

The Effect of a Multicultural Curriculum on the Knowledge and Attitudes of Pre-service Teachers: A Curriculum Proposal

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ABSTRACT The purpose of this paper is to evaluate a multicultural curriculum proposed for pre-service teachers. Quantitative aspect of the study covers data obtained through a pretest-posttest control group experimental model. Qualitative aspect of the study covers data obtained via semi-structured interview method. Independent variable of the study is the Curriculum for Designing Multicultural Educational Environments (CDMEE). "The Knowledge Test on Designing Multicultural Educational Environments" and "The Attitudes towards Multicultural Education Scale" were the tools used for collecting quantitative data. The interview form used for collecting qualitative data was prepared by the researchers. The results of the study generally indicate that the initial knowledge, attitude and awareness levels of the pre-service teachers regarding multicultural education changed significantly through the curriculum. It is also possible to say that CDMEE contributed to the pre-service teachers' development, made them aware of individual differences and helped them feel qualified by increasing knowledge and skills.

INTRODUCTION

Taking into account individual differences is one of the basic principles of education in designing teaching and learning environments. Considering and accepting that students may have different races, ethnicities, classes, genders, languages, belief systems, experiences, sexualities, and political stances, taking them into account while organizing educational environments, and being open to discussing these differences can be deemed as an important indicator of transferring cultural richness to the classroom environment. Teachers with the belief that multicultural education is a must should have a good command of culturally responsive teaching practices during the teaching and learning process. This is because teachers are the people who are to provide the upcoming generations with an awareness and tolerance towards multiculturalism. For teachers to have a perspective of this sort, they need to be knowledgeable of how to design multicultural educational envi-

ronments and be informed that they have to arrange classroom environments in such a way that they welcome diverse perspectives. There are many studies revealing the positive effects of taking into account differences arising from cultural diversity on the process of designing learning and teaching environments (Kleinfeld 1975; Au and Kawakami 1994; Ladson-Billings 1994, 1995; Foster 1995; Hollins 1996; Gay 2000; Ware 2006). It is also highlighted that students whose differences are ignored have lower academic achievements compared to others (Irvine 1990; Irvine and Armento 2001).

If teachers are to help students become careful, sensitive, and thoughtful citizens within a multicultural world community, they need to develop reflective, cultural, national, and global identities in the first place. As a result of this necessity, teacher training institutions are expected to cultivate teachers who are capable of meeting the needs of multicultural societies. As a matter of fact, Banks (2004) emphasizes the importance of cultivating teachers who are open to various cultural values and believe in the necessity of understanding and maintaining these values by means of teacher training curricula. To Banks, institutions which are responsible for teacher training should adopt policies that are

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aimed at making pre-service teachers acquire knowledge of, skills of, and positive attitudes towards multicultural education and creating educational environments where values like respect, equality, tolerance, and variety prevail.

Multicultural curricula are implemented as of pre-school education in countries with multiple nations and cultures such as USA, Canada, Australia, Germany, and Britain (Güven 2005). The USA accepted multicultural education as a legal requirement for all educators (teachers) in 1972 based on its long history of experience and national demands and conditions. In the USA, *National Council for Accreditation of Education* (NCATE) defined six basic standards one of which is "Experiences Working with Diverse Students". In this sense, all teacher training curricula should cover courses regarding multicultural education for teachers to be accredited (NCATE 2008). Besides, the APA authorization program requires talking about cultural diversities for master's degree in psychology. Massachusetts is the first state demanding everyone who applies to be provided with a psychologist's certificate to receive multicultural education. Since 1996, it has been compulsory for doctoral students to take at least four credits on multicultural formations in Massachusetts. Also, since 1999, it has been compulsory to take at least one course on race and ethnic characteristics (Diaz 1994; cited by Cirik 2008 from Schultz and Schultz 2002). Many educators support multicultural education by integrating subjects from diverse cultures into curricula (Aldridge et al. 2000). One of them is Chang (1999) who stated that receiving and passing a course on diversity reduces the biases against races. James Banks is one of the pioneers of multicultural education in the USA. To him, current curricula should be renovated and enhanced from all aspects in order to create a multicultural school environment (Swartout 2006). Pewawardy (2003) stated that current educators are living in societies with dramatic cultural diversities that are even beyond the imagination of previous generations. He also highlighted the fact that rapid changes within social structures lead to a change in tasks and roles of both organizations and staff.

