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Prospective teachers' conceptions of teaching and learning and their attitudes towards multicultural education

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This study aims to analyze the conceptions of the senior students at the faculty of education along with their attitudes towards multicultural education according to gender and department variables, and to identify degree to which their conception of teaching and learning predicts their attitudes towards multicultural education. A total of 278 prospective teachers, including 190 female and 88 male, who are attending the Faculty of Education of Cumhuriyet University participated in the study, which was conducted using a relational screening model. Data were collected using the Teacher Multicultural Attitude Survey (TMAS) and the Teaching and Learning Conceptions Questionnaire (TLCQ). Data obtained in the study was analyzed using One-Way Anova, Scheffe Test and Multiregression analysis. According to the findings of these analyses, the prospective teachers' conceptions of teaching and learning, and their multicultural educational attitudes varied significantly depending on the variables of department and gender. The prospective teachers' conceptions of teaching and learning predicted their attitudes towards multicultural education at a significant level. The obtained results were discussed in the light of the relevant literature, and were made for future studies.

Key words: Conceptions of teaching and learning, multicultural education, prospective teachers.

INTRODUCTION

Teachers' pedagogical and content knowledge, as well as their specific characteristics, influence classroom behavior, instructional practices and the learning environment that they create. In the late 1980s, there were an increasing number of studies aimed at teachers' beliefs, including their beliefs on education, teaching-learning beliefs, and self-efficacy beliefs (Chan and Elliott, 2004).

Knowing the belief structures of teachers and prospective teachers is crucial in improving their education and professional readiness (Pajares, 1992). In addition, these beliefs related to teaching and learning affect how they learn, and how they interpret pedagogical knowledge, how they conceptualize instructional tasks, their teaching decisions, as well as classroom practices (Uzuntiryaki and Boz, 2007).

Conceptions of teaching and learning refer to the beliefs that the teachers have regarding the methods of teaching and learning that they prefer. These beliefs include the meaning of teaching and learning, and the

roles of teachers and students. There are two main approaches towards teaching and learning: namely, traditional and constructivist (Clements and Battista, 1990; Chan and Elliott, 2004).

Teaching and learning approaches are classified by some authors as teacher-centered/content-oriented or student-centered/learning-oriented (Entwistle et al., 2000; Cheng et al., 2009). In the traditional approach, the teacher-student interaction is limited, transfer of knowledge is one-way from the teacher to the student, and it includes the use of teacher-centered teaching strategies. The traditional approach takes the teacher as the source of knowledge, and students as passive recipients. This approach particularly emphasizes the acquisition of knowledge from the teacher and textbook (Chan and Elliott, 2004; Cheng et al., 2009). Learning in teaching-learning environments with a traditional approach is encouraged by the use of such factors as reward, punishment, repetition etc. An environment is created where everything is determined, presented and controlled by the teacher (Açıkgöz, 2011).

Constructivism is a learning approach in which students acquire the necessary knowledge on their own, as part of active learning that the teacher establishes and under the guidance of the teacher, and in which they construct and interpret this knowledge based on their previous experiences (Doğanay and Sarı, 2012). The views of Piaget, Dewey, Vygotsky, Bruner and von Glassersfeld were influential in the development of the constructivist learning approach (Açıkgöz, 2011; Demirel, 2011). According to the notions that forms the basis of constructivism, the learner should individually discover and transform complex knowledge in order to integrate what they learn within themselves (Slavin, 2012). Constructivist conception emphasizes creating active learning environments that support critical thinking, research and cooperation (Chan and Elliott, 2004).

Student-centered teaching strategies are used and it is emphasized that, in student-centered teaching strategies, learning takes place in a reflective and interactive process in which teachers have a guiding role (Cheng et al., 2009). What the teacher is required to do is to act as an intermediary between the student and the curriculum, to facilitate the students' knowledge construction process (Açıkgöz, 2011). In the constructivist approach, the basic components of the learning environment is the learner, and constructivist teachers recognize and promote the students' autonomy and initiative, ensuring that they think freely, communicate with each other, act inquisitively by asking open-ended questions, construct links relating to the content, and create metaphors (Brooks and Brooks, 1999).

