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Contact Address:
Prof. Dr. Aytekin İŞMAN
TOJET, Editor in Chief
Sakarya-Turkey

Message from the Editor-in-Chief

Dear Colleagues,

TOJET welcomes you.

Today, technology is developing very fast around the world. This technological development (hardware and software) affects our life. There is a relationship among technology, society, culture, organization, machines, technical operation, and technical phenomenon. Educators should know this relationship because technology begins to affect teaching and learning facilities. For this reason, educators are increasingly using technology in all aspects of their profession (e.g., creating curricula, classroom instruction, work assignments). This trend can be enhanced by educating the educator about cultural and cognitive aspects of technology and technikos, as well as the associated advantages and disadvantages related to educational and human development goals.

TOJET is also a technology which affects educators and education systems because it diffuses new development all around the world. It is always successful to diffuse new developments.

I am always honored to be the editor in chief of TOJET. I am always proud of TOJET for its valuable contributions to the field of educational technology.

TOJET is interested in academic articles on the issues of educational technology. The articles should talk about using educational technology in classroom, how educational technology impacts learning, and the perspectives of students, teachers, school administrators and communities on educational technology. These articles will help researchers to increase the quality of both theory and practice in the field of educational technology.

TOJET thanks the guest editors and the editorial board of this issue for their valuable contributions.

Call for Papers
TOJET invites article contributions. Submitted articles should be about all aspects of educational technology and may address assessment, attitudes, beliefs, curriculum, equity, research, translating research into practice, learning theory, alternative conceptions, socio-cultural issues, special populations, and integration of subjects. The articles should also discuss the perspectives of students, teachers, school administrators and communities.

The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJET.

October 01, 2022

Editors,
Prof. Dr. Aytekin İŞMAN
Sakarya University
Prof. Dr. Jerry WILLIS
Manhattanville College

Editorial Board

Table of Contents

A Study on the Relationship between Teacher Candidates' Attitudes towards Teaching Critical Thinking and Critical Thinking Standards

Pınar KIZILHAN
Ankara University, Educational Sciences Faculty, Ankara, Türkiye
p.leibniz.k@gmail.com
https://orcid.org/0000-0001-6803-0183

Engin DEMİR
Bandirma Onyedi Eylül University, Vocational School of Health Services, Balıkesir, Türkiye
edemirakademik@gmail.com
https://orcid.org/0000-0002-6280-5467

ABSTRACT
This study aims to determine the relationship between the attitudes of teacher candidates towards teaching critical thinking and critical thinking standards. The population of the study consists of teacher candidates studying at the faculties of education in 2020-2021. The sample of the study consists of 743 teacher candidates determined by the appropriate sampling method. Descriptive statistics, MANOVA, and regression analyses have been used for the analysis of the data. As a result of the research, It has been determined that knowing the teaching of critical thinking has a positive effect on attitudes towards teaching critical thinking and critical thinking standards. Attitudes toward teaching critical thinking and critical thinking standards results of the teacher candidates who read four or more books per month are higher than that of those who have never read a book or read just a book per month. It has been observed that there is a positive moderate relationship between the attitudes toward teaching critical thinking and critical thinking standards results of the teacher candidates. When critical thinking standards are examined as a predictor of attitudes towards teaching critical thinking, critical thinking standards explain 37% of the variance related to attitudes towards teaching critical thinking.

INTRODUCTION
In the words of Kant, naming the Enlightenment period, mature thinking (Gokberk, 1993) is also the acceptance of criticism, and reasoning (Lewis & Smith, 1993) as the most basic criterion in evaluating the correctness of traditional decisions (Ozdemir, 2008). Critical Thinking (CT) has deep historic roots and has a history as long as philosophy, in general (Thayer Bacon, 1998). Through the questions such as "How do I know this? What is the proof that I know it? If this is true, can it be falsified?", CT is a valuable learning and teaching tool from the era of Socrates to the present, which protects people from falling into a knavery; a standard of thinking (Glasser, 1985; Lewis and Smith, 1993; McKendree et al, 2010), an attitude for democratic citizenship (Glasser, 1985; Kurum, 2002; Dewey, 2008; Gundogdu, 2009) the ability and tendency to gather, evaluate and use information effectively (Semerci, 2003; Ertas, 2012). Critical thinking has been defined, as a result of the studies conducted in 1990 with the participation of 46 theorists from the United States and Canada under the leadership of the American Psychological Association (APA), as "the individual's making conscious judgments and expressing analytical, evaluative judgments to decide what to do and what to believe". (Evancho, 2000; cite, Seferoglu and Akbiyik, 2006).

CT has not only analytic and selective but also imaginative, inventive, and constructive aspects (Bailing, 1987). Enabling individuals to develop their ability to evaluate (Semerci, 2003), CT aims to determine criteria for action and belief and to doubt explanations until they acquire intellectual skepticism and all relevant information (Kale, 1993). CT enables people to develop their ability to evaluate (Semerci, 2003). CT is a type of thinking based on discussion, which allows for predicting the possible consequences of events, presenting new options, and giving a new perspective (Kurum, 2002). There is intellectual interest in the core of mental processes called critical thinking, it depends on the intellectual accumulation of individuals (Lewis & Smith, 1993) and is based on the passion for knowing, learning, and explaining (Yildirim, 1997). Critical thinking is the search for a reasoned and original answer to five Ws and one H questions. In science and intellectual history, it is seen that prices are paid for the sake of the phrase “I don't think the same” (Ozdemir, 2008). Therefore, critical thinking is a “mental hygiene” that will protect individuals against the falsifications and harms of wrong thinking (Gundogdu, 2009).

CT is, according to the perspective of Kuhn (1993), to be able to discuss people's different and complex beliefs, judgments, and conclusions that are at the heart of everyday life culture (Anderson, Howe, Soden, Halliday, Low, 2001). CT is a way of thinking in which prejudices, assumptions, and knowledge are tested, evaluated, and

judged and their different aspects, expansions, meanings, and consequences are discussed, ideas are analyzed and evaluated, reasoning, logic, and comparison are used, resulting in certain ideas, theories or behaviors (Gurkaynak et al., 2003). CT is the art of analyzing and evaluating to improve thinking (Paul & Elder, 2006), a thought-based approach to finding the truth (Yildirim, 1997), and one of the most effective ways for a person to understand himself and others (Ertas, 2012). Chance (1986) defined critical thinking as a set of skills for analyzing facts, generating and organizing ideas, comparing, drawing conclusions, evaluating arguments, and solving problems. Similarly, Inam (1994) says that the prerequisite for critical thinking is to understand the subjects and people. Based on the common points of all definitions, critical thinking is to have original communication and production contents that require the power of correct judgment, and consistency of words and actions.

Teaching Critical Thinking

Different definitions of critical thinking have been made (Yildirim, 1997; Fernández-Balboa, 1993; Potts, 1994; Akar Vural and Kutlu, 2004; Onal, 2020); it is stated that there are various approaches to teaching critical thinking, different measurement tools related to its measurement and that these tools have similarities and differences with each other (Akar Vural and Kutlu, 2004; Onal, 2020), and therefore, critical thinking should not be measured with traditional methods (Sahinel, 2005); there are still some difficulties in measuring critical thinking (Ertas, 2012).

Undergraduate programs for teacher training should be open to innovation, research, and inquiry-based and support effective citizen skills through critical thinking. Critical thinking should retain its importance as one of the most important skills during the development of higher education programs (Torres & Cano, 1995; Kokdemir, 2003; Doganay and Yesilpinar, 2014). Individuals are expected to be sustainable, flexible, creative, and researcher throughout their lives to be successful in developing technology, changing economic conditions, professional job expectations of the digital age, etc. So, it is of great importance for teachers to be ready for the important responsibility of developing the standards of critical thinking in their classrooms and teaching these standards (Kurum, 2002; Akınoglu, 2003; Hamurcu, Gunay, and Akamca, 2005; Chin, 2005; Tok and Sevinc, 2010; Aybek, Aslan, et al. Dincer and Coskun-Arisoy, 2015; Tezci et al., 2017). Learning activities related to content and method in the university should consist of critical thinking practices (Emir, 2012; Kokdemir, 2012) and measurement processes should also be capable of testing these skills (Cikrikci Demirtasli, 2010). Because, as mentioned above, the most important indicator of being able to think at a high level is critical thinking (Semerci, 2000; Cokluk Bokeoglu and Yilmaz, 2005). Therefore, due to the nature of the individual and the subject area (Sonmez, 2015), critical thinking standards and teaching should be given importance in teacher training programs (Daniel & Drewe, 1998; Cokluk Bokeoglu and Yilmaz, 2005; Aybek, 2010). From this point of view, it has been aimed to examine the relationship between the attitudes of teacher candidates towards teaching critical thinking and critical thinking standards.

Relevant Studies

When the literature is examined, it is seen that research on critical thinking teaching (Seferoglu and Akbiyik, 2006), critical thinking tendency of teacher candidates (Akar, 2007; Aybek, 2007; Zayif, 2008; Ekinci, 2009; Sen, 2009; Korkmaz, 2009; Can and Kaymakci, 2015; Gokkus and Delican, 2016; Besoluk and Onder, 2010; Cetinkaya, 2011, Dutoglu and Tuncel, 2008; Gok and Erdogan, 2011; Narin and Aybek, 2010; Kartal, 2012; Emir, 2012; Acun, Demir and Goz, 2010) and examining teacher candidates' critical thinking skills in terms of diverse variables (Alkin-Sahin, Tunca, and Ulubey, 2014; Acisli, 2015) have been carried out. It is also seen that there are studies on the critical thinking levels of university students (Dayioglu, 2003; Ozdemir, 2005; Bilgin and Eldeklioglu, 2007; Tumkaya and Aybek, 2008; Bulut, Ertem and Sevil, 2009, Ozturk and Ulusoy, 2008; Tumkaya, 2011; Sacli and Demirhan, 2008; Korkmaz, 2009; Emir, 2012), problem solving and critical thinking (Turnuklu and Yesildere, 2005; Tok and Sevinc, 2010).

Purpose of the research

The purpose of this study is to reveal the relationship between the attitudes of teacher candidates towards teaching critical thinking and critical thinking standards. In this context, the answers to the following research questions were sought:

1. What is the level of teacher candidates' attitudes towards teaching critical thinking?
2. What are the teacher candidates' levels of critical thinking standards?
3. Do teacher candidates' attitudes towards teaching critical thinking and their standards for critical thinking differ according to?
    A. their gender,
    B. their department,
    C. their class level,
    D. knowing teaching critical thinking

E. the number of books read monthly?

4. Are teacher candidates' critical thinking standards a meaningful predictor of their attitudes towards teaching critical thinking?

METHOD

This section includes information about the design, population and sample, data collection tools, data collection process, and data analysis process of the research.