Works on multiculturalism in Turkey have focused on politics, sociology, education, and psychology. Turkey's State Planning Organization (SPO) prepared an action plan to implement the Universal Declaration of Cultural Diversity

in Turkey. This plan emphasizes promoting awareness of the positive value of cultural diversity through education, developing a curriculum to serve this purpose, and enhancing the training of teachers (Demir 2012). In addition, Turkey's Ministry of National Education prepared the General Teaching Qualifications Outline. It was stated in this outline, "*Teacher treats students as individuals and values them. By taking into account their social and cultural diversities, deeds, and interests, the teacher exerts an effort to achieve the highest level of learning and improvement*" (Turkey's Ministry of National Education 2007). However, in Turkey where various religions, beliefs, ethnicities, races, languages, social rules, and cultural values co-exist, there is no course on multicultural education in the curricula of faculties of education and in-service training programs (Aydin and Çiftçi 2014). This indicates that there is no effort to equip pre-service teachers and in-service teachers with multicultural education. However, previous studies report that teachers should get involved in educational activities that introduce diverse cultural structures in the community so that they get aware of diverse cultures (Basbay and Bektas 2009; Tortop 2014).

There are various previous studies on multicultural education that inform teachers about designing effective learning environments for students from diverse backgrounds. However, the findings of these studies are inconsistent (Asada et al. 2003; Marks and Smrekar 2003). Some studies claim that many teachers or pre-service teachers who are not qualified enough display poor knowledge and understanding regarding multicultural education, race, and ethnicity. They also add that such teachers or pre-service teachers are not ready to construct a learning environment for students from diverse cultures (Gay 2002; Neuharth-Pritchett et al. 2001). Smolen et al. (2006) indicate that educators believe in the necessity of culture-based curriculum. Yet, they have problems in putting this into practice. In addition, to Pickert and Chock (1997), teachers have a limited perception of culture and associate it with belonging to certain individuals or groups, which makes conflicts inevitable. It has been reported that emphasizing similarities but not differences between cultures may reduce conflicts among groups. Heron et al. (1995) examined the multicultural education perceptions of teachers and found out

that especially primary school teachers are more eager for implementing multicultural education in comparison to others teachers. Hermans (2002) argues that intercultural contents should be developed for the curricula implemented in the faculties of education based on the views of teachers and students. Demir and Basarir (2013a) determined that pre-service teachers have *high* multicultural self-efficacy perceptions; gender, department, and living in a metropolis are important factors influential on self-efficacy perception; and female pre-service teachers have higher self-efficacy perceptions in comparison to male pre-service teachers. In another study examining the views of pre-service teachers about multicultural education (Demir and Basarir 2013b), pre-service teachers were found to have positive views about multicultural education though they had not received any training on multicultural education. The studies investigating pre-service teachers' attitudes towards and perspectives on multicultural education (Polat 2012; Anil and Yavuz 2010; Çoban et al. 2010; Basbay and Bektas 2009; Toprak 2008) point out that positive attitudes prevail among pre-service teachers, and they are prone to multicultural education.

The most important prejudice or ignorance about multicultural education may be regarding it as an issue associated with only ethnic problems. That is manifested by Yazici et al. (2009), too. There are quite a limited number of studies on these aspects of multicultural education in Turkey. Most of the conducted studies are descriptive and focus on scale development, measuring attitudes, views, and self-efficacy perceptions, and examining curricula on the subject of multiculturalism (Demir and Basarir 2013a, 2013b; Demir 2012; Basbay and Kagnici 2011; Yazici et al. 2009; Polat 2009; Esen 2009; Basbay and Bektas 2009; Korkmaz 2009; Cirik 2008; Seyfi 2006; Altas 2003). These studies are important in that they indicate the different perspectives, ability perceptions, tendencies, and attitudes of those individuals who affect and are affected by the implementation process so that multicultural curricula can be developed. Needs analyses can also be made for multicultural curricula that are likely to be developed. One of the most effective ways of determining needs is analyzing the difficulties experienced in implementing

multicultural education in the classroom environment. That was done to form a basis for the present study, too.

This paper deals with evaluating a multicultural curriculum designed as a proposal based on the literature and needs analysis findings in terms of the knowledge, attitudes, and views of pre-service teachers. In this sense, the present study aims to evaluate a multicultural curriculum proposed for pre-service teachers. With the proposed curriculum, it is aimed to raise pre-service teachers' awareness of multiculturalism and improve their knowledge and attitudes on this subject. Detailed information about the proposed curriculum is given under the title of "independent variable" in the present paper.

It is thought that the CDMEE prepared for drawing the attention to multicultural education will contribute to educational sciences as a unique work. It is hoped that the multicultural curriculum, which is the main focus of the present study, will set a model for other schools and provide concerned people and institutions with data in the process of integration of multicultural education into higher education. To this end, the present paper makes an attempt to answer the below-mentioned research questions:

1- Is there any significant difference between the Knowledge Test on Designing Multicultural Educational Environments pretest scores of the experimental group students and those of the control group students?

2- Is there any significant difference between the Knowledge Test on Designing Multicultural Educational Environments posttest scores of the experimental group students and those of the control group students?

