29

Table 2. Results of analysis (t-test) of the participants according to program.

Program	n	Mean	SD	t	p	
Content Knowledge	Daytime education	404	146.09	21.77	-0.078	0.938
	Evening education	246	146.22	20.52		

Table 3. Results of analysis (t-test) of the participants according to gender.

Gender	n	Mean	SD	t	p	
Content Knowledge	Female	261	144.51	20.73	-1.598	.111
	Male	389	147.23	21.62		

RESULTS

The findings related to the data collected from the participants are given the tables.

In Table 1, totally, 650 geography students from the schools of arts and science of which 89 are from Kahramanmaras Sutcu Imam University (Mean = 141.70), 39 from Kilis 7 Aralik University (Mean = 143.28), 85 from Afyon Kocatepe University (Mean = 145.70), 60 from Harran University (Mean = 148.76), 119 from Ataturk University (Mean = 14153.27), 38 from Ege University (Mean = 148.42), 38 from Istanbul University (Mean = 142.94), 35 from Canakkale Onsekiz Mart University (Mean = 150.80), 63 from Ondokuz Mayıs University (Mean = 148.25), 84 from Balikesir University (Mean = 137.53), participated in the study.

According to Table 2, no statistically significant difference was found in content knowledge average scores according to program variable of the participants ($p > 0.05$). Students in both daytime education and evening education have very similar scores. According to

Table 3, no statistically significant difference was found in content knowledge average scores according to gender of the participants ($p > 0.05$).

According to Table 4, the findings show that most are graduates of general high school while the least are graduates of Anatolian High School. No statistically significant difference was found in content knowledge average scores according to type of alma mater of the participants ($p > 0.05$). Table 5 shows that statistically significant difference was found in content knowledge average scores according to program at high school ($X^2 = 11.285$; $p < 0.05$). Those who are graduates of social sciences program are reported to have most content knowledge as compared to others.

Table 6 suggests that statistically significant difference was found in content knowledge average scores according to place of residence ($F(2,647) = 3.080$; $p < 0.05$). The test showed that the source of this difference is the average scores between the inhabitants in the district (Mean = 148.86), in the center of the county (Mean = 144.78) and village (Mean = 144.26).

Table 4. Results of analysis (ANOVA) of the participants according to secondary alma mater.

Alma mater		n	Mean	SD	F	p
Content Knowledge	Anatolian teacher high school	15	145.20	13.12	0.704	0.550
	Anatolian High School	66	142.63	21.16		
	General High School	526	146.63	21.84		
	Others	43	145.81	16.41		
	Total	650	146.14	21.29		

Table 5. Results of analysis (Kruskal Wallis) of the participants according to program at high school.

Program		n	Mean	SD	X ²	p	Diff. U test
Content Knowledge	1. Social Sciences	580	146.87	21.03	11.285	.014*	1>3
	2. Turkish-Mathematics	50	142.56	18.14			
	3. Others	20	134.05	30.93			
	Total	650	146.14	21.29			

*p<0.05.

Table 6. Results of analysis (ANOVA) of the participants according to their place of residence.

Place of residence		n	Mean	SD	F	p	Diff. LSD
Content Knowledge	1. Village	157	144.26	22.69	3.080	0.047*	2>1.3
	2. District	236	148.86	19.37			
	3. County	257	144.78	21.91			
	Total	650	146.14	21.29			

*p<0.05.

Table 7. Results of analysis (ANOVA) of the participants according to participation in conferences.

Status of participation		n	Mean	SD	F	p	Diff. LSD
Content Knowledge	a) Never	84	138.38	20.95	7.429	0.000*	a<b,c,d b<c,d
	b) 1-3 times	280	144.63	20.26			
	c) 4-6 times	169	149.50	22.37			
	d) More than 7 times	117	150.48	20.62			
	Total	650	146.14	21.29			

*p<0.05

According to Table 7, statistically significant difference was found in content knowledge average scores according to participation in conferences (F(3.646)=7.429; p<0.05). The difference is (Mean= 138.38) for those who stated “never”; (Mean=144.63) for those who stated 1-3 times (Mean=149,50), 4-6 for those who stated times and

(Mean=150,48) more than 7 times. It can be concluded that increasing number of participation in such activities as conferences related to their professional competency would contribute to their content knowledge.

Table 8 shows that statistically significant difference was found in content knowledge average scores

Table 8. Results of analysis (ANOVA) of the participants according to their following academic publications.

Status of Following Scientific publications		n	Mean	SD	F	p	Diff. LSD
Content Knowledge	1. Not following	155	138.92	22.66	9.228	0.000*	1<2.4
	2. Only Academic Journal	392	148.93	19.99			
	3. Only Magazines	48	143.10	24.59			
	4. Others	55	149.25	18.46			
	Total	650	146.14	21.29			

*p<0.05.

