



Multicultural Teacher Competencies Scale for Primary Teachers: Development and Implementation Study *

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Abstract

In this survey study, it is aimed to develop a valid and reliable scale that can measure multicultural teacher competencies of primary teachers and to examine their multicultural teacher competencies. Three different participant groups were determined by convenience sampling technique. With 336 primary teachers exploratory factor analysis (EFA), with 349 primary teachers confirmatory factor analysis (CFA) was conducted. Then, multicultural teacher competencies of 419 primary teachers in the third group were determined with the scale developed. Data collected through Google forms was analyzed with SPSS 24.0. EFA, CFA, correlation, t-test, Mann Whitney U and Kruskal Wallis tests were carried out in the analysis. As a result of the analysis, consisting of 22 items and three factors; both the overall reliability coefficient, confirmed by CFA, was .94, explaining 62.10% of the total variance and the reliability coefficient values for each factor were calculated as .93 for the first factor, .85 for the second factor and .86 for the third factor. In addition, it was determined that teachers had the most self-efficacy regarding the resilience sub-dimension, followed by their sensitivity to differences and multicultural pedagogical competencies. Multicultural teacher competencies differed significantly in favor of women. There is a significant difference in sensitivity to differences in favor of younger teachers. In the sub-dimension of resilience, it was determined that teachers who work in larger cities had more resilience while there was no significant difference in the context of professional experience.

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Introduction

Multiculturalism is a very comprehensive phenomenon that includes many concepts such as race, language, gender, disability, social class, religious orientation, ethnicity, sexual orientation and age (Banks & Banks, 2010). Multiculturalism also means that various cultures can live together and that every social group can maintain their existing cultures within the mainstream culture (Bulut & Başbay, 2014). From this point of view, ensuring different cultures' both protecting their own identities and living with others from different cultures in the same environment has turned the concept of multicultural education into a buzz word.

Making a distinction between the concepts of multiculturalism and multicultural education would be beneficial. Multiculturalism is a characteristic of groups and contexts formed by individuals from different origins and characteristics. The term, "multicultural classes" can be an example for this definition. Multicultural education, on the other hand, aims at each student's achieving a high level of success by designing and implementing education programs sensitive to the differences among individuals instead of ignoring them, and is defined as an educational approach that aims at creating a more peaceful society by providing students with values such as equality, justice, democracy, and social action skills (Babayiğit, 2022). On the other hand, Banks (2006) claimed that while the term multiculturalism was defined as a concept preferred by writers who criticized and opposed multicultural education, multicultural education had a multidimensional structure that could be considered as an idea or concept, an educational movement and a process. These three basic dimensions of multicultural education can be explained as follows:

- *Multicultural education as an idea or concept:* Multicultural education is an educational approach that asserts that all students should have equal learning opportunities regardless of language, religion, race, ethnicity, social class or gender. Multicultural education attempts to explain how students are deprived of equal educational opportunities due to their differences as well (Lee and Slaughter-Defoe, 1995; Nieto, 1995).
- *Multicultural education as an education movement:* Multicultural education is a revolutionary movement that is for the innovations that will create equal learning opportunities for all students at schools. It also identifies effective teaching strategies that will enable all students to learn at a high level (Banks, 2006).
- *Multicultural education as a process:* Multicultural education is a never-ending process in a democratic and pluralistic society (Banks, 2006) as one of the main purposes of multicultural education is to ensure the fulfilment of democratic ideals such as justice, equality and freedom in society. However, although these ideals can never be fulfilled comprehensively, individuals are expected to make a constant effort to reach them.

As it can be understood from above, multicultural education is not only an idea, a concept, or education reform movement. In addition, multicultural education is a never-ending process. As a school reform movement emerged from the Civil Rights Movement of the 1960s and 1970s, "multicultural education, once implemented creatively and effectively, has the potential to transform schools to prepare students for the next century" (Banks, 2006, p.88).

The main purpose of multicultural education is to transform all schools, educational institutions and curricula in a way that they would reflect the experiences, backgrounds,

cultures and perspectives of students from various racial, ethnic, religious and social class groups (Esen, 2009). Another main purpose of multicultural education is to provide equality and social justice to all students in a comprehensive, sustainable and more transformative attitude that educators can understand and fulfill it (Gay, 2002). Multicultural education emphasizes diversity rather than uniformity and aims to include all students in the society an equally structured way (Esen, 2009). Thus, boys and girls, exceptional students, and various racial, ethnic, linguistic, and cultural members and groups will have equal chances to succeed academically at school (Banks & Banks, 2010).

Gay (1994) listed the goals of multicultural education as personal development, attitudes and value clarification, multicultural social competence, basic skill proficiency, development of ethnic and cultural literacy, educational equality and excellence, and personal empowerment for social reform. Similarly, Demir (2012) stated the goals of multicultural education as enabling individuals to recognize and respect both their own culture and the different cultures and ethnic differences in the society they live in; developing cultural and ethnic literacy; having the individual know him/herself and developing a positive identity; and raising peaceful individuals. In addition, he stated that the goals of multicultural education included learning how to interact with and understand individuals with different backgrounds, and providing them with different characteristics including mathematical skills, literacy skills, conflict resolution, problem solving and critical thinking skills (Demir, 2012).

In addition to the goals mentioned above, multicultural education aims at increasing academic achievement, eliminating prejudices against cultural differences (Duun, 1997). Besides improving communication among different groups, ensuring pluralism and equality at school, and providing an environment for critical thinking are other important goals of multicultural education (Bohn & Sleeter, 2000). It also includes various goals such as providing individuals with the ability to fight against discrimination and helping them have self-confidence about their identities (Hohensee & Derman-Sparks, 1992).

Undoubtedly, teacher competencies need to be revised in order to put these competencies in to practice. Examining the literature, it could be seen that there are various studies on multicultural teacher competencies (MTC). For example, Banks (1991, cited in Başbay & Kağnıcı, 2011) grouped MTCs under three levels as personal level, class level and school level. The personal level is stated as the teachers' knowing and researching their own culture, evaluating the level of racism and cultural centralism to which they belong, and realizing their own communication skills for multicultural environments. Class level is defined as not regarding minority students as "others", being respectful to all cultures in the school and classroom and creating a suitable classroom environment for this, creating a respectful environment in the classroom, strengthening communication with and among students, and implementing a program that is sensitive to cultural diversity. As for the school level, there are competencies such as policy making for multicultural societies, providing administrative and financial support to multicultural education practices, and creating multicultural environments.

Keengwe (2010), likewise, stated that teachers should accept the existence of different cultures in modern classrooms and provide necessary arrangements for these differences. In addition, teachers are expected to go beyond the theory of cultural mismatch in order for students' languages and cultures to be perceived as equally valuable and powerful, to set high expectations for all students, and to fulfill these expectations. Moreover, teachers are supposed

to understand the cultural diversity represented in the classroom and be prepared for the challenges they will face and be able to learn and apply effective teaching methods that is responsive to the diversity of their students. Particularly, teachers are recommended to be self-reflective about their own prejudices and respect differences and develop a willingness to approach teaching from a multicultural perspective (Keengwe, 2010).

Gay (2002) grouped teacher competencies in multicultural education into three groups. These competencies are awareness in one's own culture and being aware of prejudices, tendency to learn worldviews on different cultures, and development of culturally sensitive teaching methods. Thus, Gay (2002) adopted approaches in multicultural education incorporating experiences of students and cultural backgrounds into teaching practices. In another approach to MTCs, Weinstein, Tomlinson-Clarke & Curran (2004) adopted a five-component approach including teachers' recognition of their own ethnocentrism and prejudices, having knowledge on cultural backgrounds of students, awareness of broader social, economic and political contexts, ability and willingness to use culturally appropriate management strategies, and building compassionate classroom communities. Spiecker and Steutel (2001) stated that today's teachers should have a perception of multiculturalism, be aware that every person has equal rights and should respect this; should be against discrimination, have a democratic attitude, and should be tolerant to different lifestyles.

One of the MTCs classifications based on the literature belongs to Babayiğit (2022). Babayiğit (2022) synthesized the multicultural teacher competencies framework and grouped these competencies under two main titles as egalitarian competencies (EC) and multicultural pedagogical competencies (MPC). This classification is given in Table 1.

From the competencies demonstrated in Table 1, egalitarian competencies are seen to be related to the ability to have the intellectual and affective base required by multicultural education such as respecting differences and being democratic. On the other hand, multicultural pedagogical competencies are related to the competencies of ensuring that all students succeed, regardless of their differences, which is one of the most basic ideals of multicultural education (Babayiğit, 2022).