According to the constructivist approach, the learners integrate what they have just learnt with their gains from previous experiences to create their own constructs of meaning. Therefore, the individual is not a passive recipient, but an active subject or participant (Karadağ and Korkmaz, 2007). The teaching and learning conceptions that teachers adopt affect the various characteristics they show during the teaching process. Studies related to the conceptions of teaching and learning show that there is a direct relationship between these conceptions, teaching approaches and learning products. For example; Gow and Kember (1993) found a relationship between the teaching conceptions of instructors and the learning approaches of students (Boulton-Lewis et al., 2001).

In a study conducted by Trigwel and Prosser (1996), a strong relationship was between teaching conceptions and teaching approaches. Baş and Beyhan (2013) studies on the relationship between prospective teachers' teaching and learning conceptions and student control ideologies found a significant negative relationship between prospective teachers' constructivist teaching and learning conceptions and student control ideologies, and a significant positive relationship between traditional teaching-learning conceptions and student control ideologies. A study conducted by Baş (2015) on the relationship between teachers' educational philosophy beliefs and their teaching-learning conceptions found a relationship between constructivist teaching-learning conception and progressivism, existentialism, and reconstructionism; and also between traditional teaching-learning conception and essentialism and perennialism. Oğuz (2011) found significant relationships between prospective teachers' democratic values and their teaching-learning conceptions.

New approaches towards learning and teaching highlight the importance of supporting the student's autonomy and individual differences during the learning process. Teaching needs to be constructed according to students' individual differences. It can be said that the experiences that students gain from their cultures constitute a significant aspect of the individual differences that are reflected in the teaching environment. For various reasons, many people have to migrate within their own country or to other countries. These migrations reveal multicultural demographical structures of individuals, families and groups belonging to diverse cultures and subcultures across the world. This new fabric, composed of social differences, is conceptualized as multiculturalism (Haas, 2008; Hatton, 2003); therefore, with its wide range of aspects, this concept is currently a subject for various disciplines ranging from sociology to political science, and from philosophy to pedagogy (Yazıcı et al., 2009). The concept of multiculturalism expresses a sensitiveness on race, ethnicity, language, sexual orientation, gender, age, disabilities, social class, education, religious preference, and other cultures (Kaya and Aydın, 2014).

Multicultural education, on the other hand, refers to the educational aspect of multiculturalism. Multicultural

education is an educational reform arguing that all students, irrespective of their gender, social class, race, ethnicity, and culture, should have the same educational opportunities at school (Banks, 2013). Parekh (2002) states that multicultural education involves intellectual curiosity, self-criticism, independent decision-making by considering opinions and evidences, respect for others, sensitivity for other ways of thinking and living, and activities aimed at moving away from ethnocentrism (Başbay and Bektaş, 2009). When the definitions on multicultural education are evaluated in a holistic manner, it is seen that respecting human rights, tolerating cultural differences, equality of opportunities in education, adjusting educational environments reflecting the cultural varieties, and analyzing the different perspectives and ideas are listed (Cırık, 2008). Banks (2013) states that multicultural education aims to reduce cultural prejudice, offer various cultural options to students, and provide them with the knowledge, skills and approaches that they need in order to communicate with different cultures in their own communities.

Banks (2008) discussed five significant dimensions of multicultural education: content integration, knowledge construction, prejudice reduction, equity pedagogy, and empowering school culture (Banks, 1993; Banks, 2013; Slavin, 2012). Content integration enables the teacher to explain key concepts, principles, generalizations and theories by making use of examples, data and knowledge from various cultures and groups. *Knowledge construction* is a dimension that helps children understand how knowledge is constructed, and how individuals and groups are affected by their race, ethnicity and social class. *Prejudice reduction* is the most important objective of multicultural education, and means that teachers use classes and activities that will help students develop positive attitudes towards different racial, ethnic and cultural groups. *Equity pedagogy* is the use of teaching techniques that facilitate the academic success of students from different ethnicities and social classes. *Empowering school culture* requires structural changes in the school environment, in order to perceive the school as a part of the change and for students from all groups to have an equal opportunity for success.