Table 9. Results of analysis (ANOVA) of the participants according to participation in field study.

Participation in field study		n	Mean	SD	F	p	Difference LSD
Content Knowledge	a) Never	65	139.72	18.40	4.990	0.002*	a<c,d b<c
	b) 1-3 times	289	144.34	20.51			
	c) 4-5 times	186	149.72	22.55			
	d) more than 6 times	110	148.61	21.55			
	Total	650	146.14	21.29			

*p<0.05.

Table 10. Results of analysis (ANOVA) of the participants according to anxiety level.

Anxious		n	Mean	SD	F	p
Content Knowledge	Yes	454	146.28	20.31	2.304	0.101
	No	96	142.51	26.26		
	Partial	100	148.98	20.02		
	Total	650	146.14	21.29		

according to following scientific publications ($F(3.646)=9.228$; $p<0.05$). In a study to find which groups difference exists, it was found that those who are not following any scientific publication have less average score of competency than those who follow academic journals and others.

Table 9 suggests that statistically significant difference was found in content knowledge average scores according to their participation in field study ($F(3.646)=4.990$; $p<0.05$). In the LSD test conducted to find the source of this difference, it was found that significant difference was in favor of those who had the opportunity to participate more in field studies.

Table 10 shows that those who had the highest score in content knowledge were the ones that experience partially the anxiety of finding a job considering average scores in anxiety of finding a job variable (Mean=148.98) but no statistically significant difference was found

between average scores in content knowledge according to anxiety level ($F(2.647)=2.304$; $p>0.05$).

According to Table 11, no statistically significant difference was found between average scores in content knowledge according to their plan to teach ($p>0.05$). 534 participants stated their willingness to teach while only 116 students asserted their plan to conduct academic studies or work in private sector. Table 12 suggests that no statistically significant difference was found between average scores in content knowledge according to the reason for the choice of specific program ($F(5.644)=1.166$; $p>0.05$).

Table 13 shows that statistically significant difference was found between average scores in content knowledge according to the status of participation in social activities ($F(2.647)=10.467$; $p<0.05$). In the LSD test to find the source of difference, significant increase in competency in content was found in favor of those who participated

Table 11. Results of analysis (t-test) of the participants according to their intention to teach.

Plan to teach		n	Mean	SD	t	p
Content Knowledge	Yes	534	146.39	20.72	0.634	0.527
	No	116	145.00	23.82		

Table 12. Results of analysis (ANOVA) of the participants according to the reason for selecting the geography program.

Reason for that choice		n	Mean	SD	F	p
Content Knowledge	My parents want it	61	144.68	20.20	1.166	0.325
	To be a teacher	278	145.36	22.31		
	To be socially beneficial	53	142.73	19.04		
	OSS score history	185	147.20	18.89		
	Respected job	30	152.80	26.71		
	I like it	43	148.25	23.92		
	Total	650	146.14	21.29		

OSS= University admission score.

Table 13. Results of analysis (ANOVA) of the participants according to the status of participation in social activities.

Status of participation		n	Mean	SD	F	p	Difference LSD
Content Knowledge	1. Never	33	132.27	25.20	10.467	.000*	1<2,3 2<3
	2. Sometimes	418	145.48	21.12			
	3. Often	199	149.82	19.94			
	Total	650	146.14	21.29			

*p<0.05

more in social activities.

Table 14 suggests that statistically significant difference was found between average scores in content knowledge according to GPA ($X^2 = 14.424$; $p < 0.05$). To find the source of this difference, U test was conducted and the difference was between those whose GPA was below 2.00 (Mean = 140.97) and between 2.00 – 2.50 (Mean = 145.25) and those with 3.01-3.50 (Mean = 147.40) GPA and 3.51-4.00 (Mean = 164.75).

According to Table 15, total score of professional competencies of the participants is “3.74”, which is equal to “agree” in the scale. This may be shown as very good in the geography students who plan to teach geography in the future with higher score of competency in content knowledge.

DISCUSSION

The data of the present study suggest that no statistically

significant difference exists in content knowledge average scores according to gender of the geography students at the faculty of arts and science (Table 3). Coskun et al. (2009, 2010) found in their studies similar results. This may be due to the same curriculum followed in all faculties of arts and science oblivious of gender difference. It can also be expressed that emotional qualifications for gender do not have so much functions as to have an impact on the field competency.

In the study, the same curriculum conducted and teachers teaching the courses in both daytime and evening education may account for the lack of statistically significant difference between average scores in content knowledge according to curriculum. Coskun et al. (2010) found significant difference in favor of Turkish teacher candidates following evening education while Kahramanoglu and Ay (2013) stated significant difference in favor of classroom teacher candidates receiving daytime education.