Model of the Research

This research, which has a quantitative research approach, has a correlational survey model. Correlational research is used when it is aimed to decipher the relationship between more than one variable or to make an estimation depending on this relationship (Fraenkel, Wallen, and Hyun, 2012, p.12).

Population and sampling

The population of the research consists of the students studying at the faculty of education. According to 2019-2020 higher education institution statistics, a total of 214.441 students are studying (https://istatistik.yok.gov.tr/). Research data were collected by using convenience sampling, one of the Non-Probability Sampling Methods. In the convenience sampling method, the researcher begins to create his sample, starting with the most accessible respondents. An important limitation that should be mentioned here is that the use of an improbable sample in research conducted with online surveys reduces the generalizability of the findings (Cohen, Manion, and Morrison, 2018). Considering this limitation, 774 prospective teachers were reached within the scope of the research. After the analysis of the outliers and lost data, the analysis was carried out with 743 data. As a result, the sample of the study consists of 743 teacher candidates. Krejcie and Morgan (1970) have stated that 384 people are sufficient for the sample size when the population is 100000 or above.

Table 1: Demonstrates the Demographic Characteristics of 743 Teacher Candidates

Variable		Frequency	Percentage
Gender	Female	600	80.8
	Male	143	19.2
Department	Dept. of Basic Edu.	262	35.3
	Dept. of Math. and Sci. Edu.	110	14.8
	Dept. of Turkish and Social Sci. Edu.	268	36.1
	Other	103	13.9
Year	Freshman	168	22.6
	Sophomore	163	21.9
	Junior	175	23.6
	Senior	237	31.9
Knowledge of Teaching Critical Thinking	No	403	54.2
	Yes	340	45.8
Number of Books Read per Month	None or one	244	32.8
	Two books	217	29.2
	Three books	144	19.4
	Four books or more	138	18.6

When Table 1 is examined, it is seen that more than half of the teacher candidates are women (80.8%) and have knowledge about critical thinking teaching (54.2%). It is seen that the teacher candidates show a balanced distribution according to their class levels. 35.3% of the teachers are studying at the department of basic education and 36.1% are studying at the department of Turkish and Social Sciences Education. 32.8% of teachers read no or one book per month, while 18.6% read four or more books.

Data Collection Tools

The data of the research were collected with the attitude scale of teacher candidates towards teaching critical thinking and the critical thinking standards scale. The attitude scale of teacher candidates towards teaching critical thinking was developed by Onal (2020) with data obtained from teacher candidates. Likert-type five-point rating consisting of options from Strongly Disagree=*1* to Strongly Agree=*5* was used in the scale. The lowest score that can be obtained from the 19 items and one-dimensional scale is 19, and the highest score is 95. The variance ratio explained by the scale is 35.56%. The goodness of fit indices obtained by confirmatory factor analysis (CFA) are as follows: $\chi 2/sd=1.25$, GFI=.88, RMSEA=.042, SRMR=.06, CFI=.97, NFI= 93, NNFI=.98. Cronbach's Alpha internal consistency coefficient of the scale has been calculated as .885. Within the scope of this research, the Cronbach's alpha internal consistency coefficient of the scale has been calculated as .91.

The critical thinking standards scale was developed by Aybek, Aslan, Dincer, and Coskun-Arisoy (2015) based on the data obtained from teacher candidates. The scale consists of 42 items, including 30 positive and 12 negatives. Aiming to determine the extent to which teacher candidates have critical thinking standards, this scale uses a five-point Likert-type rating scale from strongly disagree=*1* to strongly agree=5 The resulting Critical Thinking Standards Scale, consisting of the sub-dimensions of "depth, breadth, and adequacy", "precision and accuracy" and "importance, relevance and openness" explains 35.96% of the total variance. The goodness of fit indices obtained by confirmatory factor analysis (CFA) are as follows: $\chi 2/sd=3.81$, GFI=.85, AGFI=.83, RMSEA=.08, CFI=.92, NFI=.90, NNFI=.90. While the lowest score that can be obtained from the scale is 42 and the highest score is 210, scores between 18-90 can be obtained from the 18-item depth, breadth, and proficiency subscale; 12 - 60 from the precision and accuracy subscale consisting of twelve items; 12 - 60 from the importance, relevance and openness subscale consisting of twelve items. The Cronbach's alpha internal consistency coefficient of the scale has been determined as .89, .78, and .63 for the sub-factors, and .75 for the overall scale. Within the scope of this research, the Cronbach's Alpha internal consistency coefficient of the scale has been calculated as .86.

Analysis of the Data

The statistical analyses used to answer the research sub-problems are descriptive analyses, regression analysis, and MANOVA. Pallant (2016) has stated that, before the MANOVA analysis, the prerequisites should be met, the outliers should be removed from the data set, the variables should show multicollinearity and normal distribution, there should be multicollinearity and there should be no singularity problem, and the variance-covariance matrix should be homogeneous. In this direction, all the data were examined and no missing data were found in the data set. It was checked whether the z scores were greater than +4 or less than -4 to determine univariate outliers (Stevens, 2001). The values that were not between these two values were removed from the data set. The data with outliers appearing in the boxplot were also removed from the analysis. In the last case, the skewness and kurtosis coefficients of the variables and the histogram graph with a normal distribution curve were examined to evaluate the univariate normality. As a measure of the assumption of normality, the skewness and kurtosis coefficients should be in the range of -1 to +1 (Morgan, Leech, Gloeckner & Barrett, 2004). It has been observed that none of the scores remained outside the limits of ±1 so the scores did not significantly deviate from the normal distribution. Therefore, the results obtained are that the scale sub-dimensions also show a normal distribution. Therefore, the univariate normality assumption is provided.

It is recommended to examine whether there are outliers related to the variables to determine whether the variables show a multivariate normal distribution. In this way, the outliers that make it difficult to meet the linearity assumption are also reached (Buyukozturk, 2019). For this purpose, Mahalanobis distances were calculated for all dependent variables that would be used primarily in the analysis of MANOVA. The data with Mahalanobis distances above 13.82 determined for variable number two were removed from the data set. In the last case, it has been determined that the 'Mahalanobis Distance Values' vary between 002 and 12,417. This value is below 13.82 determined for the minimum variable number two (Pallant, 2016). When the obtained Mahalanobis distances were examined, no outlier value was observed. When the scatter plots belonging to all bilateral relations of dependent variables are examined, it is seen that the plots have an oval shape and, therefore, there are no conditions that threaten linearity. Both variables show a normal distribution and if there is a linear relationship between the two variables, the scatter plot will have an oval shape (Tabachnick and Fidell, 2013).

No high correlation was detected as a result of the correlation analysis conducted to check the multiple common linearities. The Box's M Test was used to test the assumption of homogeneity of covariance matrices. If the value of p (sig) is greater than 0.001 in this test, it means that this assumption is not neglected (Pallant, 2016). Since the p (sig.) value is $p>0.001$ in all variables in the tests performed, it can be said that the homogeneity assumption of the variance-covariance matrices is also ensured. For simple regression analysis, it has been examined whether the relationship between the variables was linear with the scatter diagram and it has been determined that the relationship was linear. The analyzes were interpreted by including the percentage, frequency, mean, and standard deviation values of the variables at the .05 significance level. The calculated Cohen's d statistics regarding the level of significant difference being affected by the difference between the means have been reported. The value obtained by eta squared has been interpreted as .01=small effect, .06=moderate effect, and .14=large effect (Cohen, 1988).

Ethics and Procedure

The research data was obtained using the “online survey” technique due to the pandemic. The data was collected by using an online survey through Google Forms. Information about the purpose of the research is given on the first page of the online survey. On the second page, informed consent is given. When the participants click the "I have read and approved" button, they move on to the survey questions. This research has been carried out with

the ethical compliance decision of Bandirma Onyedi Eylul University, Social and Human Sciences Ethics Committee dated 2021-5.

FINDINGS

In this section, the findings obtained as a result of the analyses are given respectively according to the four sub-problems of the research.

Findings related to the first sub-problem of the research

Table 2: Descriptive Statistics of Teacher Candidates' "Attitude Scale towards Teaching Critical Thinking" Scores

Scales	n	Item Number	min	max	$\bar{x}$	s
Attitude	743	19	56.00	95.00	82.71	7.80

The score that teacher candidates receive from the 19-item attitude scale for teaching critical thinking ranges from 19-95. It has been observed, on the other hand, that the scores of the teacher candidates participating in the research were between 56-95. The mean scores of the teacher candidates' attitudes towards teaching critical thinking scale ($\bar{x}$=82.71) are observed to be at a high level. Therefore, it can be said that teacher candidates have positive attitudes towards teaching critical thinking.

Findings related to the second sub-problem of the research

Table 3: Descriptive Statistics of the Scores of Teacher Candidates on the "Critical Thinking Standards Scale"

Scales	n	Item Number	min	max	$\bar{x}$	s
Critical Thinking Standards	743	42	128.00	200.00	162.214	12.47

The score that the teacher candidates receive from the critical thinking standards scale ranges from 42-210. It has been observed, on the other hand, that the scores of the teacher candidates participating in the research were between 128-200. The mean scores of the teacher candidates on the critical thinking scale ($\bar{x}$=162.214) are observed to be at a high level. Therefore, it can be said that teacher candidates have critical thinking standards.

Findings related to the third sub-problem of the research by gender

Table 4: MANOVA Results of Teacher Candidates' Attitudes towards Teaching Critical Thinking and Critical Thinking Standards Scores by Gender

Independent Variable	Wilks' Lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	.99	2.82	2.00	740,00	.06	.008

When Table 4 MANOVA results are examined, no statistically significant difference is found between the independent variables, women and men, F(2,740)=2.82; p=.06; Wilks' Lambda=.99; Partial Eta Squared=.008.

Findings related to the third sub-problem of the research by the department

Table 5: MANOVA Results of Teacher Candidates' Attitudes towards Teaching Critical Thinking and Critical Thinking Standards Scores by Department

Independent Variable	Wilks' Lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Department	.97	3.113	6.00	1476.00	.005	.012

When Table 5 MANOVA results are examined, a statistically significant difference is found according to the departments of the teacher candidates, F(6,1476)=3.113; p=.005; Wilks' Lambda=.79; Partial Eta Squared=.012. In Table 8, the results obtained for the dependent variables are handled separately and the effects between the groups are given.