3- Is there any significant difference between the Attitudes towards Multicultural Education Scale pretest scores of the experimental group students and those of the control group students?

4- Is there any significant difference between the Attitudes towards Multicultural Education Scale posttest scores of the experimental group students and those of the control group students?

5- What are the views, suggestions, and expectations of the experimental group students concerning the Curriculum for Designing Multicultural Educational Environments?

METHODOLOGY

Research Design

Quantitative and qualitative research methods were used together in this paper. In this way, triangulation was done. Triangulation in social studies refers to using different kinds of measures or data collection techniques for examining the same variable (Neumann 1997; cited by Kus 2003). Johnson et al. (2007) suggest that mixed methods research is an intellectual and practical synthesis based on qualitative and quantitative research and can yield more informative, comprehensive, balanced, and useful research results in comparison to traditional qualitative and quantitative approaches, which are also important approaches. The use of quantitative and qualitative data to support each other increases research's validity and reliability (Creswell 2003). In parallel with that, a research design involving more than one situation, interviewee, participant, or data collection method strengthens the generalizability of research findings to more than one situation (Marshall and Rossman 1995; Yildirim and Simsek 2005).

The quantitative part of the present study includes data obtained through a pretest-posttest control group experimental model. The qualitative part of the paper, on the other hand, covers data obtained via semi-structured interview technique. Tashakkori and Teddlie (1998) classified the research designs used in studies employing quantitative and qualitative approaches together as follows: (1) equivalent status designs, (2) dominant-less dominant mixed method designs, and (3) designs with multilevel use of approaches. The dominant-less dominant mixed method design was employed in the present paper. In this design, a research method is dominant, and the research method treated as an alternative research method occupies a tiny place. In the present study, qualitative data were used for supporting quantitative data. Although the research method which is considered an alternative method provides limited information because it examines the details of research from a single perspective (Creswell 2003), it is useful for the examination of personal responses influential on research results (Tashakkori and Teddlie 1998). The qualitative approach, which was treated in the present study as an alternative approach, aimed to examine the development of pre-service

students' awareness of multicultural education, their purposes underlying their willingness to participate in this paper, the positive aspects of the curriculum, the difficulties experienced during its implementation, and suggestions for a better implementation.

Independent Variable

The independent variable of the paper allowing obtaining quantitative data is the Curriculum for Designing Multicultural Educational Environments (CDMEE). This curriculum was developed by the researchers within the scope of the project no. 3894 supported by the Republic of Turkey Erciyes University Scientific Research Projects Coordination Committee. This curriculum was developed by following the following stages: (1) Needs analysis through literature review and qualitative and quantitative data collection tools administered to students with the same characteristics as the target group; (2) setting targets; (3) creating learning modules; (4) arranging learning and teaching activities; (5) experimenting the draft curriculum; (6) measuring the subjects' knowledge and attitudes at the beginning and at the end of the experiment; (7) receiving the subjects' feelings and thoughts about the proposed curriculum during and at the end of the experiment; (8) finalizing the draft. These stages are explained below.

Needs Analysis

In developing CDMEE, needs were determined in the first place. Need recognition is an important part of curriculum development. The need for a curriculum must be showed for a curriculum to be prepared. Actual needs must be determined well enough so that they are fulfilled properly. Need recognition helps to understand whether or not the objectives of a curriculum fulfill the actual needs. In the present study, besides a comprehensive literature review, the needs of the pre-service primary school teachers were determined qualitatively through individual interviews. The needs analysis process was conducted in this way. The objectives of the curriculum were formed based on the data obtained in this process. To this end, open-ended questions were addressed to the 3rd and 4th grade pre-service primary school teachers via individual and groups interviews. The interviews were carried

out by the first researcher in her room in the faculty. Within the scope of the needs analysis, the pre-service teachers were made to confront questions about taking into consideration the cultural characteristics of different students, selecting and planning teaching methods that are capable of meeting their needs, selecting teaching materials responsive to multiculturalism, selecting culturally responsive assessment methods, and creating culturally responsive classroom environments. The data obtained through the needs analysis were subjected to content analysis. The themes obtained through this analysis were as follows: (1) Need for understanding one's own culture and values; (2) need for understanding what multicultural education means; (3) need for understanding the cultures and values of others (4); need for knowing the effective ways of teaching in different grades (adequacy in making plans based on teaching methods and techniques); (5) need for communication; and (6) need for practicing.

Setting the Objectives

CDMEE made up of three modules was designed based on the data obtained through the needs analysis. After the general objectives of the curriculum were set, special objectives were set for each module. Some of the objectives that cannot be described here are being capable of defining multiculturalism and the dimensions of multicultural personality (that is, Cultural Empathy, Open-Mindedness, Social Initiative, Emotional Stability, Flexibility, and Globalization), being aware that gender stereotypes lead to prejudice, determining the relationships between one's own culture and different cultures, determining the influence of class culture elements on learning, and being capable of designing a course plan by use of strategies, methods, and techniques appropriate to the multicultural classroom environment.

