

## *Original Paper*

# Student Teachers' Perceptions of Multicultural Education Based on Their Social Media Use

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### **Abstract**

*Social media, together with the technological advances, bring a different dimension to the intercultural communication and shape the cultural perspectives and perceptions of individuals. It is seen as an important requirement that student teachers, who will take responsibility for the educational processes that include different cultural structures, should be sensitive to and informed about cultural differences. Therefore, it is necessary to examine the effects of using social media environments on student teachers' perceptions regarding different cultures. This paper evaluates the perceptions of student teachers regarding multicultural education with respect to their use of social media environments. The study was carried out with 2152 senior student teachers from the education faculties of 10 state universities from each geographical region of Turkey in the fall semester of 2016-2017 academic year. In the study, inferential statistical approach was used to analyze the collected data. The results of the study indicated that the student teachers' perceptions regarding the outcomes of multicultural education showed a statistically significant difference in terms of their purpose of using social media sites. In addition, the student teachers' perceptions regarding the influence of university education on multicultural education showed a statistically significant difference in terms of the most frequently used social media site, while their perceptions regarding equality and justice showed a statistically significant difference with respect to the most frequently used social media site as well as with respect to the purpose of using social media sites.*

### **Keywords**

*Multiculturalism, Multicultural Education, Social Media, Teacher Candidates*

## 1. Introduction

In this era, known as the information age or the digital age, communication technologies have developed rapidly and become an indispensable part of human life. This development in communication technologies has brought a new dimension to one-way communication in web environments and transformed them into interactive ones (Büyükşener, 2009). With this development, usages of the internet have been diversified in an unpredictable way (Koçak, 2012), and the internet has opened the doors of an interactive world, which offers many options for its users.

Dialogues and exchanges between individuals via the internet constitute the social media (Bostancı, 2010). Applications which are defined as social media and which allow individuals to share various objects such as photos, videos and texts have become increasingly popular platforms providing virtual communication with a new dimension (Akıncı Vural & Bat, 2010). Social media is referred to the whole of platforms such as social networks, blogs, microblogs, podcasts, forums and even comment areas of news websites. Contents generated by users build up the portions of social media and form the basis of social networks (Büyükşener, 2009). Individuals who provide content in social media applications interact with each other using these applications (Zafarmand, 2010). The production of content that comes out of social media also changes the processes of production and sharing of cultural products. Individuals involved in the production process of the contents are actively involved in ensuring cultural circulation (Elkin Koren, 2012). In social media environments, users can shape a free environment by creating their own cultural codes (Acun, Yücel, Belenkuyu, & Keleş, 2017). In this way, the participatory culture is embedded into social media platforms (Hwang & Kim, 2015). Social media is very important in terms of these effects on individuals and on the society (Kirschenbaum, 2004).

With this new media, called social media that reaches to an unpredictable usage prevalence, a new course of globalization has begun (Kızıllarslan, 2012). With the impact of globalization, the interaction between individuals and societies has reached to a significant level. Therefore, the life styles of individuals and societies with different and far-reaching cultures have gradually become similar, and an analogous style and genre have come out. On the other hand, cultural interaction and globalization should not be considered as a one-way process which is indeed bidirectional. Global reaches to local while local reaches to global with a flow in the opposite direction. This brings differentiation as well as similarity (Uluç & Yarıcı, 2017). It is possible to explain the basis of this differentiation with the help of the concept of multiculturalism (Beşirli, 2011).

Multiculturalism, which began to emerge in the middle of the 20<sup>th</sup> century, represented different cultures and their struggle to exist without being crushed by one another; consequently, it was reflected as differences accepted by the community and as the effort to create a harmonious society (Yalçın, 2002). Multiculturalism is a way for emphasizing pluralism, confronting racism and prejudices, and seeing facts from various perspectives (Nieto & Bode, 2008). Multicultural education is expressed as a process which cares about the differences between students and which allows education to continue in an equal environment (Rey, 2001). In a most general sense, multicultural education can be expressed as ideas and

approaches that advocate multicultural policies should be included in education (Yazıcı, Başol, & Toprak, 2009).

Students come to the teaching - learning environment with their own experiences and cognitive structures formed by these experiences (Arslan, 2007). Therefore, these differences must be taken into account in the education process. The adoption of a multicultural approach in this process will enable people to tolerate and respect different cultures (Tuzcuoğlu & Tunç, 2014). In this approach, the responsibility of education and the training processes of students, who are considered to be very important, belong to teachers. Therefore, teachers, who have great influence on the education processes and lives of students, are expected to understand and internalize the concepts of culture and cultural diversity (Helen Jones, 2004). Traits related to the teachers such as their ability to teach things when and how, their respect to cultural differences and their ability to create a democratic educational environment are considered to be quite important (Çoban, Karaman, & Doğan, 2010). The reason is that prospective teachers are most likely to work in classrooms environments where they may face different languages, religions and ethnicities.

National Council for Accreditation of Teacher Education (NCATE) and the UNESCO- International Bureau of Education (IBE) emphasize the importance of training prospective teachers in a way to become sensitive to cultural differences (NCATE, 2008). The performance indicators of some of the teacher qualifications set by the Ministry of National Education of Turkey point to multicultural teacher efficacies (MEB, 2017).