Table 1. *Multicultural Teacher Competencies Framework (Babayiğit, 2022, p.48)*

Egalitarian Competencies	Being democratic and fair in decisions and processes regarding the classroom and teaching
	Overcoming their own prejudices and accepting cultural diversity along with enabling their students to do the same
	Taking action to change unfair attitudes and practices towards culturally diverse groups and helping students improve social action skills
	Being determined and willing to overcome the difficulties that might stem from the cultural gap between teachers' and students' cultural background
Multicultural Pedagogical Competencies	Exploring the cultural and individual characteristics of students
	Arranging teaching objectives, contents, learning-teaching processes, materials, testing-evaluation methods, and practices in a way that is responsive to cultural backgrounds and learning preferences of students to ensure success for all students

Considering the MTCs in the literature in general, the competencies the teachers should have can be summarized as follows;

- Knowing his/her own culture
- Being willing to understand and learn about different cultures
- Knowing that there may be different cultures in the classroom
- Being able to manage the teaching process by considering different cultures
- Being able to use teaching methods and techniques by considering different cultures
- Being aware of prejudices of students towards different cultures
- Gaining knowledge about cultural backgrounds of students
- Being respectful and tolerant to different cultures
- Demonstrating an embracing attitude towards the students in the minority group
- Standing against discrimination
- Having a democratic attitude
- Having ability to tolerate differences
- Using culture-appropriate management strategies
- Creating a caring classroom environment
- Understanding the cultural differences represented in the classroom and being prepared for the challenges that might appear in advance

Improving the abovementioned multicultural competencies of teachers is crucial in terms of providing high-quality education to all students and building an equitable, peaceful and democratic society. In addition, reliable measurement tools are undoubtedly needed in order to determine where and from which level to start in helping teachers improve these competencies. In this context, it can be said that there are various scales that focus on personality, attitude, experience and competency, belief, knowledge and skill, awareness and sensitivity for multicultural education in the world (Anders, Martin, & Yarbough, 1990; Andrea, Daniels, & Heck, 1991; Guyton & Wesche, 2005; Marshall, 1992; Munroe & Pearson, 2006; Ponterotto, Baluch, Greig & Rivera, 1998; Pope & Mueller, 2000; Reiff & Canella, 1992; Van der Zee, Van Oudenhoven, Ponterotto, & Fietzer, 2012). Some of these scales have been adapted to Turkish context and some other scales have been developed in Turkish context from the scratch. For example, there are scales measuring teachers' attitudes towards multicultural education (Damgacı & Aydın, 2013; Polat, 2012; Yavuz & Anıl, 2010; Yazıcı, Başol, & Toprak, 2008); teacher perceptions (Ayaz, 2016; Başbay & Kağnıcı, 2011), multicultural personalities (Sarıçam, 2014); teachers' sensitivity towards multicultural education (Büyükşahin Çevik, Güzel Yüce & Yavuz, 2016); teachers' knowledge levels of multicultural education (Toraman, Acar, & Aydın, 2015; Yıldırım & Tezci, 2017) and multicultural teacher competencies (Acar-Çiftçi, 2016; Akcaoğlu & Arsal, 2018; Babayiğit, 2022).

A thorough review of the literature revealed that only three measurement tools in the Turkish context focused on measuring teacher competencies. The first scale adapted to Turkish by Akcaoğlu and Arsal (2018) from Guyton and Wesche (2005). Undoubtedly, this scale is regarded to make significant contributions to the literature; however, it is thought to have some deficiencies in terms of cultural sensitivity, since multiculturalism is perceived and interpreted differently in different social contexts. The "Critical Multicultural Education Teacher Competencies Scale" developed by Acar-Çiftçi (2016) seems to have overcome the aforementioned limitation as it was developed in the context of Turkey sample. However, this study, focused only on critical multicultural education theory in its structure. The scale was structured in four dimensions including knowledge, skill, attitude and awareness. The "Multicultural Competence Perceptions Scale" developed by Başbay and Kağnıcı (2011) was

prepared not with teachers but academicians and consisted of awareness, knowledge and skill sub-dimensions. Similarly, Multicultural Teacher Competencies Scale for Teacher Candidates (Babayiğit, 2022) was developed with teacher candidates; therefore, it might not work in other populations.

This study aims at developing a scale to measure the multicultural teacher competencies of primary school teachers, who particularly have a decisive role in the cognitive and affective development of children. Examining the literature, it has been found out that there is no multicultural competency scale developed specifically for primary teachers in Turkey. On the other hand, it was observed that both the developed or adapted scales lacked either egalitarian or multicultural pedagogical competencies. For this reason, the scale to be developed is considered to be an important measurement tool for determining the multicultural professional competencies of primary school teachers, who have an important role in shaping students' perceptions and perspectives. Deriving from this requirement, this study aims at developing a valid and reliable measurement tool that can measure the multicultural teacher competencies of primary school teachers and examining the MTCs of primary school teachers. Answers to the following sub-questions have been sought through the implementation of the developed scale:

1. What are the multicultural teacher competency levels of primary school teachers?
2. Do the multicultural teacher competency levels of primary school teachers differ by gender, age, professional experience and the place where they work?

Method

Research Design

In this study, survey model as one of the quantitative research methods was used. In survey type studies, a past or present situation is aimed to be described as it exists. The essential idea of quantitative survey is to measure a group people on the variables of interest and to find out how these variables are related to each other (Punch, 2003).

Participants

Three different participant groups participated in this study. Explanatory factor analysis (EFA) was done with the data collected from the first group; confirmatory factor analysis (CFA) was done with the data collected from the second group. Finally, the multicultural competencies of the primary school teachers were determined with the data collected from the third group.

EFA participants.

Convenience sampling technique was used in the determination of the participants. 336 primary school teachers from 40 different cities participated in the study. The provinces that took place the most in the sample were İstanbul, İzmir, Eskişehir, Gaziantep, Sivas and Manisa. Demographic information of the teachers participating in the study is presented in Table 2.

Table 2. *Demographic Information of Primary School Teachers Participating in the EFA Study*

Demographics	Groups	<i>f</i>	%
Gender	Female	241	71.70
	Male	95	28.30
Age	25 and below	17	5.10
	26-40	160	47.60
	41-59	157	46.70
	60 and above	2	6.00
	0-5 years	33	9.80
Professional experience	6-10 years	32	9.50
	11-20 years	162	48.20
	21 years and above	109	32.40
Settlement	Village-town	43	12.80
	County	94	28.00
	City center	199	59.20

Table 2 shows that most of the teachers participated in the study were women ($n=241$, 71.70%). Examining the age distribution of the participants in general, it could be seen that most of them were between the ages of 26-59. As for the experience, it could be seen that most of the participants (80.60%) had an experience of 11 years or more. 59.20% of the participants worked in city centers whereas 28% in the counties and 12.80% in the villages and towns, namely rural areas.

CFA participants.

In the confirmatory factor analysis phase of the scale development process, not only primary school teachers but also teachers from 23 different branches participated in the study. Due to the pandemic conditions, since there was not enough data return from the primary school teachers, teachers from different branches were also included in the study in addition to primary teachers. For this purpose, convenient sampling technique was used. At this stage, data were collected from 349 teachers working in 42 different cities, mostly in Eskişehir. Demographic information of the teachers participating in the study is presented in Table 3.

Table 3. *Demographic Information of Teachers Participating in the CFA Study*

Demographics	Groups	<i>f</i>	%
Gender	Female	249	71.30
	Male	100	28.70
Age	25 and below	14	4.00
	26-40	200	57.30
	41-59	135	38.70
	0-5 years	34	9.70
	6-10 years	68	19.50
Professional experience	11-20 years	168	48.10
	21 years and above	79	22.60
	Village-town	54	15.50
Settlement	County	100	28.70
	City center	195	55.90
	Preschool	21	6.00
Education level	Primary School	127	36.40
	Secondary School	141	40.40
	High School	60	17.20

As it can be seen in Table 3, most of the teachers participated in CFA were women ($n=249$, 71.70%). Examining the age distribution of the participants, it could be seen that they were generally between the ages of 26-59. As for the experience, it could be seen that most of the participants (70.70%) had an experience of 11 years or more. 55.90% of the participants worked in the province centers whereas 28.70% in the counties and 15.50% in the villages and towns. 6.00% of the participants worked at preschool, 36.40% at primary school, 40.40% at secondary school and 17.20% at high school

Participants of the Study of Determining the Multicultural Teacher Competencies of Primary School Teachers

After the scale development process was completed, 419 teachers working in different cities were reached in order to find out the multicultural education competencies of primary school teachers. Convenient sampling was used at this stage as well. Demographic information of the teachers participating in the study is presented in Table 4.

