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Primary School Teachers' Attitudes and Knowledge Levels on Democracy and Multicultural Education: A Scale Development Study

Çetin TORAMAN¹, Ferit ACAR², Hasan AYDIN³

Abstract

Multicultural education is a recent educational perspective that cares about the needs of different cultural groups. As teachers perform the educational procedure, they have importance in achieving the goals of multicultural education. In this study, a concept map to measure teachers' knowledge on multicultural education and democracy and multicultural education attitude scale" were developed for primary school teachers. A pilot scheme was performed in a working group with 130 primary school teachers from Ankara and Istanbul where two most populous cities in Turkey. An exploratory factor analysis and Cronbach's Alpha Reliability Coefficient showed that democracy and multicultural education attitude scale is made up of five sub-dimensions (sub-scales) and it is a reliable and valid for attitude scale. Reliability and validity for concept map was supported by a group of experts who work in multicultural education field to revise a new concept map. In addition, in the pilot scheme the concepts "Universal Values", "Human Rights" and "Showing Respect to Differences" were in more than one headings. Thus, regulations were made to increase validity and reliability.

Keywords: democracy, multicultural education, primary school teachers, quantitative study, validity, reability.

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Introduction

Multicultural education is the emerging study to create equal educational opportunities for students of diverse backgrounds that include race, ethnicity, social class and cultural differences (Sleeter & McLaren, 2009). In addition, Aydin (2013a) indicates that multicultural education is a phenomenon which certainly has come into prominence in the world of education for years. In providing “multicultural education” for today’s society, multicultural teaching in the class environment should be increased by developing new structural strategies and techniques (Banks, 2013). Moreover, Ameny-Dixon (2004) states that multicultural education is an approach to teaching and learning that is based on democratic values that affirm cultural pluralism. According to Yoon (2012), multicultural education can cultivate the democratic values and attitudes of multicultural students; guaranteeing the human right of teaching and learning for them. Thus, individuals have to communicate with people from different cultural groups. This mainly happens as a result of migration that occurs because of social involvement, receiving good education, socio-economic status (SES) and political reasons (Banks, 2011; Kim, 2011). Consequently, one cannot live isolated from the rest of the world. In the same way, individuals cannot have an education introversively (O’Connor & Zeichner, 2011). In this vein, the concept of multicultural education takes this into consideration and cares differences as an enriching factor for a country as people have an opportunity to experience other cultures and democratic values.

Several theorists argue that multicultural education is an educational reform that enables students from different religion, language, race, colour, age, gender, social status, economic status, cultural background to have equal educational opportunities (Aydin, 2013; Banks, 2013; Gay, 1994). In addition, scholars emphasize that multicultural education is an educational concept that improves students’ learning skills and makes them positive to different values (Mitchell & Salsbury, 1999). However, some studies including (Cirik, 2008) found out that multicultural education may divide the country. Scott (1998) and Bennett (1999) also noted that multicultural pedagogies can also create a “false” understanding of other cultures. According to him “critics of the teaching methods associated with global education have suggested that what students are taught about different cultures is often superficial, with the emphasis on exotic differences and negative stereotypes” (p. 180). However, multicultural education is aimed at increasing awareness of other cultures and also appreciating the diversity that exists within this context. Banks (2008) also highlights that multicultural education decreases stereotyping and prejudice through direct contact and interactions among diverse individuals and it increases positive relationships through achievement of common goals, respect, appreciation, and commitment to equality (Banks & Banks, 2009). According to Banks (1993a), schools can help students reduce their biases and

improve relationships among diverse groups if: the intergroup situation is cooperative rather than competitive, group members establish common goals, status is equal among the group members, and the contact has institutional support and is sanctioned by administrators. The basic concepts of multiculturalism extend over the major domains of human activity from sports to science and is not confined to a single culture or social class as cited in Woods, 2009: 2).

It has been important in today's societies that people have struggle against living in a culturally diverse society. In other words, people have difficulty in living together as they don't have enough skills and awareness to achieve this (Unlu & Orten, 2013). At this point, the concept "multiculturalism" includes being aware of racial, ethnic, linguistics, sexual, social, educational and religious differences (Kadioglu, 2014; Parekh, 2000). Multiculturalism also keeps common cultural elements in the society in terms of different religion, identity etc. in itself. It is inevitable to create a culture agreed by different groups in a culturally diverse society. Kuzio (1998) emphasizes that multiculturalism teaches the citizens of a democratic society to value diversity and differences, helping to integrate various cultures into the larger society without cutting them off from their past. According to Race (2011), in relation to education, the notion of cultural diversity is just as important as identity and difference. In this process, education has the most important role (Banks, 2008, Basbay & Kagnici, 2011). There is no escape from culture, as there is no escape from multiculturalism, which is described by Pathak (2008) as the celebration of difference in contemporary life.