Table 6: Tests of Between-Subjects Effects and Group Averages by Department Variable

Dependent Variable	Department	n	$\bar{x}$	s	df	Mean Square	F	Sig.	Partial Eta Squared
Attitude	Dept. of Basic Edu.	262	83.62	7.23	3	300.82	5.016	,002	,020
	Dept. of Math and Sci. Edu.	110	80.30	7.68					
	Dept. of Turkish and Social Sci. Edu.	268	83.00	8.11					
	Other	103	82.24	8.04					
Critical Thinking Standards	Dept. of Basic Edu.	262	167.41	12.38	3	430.98	2.788	,040	,011
	Dept. of Math and Sci. Edu.	110	164.38	11.82					
	Dept. of Turkish and Social Sci. Edu.	268	168.38	12.66					
	Other	103	166.66	12.58					

When Table 6 is examined, a statistically significant difference is found in the scores of attitudes towards teaching critical thinking (F (3, 739) =5.016; p=.002; Partial Eta Squared=.02) and in the scores of critical thinking standards (F (3, 739) =2.788; p=.04; Partial Eta Squared=.01) according to the variable of the department. The scheffe post hoc test has been performed to determine which groups caused the significant difference. The results obtained show that the attitudes of teacher candidates in the Department of Mathematics and Science Education Sciences towards teaching critical thinking are more negative than those of teacher candidates in the Department of Turkish and Social Sciences (p=.024) and Basic Education (P=.003). Likewise, teacher candidates in the Department of Mathematics and Science Education Sciences have been found to have less critical thinking standards than those of teacher candidates in the Department of Turkish and Social Sciences Education (p=0.45).

Findings related to the third sub-problem of the research by class level

Table 7: MANOVA Results of Teacher Candidates' Attitudes towards Teaching Critical Thinking and Critical Thinking Standards Scores According to the Variable of Class Level

Independent Variable	Wilks' Lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Class Level	.99	.915	6.000	1476.000	.483	.004

When Table 7 MANOVA results are examined, no statistically significant difference is found according to the independent variable of class level; F(6,1476)=5.33; p=.915; Wilks' Lambda=.99; Partial Eta Squared=.004.

Findings related to the third sub-problem of the research by the status of knowledge on critical thinking teaching

Table 8: MANOVA Results of Teacher Candidates' Attitudes Towards Teaching Critical Thinking and Critical Thinking Standards Scores According to the Variable of Knowledge on Teaching Critical Thinking

Independent Variable	Wilks' Lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Teaching Critical Thinking	.96	12.124	2.00	740,00	.000	.032

When the MANOVA results are examined in Table 8, a statistically significant difference was found according to the independent variable of knowing teaching critical thinking, F(2,740)=12.124; p=.000; Wilks' Lambda=.96; Partial Eta Squared=.032. In Table 11, the results obtained for the dependent variables are handled separately and the effects between the groups are given.

Table 9: Tests of Between-Subjects Effects and Group Averages According to the Variable of Knowledge on Teaching Critical Thinking

Dependent Variable	Knowing Teaching Critical Thinking	n	$\bar{x}$	S	df	Mean Square	F	Sig.	Partial Eta Squared
Attitude	Yes	403	83.87	7.67	1	1174.742	19.764	.000	.026

	No	340	81.34	7.74	1				
Critical Thinking Standards	Yes	403	169,02	12.70	1	2895.698	19.052	.000	.025
	No	340	165,06	11.87					

When Table 9 is examined, a statistically significant difference is found in the scores of attitudes towards teaching critical thinking (F (1,954) =25.81; p=.000; Partial Eta Squared=.026) and critical thinking standards (F (1,954) =22.64; p=.000; Partial Eta Squared=.023) according to the variable of knowing teaching critical thinking. When the average scores are examined, it shows that those who know about teaching critical thinking have positive attitudes toward teaching critical thinking at a higher level and have critical thinking standards. The effect size is small for both dependent variables.

Findings related to the third sub-problem of the research by the Number of Books Read per Month

Table 10: MANOVA Results of Teacher Candidates' Attitudes towards Teaching Critical Thinking and Critical Thinking Standards Scores According to the Variable of Number of Books Read per Month

Independent Variable	Wilks' Lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Number of Books Read per Month	.94	6.965	6.000	1476.000	.000	.028

When Table 10 MANOVA results are examined, a statistically significant difference is found according to the number of books read monthly, F (6, 1476) =6,965; p=.000; Wilks' Lambda=.94; Partial Eta Squared=.028. In Table 11, the results obtained for the dependent variables are handled separately and the effects between the groups are given.

Table 11: Tests of Between-Subjects Effects and Group Averages by Number of Books Read Monthly

Dependent Variable	Number of Books	n	$\bar{x}$	S	df	Mean Square	F	Sig.	Partial Eta Squared
Attitude	Zero or one book	244	81.25	8.44	3	423.449	7.120	.000	.028
	Two books	217	82.47	7.31					
	Three books	144	83.45	7.47					
	Four books or more	138	84.89	7.16					
Critical Thinking Standards	Zero or one book	244	163.95	12.45	3	2032.591	13.728	.000	.053
	Two books	217	166.61	12.34					
	Three books	144	169.35	11.54					
	Four books or more	138	171.68	11.99					

When Table 11 is examined, a statistically significant difference is found in the scores of attitudes towards teaching critical thinking (F (3,739) =7.10; p=.000; Partial Eta Squared=.028) and critical thinking standards (F (3,739) =13.72; p=.000; Partial Eta Squared=.053) according to the independent variable of the monthly number of books read. The scheffe post hoc test has been performed to determine which groups caused the significant difference. The results obtained demonstrate that the attitudes of teacher candidates who read none or one book towards teaching critical thinking are more negative than those of those who read four books or more (p=.000). Likewise, the level of critical thinking standards of teacher candidates who read none or one book is more negative than those of who read four books or more (p=.000).

Findings related to the fourth sub-problem of the research

Table 12. Simple Regression Analysis of Critical Thinking Standards as a Predictor of Attitude towards Teaching Critical Thinking

	R	R^2	Adjusted R Square	Std. Error of the Estimate	F.	Sig
Critical Thinking Standards	,609	,371	,370	6.19434	437.504	,000

When Table 12 is examined, it is seen that critical thinking standards explain 37% of the variance [R=.609, R^2=.371, F (1,741) =437.504, p<.01] regarding the attitude towards teaching critical thinking. It is also observed that there is a positive mediate level (Buyukozturk, 2019) relationship between teacher candidates' critical thinking standards and their attitudes towards teaching critical thinking.

Table 13: Coefficients Table of Simple Regression Analysis of Critical Thinking Standards as a Predictor of Attitude towards Teaching Critical Thinking

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	18.972	3.056		6.208	.000
CT Standards	.381	.018	.609	20.917	.000

When Table 13 is examined, it is foreseen that a one-unit change in critical thinking standards will lead to an increase of .381 units in the attitude towards teaching critical thinking. In summary, the estimation result of the model is: y=18.972+0.381x

CONCLUSION AND DISCUSSION

It has been determined as a result of the research that the attitudes of teacher candidates towards teaching critical thinking are positive. When the relevant literature is examined, this finding has parallels with the results of some studies. It has been found in a study conducted by Gelen (2002) that classroom teachers consider themselves sufficient to implement thought-enhancing activities in the classroom environment and to acquire thinking skills. However, in the observation made with participation, it has been revealed that the teachers were “Inadequate” on average. It has been found that the vast majority of teachers have never asked any questions at the assessment level. Kaya (2008) has found that teacher candidates responded to the items related to creating a classroom environment that improves thinking at a fairly adequate level. It has been concluded that the classroom teachers feel "completely adequate" regarding the teaching of critical thinking skills (Gobel, 2013); and that the majority of primary school teacher candidates and primary school teachers consider themselves adequate regarding the teaching of critical thinking (Yesilpinar 2011; Yesilpinar and Doganay, 2014). It has been also stated in a study conducted by Inan and Ozgen (2008) that Mathematics teacher candidates consider themselves adequate at a high level in acquiring critical thinking skills in the Mathematics course. As Akdere (2012) stated, the fact that teacher candidates attach a high level of importance to teaching strategies that will improve critical thinking skills indicates that they are ready to improve themselves to put them into practice in the future. However, having a positive attitude towards teaching critical thinking does not guarantee that critical thinking will be taught in the best way.

The results of this research, in which the attitudes of teacher candidates towards teaching critical thinking are positive, do not coincide with the results obtained in some studies. It is stated in a study conducted by Akdere (2012) that the attitudes of teacher candidates towards teaching critical thinking are moderately positive. Likewise, Kiziltas (2011) states that the tendencies of classroom teachers to teach critical thinking are also moderate. Cicek Saglam and Buyukuysal (2013) have determined in their qualitative research on the barriers to teaching critical thinking to teacher candidates that the teacher candidates think that both the program and the teachers/instructors do not support the critical thinking process.

It has been found as a result of the research that teacher candidates have critical thinking standards, in other words, high levels of critical thinking skills. Studies supporting this finding in the literature are as follows: It has been determined that the critical thinking tendencies of the classroom teacher candidates (Aybek and Aslan, 2017; Yilmaz, 2017; Askin Tekkol and Bozdemir, 2018), the Religious Culture and Moral Education Teaching (Cekin, 2013), the Science (Tekin, Aslan, and Yagiz, 2016) and the Science and Primary Education Teacher candidates (Hamurcu, Akamca Ozyilmaz, Gunay, 2005), the education faculty students (Karali, 2012), the music teacher candidates (Piji Kucuk and Uzun; 2013) and the students maintaining their education in the English and Science Teaching departments (Bayat, 2014) are good, positive and high. This finding may be because critical thinking standards are involved in teacher training program achievements and the teacher candidates participating in the study internalize these tendencies and develop their research and inquiry skills. As is known, teacher training undergraduate programs are mostly structured on basic skills, attitudes, value acquisition, and adaptation. In addition to field knowledge, professional knowledge and skills for the education and training of the field have been created by prioritizing the acquisition of standards such as Science literacy and Mathematics literacy, for example (YOK, 2018).

It has been determined, on the other hand, in some studies on the subject, contrary to this finding, that the teacher candidates in the Department of Basic Education (Kiziltas, 2011), visual arts teacher candidates (Ayberk Arslan, 2016), students in the last years of primary, secondary and higher education (Korkmaz and Yesil, 2009), and teacher candidates studying in other departments have a moderate level of critical thinking tendency and power (Kurum, 2002; Cekic, 2007; Cetin, 2008; Gulveren, 2007; Dutoglu and Tuncel, 2008; Korkmaz, 2009; Deniz, 2009; Besoluk and Onder, 2010; Kartal, 2012; Gedik, 2013; Kuvac and Koc, 2014; Bayat, 2014; Kocak et. al.,

2015; Gokkus and Delican, 2016; Durnaci and Ultay, 2020). Also, some research results (Gulveren, 2007; Genc, 2008; Guven and Kurum, 2008; Zayif, 2008; Tumkaya, 2011; Cetinkaya, 2011; Tural, Secgin, 2012; Cicek Saglam and Buyukuysal, 2013; Yuksel, Uzun, Dost, 2013; Sarpkaya and Aktas, 2013; Can and Kaymakci, 2015; Karaman, 2016; Acisli, 2016; Colak et. al., 2019) demonstrate that teacher candidates have a low level of critical thinking tendency. On the other hand, it has been found in the studies conducted with university students (Kaya, 1997; Coskun, 2001; Dayioglu, 2003; Ozgen, 2009) that students have moderate critical thinking power. It is thought that SWOT analyzes and qualitative research are necessary regarding the barriers to critical thinking in pre-service education of teacher candidates, considering the amount of research in the literature on teacher candidates' mostly moderate and low levels of critical thinking tendency and skills. The courses included in the program can be conducted through further research and inquiry-based activities.