Teachers assume a primary role in teaching concepts such as equity, respect and peace, which form the basis of multicultural education, and offer equal opportunities of success to all students (Fong and Sheets, 2004; cited in Kaya and Aydın, 2014). Banks (2013) addressed the necessity for teachers and all staff working in schools to have knowledge concerning respect for different identities, democratic attitudes and values, as well as the implementation of a multicultural education program, in order to realize the multicultural education conception.

Teachers need to create a suitable classroom environment for reaching students with distinct qualities and characteristics; they should also see individual differences not as a problem, but as a component that enriches the learning environment. Designing such as process is a basic professional skill for teachers. It is therefore critical for teachers to be able to understand the effects of culture on education, multiculturalism and the concept of equality during the learning and teaching process (Başbay, 2014).

Studies on the features required by a multicultural educational environment show a similarity with the views proposed by new teaching and learning approaches. For example, the constructivist approach in teaching and learning is seen as a key component of transformative and multicultural education (Banks, 2013). That is because, in sociocultural constructivism, the interaction of the individual with their culture and their experiences play a significant part in the learning process. As stated by Başbay and Bektaş (2009), it is of vital importance for teachers to have a constructivist perspective with regards to multicultural education. The knowledge which students bring to school based on their personal and cultural experiences forms the basis of their learning. Disregarding this source means the denial of the students' knowledge construction process.

The fact that multicultural education requires teachers to have various points of view with regards to teaching-learning processes makes it vital to study prospective teachers' conceptions on teaching and learning, as well as their attitudes towards multicultural educational.

The purpose of this study is to examine prospective teachers' conceptions of teaching and learning and their multicultural educational attitudes based on the variables of gender and department, and to determine the relationship between conceptions of teaching-learning and multicultural educational attitudes. In line with the abovementioned aim, answers were sought to the following questions:

1. What is the level of the prospective teachers' attitudes towards multicultural education and their conceptions of teaching and learning?
2. Do the prospective teachers' attitudes towards multicultural education and their conceptions of teaching and learning differ significantly by gender?
3. Do the prospective teachers' attitudes towards multicultural education and their conceptions of teaching and learning differ significantly by department?
4. Do the prospective teachers' conceptions of teaching and learning significantly predict their attitudes towards multicultural education?

METHODOLOGY

The relational screening model was used in this study. Relational screening models are research models that aim to identify the existence and/or degree of covariance between two or more variables (Karasar, 2006).

Table 1. Demographic data for sampling.

Variable		N	Percentage
Gender	Female	190	68.3
	Male	88	31.7
	Total	278	100
Department	Preschool teaching	66	23.7
	Social sciences teaching	38	13.7
	Science education	36	12.9
	Classroom teaching	40	14.4
	Turkish education	32	11.5
	Secondary school mathematics education	35	12.6
	Primary school mathematics education	31	11.2
	Total	278	100

Study sample

The study sample comprised senior university students from the Departments of Preschool Teaching, Classroom Teaching, Primary School Mathematics Education, Secondary School Mathematics Education, Turkish Education, Social Sciences Education, and Science Education. Demographic data for the study sample are given in Table 1.

Data collection tool and the collection of data

Data were collected using the teaching and learning conceptions questionnaire and teacher multicultural attitude survey.

Teacher multicultural attitude survey (TMAS)

The teacher multicultural attitude survey (TMAS) was developed by a group of researchers led by Ponterotto (1998) and adapted into Turkish by Yazıcı et al. (2009). Reliability score of the scale is 0.75. The scale was originally one-dimensional, but did not emerge as one-dimensional in the analysis of key components for the reliability of the scale performed by Yazıcı et al. (2009). Yazıcı et al. (2009) reported this to be due to the scale for quantifying multiculturalism having a theoretically difficult structure in the original study. The reliability score of the scale was found to be 0.71.