Both diversity and the recognition of diversity have increased in nations around the world with last two decades (Banks & Banks, 2009) and democratic countries have to show interest in multicultural education. Because of worldwide migration and globalization, racial, thnic, cultural, lingusitic, and religious diversity is increasing in nations around world, including Turkey (Aydin, 2012; Markic & Abels, 2014). This awareness helps cultures to come together, and increases respect among people and cultures, provides equal educational opportunities, also help humaity to understand each other for better life. In addition, it improves critical thinking and decreases prejudice. Therefore, multicultural education contributes to national unification, peace and democracy. Democratic societies have to meet the needs of immigrants including educational needs. On the other hand, there can be a long distance between the main values of democracy and school experiences of minorities (Banks, 2011; Yazici, Basol & Toprak, 2009). Youngdal and Hi-Won (2010: 5-6) stresses that the need for multicultural education can be summarized into the three points. First, multicultural education can cultivate the democratic values and attitudes of students from multicultural backgrounds, which is guaranteeing the human right to teaching and learning for them in a democratic society. Second, multicultural education contributes to the integration of a diversified society and the relief of social conflicts. Third, at the aspect of cultural

evolution, the combination of multicultural grounds into diverse society can provide for the creation of a healthier and more encompassing culture.

Throughout, multicultural education is considered as an educational reform. The purpose of multicultural education is to start a reform movement at schools and provide all students equal opportunities in education regardless of religion, language, race, culture etc. At that point, concepts in democracy, such as rights, justice, freedom are directly related to multicultural education (Banks, 2008; Faltis, 2014; Kim, 2011). Understanding the different qualifications of students can make students and teachers close to each other. This comes from the fact that different groups are not homogenous in terms of gender, ethnicity, religion etc. In this context, multiculturalism and multicultural education are multidimensional concept (Tsetsura, 2011). Depending on this fact, it can be said that students from same geographical area may have different features.

Thus, multicultural elements such as race, ethnicity and culture in curriculums based on multicultural education. According to Gay, there are few distinctions between multicultural curriculum and general curriculum regarding “conceptual paradigms, methodologies, and variables of analysis in development” Gay (2004: 30). In addition, she argued that multicultural education policies, programs and practices are comparatively implicitly connected. In the recent years, educational ideas, issues, and movements are responsively considered by general curriculum theorist by sociocultural realities in local, regional, national, and global schools and societies. However, multicultural education does not appear as a part of curriculum, it is conducted inside and outside the school along with the formal programme (Okoye-Johnson, 2011). Thus, the educational process at school has to give importance to differences. Banks (2012) argues that schools should help students to understand the fact that cultural, national and regional identities are complicated, related to each other and always in progress. Kridel (2010) also describes that multicultural curriculum should involves issues to those of concern in any curriculum development. As well as, he stated that what knowledge issues is greatest worth, to whom and why, and how can it be organized to be delivered most how can it be best organized to be delivered most effectively to student because that multicultural curriculum consider the dimensions of the diversity and how the studies are to be conducted. Hilliard and Pine (1990) advocate a multicultural curriculum should be considered for several reasons: a) provides alternative points of view relative to information already taught in most educational systems; b) provides ethnic minorities with a sense of being inclusive in history, science etc.; and, c) decreases stereotypes, prejudice, bigotry, and racism in the world (*apud*. Aydin, 2013a).

Cultural differences in education have led to changes in educational process. Therefore, teacher education in a global world cannot be the same as it was before (O'Connor & Zeichner, 2011). There is a need for teachers who have universal human values to give students a global and international education. Teachers are

the most important factors to be successful in multicultural education and give effective education in terms of multiculturalism. Especially in the societies where multicultural education is a new phenomenon, teachers have critical roles. As a result of the education that student teachers get, it is expected that they have sufficient cognitive, affective and psycho-motor skills needed for the profession. Furthermore, it is also an expectation that teachers respect to cultural differences and create a democratic learning atmosphere (Unlu & Orten, 2013). Cochran-Smith (2003) asserts that discrepancies like these attest to the fact that there are dramatically different takes on “teacher preparation for diversity,” “multicultural teacher education”, and “teaching for social justice” as well as major disparities (sometimes even among people considered like-minded) in notions of “equity”, “teacher learning”, “social change”, and “highly qualified” teachers for “all students”(p.8).