Table 4. *Demographic Information of the Teachers Participating in the Study of Determining the Multicultural Teacher Competencies of Primary School Teachers*

Demographics	Groups	<i>f</i>	%
Gender	Female	287	68,50
	Male	132	31,50
Age	25 and below	19	4,50
	26-40	187	44,60
	41-59	211	50,40
	60 and above	2	0,50
	0-5 years	36	8,60
Professional experience	5-9 years	34	8,10
	10-19 years	201	48,00
	20 years and above	148	35,30
The city where they work (first 5 provinces)	Eskişehir	78	18,60
	İstanbul	70	16,70
	Gaziantep	31	7,40
	Denizli	23	5,50
	Malatya	21	5,00
Settlement of work (In terms of settlement unit)	Village-town	69	16,50
	County	117	27,90
	City center	233	55,60

As it is revealed in Table 4, the majority of the teachers participated in the research were female with a rate of 68.50%. As to the rate of male teachers, it was 31.50%. Examining the distribution by age groups, it was seen that 50.40% of the teachers were in the 41-54 age group, which could be expressed as the middle age group. It was followed by a lower age group, young adult teachers (44.60%) aged between 26-44. As it can be seen from the Table 4, 48.00% of primary teachers had a professional experience between 10-19 years. It was followed

by those with 20 years or more experience (35.30%). The teachers participated in the research were found out to work in 45 different provinces, mostly in Eskişehir (18.60%), İstanbul (16.70%), Gaziantep (7.40%), Denizli (5.50%) and Malatya (5.00%). Finally, the settlement where the primary teachers was working was examined and it was found out that the majority of them (55.60%) worked in the city centers. To summarize, the primary school teachers participated in the research were mostly middle-aged women with high professional experiences, working in the city centers mostly in Eskişehir and İstanbul.

Scale Development Process

During the development process of the scale, the scales prepared in the domestic and international literature related to the subject were examined. As a result of the literature review, it was understood that the existing scales mostly measured perceptions and attitudes towards multiculturalism, and the ones measuring competencies were either adaptations of scales developed abroad or not developed for primary school teachers. As a result, it was understood that there were no scales that could measure the multicultural teacher competencies of primary school teachers and a new scale was decided to be developed.

The scale development process including the steps of creating an item pool, determining the scope and face validity, applying it, ensuring construct validity, and calculating the reliability coefficient, were followed in the scale development process (DeVellis, 2017). The scale development process started with the creation of the item pool. First, the existing multicultural classifications and scale items were evaluated by the researchers and an item pool was created in accordance with the research purpose. The initial item pool was pre-examined by the researchers in terms of clarity, explicitness, expression, repetition, and whether it met the purpose or not, and as a result, 88 items were made available for expert opinion. The items in the pool were sent to 13 academicians working in the field of multicultural education or having expertise in curriculum development and two academicians working in the field of assessment and evaluation to get expert opinion for content validity through e-mail. Seven of these experts provided feedback. The evaluations and examinations were reviewed by the researchers; corrections were carried out; and as a result, a 5-Likert type (5-totally agree / 1-strongly disagree) draft scale with 66 items was developed.

Data Collection

The data of this study were collected in three stages from different participant groups. In all of the stages, data were collected respectively through Google forms links. The first stage was carried out between 26.06.2021 and 11.07.2021; the second stage between 26.07.2021 and 11.08.2021; and the third and last stage was carried out between 15.08.2021 and 30.08.2021. The scale, which was reorganized after each of these stages, was shared online through different mediums including social media (such as WhatsApp, Facebook) and teacher groups due to the COVID-19 pandemic, to have it filled by primary school teachers working in various regions of Turkey. 336 primary school teachers from 40 different cities filled in the scale in the

first stage; 349 teachers from 23 different branches in 42 different cities filled in it in the second stage; and 419 primary school teachers from 45 different cities participated in the in the third stage of the study.

Data Analysis

The data collected from the draft scale were used for exploratory factor analysis (EFA) through the SPSS 24. KMO and Bartlett's test of sphericity results were examined in order to determine whether the data set ready for analysis was suitable for factor analysis. EFA was done after it was found out that the values of the data set were appropriate. In order to test the accuracy of the factors created in the EFA, first-level CFA was carried out through the AMOS Program.

After testing the construct validity of the scale with EFA and CFA, the Cronbach's alpha reliability coefficient was calculated for reliability. For distinctiveness, item correlation values and unrelated samples t-test were performed between 27% lower and upper groups. The relationship between the factors of the scale was tried to be revealed by correlation analysis as well.

In the last stage, non-parametric tests, Mann-Whitney U and Kruskal Wallis, were used in order to examine the multicultural teacher competencies of primary school teachers since the data were not normally distributed.

Findings

In this section, the findings obtained as a result of the analysis of the collected data are given. The findings are presented under three titles: Findings on the Construct Validity of the Scale, Findings on the Reliability of the Scale, and Findings on the Examination of Multicultural Teacher Competencies of Primary School Teachers.

Findings on the Construct Validity of the Scale

For the construct validity of the scale, first EFA and then CFA were applied.

Findings on EFA results.

The appropriateness of the data for factor analysis was determined by Kaiser-Meyer Olkin (KMO) sample adequacy measurement and Bartlett's test of sphericity analysis prior to EFA. Results of this analysis were shown in Table 5.

Table 5. *Initial KMO and Bartlett Test Values of the Scale*

<i>Kaiser-Meyer-Olkin Sampling Adequacy Criterion</i>		.93
	Approximate Chi Square	414.579.16
Bartlett's Test of Sphericity	Df	2145
	<i>p</i>	.00

As it can be seen in Table 5, the KMO value of the scale was .93. In addition, the Bartlett sphericity value was significant ($p < .05$), confirming the suitability of the data for factor analysis (Çokluk, Şekercioğlu & Büyüköztürk, 2010; DeVellis, 2017).

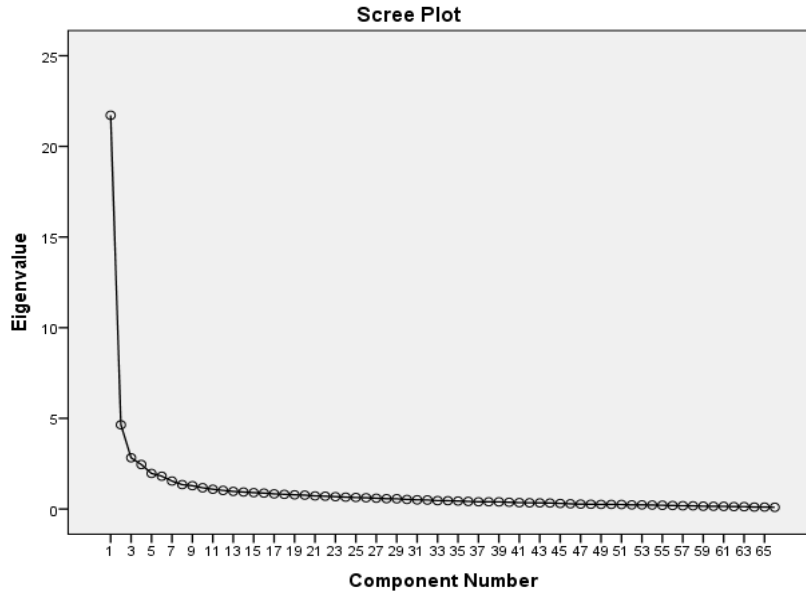


Figure 1. Initial Scree Plot of the Scale

As it can be seen in Figure 1, 3 factors were identified in accordance with the scree plot obtained from the component analysis. Then, the dimensionality of 66 items was examined through principal component factor analysis. The varimax method was used as the rotation method. The initial eigenvalues were examined to determine the factor structure of the scale.

Table 6. Initial-Stage Total Variance Explained and Eigenvalues

Component	Total Variance Explained		
	Total	% of Variance	Cumulative %
1	21.71	32.90	32.90
2	4.64	7.03	39.93
3	2.82	4.28	44.21
4	2.45	3.71	47.93
5	1.95	2.96	50.89
6	1.80	2.74	53.63
7	1.54	2.33	55.97
8	1.34	2.03	58.00
9	1.28	1.94	59.95
10	1.17	1.77	61.72
11	1.08	1.64	63.37
12	1.02	1.55	64.92
13	.97	1.47	66.39

Extraction Method: Principal Component Analysis.

The initial-stage eigenvalues showed that there were 12 factors which had eigenvalue over 1. However, the 12-factor-structure did not constitute a meaningful structure in terms of theory. Besides, initial scree plot implied that the scale should consist of three factors. Then, the principal component analysis (PCA) was repeated by forcing the test to produce three factors. Table 6 shows the KMO coefficient and Bartlett's test of sphericity results obtained from the second PCA. After forcing PCA to produce three factors, KMO coefficient raised from .93 to .95. The scree plot also showed that the scale had three factors.