Creating Learning Modules (The Content of the Curriculum)

The proposed curriculum was constructed through modular programming as it took into account the interests, wishes, and skills of individuals; its content was adaptable based on individual differences; and it introduced a new perspective to educational practices (Alkan and

Teker 1992). In addition, the consistency between the objectives and the content of the designed curriculum was checked through tables of specifications, also called objective-content matrices, prepared for each module. 8 objectives and 10 activities were planned and implemented for personal level, the first module; 8 objectives and 5 activities were planned and implemented for cultural level, the second module; and 15 objectives and 12 activities were planned and implemented for class level, the third module. Most of the activities were carried out in a participant-oriented way.

Arranging Learning-Teaching Activities and Experimenting the Draft Curriculum

In designing the teaching activities, learning strategies used in multicultural education such as (1) mentorship, (2) field work (observations and activities were carried out in a school attended by students having different cultural backgrounds), (3) narratives, counter narratives, and autobiographies, and (4) journals as instructional tools were used along with cooperative methods.

The curriculum was experimented through a 30-hour training conducted in the fall semester of the 2012-2013 academic year. The knowledge test and the attitude scale were administered to the experimental group and the control group as pretest in a single session on the same day. Each module of the curriculum made up of 3 modules was implemented by the researchers. In the first lesson, information was given about the modules of the 30-hour curriculum as well as objectives associated with these modules. In addition, journals were distributed to the participants. Each one of these journals had a different color and pattern. The participants were asked to write their impressions about the process and their experiences with other pre-service teachers in their journals as of the first day. They were informed that they would be provided with a certificate of training at the end of this training process. Food and beverage needs were met from a table including tea, coffee, cookies, etc. "Team-assisted individualization", which is cooperative learning technique, was predominantly used in the experimental group composed of 22 people. In addition, active learning was employed, thereby making the process dynamic based on group interaction, cooperation, and individual activity. Seat-

ing order was continuously changed based on the activities carried out. Binary, triple, and quadruple groups were formed by the nature of relevant activities. In the training process, the experiences of the participants were taken as basis, and the participants were made to reach, individually and in group, the principles and concepts associated with these subjects, to make lists of them, and to define them. The definitions or lists on these subjects were compared with the PowerPoint presentations created by the trainer on these subjects. Contrasts, similarities, groupings, concepts, and principles were determined and written on the blackboard. The researchers granted certificate of training to the participants at the end of 30-hour training period.

Subjects

The subjects of the present paper were 44 3rd grade students attending Erciyes University Faculty of Education Department of Primary School Teaching. The pre-service primary school teachers were included in the present study because it was thought that they can get involved in more diverse environments in terms of socio-economic status, literacy, educational and cultural level, living conditions, and the status of following technological advancements in comparison to pre-service teachers attending other departments, and they work with students in the 5 to 11 age range, which is the critical period for the acquisition of knowledge, skills, and attitudes. Before the subjects were chosen, the 3rd grade students were given a speech about the benefit of taking part in this training program for their professional competency. With this speech, the students were made to be voluntary. “*The Knowledge Test on Designing Multicultural Educational Environments*” and “*The Attitudes towards Multicultural Education Scale*” were administered as pretest to 56 students who stated that they were voluntary to participate in training activities on the days and at the hours spec-

ified. Then the scores achieved by the students in the knowledge test and the attitudes scale were sorted, and a 44-person working group composed of the students achieving the highest and the lowest scores was formed. From this working group, 22 people were appointed to the experimental group, and 22 to the control group through random sampling. Of the students in the experimental group, 15 were female, and 7 were male. Of the students in the control group, 14 were female, and 8 were male. To test whether or not the experimental and the control groups were equal, the data obtained from “The Knowledge Test on Designing Multicultural Educational Environments” and “The Attitudes towards Multicultural Education Scale” were subjected to Mann Whitney U Test. No significant difference was found between the pretest scores of these two groups. The obtained results are given in Table 1.

As it is clear from the statistical data in the Table 1, the difference between the pretest scores of the experimental group students and the control group students was not significant at the level of 0.05. Based on this finding, it can be argued that the experimental group and the control group were nearly equal at the beginning of the study.