Many researchers including Bennet (1990), Banks (1992, 1993) have stated that there is a need for institutional changes including curriculums, teaching materials, teaching and learning styles, attitudes, perceptions, teacher and manager behaviours to be successful in multicultural education. Within this paradigm, it can be said that teachers are important for multicultural education. Teachers are the people who have an effect in designing educational procedures, achieving or not achieving the goals of formal curriculum. Moreover, they have an influence on behaviors related to hidden curriculum and preparing democratic or anti-democratic classroom atmosphere. These elements make teachers important as a role-model. Therefore, teachers have to understand and trust the students. This makes them effective in teaching process (Sharma, 2005). In addition to these, teachers need to be more aware of the fact that there is not only one culture in the world or a universal culture.

Students attend the educational process with different motivation levels. Therefore, teachers should create an atmosphere that encourages students to participate in educational process. Thus, students feel themselves comfortable during the courses. Besides, teachers should let the students express their feelings and thoughts. In a classroom with students from different cultural and racial groups, this gains much importance. Teachers should pay attention to the values and thoughts of different groups and ask their opinions about the situations that they don't want. Scholars argue that teaching and learning materials needs to be diverse and critically examined for bias (Gorski, 2010). The instructional materials that are used in the school should show events, situations, and concepts from the perspectives of a range of cultural, ethnic, linguistic, and racial groups (Banks, 1999). Educators also need to examine all materials, such as texts, newspapers, movies, games, and workbooks for biases and oppressive content. In addition, educators must avoid materials that show stereotypes or inaccurate images of people from certain groups or eras. (Acquah & Commins, 2011; De Anda, 2007; Rego & Nieto, 2000; Tellez, 2008).

National Council for Accreditation for Teacher Education [NCATE], 2002) draws attention to the importance of culture in teacher education. Moreover, it describes cultural diversity as differences of ethnicity and race, socioeconomic level, gender, disability, language, religion, sexual preferences and geography. It is important for teachers to be aware of all these factors affecting educational process. Accordingly, teachers aware of these accept the students from different groups as people with rich knowledge and experience (Unlu & Orten, 2013). On the other hand, teachers, especially preservice teachers from dominant culture believe that there is no racism or discrimination in the society. Moreover, some studies have showed that preservice teachers have a limited experience with individuals from different groups (Acquah & Commins, 2013). Acquah and Commins (2013) states that preservice teachers generally believe that there is an equality in society. Furthermore, they emphasize that preservice teachers believe that there is no inequality in terms of having success and this only comes from personal performance. Such a view shadows the inequalities in the society and creates an obstacle for teachers to pay attention to cultural differences. Hence, teachers' thoughts on multicultural education has an importance in a diverse society.

Considering the primary school teachers, students spend most of their educational life with them. In Turkey, students spend 4 years of education with primary school teachers. Therefore, they have a huge influence on students' development. It is an important determining factor in terms of primary school teachers that students have democratic values, care about pluralism, respect individuals of different racial, religious and linguistic groups. As primary school teachers are really important about the issue, researching their knowledge levels and attitudes gains much importance. There is also need for analyzing these attitudes depending on their race, geographical location, SES, education, communication with different groups etc. In the same way, Aydin (2012) states that it is essential to define the needed procedures in Turkey and he argues that diversity in Turkey is becoming increasingly reflected in the nation's schools, colleges, and universities. For example, the last five years the number of international students in Turkey increased by 59 percent and there are 26 thousand students from 147 countries (Student Selection and Placement Center-OSYM, 2011). These demographic, social, and economical trends have important implications for teaching and learning in today's schools. Thus, teacher education programs should help teachers attain the knowledge, attitudes, and skills needed to work effectively with students from diverse groups as well as help students from mainstream groups develop cross-cultural knowledge, values, and competencies (Banks and Banks, 2009). In this vein, determining the attitudes of primary school teachers gains importance. Given the importance of these issues and the multiple meanings noted above, the purpose of this study is to explore primary schools teachers' attitudes and knowledge level on democracy and multicultural education for scale

development. The premise of the framework proposed in this article is that within any research study, any particular teacher preparation program or practice (whether collegiate or otherwise), and any governmental or professional policy that is in some way related to multicultural, diversity, or equity issues in teacher preparation.