Table 7. *KMO and Bartlett Test Values of the Scale*

<i>Kaiser-Meyer-Olkin Sampling Adequacy Criterion</i>		.95
Bartlett's Test of Sphericity	Approximate Chi Square	4847.97
	Df	231
	<i>p</i>	.00

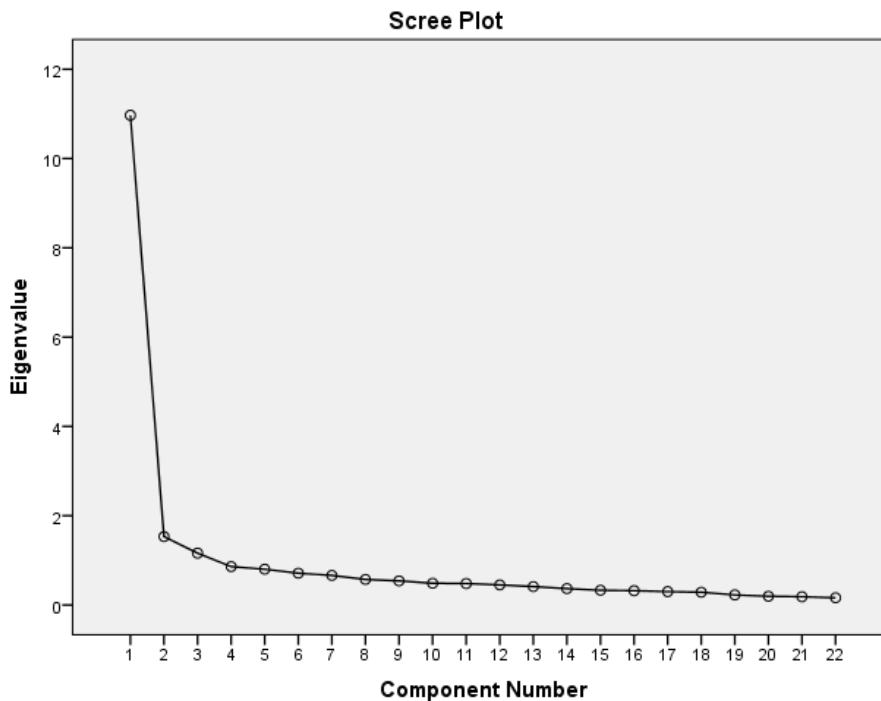


Figure 2. *Scree Plot of the Scale Obtained from the Second PCA*

In the second PCA, the items with a factor load below .3 were directly removed at the stage of removing the items. In addition, the items explaining more than one factor were removed from the scale, and a total of 22 items were included in the analysis (Table 8).

Table 8. *Factor Loads of 22 Items in the Scale*

<i>Factor</i>	<i>Items</i>	<i>Factor loads</i>		
Multicultural pedagogical competencies	Item 1	.81		
	Item 2	.80		
	Item 3	.72		
	Item 4	.70		
	Item 5	.66		
	Item 6	.63		
	Item 7	.57		
	Item 8	.52		
	Item 9	.38		
Sensitivity to differences	Item 10		.68	
	Item 11		.67	
	Item 12		.67	
	Item 13		.65	
	Item 14		.61	
	Item 15		.60	
	Item 16		.58	
	Item 17		.57	
Resilience	Item 18			.75
	Item 19			.70
	Item 20			.70
	Item 21			.69
	Item 22			.67
	Variance %	22.79	20.08	19.22
	Total %	22.79	42.88	62.10

As it can be seen in Table 8, the first factor of the scale consists of 9 items varying between .38 and .81. The second factor consists of 8 items varying between .57 and .68, and the third factor consists of 5 items varying between .67 and .75. Eigenvalues, variance percentages and total variance percentages related to the factors are shown in Table 9.

Table 9. *Structure of Factors in the Scale*

<i>Factor</i>	<i>Eigenvalue</i>	<i>Variance Percentage</i>	<i>Total Variance Percentage</i>
1	5.014	22.79	22.79
2	4.419	20.08	42.88
3	4.229	19.22	62.10

As it can be seen in Table 9, the scale includes three factors with eigenvalues higher than 1. Moreover, these three factors explain 62.10% of the total variance, sufficient to explain the

amount of variance compared to 40%, which is the minimum value accepted in behavioral sciences (Çokluk, Şekercioğlu & Büyüköztürk, 2010).

Findings on Confirmatory Factor Analysis Process

Confirmatory Factor Analysis was done to test the accuracy of the scale. For this purpose, data were recollected for the scale consisting of 22 items and three dimensions.

In order to test the factor structure of the Multicultural Teacher Competencies Scale (MTCS), confirmatory factor analysis based on the maximum likelihood estimation was used. The factor structure of the scale was tested with a model. In this model, the scale was examined in a three-factor structure as, "Multicultural Pedagogical Competencies, Sensitivity to Differences and Resilience". The model is shown in Figure 2.

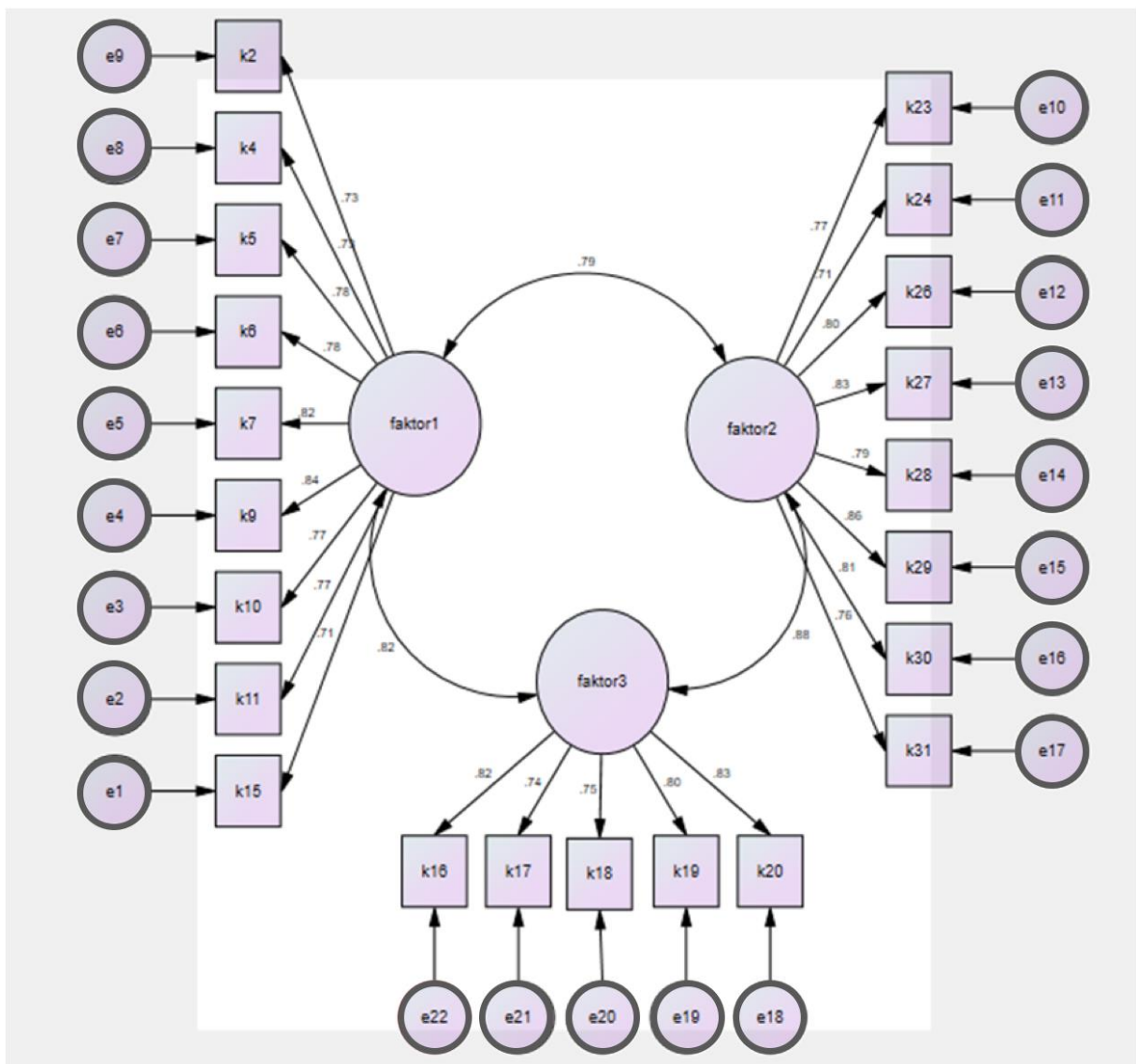


Figure 2. Confirmatory Factor Analysis Results

Acceptability levels for the model were evaluated with model goodness indicators. Model was examined using Chi-square (χ^2), normed Chi-square (χ^2 / df , NC), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative index of fit (CFI), root mean square error of approximation (RMSEA) the increasing goodness-of-fit index (IFI) and the normed index of fit (NFI). The model goodness criterion values suggested in the literature are given in Table 10.