Data Collection Tools

The Knowledge Test on Designing Multicultural Educational Environments

The tables of specifications prepared for each module were taken into consideration in ensuring the consistency of the content and the question items to be included in the knowledge test. In this sense, the ratio of the target areas determined based on Bloom’s taxonomy to the whole of curriculum objectives was taken into account, and the questions were prepared to measure cognitive, affective, and kinesthetic objectives. Multiple-choice questions were adopted in the

Table 1: Mann Whitney U Test results concerning the pretest scores obtained by the experimental group and the control group students from the knowledge test and the attitudes scale

	Group	N	Mean rank	Rank sum	u	P
Knowledge	Experimental	22	22.3	491.5	238.5	.093
	Control	22	22.6	498.5		
Attitudes	Experimental	22	22.9	505.0	232.5	.814
	Control	22	22.0	485.0		

item pool including 50 questions posed based on the reviewed literature because they were easy to apply and allowed the researcher to make more objective evaluations.

The test was examined in terms of format and content by an assistant professor working in Erciyes University Faculty of Education, an expert specialized in the subject, and three primary school teachers having an experience of minimum 10 years in order to ensure the consistency of each item in the test with the acquisition it intends to measure and thus assure the content validity of the test. In the light of the evaluation by the experts, necessary corrections were made by removing some of the questions from the test because there were questions measuring the same target behavior, and there were unclear questions. The initial test which was made up of 50 items turned into a 43-item test at the end of the efforts to ensure content validity. The validity and reliability coefficients of the item questions were calculated based on the expert opinions, and item analyses were completed. For that, the test was administered to 50 students. Average item difficulty value was found to be 0.60 in the final version of the test. This value shows that the test has an average difficulty. Average discrimination of the test is approximately 0.50. This value indicates that the test has good discrimination, and thus the test items can be used. To see the reliability of the test, it was divided into two equal halves, and the correlation between the scores achieved by the students in two halves of the test was calculated. Then based on this correlation, the reliability of the whole test was determined also by use of the Spearman–Brown formula. The reliability coefficient of the whole test was found to be 0.68 through the Spearman–Brown formula. This value shows that the test is reliable enough. The results of the statistical works done based on pilot study data demonstrate that the final version of the 32-item test is well-designed in terms of item discrimination and item difficulty and is reliable enough.

The Attitudes towards Multicultural Education Scale

The Attitudes towards Multicultural Education Scale for Pre-service Teachers developed by Anil and Yavuz (2010) was used in the present study. The scale, which was developed to deter-

mine the attitudes of pre-service teachers towards multi-cultural education, is a one-dimensional scale and made up of 28 items. It allows 5-point rating. Its Cronbach's Alpha reliability coefficient is 0.930. Since the scale has quite a high reliability level, it can be said that the items of the scale are consistent with one another and investigate the constituents of the same quality. The responses to the items of the Likert-type scale are graded for the positive items as follows; A: I Strongly Agree: 5; B: I Agree: 4; C: I Am Neutral: 3; D: I Disagree: 2; E: I Strongly Disagree: 1. They are graded for the negative items as follows; A: I Strongly Agree: 1; B: I Agree: 2; C: I Am Neutral: 3; D: I Disagree: 2; E: I Strongly Disagree: 1.

Interview Form

The interview form used in obtaining the qualitative data of the study was prepared by the researchers. The questions in the form aimed to determine the views, suggestions, and expectations of the pre-service teachers concerning the curriculum. To this end, the pre-service teachers were asked to state their purposes underlying their willingness to participate in the project, whether or not they achieved their purposes, their views about the activities, their views about the benefits of a curriculum of this sort, and their suggestions for the better.

Data Collection

Before CDMEE was carried out, the tests were administered to both groups as pretest. The same tests were administered to the groups as post-test after CDMEE was carried out. The qualitative data were obtained through the interviews conducted at the end of the training and the records kept by the subjects. The research process is hierarchically described below.

Data Analysis

The Analysis of the Quantitative Data

Mann Whitney U test was used to test whether or not there was a significant difference between the scores achieved by two unrelated samples in order to determine the pre-experiment equality of the experimental group and the control group and the final levels they reached after the experiment in terms of the independent variable.

The Analysis of the Qualitative Data

In analyzing the qualitative data, the interviews recorded via a tape-recorder were transferred into the five-part interview transcription form prepared on the computer in the researcher-participant order. All the recorded interview data were analyzed descriptively. The interviews were analyzed through the cooperation of both researchers. All the interviews were transcribed by one of the researchers and checked by the other one. In addition, member checking was done in order to improve the internal validity and reliability of the study. Member checking is conducted by people who are examined and who provide data and involves giving the written version of an interview to the interviewee for him to check its correctness prior to analyzing it (Punch 2005). In this regard, the interviews recorded via the tape-recorder were presented to randomly chosen 2 interviewees after they were transferred into the interview transcription form. After the interviewees confirmed such transcriptions, the data were analyzed.