It has been found as a result of the research that the attitudes of teacher candidates towards teaching critical thinking and the standards of critical thinking do not differ by gender. It is seen that there are studies in the literature that have obtained similar results (Kaya, 1997; Semerci, 2003; Dayioglu, 2003; Chin, 2005; Aybek, 2006; Cekic, 2007; Yildirim and Yalcin, 2008; Ekinci, 2009; Korkmaz, 2009; Leach and Good, 2011; Tural, Secgin, 2012; Karali, 2012; Piji Kucuk and Uzun, 2013; Yuksel, Sari Uzun, and Dost, 2013; Gokkus and Delican, 2016; Tekin, Aslan, and Yagiz, 2016; Aypek Arslan, 2016; Yilmaz, 2017; Askin Tekkol and Bozdemir, 2018; Durnaci and Ultay, 2020). Gelen (2002) states that gender does not constitute a significant difference in the teaching of thinking skills of teachers. Likewise, Inan and Ozgen (2008) also note that there is no difference in the views of teacher candidates regarding their ability to acquire thinking skills by gender. It is seen that other research results support the result obtained in this study, that is, the critical thinking tendencies of teacher candidates do not change by gender.

On the other hand, in some studies on the subject, it has been determined in the research findings that critical thinking tendencies differ in favor of female teacher candidates, in other words, they are more positive and higher than that of males (Kokdemir, 2003; Hamurcu, Gunay, and Akamca, 2005; Gulveren, 2007; Ay and Akgol, 2008; Besoluk and Onder, 2010; Ozsoy Gunes, Cingil Baris, and Kirbaslar, 2013; Kuvac and Koc, 2014; Yuksel, Uzun, and Dost, 2013). It has been determined that male students' critical thinking levels are more positive or higher (Cokluk Bokeoglu and Yilmaz, 2005; Zayif, 2008; Leach and Good, 2011; Kartal, 2012; Cicek Saglam and Buyukuysal, 2013), and they use their critical thinking skills more while expressing their views and thoughts on current controversial issues (Doganay et. al., 2003). As can be seen, different results have been found in the literature regarding the tendency, attitude, and standards of critical thinking for the gender variable. In line with these results, it can be said that critical thinking is a tendency independent of the gender variable. Therefore, no generalization can be made in this regard. As a result of the research, there is no significant difference between the attitudes of teacher candidates toward teaching critical thinking and the standards of critical thinking by the class level.

In parallel with this finding, it is stated that the class level does not make a significant difference in the studies conducted with teacher candidates on their critical thinking dispositions (Ekinci, 2009; Besoluk and Onder, 2010; Yuksel, Sari Uzun, and Dost, 2013; Sarpkaya Aktas and Unlu, 2013; Kuvac and Koc, 2014; Memduhoglu and Keles, 2016; Aybek and Sahin, 2017; Ozdemir, Buyruk, and Gungor, 2018). In Korkmaz's (2009) study, it has been determined that the critical thinking tendencies and levels of graduate students are higher than those of new students, but generally, critical thinking tendencies and levels in all classes are moderate. According to the author, the tendency and level of critical thinking of students do not increase to the highest level in the upper class. Based on the results, it can be said that as the class level increases, the attitude towards teaching critical thinking and the standard of critical thinking do not change. Besoluk and Onder (2010) state that this situation does not contribute to the development of critical thinking tendency in the education faculty, so these people will generally graduate with medium and low critical thinking skills. This does not correspond to the quality of the teacher in today's understanding of education. Therefore, when teacher candidates do not encounter a lesson or practice for abstraction skills such as academic writing, free reading activities, art education, projects, and out-of-school education environments to improve their high-level thinking skills they have from the first class, there may not be a significant difference between their class levels.

In contrast to the findings of this study, according to the meta-analysis study conducted by Colak, Turkkas Anasiz, Yorulmaz, and Duman (2019), it is stated that the effect of the class level variable on the critical thinking tendencies of teacher candidates is at a very low level. Although the effect size is at a very low level, the critical thinking tendencies of teacher candidates studying in the third and fourth classes are higher than those studying in the first and second classes. In parallel, Cetin (2008) has stated in his study that there is a significant difference in favor of the seniors in terms of critical thinking power level, and Tumkaya (2011) has stated that there is a significant difference between the critical thinking tendencies of science students according to the class

level, in the self-confidence dimension in favor of the senior students. It is stated that the critical thinking tendencies of the seniors are higher than that of the freshman (Can and Kaymakci, 2015), and similarly, in the studies conducted by Gokkus and Delican (2016), Karali (2012), and Kartal (2012), there is a significant difference in favor of the upper classes in the class level variable. Cokluk Bokeoglu and Yilmaz (2005) also state that there are significant differences in both research concerns and analytical, curiosity, and self-confidence dimensions in terms of the age variable of university students; Acisli (2016) has also found that the critical thinking tendencies of teacher candidates differ in favor of senior students in terms of open-mindedness according to their class levels. This can be explained by the fact that senior students are more experienced than those in the lower classes. It can be considered that the richness of experience and life increases self-confidence in senior students (Tumkaya, 2011).

As a result of the research, ATCT results of the teacher candidates in the Department of Mathematics and Science Education Sciences are more negative than that of the teacher candidates in the Department of Turkish and Social Sciences and Basic Education. This result coincides with the finding in the study conducted by Tumkaya (2011) that primary science teacher candidates have a low tendency to think critically. Tural and Secgin (2012) have found that the critical thinking tendencies of candidates of Social Studies and Science and Technology teachers of a similar nature differ significantly in favor of candidates of Social Studies teachers. It has been determined in the study conducted by Sengul (2007) that Physics teachers working in secondary education have a low level of critical thinking tendency and that teachers do not include critical thinking in the activities they organize in the classroom and treat them as if they have nothing to do with daily life. When the relevant literature is examined, it is stated, contrary to this finding, in the study conducted by Kuvac and Koc (2014) that the critical thinking tendency of science teacher candidates is at a medium level, and, it is stated as being above the medium level by Kartal, (2012).

In his research on mathematics teacher candidates, Cekic (2007) has concluded that most mathematics teacher candidates have a “moderate” level of critical thinking tendency while Yuksel, Sari Uzun, and Dost (2013) have concluded that it is at a “low” level. Also, Chin (2005) has claimed that the attitude of teacher candidates toward science is moderately positive. Therefore, these results regarding Mathematics teacher candidates are consistent with this research finding. Contrary to this finding, in the study conducted by Inan and Ozgen (2008), it has been determined that mathematics teacher candidates find themselves highly adequate in acquiring critical thinking skills in the Mathematics course, and their attitudes towards teaching critical thinking in other different branches (SMT: Secondary Education Mathematics Teaching, PMT I: Primary Education Mathematics Teaching I., PMT II: Primary Mathematics Teaching II.) of the Mathematics department do not change. In the findings obtained from this study and when some research findings are examined, although it is expected that the critical thinking tendency levels of Mathematics and Science teacher candidates are high, the reasons why their attitudes towards teaching critical thinking are more negative should be investigated and precautions should be taken. Contrary to this finding, Besoluk and Onder (2010) have found that science teacher candidates' critical thinking tendencies do not change according to the department they study, and in some studies, science teachers candidates' critical thinking tendencies are high and positive (Bayat, 2014; Tekin, Aslan, Yagiz, 2016).

Likewise, Yesilpinar (2011) has determined that the teachers and teacher candidates in the Department of Basic Education attach importance to methods-techniques and approaches suitable for teaching critical thinking, e.g; they use social teaching approach (discussion, educational games, drama, and role playing); direct approaches (question-answer); independent teaching approaches (case study, six thinking hats, and brainstorming). In support of this finding, it has been determined that teacher candidates studying in numerical fields have a more teacher-oriented approach and adopt less student-oriented strategies than those studying in social sciences (Tezci, Dilekli, Yildirim, Kervan, and Mehmeti, 2017).

Similar to the findings of this study in other sub-problems, it has been observed that Mathematics and Science Education teacher candidates have less critical thinking standards than Turkish and Social Sciences Education teacher candidates. In a study conducted by Turnuklu and Yesildere (2005), in parallel with this research finding, it is stated that the CT tendencies of mathematics teacher candidates are high, but their CT skill levels are moderate. Similarly, Sarpkaya Aktas and Unlu (2013) have stated that the critical thinking standards of mathematics teacher candidates are at a moderate level. In contrast to this research finding in the literature, it has been determined that teacher candidates in the Department of Basic Education (Kiziltas, 2011) have a moderate level of critical thinking standards. Studies in the literature that do not agree with this finding (Korkmaz, 2009) have stated that Science Teaching students' critical thinking tendencies are more positive than other students while Emir (2012) states the same for the students in the Department of Classroom Teaching. It is also stated that there is no significant difference between the departments regarding the critical thinking skills of teacher candidates (Gulveren, 2007).

It has been found that knowing the teaching of critical thinking has an effect on attitudes and standards of critical thinking towards teaching critical thinking. It is shown that those who have knowledge of teaching critical thinking have positive attitudes toward teaching critical thinking at a higher level and have critical thinking standards.

It supports the finding that knowing critical thinking teaching improves critical thinking standards. According to Kokdemir (2003), critical thinking education increases students' critical thinking tendencies. In the study of Cokluk Bokeoglu and Yilmaz (2005), it is stated that individuals who receive research education have low research concerns and that preparing research projects or taking part in different research activities contributes to the development of critical thinking. Yildirim and Yalcin (2008) have concluded that education based on critical thinking skills has a positive effect on the development of learning products such as critical thinking. Karakaya (2012) states that among the skills for teaching critical thinking, especially those who take chess lessons have higher critical thinking skills than other individuals. In other words, it has been found that as students' chess levels increased, their critical thinking skills also increased. It has been stated in a study conducted by Ozturk, Buyruk, and Gungor (2018) that critical thinking tendency is not related to a biological variable such as age and gender, but rather to individuals' lives and experiences and the processes of making sense of these lives and experiences. Likewise, it has been stated in a study conducted by Aybek, Yalcin, and Ozturk (2019) that subject-based critical thinking teaching improves students' critical thinking standards such as their willingness to gather information, and self-regulation, inference, and evidence-based decision making. In summary, when the relevant literature is examined, it has been determined that the critical thinking attitudes and skills of the participants in the sample increased after the practices that developed their critical thinking skills in the experimental researches on critical thinking (Ozcinar, 1996; Semerci, 2000; Akinoglu, 2001; Sahinel, 2001; Kokdemir, 2003; Akar Vural, 2005; Aybek, 2006; Aybek, 2007; Yildirim and Yalcin, 2008; Ertas, 2012; Bayram, 2015; Schreglmann, 2011; Schreglmann and Karakus, 2017).