Teaching and learning conceptions questionnaire (TLCQ)

This scale was developed by Chan and Elliot (2004) to determine the teaching-learning conceptions of prospective teachers and was adapted by Aypay (2011) into Turkish. The scale is a five-point Likert type scale consisting of two dimensions, which are the constructivist conception (12 items) and traditional conception (18 items). Cronbach's Alpha coefficient calculated for the whole scale is 0.71, while subscale reliability values are 0.88 and 0.83 (Aypay, 2011). In this study, the reliability score for the constructivist subscale and traditional subscale were determined as 0.84 and 0.78, respectively.

Data analysis

Mean scores and standard deviations were calculated to determine the prospective teachers' teaching-learning conceptions and their multicultural educational attitudes. Since both were rated as 5-point Likert scale and had four intervals, the interval was accepted as 0.8. The value obtained based on the mean scores was interpreted according to the following levels: 1-1.8= strongly disagree; 1.8-2.6= disagree; 2.6 -3.4=neither agree nor disagree; 3.4-4.2=agree and 4.2-5.0=strongly agree. The normality of distribution was first tested using the Kolmogorov-Smirnov test and, based on analyses allowing for the extreme values to be rearranged in a way that would not influence the distribution, the distribution was found to be normal. Thus, an independent t test was conducted to determine the difference of teaching-learning conception and multicultural educational attitude levels, while a One-Way Anova test was conducted based on the department variable. Multiregression analysis was carried out to establish whether the prospective teachers' teaching-learning conceptions significantly predicted multicultural educational attitudes.

RESULTS

This section includes the results concerning the sub-problems of the study.

1. What is the level of the prospective teachers' attitudes towards multicultural education and their conceptions of teaching and learning?

Mean scores and standard deviations were calculated to reveal the level of multicultural attitude questionnaire and teaching-learning conception survey scores, and these acquired data are included in Table 2.

As can be seen in Table 2, the prospective teachers' multicultural attitude survey mean scores were $\bar{X} = 3.65$, at a level of agreement. It was seen that the constructivist teaching-learning conception subscale score was $\bar{X} = 4.17$ and standard deviation was 0.61 at a level of agreement, while traditional teaching-learning conception mean score was 2.69 and standard deviation was 0.64, at a level of neither agreement nor disagreement. Based on these results, it can be said that the prospective teachers'

Table 2. Mean scores and standard deviations of multicultural education and teaching-learning conception scores.

Scales	$\overline{X}$	SD
Multicultural educational attitude	3.65	0.45
Constructivist teaching-learning conception	4.17	0.61
Traditional teaching-learning conception	2.69	0.64

Table 3. t Test results for multicultural educational attitude and teaching-learning conceptions based on gender.

Scales	Gender	N	$\overline{X}$	t	p
Multicultural education	Female	190	3.73	4.13*	0.00
	Male	88	3.49		
Constructivist	Female	190	4.26	3.37*	0.00
	Male	88	3.98		
Traditional	Female	190	2.57	4.54*	0.00
	Male	88	2.96		

multicultural educational attitudes are positive, and that they mainly adopt a constructivist teaching-learning conception.

An answer was sought to the second sub-problem of the second study, that is, "Do the prospective teachers' attitudes towards multicultural education and their conceptions of teaching and learning differ significantly by gender?" The t test results to determine whether prospective teachers' multicultural educational attitudes and teaching-learning conceptions differed by gender are given in Table 3.

According to Table 3, the prospective teachers' multicultural educational attitudes and their teaching-learning conceptions significantly differed according to gender in the constructivist and traditional conception subscales (p<0.05). Considering multicultural education attitude scores, it was found that the female prospective teachers ($\overline{X}$=3.73) had a significantly higher mean score than the male ($\overline{X}$=3.49) ($t_{278=}$4.13, p<0.05). It was also found that, with regards to the constructivist teaching-learning conception, the female prospective teachers had significantly higher ($\overline{X}$=4.26) mean scores than the male ($\overline{X}$=3.98) ($t_{278=}$3.37, p<0.05), while in the traditional teaching-learning conception, male prospective teachers had significantly higher ($\overline{X}$=2.96) mean scores than the female ($\overline{X}$=2.57) ($t_{278=}$-4.54, p<0.05). In accordance with these findings, it can be said that the female prospective teachers' multicultural educational attitude was more positive and that they adopted a constructivist teaching-learning conception; while the male prospective teachers adopted a traditional conception.