RESULTS

The analyses made in the present paper provided 3 groups of data. These data can be collected under the titles of (1) determining the differences between the pre-service teachers' levels of knowledge on multicultural education; (2) determining the differences between the pre-service teachers' levels of attitude towards multicultural education; and (3) determining the pre-service teachers' views about the experimented and proposed curriculum.

Determining the Differences between the Pre-service Teachers' Levels of Knowledge on Multicultural Education

In Table 2, the results of the Mann Whitney U test, which was conducted to see the significance of the difference between the pretest scores of the experimental group students and the control group students achieved in the Knowledge Test on Designing Multicultural Educational Environments, indicate that there was no significant difference between the pretest scores of the groups achieved in the Knowledge Test on Designing Multicultural Educational Environments ($p=0.093>.05$). That means that the

experimental group and the control group had knowledge levels close to one another at the beginning of the study.

Table 2: Mann Whitney U Test results concerning the pretest scores of the experimental group students and the control group students achieved in the knowledge test

Group	N	Mean rank	Rank sum	U	P
Experimental	22	22.3	491.5	238.5	.093
Control	22	22.6	498.5		

As is seen in the Table 3, there was a significant difference between the posttest scores of the experimental group students and the control group students achieved in the Knowledge Test on Designing Multicultural Educational Environments ($p=0.001<.05$). The mean ranks show that the experimental group students involved in the practices of the Curriculum for Designing Multicultural Educational Environments were more successful than the control group students not undergoing such training. This finding is important in that it shows that the difference between the groups resulted from the curriculum implemented.

Table 3: Mann Whitney U Test results concerning the posttest scores of the experimental group students and the control group students achieved in the knowledge test

Group	N	Mean rank	Rank sum	U	P
Experimental	22	30.6	673.5	63.5	.001
Control	22	14.3	316.5		

Determining the Differences between the Pre-service Teachers' Levels of Attitude towards Multicultural Education

Table 4 presents the results of the Mann Whitney U test that was carried out to reveal whether or not there was a significant difference between the attitudes of the experimental group and the control group students towards multicultural education before they were exposed to the curriculum. The analysis results show that there was no significant difference between the pretest attitudes scale scores of the experimental group and the control group students ($p=0.814>.05$). The obtained findings indicate

that the groups had attitude levels close to one another before the experiment.

Table 4: Mann Whitney U Test results concerning the pretest scores of the experimental group students and the control group students achieved in the attitudes scale

Group	N	Mean rank	Rank sum	U	P
Experimental	22	22.9	505.0	232.0	.814
Control	22	22.0	485.0		

As it is clear in the Table 5, there was a significant difference between the posttest scores of the experimental group and the control groups students achieved in the attitudes scale ($p=0.001<.05$). The mean ranks show that the levels of attitude of those students who experienced the curriculum on designing multicultural educational environments were higher than those of the students not experiencing it. That also implies that CDMEE is an effective teaching practice to make individuals acquire certain attitudes.

Table 5: Mann Whitney U Test results concerning the posttest scores of the experimental group students and the control group students achieved in the attitudes scale

Group	N	Mean rank	Rank sum	U	P
Experimental	22	28.8	634.5	102.5	.001
Control	22	16.1	355.5		

The Views of the Pre-service Teachers concerning the Experimented and Proposed Training Program

The qualitative aspect of the study focused on examining (1) the development of the pre-service teachers' awareness of multicultural education, (2) the purposes underlying the willingness of the pre-service teachers to take part in the study, (3) the positive aspects of the program, (4) the difficulties encountered by the pre-service teachers during the training, and (5) the suggestions of the pre-service teachers for a better training.

In regard to the first theme, it was determined that the participants felt no need to receive any training on multicultural education before, and thus they did not have any awareness level. This finding is supported by the following view of a

participating pre-service teacher (P12): *indeed, I had not heard any concept like multicultural education, so I did not feel any need for it.*

In relation to the second theme, it was found out that the main purpose underlying the willingness of the participants to participate in CDMEE was their intention to contribute to their personal and professional development. All of the participants stated that they achieved the purposes underlying their willingness of participate in the training program. Some views of the participants are as follows; P18: *"I wanted to see how I could help students with individual differences and learn how I had to educate them. Thus, I participated in this project. The activities we carried out in the project process served the purpose. We saw different methods and techniques that we can use in the class environment, how we can conduct teaching, and how we can take into consideration individual differences. So, it was beneficial. Especially the observation visit to a multicultural school was very good."* P11: *"The project activities were quite entertaining and productive because we always worked cooperatively and did the things by ourselves."* P15: *"When I consider all the activities, I can see that they complement one another just like the pieces of a jigsaw."* P9: *"...these activities are very suitable for in-class socialization in particular"* P5: *"...I gained some experience through the practices I got involved in. As a result, when I become a teacher, I can choose the activities which I can carry out based on the differences between students more easily"* (line. 72-76).