The fact that knowing the teaching of critical thinking has an impact on the attitude toward teaching critical thinking coincides with the research finding conducted by Onal (2020). In the research conducted the Curriculum of the Critical Thinking Course, which was applied for one semester, was effective in the positive development of the teacher candidates' tendency to critical thinking and their attitudes towards teaching critical thinking. In the study conducted by Semerci (2003), it is stated that the courses of teaching professional knowledge conducted by the method of research and inquiry in the faculties of education contribute to critical thinking. In Halpern (2003, cited, Gundogdu, 2009), it is determined that students who take a critical thinking skills course are more successful than other students in many subjects such as problem solving and searching for evidence, and they can use these skills outside of school. Ertas (2012) states that in physics teaching, critical thinking teaching supported by out-of-school scientific activities can be beneficial in developing students' critical thinking tendencies and increasing their attitudes towards the lesson. It has been determined in the study carried out by Narin and Aybek (2010) that there is a positive and significant relationship between the critical thinking skills of teachers and the teaching method they use. In summary, it is understood that critical thinking standards are a cognitive process that can be gained through effective methods (Kokdemir, 2012). Therefore, it can be said that as the knowledge, manners, and experience in teaching critical thinking increase, the attitude towards teaching critical thinking and the standards of critical thinking may also improve, become more consolidated and support professional autonomy and professional development of the teacher candidate.

The attitude and critical thinking standards of teacher candidates who read four or more books per month towards teaching critical thinking are higher than those who have never read a book or read 1 book per month. The fact that approximately 33% of the teacher candidates participating in the research have never read a book or only read one book, and approximately 18% have read four or more books indicates that teacher candidates are inadequate in reading. It is also stated in the study carried out by Gokkus and Delican (2016); Sahin Alkin, Tuca, and Ulubey (2014) that the critical thinking tendencies of teacher candidates who read “one book a week” or “one book every two weeks” are higher than those who “have never read a book”. Tural and Seckin (2012) have also found that reading books among the leisure time activities of social studies and science and technology teacher candidates is extremely low. Gomleksiz (2004) has revealed that while teacher candidates accept the necessity of reading books, the effect and benefits of reading are more adopted by female students.

From the point of view of socio-cultural theory, reading is a skill that students will develop at the university, although it depends on a complex and social basis (Bosley, 2008). It is stated that there is a moderate, positive, and significant relationship between classroom teacher candidates' critical thinking tendencies and their attitudes towards reading habits (Gokkus and Delican, 2016). “Critical literacy is based on being active, interpreting and reproducing in the process of constructing meaning away from acceptance” (Tuzel, 2012, p.6). Yilmaz (2013) has also stated that there is a significant relationship between teacher candidates' especially "magazine reading

habits and critical literacy and critical writing skills and that both the magazine reading habits of the candidates and their habits of following different magazines positively affect their critical literacy skills. Kocak, Kurtlu, Ulas, and Epcacan (2015) state that there is a low level, significant and positive relationship between critical thinking tendency and attitude toward reading. Therefore, it is noted that the tendency to critical thinking and the attitude to reading positively affect each other. When the relevant literature is examined, it is stated that the reading habit is also related to the academic writing habit. Bayat (2014) emphasizes the importance of considering the critical thinking levels of teacher candidates in increasing their academic writing success levels such as essays and reports. According to the results obtained from this study, the findings regarding the reading frequency declared by the teacher candidates indicate that the teacher candidates are unfortunately inadequate in this regard. Statistics on reading books in Turkey also show that the rate of reading books, magazines, and newspapers is lower than in countries with the same level of development (skills), and the extracurricular literacy level of most of the school-age children and youth is lower (Ortas, 2014).

It is also observed that there is a positive mediate level relationship between teacher candidates' critical thinking standards and their attitudes towards teaching critical thinking. This finding is consistent with Akdere's (2012) study that there is a moderate correlation between the teacher candidates' attitudes towards and the performance efficacy dimension of self-efficacy in teaching for critical thinking. Aybek and Aslan (2017) have also stated that the high standards of critical thinking of teacher candidates will make it easier for students to acquire these standards. Semerci (2000) supports this finding by stating that when the tendency of teacher candidates to think critically is developed, the ability to think critically may also improve. It is stated in the literature that the attitude towards teaching critical thinking is also related to the leadership and reflective thinking tendencies of teachers. Askin Tekkol and Bozdemir (2018) state that there is a positive, moderate relationship between teacher candidates' critical thinking standards and reflective thinking tendencies, and they change together. It is stated that critical thinking tendencies are also a strong predictor of leadership orientations (Ozdemir, Buyruk, and Gungor, 2018). Raths (1966, cited by Pithers and Soden, 2000) states that being an independent learner, fearful, operate within narrow rule sets are the most serious obstacles in the teaching of critical thinking skills. Therefore, the more flexible, the safer, and the less assisted learner you become, the more critical thinking standards will be able to develop. Hence, critical thinking and problem-solving in the workplace, or life, are not isolated activities. Willingham (2008) draws attention to the difficulties of teaching critical thinking. Especially beyond the superficial nature of the problems, he states that it is necessary to go deeper into the problem, define the problem and make decisions following the standards of critical thinking, the dimensions of "depth, breadth and adequacy", "precision and accuracy" and "importance, relevance, and clarity".

When the critical thinking standards as a predictor of the attitude towards teaching critical thinking are examined, it is seen that the critical thinking standards explain 37% of the variance related to the attitude towards teaching critical thinking. Therefore, it can be said that the teacher candidates having critical thinking skills will have an impact on their attitudes toward teaching critical thinking in the future. When the relevant literature is examined, Demir and Ulucinar (2012) state that individuals' displaying critical thinking tendencies does not mean that they think completely critically and that tendencies, attitudes, skills, and habits are structures that represent different but related dimensions. Aybek (2007) also points out that in terms of attitude towards teaching critical thinking, it is possible to raise individuals who can express themselves, discuss their thoughts freely, and question in a classroom environment where there is no fear and authority.

Trottier (2009) emphasizes the do's and don'ts in the teaching of critical thinking. According to the author, millennials are competent critical thinkers, they can even be called critics. As Richard Dawkins discusses in Enemies of Reason, presenting propositions that critical thinking is a method, making use of multimedia, and having interactive discussions with students are the things to be done in the name of critical thinking. Not taking an exam or not giving homework are things that should not be done in order not to inhibit critical thinking. Yildirim and Yalcin (2008) state that traditional teaching methods are not effective in the development of problem-solving and critical skill levels of teacher candidates. Cikrikci (1992) also states that critical thinking is an important dimension of mental ability and that critical thinking is affected by maturation and richness of experience. CT requires a rich vocabulary and knowledge of terms (Wright, 2002). The lack of competence of teachers in the teaching of critical thinking skills is a major obstacle in the teaching of critical thinking (Yesilyurt, 2021).

Recommendations

1. Studies can be carried out to design the course content and learning and teaching processes of the Faculty of Education in such a way as to improve the critical thinking skills of teacher candidates.
2. Teaching critical thinking to the curriculum of faculties of education can be added to the content of a course or a related course and given to teacher candidates programmatically.

3. Encouraging teacher candidates to read more books can be planned at the faculties of education.
4. Mathematics and Science Education teacher candidates can be allowed to choose courses in the field of Turkish and social sciences to support the development of critical thinking skills.
5. Sample lesson plans and designs can be developed based on critical thinking skills through the cooperation of the Faculty –School.

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Comparison of Digitalization Problems of Local Newspapers in Turkey and Sakarya Local Newspapers

Gürkan KILIÇ
gkilic@sakarya.edu.tr
Orcid No: 0000-0002-9929-0639

Dr. Mustafa ÖZTUNÇ
oztunc@sakarya.edu.tr
Orcid No: 0000-0003-3125-1120

ABSTRACT
A great number of studies have been carried out on the problems of local newspapers in Turkey. The most important common point specified in the studies is economic insufficiency. Developments in internet technologies are perceived as a disadvantage for printed newspapers. As a matter of fact, printed local newspapers have difficulty in resisting the digital media that is easy to access for audience, free of charge, and it provides the opportunity to reach the news regardless of time and place. When the problems of local newspapers published in Sakarya are analysed, similar situations are encountered. Most of the local newspapers in Sakarya could not complete their digitalization and they have to deal with the problems it brings along. In the study, in which the Mixed Research Method is used, the problems of local newspapers in Turkey and the problems of local newspapers in Sakarya will be searched in terms of digitalization perspective.
Keywords: Local newspaper, Digitalization of newspaper, Problems of Sakarya local newspapers

INTRODUCTION

According to the report published by TURKSTAT (Turkish Statiscal Institue) in 2021, the number of newspapers and magazines decreased by 13.5% and fell to 4746 in 2020 compared to 2019. 54.4% of these publications were journals. The number of newspapers, which was 2 thousand 337 in 2019, decreased to 2 thousand 164 in 2020. Whereas, 91.1% of the newspapers published locally. This means that there are approximately 1 thousand 971 active local newspapers as of 2020 (TURKSTAT, 2021).

Although the interest in communication has increased during the Covid-19 process, there have been serious increases in expenditure due to problems arising from production and distribution around the world. One of the most affected sectors by this situation is the traditional media sector and newspapers in particular. For instance, the local newspaper called "Yeniden Günaydın", which publishes in print in Diyarbakir, has started to continue its publications only in digital media as of January 10, 2022, stating the increasing expenditure. Eight journalists working at the newspaper were terminated. (tr.sputniknews.com, 2022).

The effects of the increasing inflation tendency around the world between the years 2020-2022 is seen in Turkey as well. One of the most important sources of income for local newspapers to continue their activities is Official Announcements organized and distributed by the Press Announcement Agency. According to the 2020 data of TURKSTAT, official announcement and advertising expenditure decreased by 2.6 percent compared to the previous year and became 454 million 729 thousand 980 (TURKSTAT-2021).

Official advertisement publications can also be considered as a support for newspapers today, where digital media are read many times more than printed newspapers. As a matter of fact, within this framework, according to the presidential decree published in the Official Gazette dated 24 February 2022 and numbered 31760, the new official announcement price tariff was increased by 71.57 percent in February 2022, especially by preserving local publications (newspapers with a daily circulation of less than 50 thousand).