Table 10. *Criteria for Model Goodness-of-Fit Indicators*

<i>Model Goodness-of-Fit Indicator</i>	<i>Perfect Fit Criteria</i>	<i>Acceptable Compliance Criteria</i>
RMSEA	$.00 \leq \text{RMSEA} \leq .05$	$.05 \leq \text{RMSEA} \leq .10$
CFI	$.95 \leq \text{CFI} \leq 1.00$	$.90 \leq \text{CFI} \leq .95$
IFI	$.95 \leq \text{IFI} \leq 1.00$	$.90 \leq \text{IFI} \leq .95$
NC	$0 \leq \text{NC} \leq 2$	$2 \leq \text{NC} \leq 5$
NFI	$.95 \leq \text{NNFI} \leq 1.00$	$.90 \leq \text{NNFI} \leq .95$
AGFI	$.90 \leq \text{AGFI} \leq 1.00$	$.85 \leq \text{AGFI} \leq .90$
GFI	$.95 \leq \text{GFI} \leq 1.00$	$.90 \leq \text{GFI} \leq .95$

In order to minimize the error rate, the RMSEA index, which is also called the square root of the mean squared error in the DFA analysis, was studied on. An RMSEA value less than .05 indicates a perfect fit, a value less than .08 indicates a good fit (Çokluk, Şekercioğlu & Büyüköztürk, 2010), and a value less than .10 indicates an acceptable range (Kline, 2016). NFI, CFI and IFI take values between 0-1, and a value close to 1 indicates perfect fit; .95 a good fit, and over .90 an acceptable value (Bentler & Bonett, 1980; Tabachnick & Fidell, 2007). An AGFI value over .95 indicates perfect fit, and a value over .80 indicates good fit (Çokluk, Şekercioğlu & Büyüköztürk, 2010). A GFI value above .85 and a CFI value above .90 are considered good fit indicators (Çokluk, Şekercioğlu & Büyüköztürk, 2010; Joreskog & Sorbom, 1993; Wang & Wang, 2012). The NC value is a value obtained by dividing the chi-square value by the degrees of freedom. If this value is less than 5, it is considered as an acceptable level (Yılmaz & Çelik, 2009). The CFA results of the scale are presented in Table 11.

Table 11. *CFA Results of the Multicultural Teacher Competencies Scale*

χ^2	<i>df</i>	<i>NC</i>	<i>GFI</i>	<i>AGFI</i>	<i>CFI</i>	<i>RMSEA</i>	<i>IFI</i>	<i>NFI</i>
566.41	206	2.75	.87	.84	.93	.07	.93	.90

Considering the indicators of goodness of fit, it was seen that all values were in the acceptable range in general. However, the GFI value was calculated as .87 and therefore the modifications suggested by the AMOS package program were examined. As a result of the theoretical examination, the realization of these modifications was found to be appropriate, and the analysis was carried out. Thus, modifications were made between the 5th and 6th items and 9th and 10th items in the first factor, and between the 29th and 31st items in the second factor. The results obtained after these modifications are shown in Table 12.

Table 12. *Post-Modification CFA Results of the Multicultural Teacher Competencies Scale*

χ^2	<i>df</i>	<i>NC</i>	<i>GFI</i>	<i>AGFI</i>	<i>CFI</i>	<i>RMSEA</i>	<i>IFI</i>	<i>NFI</i>
425,03	203	2.09	.90	.87	.96	.06	.96	.93

After the modification, the goodness-of-fit indicators, which were determined as criterion values, were found to be between acceptable and excellent levels in general.

Findings on the Reliability of the Scale

Cronbach's alpha (α) coefficient was used to examine the internal consistency reliability of the scale. Accordingly, the reliability coefficient of the scale consisting of 22 items was found to be .94. In addition, the reliability coefficient was calculated for each factor and it was calculated as .93 for the first factor, .85 for the second factor and .86 for the third factor. These results revealed that the scale is a reliable scale (Çokluk, Şekercioğlu & Büyüköztürk, 2010). Table 13 shows the total correlation values of the items for each factor and what the Cronbach's alpha values of the factors would be when the item is removed.

Table 13. *Item Mean, Standard Deviation, Item Total Correlations, and Cronbach's Alpha Coefficient after Item Exclusion*

<i>Items</i>	\bar{X}	<i>ss</i>	<i>Item Total Correlation</i>	α after Item Exclusion
<i>Factor 1. Multicultural Pedagogical Competencies</i>				
m37	4.36	.83	.62	.93
m40	4.55	.66	.74	.92
m41	4.42	.85	.77	.92
m42	4.35	.89	.75	.92
m43	4.36	.82	.78	.92
m48	4.52	.69	.77	.92
m49	4.35	.83	.81	.91
m50	4.39	.83	.82	.91
m58	4.38	.834	.63	.93
<i>Factor 2. Sensitivity to Differences</i>				
m9	4.34	.82	.60	.83
m12	4.77	.50	.57	.84
m17	4.44	.79	.60	.83
m19	4.60	.60	.65	.83
m22	4.46	.72	.60	.83
m23	4.65	.60	.63	.83
m25	4.47	.72	.68	.82
m26	4.44	.90	.51	.85
<i>Factor 3. Resilience</i>				
m62	4.58	.62	.74	.82
m63	4.56	.63	.65	.84
m64	4.66	.62	.70	.82
m65	4.36	.93	.60	.87
m66	4.62	.64	.79	.80

Examining Table 13, it can be seen that the item-total correlation values of the scale varied between .82 and .62 in the first factor; between .68 and .51 in the second factor; and between .79 and .60 in the third factor. Considering these values, the scale can be said to have high distinctiveness and internal consistency (Büyüköztürk, 2007). In addition, it was found out that the reliability coefficient did not increase in case of the removal of any item from the scale.

In order to test the measurement power of the scale, the scores of the participants in the data set collected from the whole scale and its sub-dimensions were calculated in order to perform confirmatory factor analysis. The dataset was ranked in an ascending order from the participant with the lowest overall average to the participant with the highest. The scores of the 27% who got the highest scores and the 27% who got the lowest scores were compared using the independent samples t-test. Table 14 shows this comparison.

Table 14. Comparison of the 27% of Groups with the Highest and Lowest Scores from the Scale

MTCS	Group	N	\bar{X}	Ss	Sd	t	p
Multicultural pedagogical competencies	Low 27%	94	3.64	.57	94.31	22.38	.00*
	High 27%	94	4.98	.04			
Sensitivity to differences	Low 27%	94	3.86	.48	93.51	22.57	.00*
	High 27%	94	4.99	.02			
Resilience	Low 27%	94	3.88	.55	93.99	19.37	.00*
	High 27%	94	4.99	.04			
Overall mean	Low 27%	94	3.77	.46	93.43	25.10	.00*
	High 27%	94	4.98	.02			

* There is a significant difference in the 95% confidence interval

It is shown in Table 14 that there was a significant difference in the whole scale and in all sub-scales comparing the scores of the highest and lowest 27% groups, and all items of the scale were found out to be distinctive.

Finally, the correlation values between the sub-factors of the scale and the whole scale were examined. Correlation values are shown in Table 15.

Table 15. Correlation Between the Whole Scale and Its Sub-Factors

	1st Factor	2nd Factor	3rd Factor	Whole Scale
1. Factor	1	.72	.76	.94
		.00	.00	.00
2. Factor	.72	1	.64	.87
	.00		.00	.00
3. Factor	.76	.64	1	.86
	.00	.00		.00
Whole Scale	.94	.87	.86	1
	.00	.00	.00	
Arithmetic mean	39.71	39.71	39.71	39.71
Standard deviation	5.87	5.87	5.87	5.87

It was found out that there was a positive and significant relationship between all sub-factors and the whole scale ($r = .64-.94$).

Findings on the Examination of Multicultural Teacher Competencies of Primary School Teachers

After the development process of the Multicultural Teacher Competencies Scale was completed, the implementation process started. In this context, the procedures followed during the development of the scale were re-traced, and the scale was tried to be conveyed to as many different places as possible by means of maximum diversity sampling via Google Forms. The implementation process lasted between 15-30 August 2021. Constant reminders were made to increase the return rate. At the end of this process, a total of 419 teachers working in different provinces were reached. After the scales were controlled, and they were confirmed to be ready for analysis, the data analysis process was carried out using the SPSS program. Frequency, percentage, arithmetic mean, Mann-Whitney U tests were used in the analysis of the research data.

Cronbach's alpha (α) coefficient was used to find out the internal consistency reliability of the scale. The reliability coefficient of the scale was found to be .95. The reliability coefficient was also calculated for the sub-dimensions of the scale, and it was calculated as .93 for the first sub-factor, .87 for the second sub-factor and .87 for the third sub-factor.