With regard to the third theme, all 22 participants agreed that the curriculum would be beneficial for students with differences. Some student views on this subject are as follows; P1: *"...it can be beneficial. It stops prejudice in the first place"*. P7: *"...it is definitely beneficial. This is because; when a person feels the things close to his own culture and is in a comfortable environment, he gets more engaged in a situation, and learning is facilitated."* The participants stated that CDMEE made a positive contribution to their professional and personal development. Some participant views on this subject are as follows; P19: *"...the project provided me with a foundation in this matter. Surely, I must improve myself in my future life. However, the project has definitely provided me with a foundation on this subject, at least by making*

me have an idea about it.” P11: “I think we can appear before our students as more qualified teachers thanks to this project whereby we have learnt how different cultures can go better together, how they can receive better education, how they can live better together, and how they can be warmer towards one another and the thoughts of one another.” P16: “This project has taught us what multicultural education means and what skills are needed to design multicultural educational environments and made us show empathy towards people with different cultural characteristics such as language, religion, race, and gender.”

With respect to the fourth theme dealing with the student views about the difficulties experienced in the process, it was seen that the participants predominantly laid an emphasis on the observation visit aiming to put what is acquired into practice. The pre-service primary school teachers expressed the difficulties they experienced in a culturally diverse environment with reference to the observation visit to a high school where 45 different students studied. P3 stated his view as follows: “...I had the biggest difficulty in the school here we made an observation because the students were very different there. They even could not speak Turkish properly. I imagined myself as a teacher there. It caused a big difficulty that we failed to communicate with the students.” To some participants, the difficulty was that the activities were carried out in the morning hours or on their free days. On the other hand, there were a lot of participants who stated that they did not experience any difficulty in the process. P15, who was also supported by other participants, delivered his view as follows; “...I am so glad that I have come and taken part in a project of this sort. I think I have been able to express my opinions clearly. I have had no difficulty.”

In connection with the fifth theme (suggestions), it was seen that the pre-service teachers mostly highlighted that multicultural education activities should be included in the curricula of the faculties of education as a course. P17 stated his view as follows: “These activities should be included in all teacher training curricula. An educator confronts different people in different environments. For example, we are appointed to different places. If you do not know the culture of a region, you may consider an act or situation weird though it is normal for people

there. Having conflicts with people from different regions is inevitable. So, similar trainings on multiculturalism should be provided in faculties of education. They should be provided within the scope of a course, and acquisitions from these trainings should be put into practice.”

DISCUSSION

This paper examined whether or not the CD-MEE has any influence on pre-service teachers' knowledge of and attitudes towards multicultural education. In this sense, the views of the pre-service teachers about the said training program were analyzed, and an attempt was made to reveal the suitability of the designed curriculum. The general results of the study indicate that the initial knowledge, attitude, and awareness levels of the pre-service teachers concerning multicultural education significantly changed through the curriculum. In addition, based on the research findings, it can be said that the implemented program contributed to the pre-service teachers' personal and professional development, provided them with the consciousness of being responsive to individual differences, and helped them have higher self-efficacy by increasing their knowledge and skills regarding different teaching strategies, methods, and techniques.

The participants were not aware of multiculturalism before they participated in the study. That may have resulted from the homogenous structure of the faculty of education where the study was conducted. The fact that the participants think that there have to be racial and ethnic differences for multicultural education to be provided and that no arrangement is needed when there are not enough number of students may have different implications. For example, they may be unprepared to work and avoid working with students having different characteristics and may be discouraged in their profession. Likewise, some research findings in the literature show that pre-service teachers have low perceptions of multiculturalism because of lack of knowledge about it due to the homogenous structure of faculty populations (Pickert and Chock 1997; McCray et al. 2004). Some of the papers conducted on this subject argue that pre-service teachers are against this concept and cannot see its benefits. To the contrary of the arguments of these papers, the present paper mainly shows that the participants accept multi-

cultural education and consent to equipping students with necessary knowledge and skills to equalize their in-class cultural differences. The partial difference of the findings of the present study from the research findings described above may be because of different social climates or different cultural environments.

The findings of the present paper are similar to those of some studies in the literature. The findings of some studies in the literature (Sultana 1994; Ladson-Billings 2001; Neutrach-Pritchett and Pearson 2001) indicate that most university students want to work in different racial, ethnic, and socio-economic conditions, but they are unprepared for the cultural diversity they are to confront in such schools because they have little or no knowledge of it. Keengwe (2010) reports that some pre-service teachers cannot notice it before they get involved in environments containing diversity, but they notice after getting involved in such environments that different cultures may lead to problems they do not expect. Furthermore, Sheets and Chew (2000) examined the perceptions of Chinese-origin pre-service teachers regarding the multicultural education course taught in teacher training programs. They concluded that pre-service teachers have internalized multicultural education, are willing to arrange and develop learning environments in accordance with the principles of multicultural education in their classes, and have realized how multicultural education may improve and change the school environment. Bryan and Sprague (1997) found out that intercultural experience positively affects pre-service teachers. On the other hand, Teresa and Pivera (2004) highlight the importance of the internalization of multiculturalism by creating a multicultural educational environment and allowing students to make observations and evaluations besides teaching cultural responsiveness to pre-service teachers.