The official announcement price tariff backdated to March 1, 2022 is as follows:

Table 1: Official Announcement Price Tariff backdated March 1, 2022 in Turkey:

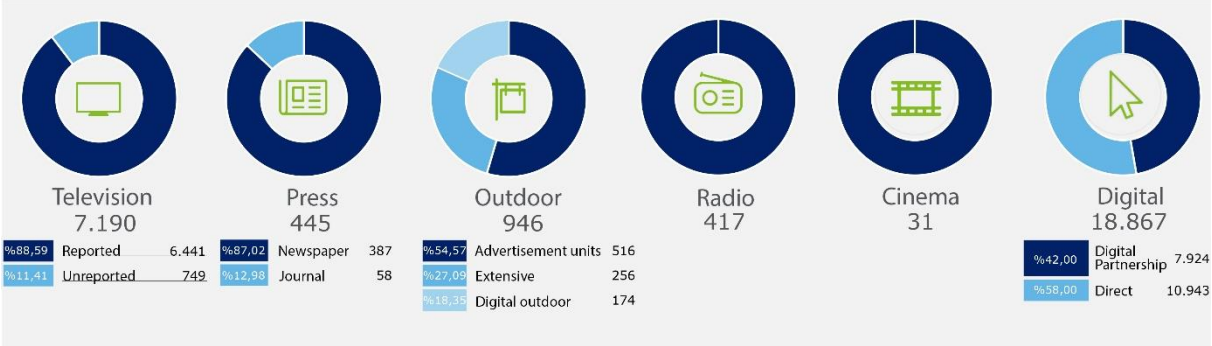
Newspaper Count	Circulation	Present Tariff Column/Cm. (₺)	New Tariff Accepted Column/Cm. (₺)	Ratio of Increase %
961	Below 50.000	20,40	35	71,57

21	Over 50.000 and more	49,35	63	27,66
982				

Source: https://bik.gov.tr/kurumsal-haberler/resmi-ilan-fiyat-tarifesi-yenilendi-2/

The problems faced by local newspapers in order to maintain their existence are of course not the decrease in advertising revenues, especially official advertisements. In the report published by the Association of Advertising Agencies on April 22, 2022, it has been reported that the share of digital media in advertising investments in the world is around 60 percent, meanwhile in Turkey, it has been observed that the channels that can broadcast digital advertisements have surpassed the television channel with the share they receive Association of Advertising Agencies, 2022). In the report, with the help of 90% Global Publishers ad revenue and 10% local publishers ad revenue estimation, the size of the 2021 digital advertising market in Turkey is calculated as 18 billion 867 million TL. This constitutes 46.7 percent of the advertising market. The share of the TV channel, which ranks second, is 42.4 percent.

Table 2: Media and advertising investments in Turkey in 2021 (million TL)



Source: https://www.rvd.org.tr/uploads/2022/04/medyayatirimlari_2021yilsonu_raporu_final.pdf

If we consider the subject in terms of technological infrastructure and digitalization index data, we see that the upward acceleration in Turkey continues (Table 3) In the Turkish Informatics Industry Association's 2021 report, the individual use section is one of the best topics in Turkey, considering the digital data, and is the individual use component. (İzmen, Kılıçaslan and Üçdoğruk Gürel, 2021, p.56)

Table 3: Usage Component Data in Turkey Digitalization Index

	2019	2020	2021
C. USAGE COMPONENT	2,88	3,16	3,36
6. Size: Individual use	3,20	3,24	3,31
6.01 Phone subscription (per 100 people)	2,14	2,01	1,82
6.02 Individual internet use (%)	3,55	3,79	3,91
6.03 Computer Ownership in households (%)	3,34	3,33	3,20
6.04 Internet access in households (%)	4,24	4,30	4,51
6.05 Fixed broadband internet subscription (per 100 people)	2,27	2,40	2,45
6.06 Mobile broadband internet subscription (per 100 people)	2,12	2,14	2,21
6.07 Individuals' use of social networks (Facebook, Twitter, Linkedin etc.)	4,63	4,45	4,64
6.08 Individuals' use of ICT in areas such as education, health and financial services	3,33	3,49	3,76

Source: https://www.tubisad.org.tr/tr/images/pdf/tubisad-2021-dde-raporu.pdf

Objective of Research

The research has two objectives. The first objective of the research is to identify the problems of local newspapers published in different cities in Turkey and local newspapers published in Sakarya regarding their transition to the digital journalism age and to reveal how much they are affected by this process.

The second objective of the research is to compare the problems of local newspapers published in different provinces in Turkey with the ones of local newspapers in Sakarya and to analyse their similarities and differences together with their causes and effects. It is aimed to reach a more effective result and suggestion by analysing the problems of local newspapers across the country and Sakarya local newspapers.

Importance of Research

Advances in internet technologies have also started to be used in communication technologies, and in this process, the digitalization of journalism has also been possible. Digital technologies that allow the transformation and circulation of all kinds of information have also caused a radical change in journalism practices (Değirmencioğlu, 2016, p.591).

Newspapers that can adapt to these changes can continue to make a name for themselves in the digital medium. Some newspapers are experiencing problems in the transition period, and the professional concerns and professional advantages of journalists may contribute diversely to the transformation. In this adaptation process, serious problems are observed in many newspapers (Ünal, 2020).

In addition to the economic problems, the number of local newspapers that cannot carry out digitalization processes is decreasing every year. With the awareness of the importance of maintaining the existence of local newspapers in order to sustain democracy and local agendas, the closure of local newspapers may cause problems not only for the employees of the sector but also for our society.

In general, our research is important in terms of addressing the problems of local newspapers against digitalization as a whole and in particular, making suggestions for local newspapers in Sakarya to find problems and solutions to digitalization.

Method of Investigation

In the study, Mixed Research Methods, a research method, will be used. Karma In research methods, both quantitative and qualitative data are collected together to understand the research problems. By integrating the data collected in two different ways, the researcher uses their advantages (Creswell, 2021). This method is also substantial in terms of increasing the reliability of the research by considering it with different methods instead of just one. (Butgel Tunalı, S., Gözü, Ö.and Özen, G.,2016, p.107). It is also stated that mixed management allows the researcher to establish a bridge and link between qualitative and quantitative research (Onwuegbuzie and Leech, 2004 cited in Baki and Gökçek, 2012, p. 2).

In the study, the research on the problems of local media in Turkey were examined, in addition, the similarities or differences between them were tried to be reached by conducting research in Sakarya.

In parallel with this purpose, the following research questions were determined:

- What are the main problems of local newspapers in Turkey?
- What is the attitude of local newspapers in Turkey towards digitalization?
- How have local newspapers that have completed or failed to complete their digital transformations been affected?
- What are the predominant problems of local newspapers in Sakarya?
- What is the digitalization transformation status of local newspapers in Sakarya?
- How have local newspapers in Sakarya been affected by the digitalization factor?
- Do the problems of the local media in Turkey differ from or show similarities between the local media in Sakarya about being against of digitalization?

In order to find answers to the determined questions, the problems of local newspapers in Turkey, which are predominantly produced on the basis of provinces, have been discussed from the perspective of digitalization. Local newspapers in Sakarya have been examined according to digitalization data.

On the other hand, in Sakarya, local newspaper executives who completed the digitalization process and were observed to be unable to complete it were interviewed. Depth Interview Technique, which is one of the Qualitative Research Methods, was used in the interview. In the depth interview technique; it is tried to reach the knowledge, experience, feelings and observations of the interviewee by collecting data with face-to-face interviews, in which all dimensions of the subject are covered, open-ended questions are generally asked, detailed answers are aimed for better analysis (Tekin and Tekin, 2006). This method is effective in achieving results that the researcher could not foresee at the beginning. Plus, many researchers using qualitative research methods use depth interview technique (Yıldırım & Şimşek, 2016). In the depth interview technique, non-standardized interviews were conducted as the data collection method. In the non-standardized interview, while some questions are asked in a planned and necessary manner, the flow of the conversation may take shape according to the answers given by each interviewee. In this technique, in which there is no need to prepare a special question, the researcher directs the speaker to the conversation about various aspects of the subject as much as possible, and also focuses on the points mentioned here and contributing to the research (Lune and Berg, 2019).

Moreover, Literature Search Method was used in the study. Literature search in studies; it includes stages such as researching, finding, reading, classifying summarizing and analysing previously published works on the subject. The first purpose of the literature review is to identify the previous studies and to see where the study will be placed in the literature by revealing the points reached by the literature, gaps and untouched issues. (Demirci, 2014, p.73). The necessity of literature search is not only for academic studies either. It is an innovative research technique that can be applied in all fields.

It has been determined that the literature search contributes to the following subjects (Cited from Gall, Borg and Gall, Köroğlu, S.A. 2015):

- Defining the boundaries of the research problem,
- Capturing new research subjects,
- Elimination of previously tested but unsuccessful methods,
- Determining what future studies might be,
- Forming an idea about the methods that can be used (p.61)

The universe of the research is local newspapers in Isparta, Kocaeli, Tekirdağ, Çorum, Bolu, Aksaray, Bitlis, Elazığ, Erzurum, Gümüşhane, Antalya, Konya, Kayseri, Nevşehir, Sivas, Eskişehir, Denizli and Sakarya in Turkey.

The limit of the research is the newspapers published in Turkey and making local publications.

Literature Search

Various studies have been carried out in Turkey that examine the problems of local media on the subject of digitalization. One of these studies is the research titled ''STRUCTURAL FEATURES AND PROBLEMS OF ISPARTA LOCAL PRESS'' by Kılıç and Aygün (2020). In the study, the degree to which local journalists use technology has also been revealed. In another study, the websites of 3 local newspapers published in Kocaeli were analysed.

In another study examining the Tekirdağ example, researcher Köseoğlu (2017) analysed the digital versions of local newspapers in Tekirdağ. In his research titled ''LOCAL INTERNET JOURNALISM: ÇORUM AS A CASE STUDY'' Çınar (2019), examined the websites of the newspapers in Çorum and tried to find out to what extent they were doing digital journalism. In his research titled ''Issues that Local Press Encountered in the Digital Communications Age'' Arvas (2019), who did research about the newspapers published in Bolu province, questioned the effects of digital transformation on local newspapers in Bolu.

In the ''Determinations on Problems of Local Press: A Qualitative Research at The Sample of Aksaray'' by Çavuş (2017), it was searched to what extent local newspapers benefited from technological developments. A study on the adaptation of the local media to the changing technology was also carried out by analysing the local newspapers in Bitlis. Coşkun's (2021) study titled "Innovation Practices of Bitlis Local Newspapers" questions the relationship between digitalization and reader losses.

Gülcan and Bekiroğlu (2013), on the other hand, analysed whether there is a connection between the number of local presses in the internet environment in the regions where the Gross National Product (GNP) is high in their study titled ''AN OVERVIEW OF THE TURKISH LOCAL PRESS IN RESPECT OF WEB JOURNALISM AND AN EVALUATION BETWEEN REGIONS''.

Kurtbaş, Doğan and Göker (2011) researched the problems of local newspapers in Elazığ and evaluated the capacity of local newspapers to use technology in their research titled ''LOCAL MEDIA PROBLEMATICS AND VIEWPOINT OF THE PROBLEMS FROM SECTOR EMPLOYEES 'SAMPLE OF ELAZIĞ CITY". In Köseoğlu's (2018) research titled ''A Study on the Advantages and Disadvantages of the Implementation of Local Journalism in Digital Newspapers in the Case of Local Newspapers of Erzurum'', the connections of the problems encountered with digitalization of local newspapers in Erzurum with factors such as legal supervision and qualified personnel were discussed.