The findings in the present study suggest that most

Table 14. Results of analysis (Kruskal Wallis) of the participants according to academic grade point average.

Academic GPA	n	Mean	SD	X ²	p	Difference U test	
Content knowledge	a) Below 2	37	140.97	20.60	14.424	0.006*	
	b) Between 2-2.5	139	145.25	20.47			a<d,e
	c) Between 2.51-3.00	291	145.95	19.80			b<e
	d) Between 3.01-3.50	175	147.40	24.25			c<e
	e) Between 3.51-4.00	8	164.75	10.93			d<e
Total	650	146.14	21.29				

*p<0.05

Table 15. Scaled average scores of competency level of the participants in content knowledge.

Scale	Frequency	Score	Total
Absolutely disagree	515	1	515
Disagree	1740	2	3480
Somewhat agree	7065	3	21195
Agree	10343	4	41372
Absolutely agree	5686	5	28430
Total	25349		94992
Score in content knowledge		146.14	
Average score in content knowledge		3.74 (Agree)	

Content knowledge (CK) score = (total score/total subjects); Average score in content knowledge = (total score/total frequency).

geography students are graduates from general high school while only a small number is from Anatolian teacher high school according to their alma mater (Table 4). Taking into consideration alma mater of the students, common curriculum and equal education provided may account for the lack of statistically significant difference between average scores in content knowledge regardless of the alma mater of geography students at the faculties of arts and science. Researches showed that alma mater did not make any difference (Coskun et al., 2009, 2010; Eraslan and Cakici, 2011; Karademir, 2013). It can be concluded that generally, graduates from general high schools prefer to choose geography departments, and science high school and Anatolian high school graduates select the programs which require higher scores in university placement examination and that successful students graduating from general high schools prefer to choose programs run by the schools of arts and science for which medium level of score in the exam is required.

Statistically significant difference was found between average scores in content knowledge according to program at high school (Table 5). This may be due to the fact that geography course is not compulsory in science program at high school, duration of instruction of

geography in Turkish-Mathematics program is not sufficient and that geography is required and the hours of instruction are more than required in social sciences program. In the present study, it was found that the student profile reflects this reality and graduates from social sciences program are more than those from Turkish-Mathematics program and students from science program do not choose this department. Ozgen and Bindak (2009) reached similar results in the research. Considering the instruction of geography as a social science course at high schools, this difference is thought to be an expected result of the study.

Average scores in content knowledge vary whether the place of residence is village, district or county (Table 6). That the level of education and study opportunities in county are good enough while living with geographic environment in the village may result to similarity between average scores in content knowledge in terms of county and village. Sophisticated education conditions in county ensure theoretically geographic information while in village such information is acquired by living nature. This may be the reason why content competency level of students living in both settlements shows similarity. Cin (2008) argued that geographic information of children is

closely related with their direct interaction with geographic environment they live and students in rural areas like geography more, accordingly. In addition, Ozgen and Bindak (2009) pointed out that children with rural life background have more interest and attitudes toward geography.

Statistical differences between average scores in content knowledge vary from those who never participate in conferences, those participating in these conferences 1-3 times, 4-6 times and more than 7 times (Table 7). The more the number of participation of geography students in conferences related to their field of study, the more their content knowledge increases. Participation in conferences contributes to geography students' professional experience and helps them dominate their field.

The results of the study show that those who are not following any publication have lower scores of competency than those following academic journals and other publications (Table 8). Elmas (2006) and Turker (2008) in their studies reached similar results: those reading books and journals are more competent in content knowledge.

It is highly difficult for one to learn a discipline in closed settings, which gets at least 50% of its "theme" from natural environment. Therefore, geography courses should be supported by trips, observations and specifically field studies (Ozgen, 2011) because the laboratory of geographic researches is nature itself (Garipagaoglu, 2001). In the present study, professional competency difference was found to be statistically significant between average scores in content knowledge according to participation in field studies during their education (Table 9). As compared to those who never had experience in field study or participated 1-3 times in the study, those who experienced the field study 4-5 times or more than 6 had higher professional competency. Korkmaz (2006), Cagliyan and Ozan (2004) in their researches found similar results. The increase in participation in field study suggested a positive impact on competency level.