Recent studies in the area of teacher training point out that prospective teachers should be more sensitive to cultural and cultural differences (Ünlü & Örtten, 2013). The qualifications that the 21<sup>st</sup> century teacher should have are thought to include being tolerant towards different lifestyles, being aware of the fact that every citizen has equal rights and respects to that, having a multicultural perspective, having multicultural teaching efficacies and a strong stance against discrimination, having democratic attitudes, and so on (Spiecker & Steutel, 2001; Cogan & Pederson, 2001; Polat, 2012).

Studies on multiculturalism in the field of education generally focused on scale development, scale adaptation, status detection and multicultural attitudes and efficacies of prospective teachers and instructors (Toprak, 2008; Yazıcı, Başol, & Toprak, 2009; Yavuz & Anıl, 2010; Başbay & Kağnıcı, 2011; Başarır, 2012; Coşkun, 2012; Ünlü & Örtten, 2013; Demircioğlu & Özdemir, 2014; Başbay, Kağnıcı, & Sarsar, 2013; Damgacı & Aydın, 2013; Taştekin, Bozkurt Yükçü, İzoğlu, Güngör, Işık Uslu, & Demircioğlu, 2016; Aslan, 2017, Boydak-Özan & Şengür, 2017). Review of the related literature revealed that there are not enough study investigating the effects of using social media on teachers' perceptions regarding multicultural education. However, considering the fact that social media is now considered to be a shaping factor from a cultural perspective due to its influence on everyday life (Kılıç, 2015) and is becoming a factor affecting individuals and the society in different ways (Banks, 2009), multiculturalism and multicultural education should be examined whether they differ depending on the use of these environments. Therefore, within the scope of this research, we found it noteworthy to

evaluate the student teachers' perceptions of multicultural education with respect to their social media usages.

In addition, within the scope of this research, the perceptions of the student teachers regarding multicultural education were examined in terms of their usages of social media sites in general as well as with respect to the social media site they used. The most widely used social media sites were identified, and the perceptions of the student teachers regarding multicultural education were examined in accordance with the social media site they used most. The results were evaluated considering not only the features of the social media sites used but also the implicit effects that the sites might have had on the individuals. It is thought that the research will contribute to the field with this aspect.

### *1.1 Purpose of the Study*

The purpose of this study was to evaluate the student teachers' perceptions regarding multicultural education with respect to their use of social media environments. In this respect, the following research questions were directed:

Do student teachers' perceptions regarding the "outcomes of multicultural education" show a statistically significant difference in terms of duration of membership to social media sites, the total number of friends on social media sites, the most frequently used social media site and the purpose of using social media sites?

Do student teachers' perceptions regarding the "impact of university education on multicultural education" show a statistically significant difference in terms of duration of membership to social media sites, the total number of friends on social media sites, the most frequently used social media site and the purpose of using social media sites?

Do student teachers' perceptions regarding "justice and equality" show a statistically significant difference in terms of duration of membership to social media sites, the total number of friends on social media sites, the most frequently used social media site and the purpose of using social media sites?

## **2. Method**

This part presents the research model, the population and sampling, the data collection tools and the analysis of the research data.

### *2.1 Research Model*

In this study, which was conducted to determine the student teachers' perceptions regarding multicultural education with respect to their usages of social media environments, the causal comparison design was used. In this type of studies, the reasons and consequences of the differences between groups are determined without any intervention to the participants and conditions (Büyüköztürk et al., 2013). The causal comparison method involves comparison of samples that differ in a critical variable but are still comparable among themselves (Borg & Gall, 1989; cited in Balci, 2009).

## 2.2 Population and Sampling

The student teachers who were senior students at the education faculties of state universities in Turkey in the fall semester of 2016-2017 academic year constituted the population of the study. The reason why senior-level student teachers were included in the study was that they are closer to becoming practitioners in educational settings because they are about to complete their undergraduate education and also that multicultural and multicultural education perceptions may be more evident as they continue to practice teaching at schools.

As the target population of the study was large, sampling was done to save time and cost. The cluster sampling method was used to represent the population, and the data were collected from the lower clusters such as universities. The cluster sampling method is used when all clusters in the population have the chance to be selected equally (Karasar, 2012). This sampling method can be defined as clusters formed by more than one population unit. In this case, the sample is taken from the population on group basis (Büyükoztürk et al., 2013). Cluster sampling is a sampling method based on probability. In this sampling method, any group with similar characteristics refers to a cluster. Cluster samples may include clusters such as classes, schools, and hospitals (Gay & Airasion, 2003). In this study, cluster sampling was done according to the criterion of university. In this case, student teachers who were senior students at the education faculties of 10 state universities from different geographical regions of Turkey constituted the research sample. Table 1 and Table 2 present information about the student teachers participating in the study.