In Özcan (2019)'s research titled "GUMUSHANE LOCAL PRESS: HISTORICAL BACKGROUND, PROBLEMS AND SOLUTIONS", whether the local newspapers in Gümüşhane are aware of the importance of online publishing and the existence of internal and external factors at the point of whether or not to switch to digital journalism have been examined. Tunca and Çağlar (2022), who analysed their research with 6 of the newspapers published in print in Antalya, examined the process that the printed newspapers have gone through or are trying to

go through in the digitalization process in their research titled ‘’DIGITAL TRANSFORMATION IN LOCAL NEWSPAPERS: A STUDY ON ANTALYA LOCAL NEWSPAPERS’’

In the research titled "LOCAL ACTORS OF THE VIRTUAL WORLD: AN ANALYSIS OF THE LOCAL PRESS IN KONYA", which was conducted among local newspapers in Konya, the reporting techniques in the digital versions of the newspapers were analysed (Bekiroğlu and Bal, 2013). In the comparative analysis of "SOCIO-DEMOGRAPHIC SITUATION OF LOCAL MEDIA EMPLOYEES AND OUTLOOK OF LOCAL MEDIA PROBLEMS: A STUDY IN KAYSERİ AND NEVŞEHİR" made with local newspapers of Kayseri and Nevşehir, employees' opinions on technology use and technological competencies were investigated (Temel, Korkmaz, Somuncu and Şilen, 2013).

In the research titled “A QUALITATIVE STUDY ON THE FUTURE OF LOCAL PRESS: THE EXAMPLE OF HAKİKAT AND BÜYÜK SİVAS NEWSPAPERS” (Barış, 2021), which was conducted on local newspapers in Sivas, the expectations of local printed newspapers about their future and their perspectives on digital journalism were analysed. In the study titled "Views of Local News on the Internet - An Evaluation in the Sample of Denizli, Eskişehir and Erzurum", which examines local newspapers in Eskişehir, Erzurum and Denizli, it is analysed whether these provinces have internet news websites even though they have many local newspapers. (Gulcan and Bayram, 2013).

Results

Common problems of local newspapers in Turkey

When the local newspapers in Turkey are analysed, it is concluded that there are mainly economic problems. It brought cheap and unqualified labour force along with economic problems, and later on, this caused some ethical and quality problems in the journalism profession, which is described as a 'white-collar worker'.

One of the most important problems of newspapers is that printing expenses have increased significantly in recent years. Therefore, it has been observed that some local newspapers have stopped their newspaper publications and switched to digital publication only, while others have had to dismiss their personnel. In parallel with the deficiencies experienced by local newspapers in employing qualified personnel, the rate of employing graduates of the "Faculty of Communication" is also low.

It has led to an increase in the similarity rates of the news in different newspapers, since the newspapers that are looking for ways to reduce costs, have to employ personnel such as reporters and editors, mainly from people in News Agencies where ready news services are provided and have much cheaper costs. It causes readers' eyebrows to raise and is reflected in the online versions of newspapers.

Another common problem seen in local newspapers is the ones related to the political economy. It has been observed that local newspapers, which could not earn enough income with official advertisement revenues and commercial advertisements, received economic support from local governments, politicians or some NGOs, and as a result, they had difficulties in their editorial independence and were also criticized by the readers.

Attitudes of local newspapers in Turkey towards digitalization

Printed newspapers in Turkey have serious difficulties in transitioning to online publications. Technological inadequacy, hesitations and reservations of newspaper management on this issue, and the perception of technological investment is unnecessary are just some of the important obstacles to their transition to digital.

The insecurity about the preparation for the indispensable requirements of internet journalism, such as the demand for effort, the need for advanced technological skills, the speed and confirmation in journalism, also affects the attitudes of newspapers towards digitalization.

Some local newspapers, on the other hand, resist transition to the online version, fearing that their circulation will decrease. Local newspapers that do online journalism update the news on their websites after they are published in their newspapers.

Status of local newspapers that have completed or failed to complete their digital transition

Some of the local newspapers published in different provinces of Turkey have completed their digital transition and switched to online publishing. Local newspapers, which do online journalism with everything it requires, seem to be advantageous in this process. When it is analysed within the framework of the tendency of the readers to reduce their problems about confirmation and trust in internet journalism by preferring corporate newspaper websites, the fact that local newspapers are institutional can be an effective reference for readers.

When the mainstream media in Turkey is analysed, it is not a coincidence that newspapers such as Hürriyet, Milliyet and Sabah are among the most read news websites, and this supports the previous view. This is expected to be the ultimate aim in local newspapers, whereas it is generally seen that these transitions are incomplete and not worked efficiently due to technological or personnel inadequacies. The fact that most of the local newspapers are not able to receive advertisements and promotions on their internet versions also prevent them from continuing to pay attention to this issue in a stubborn way.

The situation is even much worse for local newspapers that have not stepped up or not completed digitization. The developments in the Covid-19 Pandemic process, especially in 2020 and 2021, had a very serious impact on the circulation of local newspapers and caused the circulation to decrease. Local newspapers, which have lost their readers and incomes in the face of digitalization, have downsized, had to take measures such as dismissing staff, reducing the number of prints, etc.

Overview of Local Newspapers in Sakarya

There are 7 local newspapers published daily in Sakarya. All of these local newspapers receive Official Advertisements. There is no local newspaper published without an Official Announcement. All newspapers are published 6 days a week, except for Sundays.

According to the Press Advertisement Institution (BİK in Turkish) data, the newspapers published in Sakarya and their particulars are stated in Table 4.

Table 4, Sakarya Local Newspapers Where Official Announcements and Advertisements Can Be Placed in May 2022

Place	Title of the Periodical	Publication Type	Publication Period	Page Count	Acreage (m^2)
1	Adapazarı Akşam Haberleri	Local	Daily	12	2,25
2	Adapostası	Local	Daily	12	2,25
3	Bizim Sakarya	Local	Daily	12	2,35
4	Sakarya Yenigün	Local	Daily	12	2,35
5	Sakarya Yenihaber	Local	Daily	12	2,25
6	Söz Sakarya	Local	Daily	8	1,56
7	Yeni Sakarya	Local	Daily	12	2,25

Source: https://ilanbis.bik.gov.tr/Uygulamalar/AylikListe

Even though it is said that Sakarya local newspapers are effective in setting the agenda, it is seen that their circulation is far behind the rates of cities such as Kocaeli and Bursa. All local newspapers in Sakarya broadcast political content. Regarding the journalism profession, there are 2 important professional organizations in terms of the number of members.

Major issues of local newspapers in Sakarya

In the research conducted by Yazıcı (2014), it was revealed that although the situation of the press in Sakarya is relatively good compared to other cities, it has problems such as financing and qualified personnel. On the other hand, it has also been revealed that most newspapers still prefer to continue their publications in print, since they count their official advertisement revenues as their main source of income.

In the final report of a research conducted throughout Turkey, it has been observed that the circulation of newspapers has decreased by 50 percent in the last 6 years, and that the steady decline has continued since 2013, and that there has been a decline to the lowest circulation level of the last 20 years (Association of Journalists, 2022). Problems such as the decrease in circulation of the newspapers in Sakarya, the increase in costs, the inability to employ qualified personnel, the similarity of newspaper news arising from the widespread use of agency news and the situation of newspapers in political economy approaches stand out.

Transition of local newspapers in Sakarya against digitalization

According to the data analysis utilised to see the digitalization levels of local newspapers in Sakarya and its effectiveness, it is beneficial to read two different tables. The first of these is the ranking of the internet news sites that receive the most hits in Sakarya. When Table 5 is analysed, Sakarya's most read news site is Medyabar.com, which was born digital. Medyabar.com is also among the 500 most read websites in Turkey. Medyabar is followed by t54.com.tr and haberfokus.com, respectively, which are digital-born news sites. Although they have a printed newspaper publication in Sakarya, it is still the Yenihaber Newspaper that can reach the most digital readers.

Sakaryayenihaber.com ranks 2 thousand 39 among Internet sites in Turkey. The fifth news site that receives the most visitors in Sakarya, is haberlis.com, which is a born-digital.

Table 5: Ranking of the most visited internet news sites in Sakarya among the websites in Turkey

	Name of Digital News Site	Ranking Among Websites in Turkey
1	Medyabar.com	447
2	T54.com.tr	1.526
3	Haberfokus.com	1.630
4	Sakaryayenihaber.com	2039
5	Haberlisin.com	2.622

Source: Alexsa.com, 28 Mart 2022

In Table 6, comparisons of local newspapers published in Sakarya among themselves are made through the ranking of websites all across Turkey. As it is obvious in Table 6, it is understood that 3 out of 7 newspapers took steps towards digitalization, and 4 did not care much about the issue. Sakarya Yenihaber, Bizim Sakarya and Söz Sakarya newspapers have higher ranking than other newspapers. When we look at the country ranking of Sakarya Yenigün Newspaper, which has been at the top in terms of circulation in Sakarya for many years, it is seen that it ranks 5th in Sakarya among the online versions of local newspapers.

Table 6: Rankings of newspapers in Sakarya and internet news sites in Turkey

Place	**Periodical Title**	**Alexa Country Ranking**
1	ADAPAZARI AKŞAM HABERLERİ (aksamhaberleri.com.tr)	20,189
2	ADAPOSTASI (adapostasi.com)	43,078
3	BİZİM SAKARYA (bizimsakarya.com.tr)	3,949
4	SAKARYA YENİGÜN (sakaryayenigun.com.tr)	18,697
5	SAKARYA YENİHABER (sakaryayenihaber.com)	2.039
6	SÖZ SAKARYA (sozsakarya.com)	3,872
7	YENİ SAKARYA (yenisakarya.com)	12,134

Source: Alexsa.com

While Sakarya witnessed successful performances by digital-born local newspapers, there are various reasons behind the failure of the online versions of printed newspapers to achieve the same success.

In the Depth Interview technique with the managers of local newspapers in Sakarya, who could not achieve the success they wanted in digital journalism, the reason for this problem was tried to be determined with the help of semi-structured questions. In the research, it is understood that the local newspapers, which could not achieve similar success in the digital environment despite being in the top ranks in terms of circulation in Sakarya, do not attach importance to this issue, do not make the necessary technological investments, and finally do not work with expert personnel on this subject.

As one of the reasons why newspaper owners stay away from the necessary technological investment for digital journalism, there is an expectation that there will be a law that can be interpreted as "If the local newspaper has a website, it can only continue to receive official announcements in one media". can be concluded. Newspapers that have not yet transitioned into digital transformation see this investment as an unnecessary and irreversible investment for the reason we have just mentioned.