Democracy, Multicultural Education Scales and Scale Development

There has been many studies in the world concerning teachers' and preservice teachers' knowledge levels, experiences, attitudes and behaviours. Among these, there are various scales of Reiff and Cannella (1992), Campell and Farrell (1985), Anders *et al.* (1990), Cooper *et al.* (1990), and Marshall (1992). In addition, the scale developed by Guyton and Wesche measures the dimensions of knowledge, experience, attitude and behaviour in multiculturalism (Yazici, Basol & Toprak, 2009). In Turkey, there are some studies to adapt multicultural scales into Turkish culture. For example, Yazici, Basol and Toprak (2009) tried to adapt Multicultural Attitudes Scale made by a group of researchers including Jojeph G. Ponterotto. On the other hand, there aren't any developed scales that belong to Turkish culture's unique characteristics.

In different resources, it is possible to see scale development steps (Ballesteros, 2003, as cited in Giray Berberodlu; Crocker & Algina, 1986). The steps of scale developing are as follows: (1) Defining the goals of the scale (*determining the extent and writing the items*); (2) Revising the items and prepare the form; (3) Determining how to grade the items, how to analyze the data; (4) Making the pilot scheme; (5) Grading the items and analyzing; (6) Presenting the final scale depending on the results. Throughout aforementioned steps, the purpose of this study is to develop an attitude scale and a concept map, special to Turkish culture, to measure primary school teachers' knowledge levels.

Method

Research Design

This study is grounded on a quantitative research design within a descriptive approach. The research has been aimed to develop a concept map that measures teachers' knowledge levels of multicultural education. Moreover, an attitude scale has been developed to determine the attitudes of primary school teachers to describe psychometric features.

Instruments

Scales have been developed for primary school teachers who work in public and private primary schools. A purposive sampling group of primary school teachers who are easy to be reached attended the study. In this group, there are primary school teachers from Istanbul and Ankara. In the group, there are 94 primary school teachers from Ankara and 36 from Istanbul. This study has been conducted with the permission of Yıldız Technical University with the document numbered 58821933-302.99-1880 in 28.11.2013.

Scales and Their Features

Multicultural Education Concept Map (MECM): It was developed by the researchers by reviewing the related literature. MECM measured the knowledge levels of primary school teachers on multicultural education. Furthermore, there was a possibility that primary school teachers might confuse the concepts about multicultural education. Therefore, it also helped to define the concepts that the participants confuse with each other. There were 25 blanks in MECM. Every blank was scored as 1 point. The highest point that could be taken from the map is 25 points. In pilot scheme of MECM, it was applied by leaving 25 blanks out of 36 concepts. Eleven concepts were given in the concept map to help the participants to create relations between concepts. Pilot scheme showed that the concepts, "Universal Values, Human Rights and Showing Respect to Differences" were stated in two different groups by the participants. In the first practice, the concept, "Universal Values" was stated in the concept map as a concept "included" in multicultural education. After this practice, it could be seen that most of the participants thought that it was a concept "developed" by multicultural education. In the first practice, the concept, "Human Rights", was stated in the concept map as a concept "included" in multicultural education. After this practice, it could be seen that most of the participants thought that it was a concept "developed" by multicultural education. In the first practice, the concept "Showing Respect to Differences" was stated in the concept map as a concept "developed" by multicultural education. After this practice, it could be seen that most of the participants thought that it was a concept "aimed" by multicultural education. Therefore, these 3 concepts were added to both two headings not to decrease validity. To summarize, there were 25 blanks out of 39 concepts related to multicultural education in the final version. Every blank was scored as 1 point. The highest point that could be taken from the map is 25 points.