**Table 1. Numbers of the Participants According to Their Universities**

Universities	N	%
Fırat University	177	8.2
İnönü University	241	11.2
Dicle University	263	12.2
Gaziantep University	115	5.3
Cumhuriyet University	253	11.8
Erciyes University	188	8.7
Afyon Kocatepe University	241	11.2
Uludağ University	282	13.1
Ondokuz Mayıs University	277	12.9
Çukurova University	115	5.3
Total	2152	100

**Table 2. Distributions of the Student Teachers According to Their Departments and Sub-Departments**

Department	Sub-Department	N	%
Department of Computer and Instructional Technology Education	Computer and Instructional Technologies Education	233	10.8
	Science Education	343	15.9
Department of Mathematics and Science Education	Mathematics Education	478	22.2
	Social Studies Education	414	19.2
Department of Social Sciences and Turkish Education	Turkish Education	438	20.4
	English Language Education	174	8.1
Department of Foreign Language Education	German Language Education	72	3.3
	Total	2152	100

### 2.3 Data Collection Tools

In this study, which was conducted to determine the student teachers' perceptions regarding multicultural education according to their usages of social media environments, a questionnaire developed by the researcher was used to determine the student teachers' usages of social media sites. While determining the questions included in the questionnaire, the literature on social media was reviewed in detail. In this context, theoretical studies and existing examples in the literature were examined. Afterwards, a draft of the data collection tool was prepared based on expert opinions. The data collection tool was rearranged and finalized in line with the opinions of field experts and of the faculty members working in the Department of Educational Sciences.

In order to measure the student teachers' perceptions regarding multicultural education, "Perception Scale for Multicultural Education" developed by (Alanay, 2015) was used. This scale was developed as a 5-point Likert-type scale (strongly disagree, disagree, neutral, agree and strongly agree). The items in the scale were grouped under three factors (dimensions). The names of these factors were as follows:

**Outcomes of Multicultural Education:** This dimension demonstrates a perception of situations that will arise as a result of multiculturalism and multicultural education. The high score to be taken in this dimension shows that multicultural education will have positive results.

**Effects of University Education on Multicultural Education:** This dimension shows the perception regarding the effects of the courses taken at the university on multiculturalism and multicultural education. The high score to be taken in this dimension shows the positive effect of the courses at university on multicultural education.

**Equality and Justice:** It shows the perception of equality and justice in the context of multiculturalism and multicultural education. The high score to be taken in this dimension shows that the perception of equality and justice is high.

In order to determine the internal consistency of the scale, Cronbach Alpha internal consistency analysis was performed. The Cronbach Alpha values for the three sub-factors of the scale were calculated. The reliability coefficients were calculated as 0.82 for the first sub-dimension (Outcomes of Multicultural Education), 0.82 for the second sub-dimension (Effects of University Education on Multicultural Education) and 0.71 for the third sub-dimension (Equality and Justice). Reliability coefficient values for the scales ranging from 0.70 to 0.90 are considered to refer to high reliability (Özdamar, 2013). Therefore, it could be stated that these sub-dimensions had high reliability levels. The Cronbach-Alpha internal consistency coefficient was found to be 0.83 when the scale was taken as one dimension.

The validity study of the scale was conducted by the content validity. The experts in the field examined the scale and agreed that it was capable of measuring perceptions regarding multicultural education. In the light of these findings, it was concluded that the scale could be used in the present study.

#### *2.4 Confirmatory Factor Analysis and Reliability Analysis for This Study*

Confirmatory factor analysis is one used to test whether the factors determined by Exploratory Factor Analysis for a scale are appropriate (Aytaç & Öngen, 2012). Sumer (2000) identifies confirmatory factor analysis as an analysis used to evaluate how well the factors made up of several variables are in conformity with the actual data based on theoretical foundations. In other words, confirmatory factor analysis aims to determine how a predetermined structure is confirmed by the collected data.

In order to determine whether the scale structure was confirmed, the IBM AMOS software was used to conduct confirmatory factor analysis on the data set obtained from 295 student teachers.

There are various goodness-of-fit indices used to evaluate model appropriateness, and these indices have different statistical functions (Gizir, 2005). In this study, the following fit indices were used in the context of confirmatory factor analysis: GFI (Goodness of Fit Index), AGFI (Adjusted Goodness of Fit Index), RMR (Root Mean Square Residual), RMSEA (Root Mean Square Error of Approximation) (Mels, 2002).

When the fit indices obtained as a result of the confirmatory factor analysis were examined, it was seen that the chi-square value ( $\chi^2 = 246.100$ ,  $N = 295$ ,  $p = 0.00$ ) was significant and that  $X^2/sd=2.82$  ratio was obtained. A value lower than 3 indicates perfect fit (Kline, 2005; Sümer, 2000; Jöreskog & Sörbom, 1993). In this study, GFI value was found to be 0.88. The fact that GFI was greater than 0.70 indicated that the factor model explained the original variability well enough and that the model was a usable, suitable and good model (Özdamar, 2013). The fact that the AGFI value obtained in the analysis was greater than 0.80 meant that the fit provided by the model with the actual data was acceptable (Şimşek, 2007). As a result of the analysis, the obtained AGFI = 0.845 value was acceptable. As a result of DFA, RMSEA value was found to be 0.079. A RMSEA value of less than 0.05 indicates the perfection of the model fit, while the value of 0.08 indicates an acceptable limit (Schermelleh Engel and Moosbrugger, 2003). The fact that the obtained value of RMR = 0.047 was less than 0.10 meant that the models fitting the actual data were at an acceptable level (Şimşek, 2007). When RMR < .05 was taken as criterion (Hu & Bentler, 1999), it could be stated that it was still at an acceptable level. According to the results of the

confirmatory factor analysis, the three-dimensional structure of the scale could be said to be confirmed by fit statistics.

The reliability coefficients were calculated as 0.81 for the first sub-dimension (Outcomes of Multicultural Education), 0.83 for the second sub-dimension (Effects of University Education on Multicultural Education) and 0.71 for the third sub-dimension (Equality and Justice). These values indicated that the reliability for each item was valid.