The results of the paper show that CDMEE may be beneficial for students with differences. It was emphasized by the participants that CDMEE is important in terms of its elimination of prejudices. Baker (1981) argues that teachers may be prejudiced towards people who are different from them and that may prevent their communication with different groups in the classroom environment. Within the scope of multicultural education, teachers are expected to develop cultural awareness, notice their prejudices, develop

a multifaceted perspective that rejects all kinds of discrimination, have knowledge about their students' personal and cultural identities, and create a classroom environment where individual differences are taken into consideration and welcomed. Baker (1981) also reports that a lot of students do not have enough knowledge of the historical, religious, and cultural differences of ethnic groups. To Baker, that is not surprising because it is a result of the training received by teachers, and most teachers do not feel the need for receiving training on multiculturalism. This thought of Baker is supported by the findings of the present study which suggests that the pre-service teachers participating in the study did not feel the need for receiving training on multicultural education before and thus they did not have any awareness of this issue.

The participants of the paper suggested that similar curricula on multiculturalism should be provided in faculties of education; the activities carried out within the scope of the curriculum implemented in the paper should be provided to students within the scope of a course included in the curricula of faculties of education; and the acquisitions of such curricula should be put into practice. This result is consistent with Ngai (2004) who argues that an effective multicultural teaching-learning should be carried out as of the teacher training period in order to succeed in multicultural education in primary education and secondary education. Internship practices may be organized in multicultural educational environments so that pre-service teachers understand why future teachers should be different and why they should be responsive to diversity in their classes and adapt to this educational environment (Cook and Van Cleaf 2000; Duarte and Reed 2004; Gremion 2006; Luft et al. 1999; Santoro and Allard 2005; Engin and Sarsar 2015). In addition, Keim et al. (2001), Teresa and Pivera (2004), Cirik (2008), and Basbay and Bektas (2009) stated that all teacher training programs should contain courses on multicultural education. These ideas in the literature are supported by the research findings suggesting that teacher training programs should contain multicultural education.

It is very important that culturally responsive teaching practices be employed in the multicultural education process. Villegas and Lucas (2002) list culturally responsive teaching strategies as follows; a) creating a classroom environment that encourages all students to make sense

of their new learning rather than rote learning, b) providing students with an opportunity to do research on the subjects they are interested in, c) creating a discussion platform in the classroom, d) presenting new information by using the examples related to students' lives and giving experience examples from students' cultures, and e) including people from students' lives in the learning process in order to build a bridge between their new learning and their existing experiences. In designing multicultural educational environments, multiple teaching methods should be used for students with different learning styles; collaboration should be encouraged; group works based on mutual interaction should be arranged; a classroom environment that encourages active participation and innovation should be created; and students from different cultural backgrounds should be made to communicate (Gay 1994; Herring and White 1995; Tuttle 1995; Moreno 2015). When the research findings are considered, CDMEE prepared based on multicultural education may be described as a process that is suitable for in-class socialization, participant-oriented, cooperative, entertaining, and productive. These views of the participants about the training process reveal that the designed training program is consistent with culturally responsive teaching practices. This result is supported by many researchers who highlight the arrangement of multicultural educational environments (Gay 1994; Bryan and Sprague 1997; Bennett 2001; Chan 2002; Engin and Genç 2015).

CONCLUSION

The pre-service teachers expressed their gladness for the training they received. The significant differences between the participants' levels of attitude towards and knowledge of multicultural education before and after the training indicate that the implemented curriculum is influential on the professional development of pre-service teachers. Based on the findings concerning the CDMEE prepared to improve pre-service teachers' multicultural education competencies.

RECOMMENDATIONS

CDMEE may be made to generalize to all teacher training programs. Seminars may be given to implementing instructors to improve the

effectiveness of practices. Similar studies may be carried out on different groups, more crowded groups, and groups at different levels to check their effectiveness. Out-of-class activities that increase interaction with diverse communities should be encouraged to raise and improve the awareness of pre-service teachers.

The research findings show the importance of diversifying the population of university, too. Diverse student population and diverse faculty structure may impel students and faculties to take on responsibility. Universities should help students get acquainted with different worlds by creating classes that consist of students with different backgrounds, interests, and skills. They should bring together students in activities that drive them to think critically, solve problems, and deal with diverse ideas and issues and improve their communication skills.

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