Democracy and Multicultural Education Attitude Scale (DMEAS): It was developed by the researchers by reviewing the related literature. DMEAS was developed to determine the attitudes of primary school teachers about democracy and multicultural education. There were 35 items before the pilot scheme. These

items included expressions about knowledge, beliefs, thoughts, emotions and behaviours about democracy and multicultural education. Answers to these expressions were digitised with a likert scale. Expressions in DMEAS were designed from “I completely agree” to “I completely disagree” with five point likert scale. After the pilot scheme, 8 items were removed from the scale as they showed common loads in more than one factor. In the final version of the scale, there were 5 sub-dimensions (sub-scales) and 27 items as it can be seen below:

- *Attitude Towards Multicultural Education*: It was made up of items numbered 12, 17, 23, 24, 25, 26 and 27. The highest score that could be taken from this sub-scale was 35. Getting high scores showed positive attitude towards multicultural education.
- *Prejudiced Attitude Towards Multicultural Education*: It was made up of items numbered 5, 13, 14, 16, 18, 19 and 20. The items in this sub-scale were formed with negative verbs or have negative meaning. For that reason, they were scored reversely. The highest score that could be taken from this sub-scale is 35. Getting high scores showed unprejudiced attitude and getting low scores showed prejudiced attitude.
- *Attitude Towards Democracy Education*: It was made up of items numbered 1, 2, 3, 4 and 6. The highest score that could be taken from this sub-scale is 25. Getting high scores showed positive attitude towards democracy education.
- *Attitude Towards Democracy*: It was made up of items numbered 7, 8, 9, 21 and 22. The highest score that could be taken from this sub-scale is 25. Getting high scores showed positive attitude towards democracy.
- *Attitude Towards Cultural Differences*: It was made up of items numbered 10, 11 and 15. The highest score that could be taken from this sub-scale is 15. Getting high scores showed positive attitude towards cultural characteristics and differences.

Data Analysis

Data obtained from 130 primary school teachers are transferred to IBM-SPSS 22 Software. To determine the validity and reliability of “Democracy and Multicultural Education Attitude Scale” Kaiser-Meyer-Olkin (KMO) test, Bartlett Sphericity test, Varimax rotation, anti-image correlation, Cronbach Alpha reliability coefficient, ANOVA with Tukey’s Test for Nonadditivity test were applied (Buyukozturk, 2003; Ozdamar, 2013). Detailed information about analysis was given in findings part.

Results

Construct Validity (Factor Analysis) and Reliability

To examine construct validity of “*Democracy and Multicultural Education Attitude Scale*”, exploratory factor analysis was applied. Before this analysis, firstly, KMO value which enables us to test the data for analyzing was checked and the result was found as 0.794. This rate has to be over 0.50. In addition, Bartlett Test which serves to same purpose was performed and the result was found as [$\chi^2 = 1478,378$; $p < 0.01$]. As this value is meaningful, factor analysis can be applied (Buyukozturk, 2003; Ozdamar, 2013). As a result of Democracy and Multicultural Education Attitude Scale’s exploratory factor analysis which was made by using principal component analysis method, it was determined that items numbered 5, 7, 9, 14, 22, 30, 32 and 34 show high correlation and in more than one factor and anti-image correlation value was under 0.50 for some items. For that reason, these items are not included in the scale. For the rest of the items, it is seen that factor yük values vary from 0.376 to 0.729. Also, item total correlations show different values between 0.198 and 0.622. The variance that the items explain under five factors is % 56.732. When the scale is analyzed unidimensionally, Cronbach-Alpha coefficient of consistence which is related to reliability was found as 0.866. Item factor values, item total correlations are shown in table 1 and items’ anti-image correlation values are shown in table 2.

Table 1. *Factor Analysis Initial Factor Load Values and Item-Total Correlation Results*

| Item Number | Initial Factor Load Value | Item-Total Correlation | | Item Number | Initial Factor Load Value | Item-Total Correlation |
|--|---------------------------|------------------------|--|-------------|---------------------------|------------------------|
| I1 | 0.540 | 0.273 | | I19 | 0.601 | 0.363 |
| I2 | 0.681 | 0.298 | | I20 | 0.598 | 0.577 |
| I3 | 0.729 | 0.270 | | I21 | 0.634 | 0.622 |
| I4 | 0.625 | 0.198 | | I23 | 0.595 | 0.535 |
| I6 | 0.413 | 0.330 | | I24 | 0.522 | 0.441 |
| I8 | 0.496 | 0.260 | | I25 | 0.384 | 0.409 |
| I10 | 0.527 | 0.379 | | I26 | 0.511 | 0.385 |
| I11 | 0.636 | 0.489 | | I27 | 0.554 | 0.345 |
| I12 | 0.631 | 0.431 | | I28 | 0.487 | 0.445 |
| I13 | 0.602 | 0.260 | | I29 | 0.376 | 0.327 |
| I15 | 0.711 | 0.470 | | I31 | 0.523 | 0.514 |
| I16 | 0.489 | 0.573 | | I33 | 0.639 | 0.510 |
| I17 | 0.643 | 0.538 | | I35 | 0.653 | 0.559 |
| I18 | 0.517 | 0.276 | | | | |
| The Variance Represented By 5 Factors = % 56.732 Cronbach Alpha = 0.866 | | | | | | |