In order to determine whether the items in the scale showed a normal distribution, skewness and kurtosis values were examined. Provided that these values are between +2 and -2, it is accepted that the data are distributed close to normal (George & Mallery, 2003). When the skewness and kurtosis values of the items of the scale were examined, it was observed that they did not show a normal distribution because they were outside this range and skewness was observed in the histogram curves. For this reason, nonparametric tests were used in the analyzes where the difference was sought. The average scores of primary school teachers in terms of multicultural teacher competency are given in Table 16.

Table 16. Mean Scores of Primary School Teachers on Multicultural Teacher Competencies Scale

<i>Multicultural Teacher Competencies</i>	<i>N</i>	\bar{X}	<i>SS</i>
Multicultural Pedagogical Competencies	419	4,38	,66
Sensitivity to Differences	419	4,52	,52
Resilience	419	4,55	,57
Whole Scale	419	4,47	,54

The average scores of the primary school teachers from the scale are shown in Table 16. It was found out that the teachers had the highest competency rate from the resilience sub-dimension ($\bar{X} = 4.55$), followed by sensitivity to differences ($\bar{X} = 4.52$) and multicultural pedagogical competencies ($\bar{X} = 4.38$).

In the following sections, findings regarding whether the multicultural teacher competencies of primary school teachers differed in terms of gender, age, professional experience and the place of employment are presented. Mann-Whitney U test was applied to find out whether the multicultural teacher competencies of the teachers differed in terms of gender (Table 17).

Table 17. *Comparison of Multicultural Teacher Competencies by Gender*

MTCS	Group	n	Mean rank	Total rank	U	z	p
Multicultural Pedagogical Competencies	Female	287	222.11	63745.50	15466.50	3.06	.00*
	Male	132	183.67	24244.50			
Sensitivity to Differences	Female	287	219.48	63745.50	16222.50	2.40	.00*
	Male	132	189.40	24244.50			
Resilience	Female	287	225.00	62989.50	14636.50	3.91	.01*
	Male	132	177.38	25000.50			
Overall mean	Female	287	222.89	63969.00	15243.00	3.22	.00*
	Male	132	181.98	24021.00			

As seen in Table 17, multicultural teacher competencies of teachers differed significantly by gender ($U=15243$, $p=.00<.05$). Accordingly, multicultural teacher competencies of women were significantly higher than of men. Examining the sub-dimensions of the scale, in terms of multicultural pedagogical competencies ($U=15466$, $p=.00<.05$), sensitivity to differences ($U=16222$, $p=.00<.05$) and resilience ($U=14636$, $p=.01<.05$), a significant difference in favor of women was found as well.

Kruskal Wallis test was applied to find out whether multicultural teacher competencies differed in terms of age. Results of analysis were presented in Table 18.

Table 18. *Comparison of Multicultural Teacher Competencies by Age*

MTCS	Group	n	Mean rank	Chi-square	p
Multicultural Pedagogical Competencies	25 years and below	19	256.84	3.31	.34
	26-40	187	207.23		
	41-59	211	207.86		
	60 years and above	2	249.50		
Sensitivity to Differences	25 years and below	19	299.34	14.38	.00*
	26-40	187	202.02		
	41-59	211	210.36		
	60 years and above	2	69.50		
Resilience	25 years and below	19	257.24	7.68	.05
	26-40	187	198.03		
	41-59	211	215.24		
	60 years and above	2	327.50		

Table 18. (Cont.)

	25 years and below	19	282.42	7.33	.06
Overall mean	26-40	187	204.51		
	41-59	211	208.54		
	60 years and above	2	189.50		

As seen in Table 18, there was no significant difference in multicultural teacher competencies of teachers ($\chi^2=7.33$, $p=.06>.05$) in terms of age. Although there was no significant age difference in the overall scale, examining the sub-dimensions of the scale, a significant difference was found in sensitivity to differences in terms of age ($\chi^2=14.38$, $p=.00<.05$). Thus, the teachers in the age group of 25 and below can be said to have higher multicultural teacher competencies in terms of sensitivity to differences.

The Kruskal Wallis test was applied to find out whether the multicultural teacher competencies of the teachers differed in terms of professional experience. Test result were given in Table 19.

Table 19. Comparison of Multicultural Teacher Competencies by Professional Experience

MTCS	Group	n	Mean rank	Chi-square	p
Multicultural Pedagogical Competencies	0-5 years	36	215.94	.28	.96
	5-9 years	34	217.90		
	10-19 years	201	208.40		
	20 years and above	148	208.91		
Sensitivity to Differences	0-5 years	36	241.67	5.03	.16
	5-9 years	34	178.24		
	10-19 years	201	210.99		
	20 years and above	148	208.25		
Resilience	0-5 years	36	218.32	4.53	.20
	5-9 years	34	198.72		
	10-19 years	201	199.60		
	20 years and above	148	224.69		
Overall mean	0-5 years	36	229.64	1.39	.70
	5-9 years	34	198.59		
	10-19 years	201	207.18		
	20 years and above	148	211.67		

Table 19 shows no significant difference in multicultural teacher competencies of teachers in terms of their professional experience ($\chi^2=1.39$, $p=.70>.05$).

Table 20 includes the data of comparison of multicultural teacher competencies by the settlements where they work.

Table 20. Comparison of Multicultural Teacher Competencies by the Settlements Where They Work

MTCS	Group	n	Mean rank	Chi-square	p
Multicultural Pedagogical Competencies	Village/town	69	203.64	.94	.62
	County	117	203.67		
	City center	233	215.06		
Sensitivity to Differences	Village/town	69	214.58	.17	.91
	County	117	206.97		
	City center	233	210.17		
Resilience	Village/town	69	176.91	7.87	.02*
	County	117	207.42		
	City center	233	221.09		
Overall mean	Village/town	69	199.32	1.39	.49
	County	117	204.23		
	City center	233	216.06		

As seen in Table 20, there was no significant difference in overall multicultural teacher competencies of the teachers in terms of the place of residence ($\chi^2=1.39, p=.49>.05$). Although there was no significant difference in terms of the place where teachers worked in general, studying on the sub-dimensions of the scale, a significant difference was found in terms of working in the city center in the dimension of resilience ($\chi^2=7.87, p=.02<.05$). Deriving from the findings, it can be said that the bigger the size of the settlement place, the higher the scores of teachers become in the resilience dimension of multicultural professional competencies.

Discussion, Conclusion and Implications

In this study, a scale consisting of 22 items and three factors was developed to determine the multicultural teacher competencies of primary school teachers. First of all, EFA was applied on the data collected with the scale draft, and 62.14% of the variance was explained with the three factors obtained as a result of the EFA. CFA was applied to test the construct validity of the scale and it was seen that the scale's compliance values were good. In addition, the item-total correlations of the items in the scale were calculated and it was found out that the correlation values of each item were .30 and above. The scale was found out to be distinctive with a 27% lower-upper group comparison. In the correlation analysis performed to determine the relationship between the factors of the scale, it was concluded that there were significant relationships, and it could be used holistically. The total reliability coefficient of the scale was found to be .94. In addition, the reliability coefficient was calculated for each factor individually, and it was calculated as .93 for the first factor; .85 for the second factor; and .86 for the third factor. These results revealed the scale to be a reliable one (Çokluk, Şekercioğlu & Büyüköztürk, 2010; Tabachnick & Fidell, 2007).

The scale developed for primary school teachers was prepared in a 5-point Likert type. It consists of 22 positive items. The Multicultural Teacher Competence Scale consists of three sub-dimensions as mentioned above. There are nine items in the sub-dimension of "multicultural pedagogical competences", which is one of them. Some of these items are, "I prepare activities suitable for the special needs of my students with differences", "I create my content considering individual, cultural and identity differences in the classroom", "I take special precautions to ensure that my students with cultural differences are as successful as others" and so on. In the other sub-dimension of the scale, "sensitivity to differences", there are 8 items. Examples of these items can be given as follows: "I often include group work in order to break down prejudices in the classroom", "I make students with individual, cultural and identity differences feel comfortable in my classroom". The last sub-dimension of the scale is named as "resilience". The total number of items in this sub-dimension is 5, and it includes items such as "I try to overcome the difficulties arising from individual, cultural and identity differences", "I improve myself to be more helpful to my students with individual, cultural and identity differences". In the evaluation of the scale, the total score, the scores of the subscales and the mean scores can be used. A minimum of 22 and a maximum of 110 points can be obtained from the total 22 items in the scale. Minimum 9 and maximum 45 points from the first sub-dimension of the scale can be taken. From the second sub-dimension minimum 8, and maximum 40 points, and from the third sub-dimension, a minimum of 5 and a maximum of 25 points can be taken.