#### 2.4.1 Analysis of Data

The analysis of the data obtained in the study was performed by using SPSS package program. For the analysis of the data, the predictive statistical approach was used. This approach tests hypotheses to determine whether there is a difference between the statistics or whether there is a relationship between the variables (Balci, 2009). Before heading on to the analysis, the distribution of the data was examined. As a result of Kolmogorov-Smirnov<sup>a</sup> normal distribution test, it was seen that the p values related to the sub-dimensions of the student teachers' perceptions regarding multicultural education were found to be lower than the significance level of 0.05. In addition, the skewness and kurtosis values were found for the three sub-dimensions as follows: skewness = -.804 and kurtosis = 1.346 for Outcomes of Multicultural Education; skewness = .616 and kurtosis = .144 for The Effect of University Education on Multicultural Education; and skewness = -1.226 and kurtosis = 1.905 for Equality and Justice. After the analysis, it was seen that the data did not show normal distribution and thus did not provide the assumptions of the parametric test. For this reason, Mann Whitney U and Kruskal-Wallis variance analysis were used as non-parametric tests, and the significance value was taken as  $p < .05$ . In the case of a significant difference found as a result of Kruskal Wallis analysis of variance, Dunn test was applied as the non-parametric post-hoc method to test which groups caused the significant difference (Kirk, 1982). In this study, the r values were reported for the purpose of determining the effect size along with statistical significance. These values are regarded as small effect levels if  $.10 < r < .29$ , as medium effect levels if  $.30 < r < .49$  and as large effect levels if  $r > .50$  (Cohen, 1977; Cohen, 1988).

### 3. Findings

This part presents the findings and related comments in the order of the sub-objectives of the study.

#### 3.1 Findings Related to the Dimension of "Outcomes of the Multicultural Education"

##### 3.1.1 Examining the Perceptions Related to "Outcomes of the Multicultural Education" with Respect to "Duration of Membership to Social Media Sites"

Kruskal-Wallis analysis of variance was used for the data related to this sub-objective. The findings are presented in Table 3.



**Table 3. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to Outcomes of the Multicultural Education with Respect to Duration of Membership to Social Media Sites**

	N	Mean Rank	Sd	X <sup>2</sup>	P	Groups with Significant Difference
Less than 3 years	311	1092.51				
3-5	676	1079.36	3	1.908	.592	-
6-8	804	1046.91				
More than 8 years	348	1085.05				

Table 3 shows the mean rank values for the student teachers' scores related to the outcomes of multicultural education dimension with respect to the duration of membership to social media sites. According to the Kruskal-Wallis analysis of variance, p value was found as  $p > 0.05$ , and it meant that the student teachers' scores related to the outcomes of multicultural education dimension showed no significant difference with respect to the duration of membership to social media sites. Based on these findings, it could be stated that the duration of membership to social media sites was not an effective variable for the student teachers' perceptions regarding the outcomes of multicultural education.

### 3.1.2 Examining the Perceptions Related to "Outcomes of the Multicultural Education" with Respect to "Total Number of Friends on Social Media Sites"

Kruskal-Wallis analysis of variance was used for the data related to this sub-objective. The findings are presented in Table 4.

**Table 4. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to "Outcomes of the Multicultural Education" with Respect to "Total Number of Friends on Social Media Sites"**

	N	Mean Rank	Sd	X <sup>2</sup>	P	Groups with Significant Difference
Less than 100	391	1085.64				
100-300	979	1042.12				
301-500	462	1050.18	4	1.742	.783	-
501-700	160	1065.88				
701 and more	119	1082.09				

Table 4 shows the mean rank values for the student teachers' scores related to the dimension of outcomes of multicultural education with respect to total number of friends on social media sites. According to the Kruskal-Wallis analysis of variance, p value was found as  $p > 0.05$ , and it meant that the student teachers' scores related to the outcomes of multicultural education dimension showed no significant difference with respect to the total number of friends on social media sites. Depending on these findings, it could be

stated that the number of friends on social media sites was not an effective variable for the student teachers' perceptions regarding the outcomes of multicultural education.

### 3.1.3 Examining the Perceptions Related to “Outcomes of the Multicultural Education” with Respect to “Most Used Social Media Site”

Kruskal-Wallis analysis of variance was used for the data related to this sub-objective. The findings are presented in Table 5.

**Table 5. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to “Outcomes of the Multicultural Education” with Respect to “Most Used Social Media Sites”**

	N	Mean Rank	Sd	X <sup>2</sup>	P	Groups with Significant Difference
Facebook	764	1075.31				
Youtube	235	1048.19				
Twitter	189	1168.33	4	6.651	.156	-
Instagram	851	1048.23				
Other	103	1110.99				

Table 5 demonstrates the mean rank values for the student teachers' scores related to the dimension of outcomes of multicultural education with respect to the most used social media sites. According to the Kruskal-Wallis analysis of variance, p value was found as  $p > 0.05$ , and it meant that the student teachers' scores related to the outcomes of multicultural education dimension showed no significant difference with respect to the most used social media sites. According to these findings, it could be stated that the most used social media site was not an effective variable for the student teachers' perceptions regarding the outcomes of multicultural education.

### 3.1.4 Examining the Perceptions Related to “Outcomes of the Multicultural Education” with Respect to “Top Usage Purpose of Social Media Sites”

Kruskal-Wallis analysis of variance and Dunn's non-parametric comparison were used for the data related to this sub-objective. The findings are presented in Table 6.