When Table 1 is analyzed, it was found that remaining items' initial factor loads are not under 0.376 and item-total correlations are not under 0.198. In the analysis of Cronbach Alpha reliability, in the section of "Cronbach's Alpha if Item Deleted", in case of removing any items in table 1, Cronbach Alpha reliability value has the value under 0.866. At that point, it can be said that all items' values of reliability are high (Buyukozturk, 2003; Ozdamar, 2013).

Table 2. *Items' Anti-image Correlation Values*

| Item | Anti-image Correlation | Item | Anti-image Correlation | Item | Anti-image Correlation |
|------|------------------------|------|------------------------|------|------------------------|
| I1 | 0.782 | I13 | 0.652 | I24 | 0.802 |
| I2 | 0.768 | I15 | 0.750 | I25 | 0.763 |
| I3 | 0.812 | I16 | 0.794 | I26 | 0.798 |
| I4 | 0.724 | I17 | 0.806 | I27 | 0.775 |
| I6 | 0.789 | I18 | 0.704 | I28 | 0.842 |
| I8 | 0.809 | I19 | 0.766 | I29 | 0.696 |
| I10 | 0.786 | I20 | 0.814 | I31 | 0.760 |
| I11 | 0.818 | I21 | 0.886 | I33 | 0.810 |
| I12 | 0.859 | I23 | 0.820 | I35 | 0.826 |

When table 2 is analyzed, it was found that items' anti-image correlation values vary from 0.652 to 0.886. All of the items in the scale have anti-image values over 0.50. This shows that items' load values' contribution to factor construction is high.

In exploratory factor analysis, to determine if there are sub-dimensions in the scale "Varimax" rotation method has been used. It also enables to define sub-dimensions if there are any (Buyukozturk, 2003; Ozdamar, 2013). "Varimax" rotation results can be seen in table 3.

Table 3. *Factors and Items under the Factors According to the Results of Varimax Rotation Method*

| Items | Factors | | | | |
|-------|---------|------|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| I33 | .733 | | | | |
| I35 | .700 | | | | |
| I31 | .680 | | | | |
| I28 | .674 | | | | |
| I21 | .670 | | | | |
| I29 | .578 | | | | |
| I16 | .546 | | | | |
| I17 | | .774 | | | |
| I23 | | .717 | | | |
| I20 | | .648 | | | |
| I24 | | .627 | | | |
| I6 | | .612 | | | |
| I18 | | .584 | | | |

| Items | Factors | | | | |
|-------|---------|------|------|------|------|
| | 1 | 2 | 3 | 4 | 5 |
| I25 | | .508 | | | |
| I3 | | | .802 | | |
| I2 | | | .767 | | |
| I4 | | | .722 | | |
| I8 | | | .667 | | |
| I1 | | | .530 | | |
| I12 | | | | .693 | |
| I11 | | | | .684 | |
| I26 | | | | .683 | |
| I27 | | | | .671 | |
| I10 | | | | .616 | |
| I13 | | | | | .765 |
| I15 | | | | | .724 |
| I19 | | | | | .657 |

As it can be seen in Table 3,

- Items numbered as 16, 21, 28, 29, 31, 33 and 35 create a sub-dimension (first sub-dimension),
- Items numbered as 6, 17, 18, 20, 23, 24 and 25 create a sub-dimension (second sub-dimension),
- Items numbered as 1, 2, 3, 4 and 8 create a sub-dimension (third sub-dimension),
- Items numbered as 10, 11, 12, 26 and 27 create a sub-dimension (fourth sub-dimension),
- Items numbered as 13, 15 and 19 create a sub-dimension (fifth sub-dimension).

Reliability values and additivity test (ANOVA with Tukey’s Test for Non-additivity) results that belong to sub-dimensions created by these items have been shown in table 4, 5, 6, 7 and 8 (Buyukozturk, 2003; Ozdamar, 2013).