When the factor structure is examined through the lens of theory, it is -expectedly- seen that multicultural pedagogical competencies are at the center of MTCS. What is not expected is the absence of egalitarian competencies. To be able serve well in multicultural classrooms, teachers need to be dedicated to social justice, democracy and have anti-oppressionist attitudes (Babayiğit, 2022; Keengwe, 2010; Spiecker & Steutel, 2001; Villegas & Lucas, 2002; Weinstein et al., 2004). However, during the development of MTCS, many of the items that aimed to measure the egalitarian competencies did not work except for the items related to sensitivity towards differences and resilience. Items expressing egalitarian competencies such as "I do not tolerate discrimination in my classroom" and "I try to create fair education environments" were observed not to come together to form a factor; therefore, they had to be removed from the MTCS. As a result, egalitarian competencies were not included in the scale. This also makes us think that primary school teachers might have felt closer to inclusive education rather than the concepts emphasized by the multicultural education. Therefore, it should be noted that MTCS lacks the items measuring democratic, anti-oppressionist and social justice-oriented attitudes and behaviors. Future researchers who will use MTCS can adopt supplementary measurement tools to make up for this limitation.

As a result of the study, it was found out that the primary teachers had the highest competency in the sub-dimension of resilience and had a lower competency in the sub-dimension of multicultural pedagogical competencies. The reason why teachers got lower

scores on multicultural pedagogical competencies can be explained with teacher training programs in Turkey. Many scholars have emphasized that teacher education programs in Turkey does not prepare teachers to teach in multicultural settings (Babayiğit, 2022; Karataş, 2018; Polat & Kılıç, 2013). Since teachers were not taught the principles and implications of multicultural education, their scores on multicultural pedagogical competencies might have been lower than other factors in MTCS.

Although teachers felt less competent in multicultural pedagogical competencies, the overall arithmetic mean of teachers' scores on MTCS showed that they had a proficiency above the average. Previous quantitative research findings both in teacher population and teacher candidate population are also in line with this result (Bulut & Başbay, 2014; İsmetoğlu, 2017; Karadağ & Özdemir-Özden, 2020). As it was formerly pointed out by Polat and Kılıç (2013), quantitative research results about multicultural education in Turkey depict a more positive picture than the qualitative research results. Therefore, it is recommended for future researchers to dive deeper into this phenomenon by using both qualitative and quantitative methods simultaneously.

In addition, it was found out that there was a significant difference in the multicultural teacher competencies of primary teachers in terms of gender. It was observed that the multicultural teacher competencies of female teachers were higher than the competencies of male teachers. Former studies on the topic yielded controversial findings regarding gender. While some of them reported findings in favor of men (Aslan & Kozikoğlu, 2017; İsmetoğlu, 2017; Karadağ & Özdemir-Özden, 2020), various studies reported higher scores for females especially in terms of attitudes (Başbay et al., 2013; Frazier-Anderson, 2005; Karadağ & Özdemir-Özden, 2020) despite other studies revealing no significant effect of gender (Akın, 2016; Bulut & Başbay, 2014; Marangoz, 2014). The findings of this study support those of Başbay and others (2013), Frazier-Anderson (2005) and Karadağ and Özdemir-Özen (2020); however, more research is needed to clarify the relationship between gender and multicultural competencies.

A significant difference in the multicultural teacher competencies of primary teachers in terms of age in the dimension of sensitivity to differences were found ($\chi^2=14.38$, $p<0.05$). Accordingly, primary school teachers aged 25 and under can be said to have a higher level of multicultural teacher competencies in terms of showing acceptance and tolerance to cultural differences. However, no significant difference in terms of professional experience was determined. In terms of multicultural skills, İsmetoğlu (2017) and Frazier-Anderson (2005) reported that teachers who had less experience in the profession had higher scores. Marangoz (2014), Özdemir and Dil (2013) and Kaya and Söylemez (2014) reported that experience level did not interfere with multicultural competencies and perceptions. Although age and professional experience are very similar variables that can act together, literature presents conflicting findings about them. For example, Aslan and Kozikoğlu (2017) found out that

teachers having higher levels of experience had more positive attitudes about multicultural education while Bulut and Başbay (2014) reported the exact opposite. Unfortunately, the findings of this study are not adequate to answer why these variables act in different ways than similar. Therefore, future researchers are advised to investigate this problem.

There was no significant difference in the multicultural teacher competencies of primary school teachers in terms of the place of residence they worked. However, when the sub-dimensions of the scale were studied on, a significant difference was found in the dimension of resilience for the teachers working in the city center. Accordingly, it can be said that the primary school teachers working in the city centers have more resilience when it comes to solve the problems that stem from the diversity of the students and to make up for the limited resources for learning in the school or environment. In addition, teachers showed less resilience as the settlement got smaller. Teachers working in remote areas might feel helpless and refrain from asking help from colleagues or other sources since there are not enough of them available (Akdağ, 2014). For this reason, it is recommended that more professional support should be provided for teachers who work in smaller settlements and disadvantaged areas. This support can be made available by forming face-to-face teacher groups working in closer areas and by providing online materials, resources and teacher support groups.

In conclusion, a valid and reliable scale called 'Multicultural Teacher Competencies Scale' was developed and used to examine primary teachers' MTC. Having three factors (multicultural pedagogical competencies, sensitivity to differences and resilience), MTCS can be used to measure teachers MTC and can help needs assessment studies required for multicultural teacher training. Although MTCS is a valid and reliable scale, that it can be improved in a way to deepen its content validity with the endeavors of future researchers.

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Author Contribution

The first writer is the project coordinator and has made a contribution to all process. Other writers have made a contribution at an equal rate.

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Sınıf Öğretmenlerine Yönelik Çokkültürlü Öğretmen Yeterlikleri Ölçeği: Geliştirme ve Uygulama Çalışması

Giriş

Bu çalışmada özellikle çocukların bilişsel ve duyuşsal gelişiminde belirleyici role sahip olan sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerinin belirlenmesi amacıyla bir ölçek geliştirilmesi amaçlanmıştır. Alanyazın incelendiğinde Türkiye bağlamında sınıf öğretmenleri özelinde geliştirilmiş bir çokkültürlü yeterlik ölçeğinin olmadığı belirlenmiştir. Öte yandan, geliştirilen veya uyarlanan ölçeklerde hem eşitlikçi hem de çokkültürlü pedagojik yeterliklere yer verilmediği görülmüştür. Bu nedenle geliştirilecek olan ölçeğin, öğrencilerin algılarının ve bakış açılarının şekillendirilmesinde önemli rolü olan sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerinin belirlenmesi için önemli bir ölçme aracı olacağı düşünülmektedir. Bu gereksinimden hareketle bu çalışmada temel olarak sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerini ölçebilecek geçerli ve güvenilir bir ölçme aracı geliştirmek ve sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerini incelemek amaçlanmıştır. Geliştirilen ölçeğin uygulanması ile de aşağıdaki alt sorulara yanıt aranmıştır:

1. Sınıf öğretmenlerinin çokkültürlü öğretmen yeterlik düzeyleri nedir?
2. Sınıf öğretmenlerinin çokkültürlü öğretmen yeterlik düzeyleri cinsiyete, yaşa, kıdeme ve çalıştıkları yere göre farklılaşmakta mıdır?

Yöntem

Sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerinin belirlenebilmesi için bir ölçek geliştirilmesi ve geliştirilen bu ölçek ile sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerinin belirlenmesi amacını taşıyan bu çalışmada nicel araştırma yöntemlerinden tarama modeli kullanılmıştır.

Bu çalışmada üç farklı katılımcı grubu ile çalışılmıştır. Birinci gruptan toplanan veriler ile açımlayıcı faktör analizi (AFA), ikinci gruptan toplanan veriler ile doğrulayıcı faktör analizi (DFA) yapılmış; üçüncü gruptan toplanan veriler ile de sınıf öğretmenlerinin çokkültürlü yeterlikleri belirlenmeye çalışılmıştır. Çalışmanın tüm katılımcılarının belirlenmesinde uygun örnekleme tekniğinden yararlanılmıştır. AFA çalışmasına 40 farklı ilden 336 sınıf öğretmeni katılmıştır. Örneklemede en fazla yer alan iller İstanbul, İzmir, Eskişehir, Gaziantep, Sivas ve Manisa'dır. DFA çalışmasında çoğunluğu Eskişehir olmak üzere 42 farklı ilde çalışan 349 öğretmenden veri

toplanmıştır. Sınıf öğretmenlerinin çokkültürlü eğitim yeterliklerinin belirlenmesi aşamasında da farklı illerde görev yapan 419 öğretmene ulaşılmıştır.