**Table 6. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to “Outcomes of the Multicultural Education” with Respect to “Top Usage Purpose of Social Media Sites”**

	N	Mean Rank	Sd	X <sup>2</sup>	P	Groups with Significant Difference and r values
1. To have knowledge about other societies and cultures	150	1154.68				
2. To follow news and agenda	1057	1099.70				(1) and (5), (-0,18)
3. To share photo, video, music, instant status, etc.	471	1072.94	5	30.494	.001	(2) and (5), (-0,17) (3) and (5), (-0,14)
4. To communicate with friends	301	1030.19				(1) and (4), (-0,12)
5. To share academic information (homework, project, etc.)	109	919.83				
6. Other	50	706.09				

Table 6 presents the mean rank values for the student teachers' scores related to the dimension of outcomes of multicultural education with respect to the top usage purpose of social media sites. According to the Kruskal-Wallis analysis of variance, p value was found as  $p > 0.05$ , and it meant that the student teachers' scores related to the dimension of outcomes of multicultural education showed a significant difference with respect to the usage purpose of social media sites. The results of the Dunn test, which was performed to find out which groups caused the difference, are as follows:

The mean rank values related to the outcomes of multicultural education for the student teachers who used social media mostly “to have knowledge about other societies and cultures”, “to follow news and agenda” and “to share photos, videos, music, instant status, etc.”. were significantly higher than those who used social media mostly “to share academic information”. In addition, the mean rank values related to the outcomes of multicultural education for the student teachers who used social media mostly “to have knowledge about other societies and cultures” were significantly higher than those who used social media mostly “to communicate with friends”. According to these findings, it could be stated that the top usage purpose for social media sites was an effective variable for the student teachers' perceptions regarding the outcomes of multicultural education.

### 3.2 Findings Related to the “Effect of University Education on Multicultural Education” Dimension

#### 3.2.1 Examining the Perceptions Related to “Effect of University Education on Multicultural Education” with Respect to “Duration of Membership to Social Media Sites”

Kruskal-Wallis analysis of variance was used for the data related to this sub-objective. The findings are presented in Table 7.

**Table 7. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to “Effect of University Education on Multicultural Education” with Respect to “Duration of Membership to Social Media Sites”**

	N	Mean Rank	Sd	X <sup>2</sup>	P	Groups with Significant Difference
Less than 3 years	311	1098.35				
3-5	676	1091.03				
6-8	804	1061.80	3	3.643	.303	-
More than 8 years	348	1022.76				

Table 7 shows the mean rank values for the student teachers’ scores related to the effect of university education on multicultural education with respect to duration of membership to social media sites. According to the Kruskal-Wallis analysis of variance, p value was found as  $p > 0.05$ , and it meant that the student teachers’ scores related to the dimension of the effect of university education on multicultural education showed no significant difference with respect to duration of membership to social media sites. According to these findings, it could be stated that the duration of membership to social media sites was not an effective variable for the student teachers’ perceptions regarding the effect of university education on multicultural education.

### 3.2.2 Examining the Perceptions Related to “Effect of University Education on Multicultural Education” with Respect to “Total Number of Friends on Social Media Sites”

Kruskal-Wallis analysis of variance was used for the data related to this objective. The findings are presented in Table 8.

**Table 8. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to “Effect of University Education on Multicultural Education” with Respect to “Total Number of Friends on Social Media Sites”**

	N	Mean Rank	Sd	X <sup>2</sup>	P	Groups with Significant Difference
Less than 100	391	1060.24				
100-300	979	1070.47				
301-500	462	999.78	4	8.417	.077	-
501-700	160	1039.14				
701 and over	119	1163.97				

Table 8 demonstrates the mean rank values for the student teachers’ scores related to the effect of university education on multicultural education with respect to the total number of friends on social media sites. According to the Kruskal-Wallis analysis of variance, p value was found as  $p > 0.05$ , and it meant that the student teachers’ scores related to the dimension of the effect of university education on

multicultural education showed no significant difference with respect to the total number of friends on social media sites. Based on these findings, it could be stated that the total number of friends on social media sites was not an effective variable for the student teachers' perceptions regarding the effect of university education on multicultural education.

### 3.2.3 Examining the Perceptions Related to "Effect of University Education on Multicultural Education" with Respect to "Most Used Social Media Site"

Kruskal-Wallis analysis of variance and Dunn's non-parametric comparison were used for the data related to this sub-objective. The findings are presented in Table 9.

**Table 9. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to "Effect of University Education on Multicultural Education" with Respect to "Most Used Social Media Site"**

	N	Mean Rank	Sd	X <sup>2</sup>	P	Groups with Significant Difference and r values
Facebook	764	1102.84				
Youtube	235	1109.97				Facebook and Twitter, (-0,17)
Twitter	189	965.77	4	10.165	.038	Youtube and Twitter, (-0,14)
Instagram	851	1065.62				Instagram and Twitter, (-0,12)
Other	103	993.89				

Table 9 shows the mean rank values for the student teachers' scores related to the effect of university education on multicultural education with respect to the most used social media site. According to the Kruskal-Wallis analysis of variance, p value was found as  $p < 0.05$ , and it meant that the student teachers' scores related to the dimension of the effect of university education on multicultural education showed a significant difference with respect to the most used social media site. The results of the Dunn test, which was performed to find out which groups caused the difference, were as follows:

The mean rank values related to the effect of university education on multicultural education for the student teachers who reported their most used social media site as "Facebook", "YouTube" and "Instagram" were significantly higher than those who reported their most used social media site as "Twitter". According to these findings, it could be stated that the most used social media site was an effective variable for the student teachers' perceptions regarding the effect of university education on multicultural education.