Table 4. *First Sub-Dimension Cronbach Alpha and Nonadditivity Test Results*

| Items | Cronbach Alpha | Source of Variance | Sum of Squares | Mean of Squares | F | df | p |
|---------------------------|----------------|--------------------|----------------|-----------------|-------|----|-------|
| 16, 21, 28, 29, 31,33, 35 | 0.829 | Nonadditivity | 2.673 | 2.673 | 3.502 | 1 | 0.062 |

As it can be seen in Table 4, Cronbach Alpha reliability coefficient is 0.829. For scales, values for reliability coefficient are acceptable between 0.70 and 0.90 (Ozdamar, 2013, 555). It can be said that this sub-scale has high level of reliability. In addition, it is a likert type additive scale in terms of scoring (Tukey Non-additivity $p > .05$).

Table 5. *Second Sub-Dimension Cronbach Alpha and Nonadditivity Test Results*

| Items | Cronbach Alpha | Source of Variance | Sum of Squares | Mean of Squares | F | df | p |
|---------------------------|----------------|--------------------|----------------|-----------------|-------|----|-------|
| 6, 17, 18, 20, 23, 24, 25 | 0.797 | Nonadditivity | 1.371 | 1.371 | 1.193 | 1 | 0.275 |

When Table 5 is analyzed, it can be seen that Cronbach Alpha reliability coefficient is 0.797. This means that this sub-scale has high level of reliability. Also, it is a likert type additive scale in terms of scoring (Tukey Nonadditivity $p>.05$).

Table 6. *Third Sub-Dimension Cronbach Alpha and Nonadditivity Test Results*

| Items | Cronbach Alpha | Source of Variance | Sum of Squares | Mean of Squares | F | df | p |
|---------------|----------------|--------------------|----------------|-----------------|-------|----|-------|
| 1, 2, 3, 4, 8 | 0.794 | Nonadditivity | 0.000 | 0.000 | 0.002 | 1 | 0.966 |

As it can be seen in Table 6, third sub-dimension's Cronbach Alpha reliability coefficient is 0.794. Thus, it has high level of reliability. Also, it is a likert type additive scale in terms of scoring (Tukey Nonadditivity $p>.05$).

Table 7. *Fourth Sub-Dimension Cronbach Alpha and Nonadditivity Test Results*

| Items | Cronbach Alpha | Source of Variance | Sum of Squares | Mean of Squares | F | df | p |
|--------------------|----------------|--------------------|----------------|-----------------|-------|----|-------|
| 10, 11, 12, 26, 27 | 0.781 | Nonadditivity | 1.708 | 1.708 | 3.363 | 1 | 0.680 |

When Table 7 is examined, it can be seen that fourth sub-dimension's Cronbach Alpha reliability coefficient is 0.781. This means that this sub-scale has high level of reliability. Also, it is a likert type additive scale in terms of scoring (Tukey Nonadditivity $p>.05$).

Table 8. *Fifth Sub-Dimension Cronbach Alpha and Nonadditivity Test Results*

| Items | Cronbach Alpha | Source of Variance | Sum of Squares | Mean of Squares | F | df | p |
|------------|----------------|--------------------|----------------|-----------------|-------|----|-------|
| 13, 15, 19 | 0.706 | Nonadditivity | 0.005 | 0.005 | 0.006 | 1 | 0.936 |

As it is shown in table 8, Cronbach Alpha reliability coefficient of fifth sub-dimension is 0.706. It can be said that this sub-scale has high level of reliability. Also, it is a likert type additive scale in terms of scoring (Tukey Nonadditivity $p>.05$). As a result of exploratory factor and reliability analysis, last version of the scale has been designed. According to the latest version of the scale:

- Items 16, 21, 28, 29, 31, 33 and 35 are numbered as 12, 17, 23, 24, 25, 26 and 27. The sub-dimension that these items create are named as “Attitude towards Multicultural Education”.
- Items 6, 17, 18, 20, 23, 24 and 25 are numbered as 5, 13, 14, 16, 18, 19 and 20. The sub-dimension that these items create are named as “Prejudiced Attitude towards Multicultural Education”.
- Items 1, 2, 3, 4 and 8 are numbered as 1, 2, 3, 4 and 6. . The sub-dimension that these items create are named as “Attitude towards Democracy Education”.
- Items 10, 11, 12, 26 and 27 are numbered as 7, 8, 9, 21 and 22. The sub-dimension that these items create are named as “Attitude towards Democracy”.
- Items 13, 15 and 19 are numbered as 10, 11 and 15. The sub-dimension that these items create are named as “Attitude towards Cultural Differences”.