A One-Way ANOVA test was used to determine whether the prospective teachers' multicultural educational attitudes and their teaching-learning approaches differed by the departments in which they worked, in seeking an answer to the third sub-problem of the study, that is, "Do the prospective teachers' attitudes towards multicultural education and their conceptions of teaching and learning differ significantly by department?" Results are given in Table 4.

As can be seen in Table 4, the prospective teachers' multicultural educational attitudes (F=9.31; p=0.00<0.05) and their teaching-learning conceptions significantly differed significantly according to department in the constructivist (F=6.91; p=0.00<0.05) and traditional (F=3.58; p=0.02<0.05) subscales. The Scheffe test was used as a post-hoc test to determine the source of difference. According to the results of the Scheffe test, in multicultural educational attitude, the mean scores of the students in the social sciences teaching department were significantly higher than the mean scores of the students in preschool, primary mathematics, Turkish education and science educational departments. The multicultural education scores of the students in the classroom teaching department were significantly higher than the students in the science education department. With regards to teaching-learning conceptions, the constructivist teaching-learning conception mean scores of students in social sciences education department are higher than those of the students in science education

Table 4. ANOVA results for multicultural educational attitude and teaching-learning conceptions based on department.

Scales	Department	N	$\overline{X}$	SD	Source of variance	Sum of squares	Df	Mean square	F	p	Significant difference
Multicultural education	Preschool	66	3.6	0.44	Between groups	9.76	6	1.62			
	Social S.	38	4.0	0.53							
	Science	36	3.3	0.50							
	Classroom teaching	40	3.7	0.26	Within groups	47.35	271	0.17	9.31	0.000	2-1,3,5,7; 4-3
	Turkish	32	3.6	0.31							
	Secondary math	35	3.4	0.33	Total	57.11	277	-			
	Primary math	31	3.6	0.41							
Constructivist	Preschool	66	4.1	0.66	Between groups	13.83	6	2.30			
	Social S.	38	4.5	0.52							
	Science	36	3.8	0.65							
	Classroom teaching	40	4.8	0.36	Within groups	90.35	271	0.33	6.91	0.000	2-3,7; 4-3,7
	Turkish	32	4.2	0.36							
	Secondary math	35	4.2	0.60	Total	104.19	277				
	Primary math	31	3.8	0.68							
Traditional	Preschool	66	2.7	0.57	Inter-group	8.37	6	1.39			
	Social S.	38	2.5	0.52							
	Science	36	3.0	0.55				271				
	Classroom teaching	40	2.4	0.63	Intra-group	105.56		0.39	3.58	0.002	3-4
	Turkish	32	2.8	0.79							
	Secondary math	35	2.8	0.76	Total	113.93	277	-			
	Primary math	31	2.7	0.50							

Table 4. Relationship between constructivist and traditional teaching-learning conceptions.

Variable	MEA	CTL	TTL
Multicultural educational attitude	1	0.641**	-0.363**
Constructivist teaching-learning	1	1	-0.389**
Traditional teaching-learning	1	1	1

**p<0.01.

Table 5. Regression results regarding the predictiveness of constructivist and traditional teaching-learning conception scores concerning multicultural educational attitude (Predicted variable: Multicultural educational attitude).