### 3.2.4 Examining the Perceptions Related to "Effect of University Education on Multicultural Education" with Respect to "Top Usage Purposes for Social Media Sites"

Kruskal-Wallis analysis of variance was used for the data related to this sub-objective. The findings are presented in Table 10.

**Table 10. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to “Effect of University Education on Multicultural Education” with Respect to “Top Use Cases for Social Media Sites”**

	N	Mean Rank	Sd	X <sup>2</sup>	P	Groups with Significant Difference
1. To have knowledge about other societies and cultures	150	1035.48				
2. To follow news and agenda	1057	1077.64				
3. To share photo, video, music, instant status, etc.	471	1088.68	5	10.143	.071	-
4. To communicate with friends	301	1054.07				
5. To share academic information (homework, project, etc.)	109	1112.18				
6. Other	50	818.49				

Table 10 presents the mean rank values for the student teachers' scores related to the effect of university education on multicultural education with respect to top usage purposes for social media sites. According to the Kruskal-Wallis analysis of variance, p value was found as  $p > 0.05$ , and it meant that the student teachers' scores related to the dimension of the effect of university education on multicultural education showed no significant difference with respect to top usage purposes for social media sites. Depending on these findings, it could be stated that top usage purpose for social media sites was not an effective variable for the student teachers' perceptions regarding the effect of university education on multicultural education.

### 3.3 Findings Related to the Dimension of “Equality and Justice”

#### 3.3.1 Examining the Perceptions Related to “Equality and Justice” with Respect to “Duration of Membership to Social Media Sites”

Kruskal-Wallis analysis of variance was used for the data related to this sub-objective. The findings are presented in Table 11.

**Table 11. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to “Equality and Justice” with Respect to “Duration of Membership to Social Media Sites”**

	N	Mean Rank	Sd	X <sup>2</sup>	P	Groups with Significant Difference
Less than 3 years	311	1067.18				
3-5	676	1064.37	3	3.804	.283	-
6-8	804	1051.38				
More than 8 years	348	1126.48				

Table 11 demonstrates the mean rank values for the student teachers' scores related to the equality and justice with respect to duration of membership to social media sites. According to the Kruskal-Wallis analysis of variance, p value was found as  $p > 0.05$ , and it meant that the student teachers' scores related to the dimension of equality and justice showed no significant difference with respect to duration of membership to social media sites. According to these findings, it could be stated that duration of membership to social media sites was not an effective variable for the student teachers' perceptions regarding justice and equality.

### 3.3.2 Examining the Perceptions Related to "Equality and Justice" with Respect to "Total Number of Friends on Social Media Sites"

Kruskal-Wallis analysis of variance was used for the data related to this sub-objective. The findings are presented in Table 12.

**Table 12. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to "Equality and Justice" with Respect to "Total Number of Friends on Social Media Sites"**

	N	Mean Order	Sd	X <sup>2</sup>	P	Groups with Significant Difference
Less than 100	391	1078.21				
100-300	979	1044.98				
301-500	462	1039.16	4	2.468	.650	-
Between 501 and 700	160	1107.75				
701 and more	119	1069.47				

Table 12 shows the mean rank values for the student teachers' scores related to equality and justice with respect to total number of friends on social media sites. According to the Kruskal-Wallis analysis of variance, p value was found as  $p > 0.05$ , and it meant that the student teachers' scores related to the dimension of equality and justice showed no significant difference with respect to total number of friends on social media sites. According to these findings, it could be stated that total number of friends on social media sites was not an effective variable for the student teachers' perceptions regarding justice and equality.

### 3.3.3 Examining the Perceptions Related to "Equality and Justice" with Respect to "Most Used Social Media Site"

Kruskal-Wallis analysis of variance and Dunn's non-parametric comparison were used for the data related to this sub-objective. The findings are presented in Table 13.

**Table 13. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to “Equality and Justice” with Respect to “Most Used Social Media Site”**

	N	Mean Order	Sd	X <sup>2</sup>	P	Groups with Significant Difference and r values
Facebook	764	1105.38				
Youtube	235	997.29				Facebook and Youtube, (-0,14)
Twitter	189	1178.35	4	14.133	.007	Twitter and Youtube, (-0,17)
Instagram	851	1048.33				Facebook and Instagram, (-0,14)
Other	103	1110.99				Twitter and Instagram, (-0,17)

Table 13 presents the mean rank values for the student teachers' scores related to equality and justice with respect to the most used social media site. According to the Kruskal-Wallis analysis of variance, p value was found as  $p < 0.05$ , and it meant that the student teachers' scores related to the dimension of equality and justice showed a significant difference with respect to the most used social media site. The results of the Dunn test, which was performed to find out which groups caused the difference, are as follows:

The mean rank values related to equality and justice for the student teachers who reported their most used social media site as “Facebook” and “Twitter” were significantly higher than those who reported their most used social media site as “YouTube” and “Instagram”. According to these findings, it could be stated that the most used social media site was an effective variable for the student teachers' perceptions regarding justice and equality.