Bu araştırmanın verileri üç aşamada toplanmıştır. Birinci aşamada AFA için, ikinci aşamada DFA için, 3. aşamada da sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerinin belirlenmesi için farklı katılımcı gruplarından veriler Google Forms aracılığıyla oluşturulan linkler yardımıyla toplanmıştır. Bu aşamaların her birinde yeniden düzenlenen ölçek; Türkiye'nin çeşitli bölgelerinde görev yapmakta olan sınıf öğretmenlerinin doldurmaları amacıyla COVID-19 salgını nedeniyle online olarak sosyal medya ortamları (Whatsapp, Facebook gibi), öğretmen grupları gibi farklı ortamlarda paylaşılmıştır.

Ölçek geliştirme sürecinde madde havuzu oluşturma, kapsam ve görünüş geçerliliğini saptama, uygulama, yapı geçerliliğini sağlama ve güvenilirlik katsayısı hesaplama aşamalarını içeren ölçek geliştirme süreci izlenmiştir. Bu süreçte AFA ve DFA analizleri gerçekleştirilmiştir. Ardından, güvenilirlik için Cronbach alfa güvenilirlik katsayısı hesaplanmıştır. Ayırt edicilik için madde korelasyon değerleri ile %27'lik alt ve üst gruplar arasında ilişkisiz örneklem t testi yapılmıştır. Ölçeğin faktörleri arasındaki ilişki durumu da korelasyon analizi ile ortaya konulmaya çalışılmıştır. Sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerinin belirlenmesi amacıyla Mann Whitney U ve Kruskal Wallis testlerinden yararlanılmıştır.

Bulgular

Bu çalışmada sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerini belirlemek amacıyla 22 maddeden oluşan bir ölçek geliştirilmiştir. Uygulanan AFA çalışması sonucunda ölçeğin üç faktörden oluştuğu ve toplam varyansın %62.10'nu açıkladığı belirlenmiştir. Birinci faktör 9; ikinci faktör 8; üçüncü faktör ise 5 maddeden oluşmuştur. Belirlenen üç faktör ile DFA çalışması gerçekleştirilen ölçeğin uyum iyiliği değerleri incelenmiş ve gerçekleştirilen modifikasyon sonrası uyum iyiliği göstergelerinin ($df = 203$; $NC=2.09$; $GFI= .90$; $AGFI= .87$; $CFI= .96$; $RMSEA= .06$; $IFI= .96$; $NFI= .93$) genel olarak kabul edilebilir düzey ile mükemmel düzey arasında olduğu bulunmuştur.

Geliştirilen Çokkültürlü Öğretmen Yeterlikleri Ölçeği'nin (ÇÖYÖ) iç tutarlılık güvenilirliğini incelemek için Cronbach alfa (α) katsayısı kullanılmıştır. Buna göre ölçeğin toplam güvenilirlik katsayısı .94; birinci faktör için .93, ikinci faktör için .85 ve üçüncü faktör için .86 olarak hesaplanmıştır. Bu sonuçlar ölçeğin güvenilir bir ölçek olduğunu ortaya koymuştur (Çokluk vd., 2010). Ölçeğin ölçme gücünün sınanması için %27'lik alt ve üst grup puanları bağımsız örneklem t testi kullanılarak karşılaştırılmıştır. Ölçeğin hem toplam puanında hem de alt boyutlarına ait toplam puanlarda anlamlı farklılık çıkmış ve ölçeğin tüm maddelerinin ayırt edici olduğu belirlenmiştir (1. Faktör $t= 22.38$; 2. Faktör $t= 22.57$; 3. Faktör $t=19.37$; Genel ortalama $t = 25.10$; $P<0.01$). Ölçeğin alt faktörleri ile ölçeğin tümü arasındaki korelasyon değerleri incelendiğinde de tüm alt faktörler ve ölçeğin tümü arasında pozitif yönde anlamlı bir ilişki olduğu belirlenmiştir ($r= .649-.949$).

Sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerinin belirlenmesi aşamasında öğretmenlerin en fazla yılmazlık alt boyutuna ilişkin ($\bar{X} = 4.55$) özyeterliğe sahip olduğu, bunu farklılıklara duyarlılık ($\bar{X} = 4.52$) yeterlikleri ve çokkültürlü pedagojik yeterliklerin ($\bar{X} = 4.38$)

izlediği belirlenmiştir. Çokkültürlü öğretmen yeterliklerinin cinsiyete göre kadınlar lehine anlamlı olarak farklılaştığı ($U=15243$, $p=,00<,05$); öğretmenlerin yaşlarına göre sadece farklılıklara duyarlık alt boyutunda anlamlı farklılık olduğu ($\chi^2=14,386$, $p<0.05$); yılmazlık alt boyutunda da çalışılan ile göre farklılaşmanın olduğu belirlenirken ($\chi^2=7,870$, $p=.02<.05$); mesleki deneyimler bağlamında anlamlı bir farklılık bulunamamıştır ($\chi^2=1,398$, $p=.70>.05$).

Tartışma, Sonuç ve Öneriler

Yapılan tüm analizler sonucunda ölçeğin geçerli ve güvenilir bir ölçme aracı olduğu söylenebilir. Geliştirilen ölçek 5'li Likert türünde hazırlanmış ve 22 olumlu maddeden oluşmuştur. ÇÖYÖ, üç alt boyuttan oluşmaktadır. Bunlardan biri olan "çokkültürlü pedagojik yeterlikler" alt boyutunda 9 madde yer almaktadır. Ölçeğin diğer alt boyutu olan "farklılıklara duyarlılık"ta ise 8 madde yer almaktadır. Ölçeğin son alt boyutu ise "yılmazlık" olarak adlandırılmıştır. Bu alt boyutta toplam madde sayısı 5'tir. Ölçekte yer alan toplam 22 maddeden en az 22, en çok 110 puan alınabilmektedir.

Faktör yapısı teori merceğinden incelendiğinde çokkültürlü pedagojik yeterliklerin ÇÖYÖ'nün merkezinde olduğu görülmektedir. Fakat, çokkültürlü pedagojik yeterliklerin aksine eşitlikçi yeterlikler ÇÖYÖ kapsamında yeterince yer alamamıştır. "Sınıfımda ayrımcılığa tahammül etmem." ve "Adil eğitim ortamları oluşturmaya çalışırım." gibi eşitlikçi yeterlikleri ifade eden maddelerin bir araya gelerek faktör oluşturmadığı görülmüş ve bu nedenle de ölçekten çıkarılmıştır. Bu da sınıf öğretmenlerinin çokkültürlü eğitimin vurguladığı kavramlardan ziyade kapsayıcı eğitime daha yakın hissettiklerini düşündürmektedir. Bu nedenle, ÇÖYÖ'nün demokratik, baskı karşıtı ve sosyal adalet odaklı tutum ve davranışları ölçen maddelerden kısmen yoksun olduğunu belirtmek gerekir. ÇÖYÖ'yü kullanacak olan gelecekteki araştırmacılar, bu sınırlılığın üstesinden gelmek için ek ölçüm araçları kullanabilir.

Öğretmenlerin ÇÖYÖ puanlarının genel aritmetik ortalaması, ortalamanın üzerinde bir yeterliğe sahip olduklarını göstermiştir. Polat ve Kılıç (2013) tarafından daha önce belirtildiği gibi, Türkiye'de çokkültürlü eğitime ilişkin nicel araştırma sonuçları, nitel araştırma sonuçlarından daha olumlu bir tablo ortaya koymaktadır. Bu nedenle, gelecekteki araştırmacıların hem nitel hem de nicel yöntemleri aynı anda kullanarak bu olguyu daha derinlemesine incelemeleri önerilir.

Sınıf öğretmenlerinin çokkültürlü öğretmen yeterliklerinde cinsiyete göre anlamlı bir farklılık olduğu tespit edilmiş, kadınların erkeklerden daha yüksek düzeyde farklılıklara duyarlılık gösterdiği belirlenmiştir. Bu bulgu Başbay ve diğ. (2013), Frazier-Anderson (2005) ve Karadağ ve Özdemir-Özen (2020)'in bulgularıyla örtüşmektedir; ancak cinsiyet ve çokkültürlü yeterlikler arasındaki ilişkiyi netleştirmek için daha fazla araştırmaya ihtiyaç vardır. Ayrıca, 25 yaş ve altındaki sınıf öğretmenlerinin kültürel farklılıkları kabul etme açısından daha yüksek puanlar aldığı görülmüştür. Ancak mesleki deneyim açısından anlamlı bir farklılığa rastlanılamamıştır. Son olarak, il merkezinde görev yapan öğretmenlerin yılmazlık puanlarının daha yüksek olduğu, yerleşim küçüldükçe öğretmenlerin daha az dayanıklılık gösterdikleri belirlenmiştir. Bu nedenle daha küçük yerleşim yerlerinde ve dezavantajlı bölgelerde görev yapan öğretmenlere daha fazla mesleki destek verilmesi önerilmektedir.