Pilot Scheme Results of Concept Map

In the study, it was also aimed to develop a concept map for primary school teachers’ knowledge about the concepts in multicultural education. For that reason, a concept map was developed by the researchers. The validity and reliability of the concept map were performed by getting the opinions of 7 experts, one of them holds PhD in multicultural education and the others are doctoral students. In addition to this practice, a pilot scheme was performed to define if the concepts were used for each other, if there were any misunderstandings about the concepts and if every concept was clear. The pilot scheme was applied in Ankara and Istanbul to 130 primary school teachers. 25 of them didn’t fill the concept map but 105 of them answered all of the concepts in the map. Descriptive statistics for these 105 teachers’ answers was shown at table 9.

Table 9. *Descriptive Statistics of Scores taken from Concept Map*

| Scale | Descriptive Statistics | |
|-------------|------------------------|-------|
| | N | 105 |
| Concept Map | Mean (\bar{X}) | 14.50 |
| | Standart Error of Mean | 5 |
| | Standart Deviation (S) | 0.566 |
| | Median | 5.801 |
| | Mode | 15 |
| | Minimum Point | 14 |
| | Maximum Point | 2 |
| | Maximum Point | 25 |

When table 9 is analyzed, primary school teachers' scores for the concepts about multicultural education are more than half of the questions. In other words, the participants average is 14.5 ($\bar{X} = 14.505$). The highest score that can be taken from the map is 25. The lowest score is 2 and the highest score is 25 for the participants. The most frequent score is 14. Item analysis could not be made to concept map but it can be said that its difficulty level is normal when the value of mean is considered. Descriptive examination for answers to concept map was also performed in terms of placing the concepts correctly, using the concepts for each other, being clear and understandable or not. In pilot scheme of MECM, it was applied by leaving 25 blanks out of 36 concepts. Eleven concepts were given in the concept map to help the participants to create relations between concepts. Pilot scheme showed that the concepts, "Universal Values, Human Rights and Showing Respect to Differences" were stated in two different groups by the participants. In the first practice, the concept, "Universal Values" was stated in the concept map as a concept "included" in multicultural education. After this practice, it can be seen that most of the participants thought that it is a concept "developed" by multicultural education. In the first practice, the concept, "Human Rights", was stated in the concept map as a concept "included" in multicultural education. After this practice, it can be seen that most of the participants thought that it is a concept "developed" by multicultural education. In the first practice, the concept "Showing Respect to Differences" was stated in the concept map as a concept "developed" by multicultural education. After this practice, it can be seen that most of the participants thought that it is a concept "aimed" by multicultural education. Therefore, these 3 concepts were added to both two headings not to decrease validity. To summarize, there are 25 blanks out of 39 concepts related to multicultural education in the final version. Every blank is scored as 1 point. The highest point that can be taken from the map is 25 points.

Conclusion and Discussion

In this study, "*Democracy and Multicultural Education Attitude Scale*" whose validity and reliability were examined was evaluated in terms of psychometric features that a measurement instrument should have. After the evaluation, it was determined that the attitude scale was made up of five sub-scales. These sub-scales are; Attitude Towards Multicultural Education, Prejudiced Attitude Towards Multicultural Education, Attitude Towards Democracy Education, Attitude Towards Democracy and Attitude Towards Cultural Differences. It was also determined that these sub-scales's Cronbach's Alpha reliability coefficient was between 0.706 and 0.829. For scales, values for reliability coefficient are acceptable between 0.70 and 0.90 (Özdamar, 2013, 555). The items under the scale showed high factor loads. In addition, it was proved that sub-scales were additive scales with

ANOVA with Tukey's Test for Nonadditivity (Buyukozturk, 2003; Ozdamar, 2013).

The concept map's validity and reliability which was developed to determine the knowledge levels of primary school teachers on multicultural education were performed by getting experts' opinions. In the pilot scheme, it was found that three of the concepts could be in different headings. To increase the validity and reliability of the concept map, three concepts were placed in these three headings. Multicultural education has a very important place in the field of education. Recently, it has become more and more important in today's globalizing world. In terms of education, it was important to know teachers' knowledge and attitude towards the issue and there aren't any concept maps and attitude scales special to Turkey's characteristics. Countries which give importance to be successful in educational area should care about democracy and multicultural education. This aim can only be performed with scientific studies. Performing these studies includes the problem of methodology but it also includes the problem of collecting valid and reliable data. In this aspect, the researchers of this study think that it will be beneficial to educational area as the instruments' validity and reliability were proved in the study.

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