### 3.3.4 Examining the Perceptions Related to “Equality and Justice” with Respect to “Top Use Cases for Social Media Sites”

Kruskal-Wallis analysis of variance and Dunn's non-parametric comparison were used for the data related to this sub-objective. The findings are presented in Table 14.

**Table 14. Results of the Kruskal-Wallis Analysis of Variance for Examining the Perceptions Related to “Equality and Justice” with Respect to “Top Use Cases for Social Media Sites”**

	N	Mean Order	Sd	X <sup>2</sup>	P	Groups with Significant Difference and r values
1. To have knowledge about other societies and cultures	150	1213.07				
2. To follow news and agenda	1057	1072.80				(1) and (2), (-0,22)
3. To share photo, video, music, instant status, etc.	471	1073.98	5	19.447	.002	(1) and (3), (-0,14)
4. To communicate with friends	301	1063.36				(1) and (4), (-0,14)
5. To share academic information (homework, project, etc.)	109	924.82				(1) and (5), (-0,13)
6. Other	50	879.23				(2) and (5), (-0,16)
						(3) and (5), (-0,15)
						(4) and (5), (-0,16)



Table 14 shows the mean rank values for the student teachers' scores related to equality and justice with respect to the most used social media site. According to the Kruskal-Wallis analysis of variance, p value was found as  $p < 0.05$ , and it meant that the student teachers' scores related to the dimension of equality and justice showed a significant difference with respect to the most used social media site. The results of the Dunn test, which was performed to find out which groups caused the difference, are as follows:

The mean rank values related to justice and equality for the student teachers who used social media mostly "to have knowledge about other societies and cultures" were significantly higher than those who used social media mostly "to follow news and agenda", "to share photos, videos, music, instant status, etc." and "to communicate with friends". In addition, the mean rank values related to justice and equality for the student teachers who used social media mostly "to have knowledge about other societies and cultures", "to follow news and agenda", "to share photos, videos, music, instant status, etc." and "to communicate with friends" were significantly higher than those who used social media mostly "to share academic information". According to these findings, it could be stated that top usage purpose for social media sites was an effective variable for the student teachers' perceptions with respect to the dimension of justice and equality.

#### 4. Results and Discussion

This part discusses the findings obtained in the study interprets the research results.

As a result of the study, it was found that the top usage purpose of social media sites was an effective variable for the student teachers' perceptions with respect to the results of multicultural education. As social media used for various purposes today affects individuals, it also affects the society that individuals form up together (Tutgun Unal, 2015). Individuals re-establish and develop the virtual relationships they create through new media opportunities on social networks (Toprak, Yıldırım, Aygül, Binark, B örek ç i, & Ç omu, 2009). Social media tools with their socialization and information functions (Gökçe, 2003) allow individuals to have information about different cultures. These tools also enable individuals to be a part of the society, to acculturate the cultural values of the society and to gain new values, to integrate with the society and to change their behaviors and attitudes. The global identity gained by these interactions involves multiculturalism (D üvenci, 2012). If we refer to social media as a multicultural environment where cultural transmission takes place, then active participation of individuals in this multicultural environment can be said to give them multicultural awareness depending on their intended use.

Social media environments support participatory culture, where everyone can share their thoughts and feelings (Yıldırım, Özdemir, & Alparslan, 2018). Since these environments do not have time and space limitations, they make it easier for people to interact with each other (Mahmood & Farooq, 2014) and contribute to the development of social interaction. As a bearer of culture, social media has allowed people from all corners of the world to show themselves on different platforms (Chen, 2012). Social media, which enhances interpersonal communication and especially facilitates the contact among people

from different cultures (Uluç & Yarıç, 2017), increases intercultural communication and allows adaptation to different cultures (Chen, 2012). When all these features are taken into account, it is possible to say that social media can grant individuals a multicultural perspective.

In recent years, one of the most important efficacies expected from student teachers in teacher training is to have efficacy for multicultural teachers. Therefore, it could be stated that the positive effect of social media on student teachers' perceptions with respect to multicultural education is very important for teacher training. Because teachers who have high perceptions about multicultural education are likely to have knowledge about ethnic and cultural diversities can organize the teaching-learning environment in such a way that individuals with different cultural structures will benefit at the maximum level, can select and organize teaching methods according to the learning needs of the students and can take the cultural and socio-economic characteristics of their working environments into account.

Studies emphasize that social media users are satisfied with subjects such as personal identity, social interaction, information acquisition, supervision and guidance (Koçak, 2012; Üksel, 2015). These are the factors that push individuals to use social media, and social media helps individuals to reach satisfaction in these subjects. According to the uses and satisfaction approach, which encourages individuals to use social media environments and to get satisfaction from these environments, users are separated by the satisfaction they get from these subjects (Sheldon, 2008). When the purposes of individuals using social media are examined, it could be stated that the use of social media for the purpose of providing information about other societies and cultures yields a more intense interaction in social and cultural terms. Therefore, it could be stated that whoever uses social media for this purpose may have higher perceptions about the necessity of multiculturalism.

Social media allows communication to understand different cultures (Chen, 2012). Social media tools have important functions in cultural transformations and its transmission (Karaduman, 2017). Through social media, individuals have the opportunity to establish wide-ranging social relations (Uluç & Yarıç, 2017). Social media has significantly increased the speed and intensity of cooperation by connecting geographically distant communities. This has had a direct and profound impact on intercultural interaction (Uluç & Yarıç, 2017). The ability of people from different cultures to introduce their own culture on their blog pages, to make friends from different cultures or to interact with their friends through social media environments positively affects the development of intercultural communication.