In Turkey, 33 departments of geography and geography education exist, 17 of which have evening education. In addition, there are other 15 that plan to admit students after having enough lecturers. In the coming years, 40 departments of geography are expected. Educated unemployed youth and unemployment become more and more common among the graduates of geography and geography education in Turkey (Kaya, 2014). Lack of title of geographer as a profession, what the graduates of geography do after school, what qualifications and missions they should have are not clarified before the laws, which is effective on unemployment. The number of geography teachers appointed remains too low as compared to that of graduates (Ilhan et al., 2013). The

limited number of employment opportunities for geography graduates (Unaldi ve Alaz, 2008) make the students have very important employment problems (Gokce, 2009; Ilhan et al., 2013; Sandal and Karademir, 2013; Kilinc and Ates, 2014). Just as university students are anxious about job opportunities after school, so the geography students have anxiety over finding a job and profession in the future (Karakuyu, 2008; Kilinc, 2013; Kilinc and Ates, 2014). Besides, the exams like public personnel selection examination, academic personnel and postgraduate education entrance exam, foreign language examination after graduation lead to an increase in such anxiety (Kaya et al., 2014). In this study, no statistically significant difference was found between average scores in content knowledge according to anxiety level of finding a job (Table 10), but considering average scores, those who experience partial anxiety have the highest average score of competency in content knowledge. Yilmaz and Cokluk (2010) stated that research anxiety level of graduates from the faculty of arts and science was not high. This may be related to the fact that the right of teaching has not been given periodically for the graduates of the schools of arts and science and after 2014, this right was reserved for those who met certain criteria.

Most participants in this study stated preference for teaching, only a small number wanted to do academic work or find a job in private sector (Table 11). Since most prefer to teach, it is clear that their objective is to become teachers and this is why they prefer the faculty of arts and science.

No statistically significant difference was found between average scores in content knowledge according to the reason for the choice of the program (Table 12) but the fact that students stated they selected this department to become a teacher right before the university entrance exam suggests they study in this department with the aim of teaching. Gurbuz and Kisoglu (2007) found similar results.

Statistically significant difference between average scores in content knowledge according to participation in social activities is important in that it shows an increase in field competencies (Table 13). Participation not only in field courses but also other social activities may make students change their social opinions and look at geography from a wider perspective.

Statistically significant difference was found between average scores in content knowledge according to GPA (Table 14) and students' level of competency was in parallel with their GPA. Saracaloglu et al. (2009) and Kahramanoglu and Ay (2013) found similar results while Coskun et al. (2010) reported no statistically significant difference between their competency perception according to teacher candidates' academic achievement. Higher GPA suggests higher motivation for geography

students to learn and master their field of study. Therefore, the higher their GPA is, the more competent they acquire regarding teaching profession. Quality of education received during higher education and individual efforts may also be effective on the competency.

Competency in content knowledge helps teacher to be confident and enjoy the class answering the questions of the students (Kucukahmet, 2008; Davis, 2003). To be a competent teacher is to be competent in content knowledge (Mendro, 1998). In terms of professional levels of the participants, total score in content knowledge obtained is equal to 3.74, which means “yes, I participate” in the competency scale. In this case, geography students at the schools of arts and science seem “competent” in content knowledge (Table 15). Competency of students in content knowledge is important in that they command the course.

Conclusion

Content knowledge is the basic for all teachers. In the present study, the level of participants’ content knowledge was found “competent”. In this context, educational curriculum prepared to train geography teacher candidates to pedagogical training at the faculties of arts and science achieved its objective. In addition, gender, the reason for the choice of geography discipline, plan to teach, anxiety and the high school alma mater as well as the type of program at high school did not have any significant difference in content knowledge of geography students while academic GPA, participation in social activities, field studies and conferences, follow-up scientific publications, place of residence with family, programs at high school led to significant difference.

All geography students are taught common curriculum and provided equal level of education regardless of gender differences, daytime or evening education, and type of their alma mater. Therefore, gender, the reason for the choice of geography discipline, plan to teach, anxiety and the high school alma mater as well as the type of program at high school do not affect their content knowledge. However, their participation in conferences related to their field of study, field studies and in all social activities, reading books and journals, higher GPA led to an increase in the level of their content knowledge. A variety of education cycles and opportunities of education in county, living together with geography in village help students from these areas to have higher level of content knowledge. It was found that geography students prefer to teach in this department most after school.

Recommendations

Geography students should be encouraged to participate

from time to time more in conferences, field studies, and social activities and follow related scientific publications during their bachelor’s degree period so that the level “competent” in content knowledge gets advanced. In addition, they are advised to be updated by the professional advances, catch up with the time and have a geographic perspective.

Since it is possible for students at the faculties of arts and science to become teachers, activities and opportunities must be created during the process. The studies in the coming years must focus on teaching geography and be conducted on different variables and greater groups. For instance, attitudes of geography students towards teaching may be researched and competencies of academics in the departments of geography at the schools of arts and science are to be examined.

Conflict of Interests

The author has not declared any conflicts of interest.

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