Variable	B	Shb	β	t	p
Constant	2.088	0.21	-	9.92	0.000
Constructivist	0.43	0.037	0.58	11.88	0.000
Traditional	-0.09	0.035	-0.13	-2.68	0.008
R=.653	R^2=0.426	-	-	-	-
F=102.13	P=.000	-	-	-	-

and primary mathematics education departments. The mean scores of the students in the classroom teaching department were significantly higher than those of the students in the science and primary mathematics teaching departments. In terms of traditional teaching-learning conception, the mean scores of the students in the science teaching department were higher than those of the students in the classroom teaching department.

The Pearson correlation coefficient was first used to find an answer to the fourth sub-problem of the study, which was "Do the prospective teachers' conceptions of teaching and learning significantly predict their attitudes towards multicultural education?", and a multi-regression analysis was then performed. The Pearson correlation coefficients are given in Table 4, while the results of the multi-regression analysis are given in Table 5.

As can be seen in Table 4, there is a medium level positive relationship between the prospective teachers' attitudes towards multicultural education and their constructivist teaching-learning conceptions (r=0.641), and a medium level negative relationship between traditional teaching-learning conceptions (r=0.363).

Both constructive and traditional teaching-learning conceptions significantly predict the prospective teachers' multicultural educational attitude (R=0.653, R^2=0.426, p<0.05). The two sub-scales of the teaching-learning conception questionnaire explained approximately 43% of the level of multicultural educational attitude. According to the standardized regression coefficient (*β*), constructivist conception has primary significance (*β=.58*) while traditional has secondary significance (*β=0.13*) as predictive variables. When the p values are examined for the significance of the relationship, it can be seen that both dimensions are significantly influential in explaining the levels of the students' multicultural educational attitude (p<0.05).

DISCUSSION

This study examined the teaching-learning conceptions and attitudes towards multicultural education of senior education faculty students, and a number of recommendations were proposed by discussing the

results of the study in light of other studies in the literature.

The first finding of the study indicates that the prospective teachers' level of attitude towards multicultural educational as well as their level of constructivist teaching-learning conception are good, while their traditional teaching-learning conception is at a medium level. It has been reported by Baş (2014) and Engin and Daşdemir (2015) who found that teachers have constructivist teaching-learning conception, while Baş and Beyhan (2013), Aydın et al. (2015), Aypay (2011), Yılmaz and Şahin (2011) and Oğuz (2011) found that prospective teachers have constructivist teaching-learning conception. These findings are thought to be related to the implementation of curricula in Turkey that target constructivism, and frequently laying emphasis on the importance and requirement of constructivism in teachers' and prospective teachers' education.

The study found that prospective teachers' attitudes towards multicultural education are positive. In the studies of Marangoz et al. (2015) and Söylemez and Kaya (2014) on the multicultural educational attitude of teachers; of Çoban et al. (2010) and Türkan et al. (2016) on those of prospective teachers; of Demircioğlu and Özdemir (2014) on those of students who go through pedagogical formation; and of Polat (2012) in a study regarding school principals, it was determined that the attitudes were generally positive. It can be seen that the results of this study are in agreement with those of the related study results. It can be said that prospective teachers' constructivist teaching-learning conceptions influence their positive attitudes towards multicultural education. That is because multicultural education requires educational environments to be arranged according to individuals differences, and in a way that enables students to construct their knowledge differently (Türkan et al., 2016). One characteristic that is necessary for teachers with a positive attitude towards multicultural education is the ability to guide students when they are structuring information.

In the study, it was found that the prospective teachers' teaching-learning conceptions differed significantly by gender. It was determined that the female prospective

teachers had a more constructive understanding, while the male prospective teachers had a more traditional understanding. This finding fully matches with the results of the study of Aypay (2011). In the study conducted by Baş (2014), it was also observed that there was significant difference in favor of male teachers in traditional teaching-learning conception, although the difference in constructive conception was not significant. No significant difference was found in the study carried out by Engin and Daşdemir (2015) in the teaching-learning conceptions of classroom teachers. It can be seen that the results of studies examining the teaching-learning conceptions based on gender then to differ from one another.