The results of the study revealed that the most used social media site was an effective variable on the student teachers' perceptions regarding the effect of university education on multicultural education. The student teachers' perceptions regarding the effect of university education on multiculturalism and on multicultural education who reported their most used social media site as "Facebook", "YouTube" and "Instagram" were significantly higher than those who reported their most used social media site as "Twitter". This difference could be explained with the influence of the social media site used on its users. We can say that student teachers who use social media environments may gain a multicultural perspective by having stronger and more interactions with their universities or with other universities, by

being aware of the activities to be carried out, by sharing information and cooperation and by getting involved in domestic and foreign activities. Albion (2008) emphasizes that social media tools are important in terms of supporting teacher training. Ajjan and Harsthone (2008) state that social media provides interaction between individuals. McLoughlin and Lee (2007) emphasize that the potential benefits of social media include providing social support, providing opportunities to share and allowing cooperative discovery of information. All in all, it could be stated that social media environments, which are based on sharing and interaction without space and time limitations, (Akıncı Vural and Bat, 2010) could have an influence on its users' perceptions.

As a result of the study, it was found that the most used social media site was an effective variable on the student teachers' perceptions regarding justice and equality. The student teachers' perceptions regarding justice and equality who reported their most used social media site as "Facebook" and "Twitter" were significantly higher on those who reported their most used social media site as "YouTube" and "Instagram".

Every social media tool has its own characteristics and can provide different kinds of services and different perceptions on its users. Social media environments have played an important role in the transition from representative democracy to participatory democracy (Çıldan, Ertemiz, K üçük, Tumu çin, & Albayrak, 2012). Social media, which has the potential to direct the development process of democracy (Sayımer, 2014), provides a platform where individuals can express their demands for equality and justice. Prensky (2001) states that individuals who use social media are more sensitive to injustices and troubles and give more value to concepts like equality, justice and freedom.

It could be stated that microblogging applications in social media tools are very effective in terms of coordinating activities and sharing ideas (Honeycutt & Herring, 2009). Twitter is a microblogging system where news on the agenda are shared. Holotescu and Grosseck (2010) state that creating virtual environments to explain and discuss different ideas and to create instant communities in unexpected situations are among important features of Twitter. Users can share information about various connections, news, events and announcements in these environments (Hricko, 2010). Users can express themselves through Twitter, see what others are talking about, and participate in discussions (Johnson & Yang, 2009).

Individuals can create groups, initiate discussions and collaborate in various social media environments. The Arab Spring is one of the most prominent examples in this context. In fact, the role of social media should not be overlooked in this event, which started in Tunisia at first and then brought the whole world under its influence. People are organized especially through Facebook (Üksel, 2015). Some experts even refer to social medias as the new leader of social revolutions considering its role in the Arab Spring, especially Facebook. In the face of any developing situation, it is possible via Facebook to make a variety of sharing, to reach the target audience and to be informed about the flash news (Johnson & Yang, 2009). Because of these features, it could be stated that Facebook and Twitter have a positive effect on the perception of equality and justice.

As a result of the study, it was found that the top usage purpose for social media sites is an effective variable on the student teachers' perceptions regarding justice and equality. The usage purposes for social media networks and the way how they are perceived differ from one individual to another, and social media can be used in different ways in accordance with their intended use (Tutgun Ünal, 2015). There is a multifaceted communication cycle and feedback in social media environments. In this respect, social media provides users with a participatory, free, interactive and fair communication environment without any superior-subordinate relationship (Kılıç, 2015). Classes, religion, language and ethnicity are ignored in social media environments. The fact that individuals share the same environment with people with different characteristics, create a collective consciousness, express themselves freely, become a content provider and get treated equally as content providers consolidates the consciousness of democracy of these individuals.

## 5. Suggestions

As a result of the study, it was revealed that the student teachers' perceptions regarding multicultural education differ depending on their usage purposes of social media. Therefore, student teachers can be guided in a way to use social media for purposes that will have a positive impact on the perspectives of multicultural education. In addition, social media can also be included by instructors in the teacher training process of student teachers. This positive effect of social media on student teachers' perceptions of multicultural education is considered to be important. Because in the education system that is based on cultural differences, it is expected that the teacher will have multicultural teacher characteristics in order to achieve the aim of education. Because in the education system based on cultural differences, it is expected that the teacher should have multicultural teacher characteristics in order to achieve the goals of the education. Therefore, it should be ensured that student teachers could gain experience that can give them a multi-cultural perspective during their university education. In this respect, receiving multi-cultural teacher education courses and being assigned to schools with different cultural structures in their teaching practice courses could be helpful.

In this study, the student teachers' perceptions related to the multi-cultural education with respect to usage purposes of social media were investigated. However, there is a need for other studies that address different aspects of social media and the perception of multicultural education. In order to provide student teachers with a multicultural perspective in the process of their university education, it is possible to conduct studies that focus on the opportunities provided by universities for multicultural education. In this way, the existing circumstances can be represented, and the necessary improvements can be achieved. In addition, for the purpose of determining student teachers' manners, behaviors and attitudes with regards to multiculturalism, data mining studies can be conducted on the data provided by their activities in social media.

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