In the current study, it was found that the prospective teachers' attitudes towards multicultural education differed according to gender, with female students having a higher level. This finding is in agreement with the results of the studies conducted by Demircioğlu and Özdemir (2014) and Türkan et al. (2016). On the other hand, in a study by Tortop (2014), prospective teachers' attitudes towards multicultural education did not show any significant difference according to gender.

Another finding of the current study was that multicultural educational attitudes and teaching-learning conceptions of faculty of education students differed according to their department. In the multicultural attitude survey, the mean scores of the students in the social sciences education department were significantly higher than those of the other departments, with the exception of the classroom teaching department. This result is considered to be associated with the content and structure of the social sciences class. As stated by Duman and İkiel (2002), the social sciences class is pivotal in terms of allowing students to understand and perceive themselves as well as their community, society, country and world from socioeconomic, environmental, cultural, local and global perspectives, and to solve problems relating to perception. In addition, it was found that the students in the classroom teaching department had a much more positive attitude towards multicultural education than the students in the science and primary mathematics department. This result is believed to be associated with the variety of classes taught in this department.

The prospective teachers' conceptions of teaching and learning differed significantly by department. It was recognized that, with regards to constructivist teaching-learning conception, students from the social sciences department had higher scores than students in the science and primary mathematics departments. This result is believed to be due to the structure and content of social sciences class. The teaching-learning process in the social sciences class should be arranged in a way that will allow students to discover, carry out activities involving analysis and evaluation, gain knowledge from

the actual source, and to interpret and develop a new meaning from what they learn. This requires making use of prior knowledge in learning, and effectively building subsequent learning experiences on prior learning experiences (Jadallah, 2000; cited in Gömleksiz and Öner, 2013).

Additionally, it was found that students in the classroom teaching department adopted constructivist teaching-learning conception more than the students in the science education and primary mathematics teaching departments, while students in the science education department adopted traditional conception more than those of students in classroom teaching. This finding is in agreement with the findings associated with multicultural educational attitudes. It was observed that in departments with higher attitudes towards multicultural education, the mean score for the constructivist teaching and learning concept was also higher.

Another finding of the study is that the prospective teachers' conceptions of teaching and learning significantly predicted attitudes towards multicultural education. The emphasis in the literature on the need for a constructivist approach in multicultural reinforces this finding in the study. Banks (2013) describes that the constructivist approach in teaching and learning is a key component of multicultural education. As stated by Başbay and Bektaş (2009), it is of vital importance for multicultural education that teachers adopt a constructivist perspective. The knowledge which students bring to school based on their personal and cultural experiences forms the basis of their learning. Disregarding this source means the denial of the students' knowledge construction process.

In a study conducted by Türkan et al. (2016) on prospective teachers' attitudes towards multicultural education and their epistemological beliefs, it was found that prospective teachers' beliefs on knowledge construction increased with higher multicultural educational attitude scores. Based on these results and descriptions, it can be said that teachers cannot implement constructivism without having a positive attitude towards multicultural education, or, inversely, implement a multicultural education without a constructivist conception.

CONCLUSION AND RECOMMENDATIONS

Ever increasing multiculturalism in many societies today makes it necessary to generate solutions on this issue. This situation signifies the importance of multicultural education and the necessity that teachers should be qualified for multicultural education. Including the multicultural education in the whole educational life of teachers as well as the in-service educations in the framework of the constructivist approach may increase the knowledge, skills and attitudes of teachers and

prospective teachers against multicultural education, and therefore allow the constructivism to be better applied. Furthermore, it is considered that inclusion of courses relevant to multicultural education in the teacher education programs and increasing the exchange of students of education faculties across countries may allow the teachers gain multicultural education qualifications. Teachers' and prospective teachers' teaching-learning conceptions and their multicultural educational attitudes could be studied by focusing on different characteristics. It may be possible to obtain better results in these studies by using qualitative research methods. Studies could be performed to assess teachers' teaching-learning conceptions and their attitudes towards multicultural education based on the opinions of students. It is believed that investigating the effects of teachers' teaching-learning conception on students' learning products could also make a certain contribution.

Conflict of Interests

The authors have not declared any conflict of interests.

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