One of the most important difficulties experienced by local newspapers in Sakarya in the face of digitalization has emerged in the depth interview method, such as the unauthorized use of news by underground organizations and corporate digital publishing sites and sharing them from their social media accounts. The fact that there is competition among the journalists of Sakarya with personal journalists who are called 'Cubukçu Gazeteciler' based on the policy of broadcasting on social media using a monopod or selfie stick with their mobile phones, also negatively affects some newspaper owners who are willing to invest in this issue.

Interactions of local newspapers in Sakarya against digitalization

It has been observed that all 7 local newspapers published in Sakarya could not complete their digital transitions effectively. The loss of circulation and the inability to achieve sufficient hit rates in the digital environment caused serious decreases in advertising revenues. On the other hand, the fact that the digital-born Medyabar, which started

its broadcasting life in 2004, has the majority of its readers and advertising share, creates a competitive disadvantage for local newspapers that continue their activities in digital.

Although there are very experienced newspapers in local newspapers, the number of journalists who can adapt to digital and use headlines and images suitable for the characteristics of online journalism is not very high. There is a serious shortage of staff in this regard.

The possibilities of local newspapers in Sakarya to set the agenda of the city with methods such as editorial events, making news, research files, etc., continue to decline in the rate of decrease, as the interest in digital newspapers in Sakarya increases day by day. News centers of born-digital newspapers mainly set the agenda of the city and there are discussions about their columnists.

In the case of breaking news, local newspapers have delays in announcing the news from their internet sites, but digital-born newspapers can make the news instantly, this issue has caused the news mass in Sakarya to switch from local newspapers to digital newspapers.

Common or Differentiating Problems of Local Newspapers in Turkey and The Ones in Sakarya

It is not possible to distinguish the problems of local newspapers in Sakarya from the problems experienced by local newspapers in Turkey in general. But there are some differences in some points.

Local newspapers in Sakarya, like most local newspapers in Turkey, could not complete their digital transformation with all their requirements. The circulation losses are decreasing. They are getting worse and worse economically. Requests for external support, subsidies, and assistance are increasing. From time to time, questions arise from the reader on issues such as editorial independence. The news served by a municipality or NGO may similarly be in the headlines, the style of the news may be similar, and they may have local advertisements that can even be taken on the logo, but such issues have caused a negative perception in terms of political economy.

Among the most important differences of Sakarya local newspapers are the high awareness of digitalization, the investments in this regard, the institutional presence of local newspapers which continues to be important for the city's agenda from a political point of view, the fact that experienced and well-known journalists do not lose their readers, also the fact that it is close to other big cities, and the fact that the Political Party, NGOs and athletes from Sakarya have a say in the administrations throughout the country and create the opportunity to turn them into news sources allow local newspapers to continue their existence and produce original news despite their problems.

CONCLUSION AND RECOMMENDATIONS

When the problems of local newspapers in Turkey are analysed, it is concluded that there are mainly economic reasons. It is seen that the printed newspapers, which receive most of their income from Official Advertisements, lose more and more readers against news sites that are easier for news followers and can be accessed free of charge, and therefore, they lose more commercial advertisements day by day.

Newspapers have 3 ways ahead. The first is that they should continue to publish printed newspapers in their current form. Although it is a difficult process, it is possible to get out of this struggle sustainable in the short term with the support of political and local governments and/or NGOs. However, this time, problems arise on issues such as "Editorial Independence" and "Reputation Issues of Local Journalists", which researchers frequently focus on. This makes local newspapers far from being reliable in the eyes of readers due to their political economic preferences.

The second way newspapers can do is to end their printed newspaper publications and continue their publications in the digital media. As in the examples of Radikal newspaper and Habertürk newspaper in the mainstream media, the preference to broadcast only in digital media is actually a reflection of a worldwide trend in Turkey. The world-famous newspaper of the UK, "The Independent", made its last edition on March 27, 2016 and switched to its online version. The paid online version of the world-famous newspaper of the USA, "New York Times", has exceeded 1 million subscribers in 2015 (Yazıcı, 2006).

Another option for newspapers that traditionally continue their publications in print is to continue their publications in both print and digital media. An example of this is that the digital versions of the newspapers that are widely published in Turkey are among the most read news sites.

Table 4: Comparison of the circulation of the newspapers in Turkey and the hits of the websites.

PLACE	NEWS SITE	HIT	CIRCULATION
1	hurriyet.com.tr	198,6 million visitors	195 thousand 687 sales

2	sozcu.com.tr	181,5 million visitors	182 thousand 597 sales
3	milliyet.com.tr	135,2 million visitors	124 thousand 932 sales
4	sabah.com.tr	110,4 million visitors	191 thousand 927 sales
5	haberturk.com	79,4 million visitors	-

Source: Alexsa.com, http://app.speedmedya.com

Although the most read news site in Turkey is a digital-born site, digital versions of printed newspapers come from the second rank. The list created according to the hits of the sites and the circulation of the newspapers, excluding Ensonhaber.com, is shown in Table According to the data in Table 4, the ratio between the total circulation of the newspapers in a month and the hit or click rates they receive can be around a thousand times. For example, Hürriyet newspaper sells 195 thousand copies in a month, while the number of clicks on hurriyet.com.tr is around 198 million. The most realistic solution for local newspapers may be the hybrid method in this way. Continuing with print newspaper publishing on the one hand and investing in digital versions on the other hand should be considered as the most serious option.

Necessary trainings are provided by the state regarding the digitization of local newspapers. Regarding the subject, "digitalization and social media management" training was given by the Press Advertisement Institution in almost all provinces (bik.gov.tr). Educational efforts are of course important, but in addition, economic incentives are also necessary for local newspapers to take their place effectively in the digital environment. The training and financial support provided by KOSGEB (small and medium industry development organization) for SMEs who want to complete their digitalization processes and who want to switch to e-commerce can be done on the digitalization of local newspapers.

There are great similarities between the problems of local newspapers in Turkey and their attitudes towards digitalization and the subject headings of local newspapers in Sakarya. Although the local newspapers of Sakarya were strong, they started to lose their power gradually with the decrease of the readers. If they complete their digital transformation and continue with their digital publishing requirements and methods, they have the potential to reach a much better level in the ranking of the sites with the most hits in Sakarya and Turkey.

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Metaphorical Perceptions of Music Teacher Candidates about Piano Lessons in the Online Education Process of the Pandemic Period

Şefika TOPALAK
Trabzon University, Faculty of Education, Department of Fine Arts Education, Trabzon, Turkey
sefikat@trabzon.edu.tr
ORCID: https://orcid.org/0000-0002-8626-5194

ABSTRACT
This research was conducted to reveal the metaphorical perceptions of music teacher candidates about piano lessons during the pandemic period's online education process. The study group of the research consists of forty-one students who are studying in Trabzon University Fatih Education Faculty Fine Arts Education Department, Music Teaching Department, and who attended online piano lessons held during the pandemic process. The data of the study, which was carried out with the Phenomenology design, which is one of the qualitative research methods, were compiledd through a form prepared and applied by the researcher. Content analysis was applied to the obtained data. Metaphors are conceptually divided into two main themes; positive and negative metaphors, and five sub-themes that make up these themes. When the data were examined, it was noted that the participants produced the most negative metaphors for online piano lessons, and the frequency of positive metaphors was very low. Based on the data, it is recommended to reorganize and update the education programs to ensure that the students and academicians who benefit from online education applications are prepared.

INTRODUCTION
The word metaphor, which is explained as a combination of the Greek words meta (beyond) + pgora (transport) in terms of origin (Kılcan, 2021), is the expression of a thing by replacing it with another phenomenon that has nothing to do with it. The concept, which has its Turkish equivalent as "mecaz", is defined in the dictionary as "a word used in a sense other than its literal meaning as a result of a relevance or analogy" (Türkçe Sözlük, 2011, p. 441). It has also been expressed by Lakoff and Johnson (2010) as a concept field used in the transfer of cognitive actions. In other words, it is to describe an experienced or felt phenomenon, event, or situation with another phenomenon or situation that has nothing to do with it. With this aspect, metaphors can help us understand the concepts underlying perceptions and attitudes towards a field. Because "metaphors structure our perceptions, thoughts and actions" (Saban, Koçbeker & Saban, 200, p. 123).

In our country, music teaching departments of education faculties have undertaken the task of training music teachers. The piano, which is one of the compulsory courses for the students studying in these departments/programs, is one of the instruments that does not have intonation problems and is the most preferred instrument to be used and taught in the teaching profession (Coşkuner & Varış, 2018). In this context, piano education is an important tool in terms of transforming the basic music theory and theoretical knowledge that music teacher candidates need to learn during their education process into practice, and being an instrument that they will use during their teaching profession (Kıvrak 2003).

Since the beginning of 2020, the effect of the Covid-19 pandemic has spread rapidly all over the world. To prevent students from being harmed by the effects of the Covid-19 disease in our country as well as all over the world, face-to-face education activities at all levels have been suspended as of March 11, 2020, and courses have been started to be given through distance education platforms.

Distance education can be defined as a system that allows teaching through online and offline, synchronous or asynchronous applications in a planned learning-teaching environment (Hark Söylemez, 2020) with audio or video (İşman, 2011), in an internet environment where teachers and students can take place at the same time and place (Özdoğan & Berkant, 2020), making use of current communication technologies (Özyürek et al., 2016).

Distance education, which tries to eliminate the limitations between learner, teacher and learning resources, uses existing technologies in a pragmatist way to achieve this. It is an interdisciplinary field that uses an approach. Distance education, in a planned learning-teaching environment (Hark Söylemez, 2020), teacher and
where students can take place at the same time and place (Özdoğan & Berkant, 2020), current communication online and offline in an internet environment by making use of technology A system that allows lectures to be taught through synchronous or asynchronous applications (Özyürek et al., 2016) can be defined as.

At Trabzon University, where the study was conducted, piano lessons, like all lessons, were carried out through distance education platforms during the Covid-19 pandemic, and educational activities continued without interruption. In this process, it is thought that through this study, which is planned to learn the perceptions of students about online piano lessons, the effect of piano lessons carried out in the online education process on students and their perceptions can be revealed and shed light on students' perspectives.

There are metaphor studies in the literature to reveal the perceptions about piano education. Among these studies, Okan and Mohan Kömürcü (2020) examined the metaphorical perceptions of conservatory students towards the accompaniment lesson. In the results of their research with one hundred and four conservatory students, they determined that conservatory students were divided into seven categories regarding the accompaniment course, as an element of harmony and togetherness, a source of anxiety, a source of excitement and happiness, a complementary element, a supportive element, and a guiding and instructive element.

Yazıcı (2018) examined the attitudes of fine arts high school students towards piano lessons in his study titled "Metaphorical analysis of fine arts high school music department students' attitudes towards piano lessons" and conducted his research with ninety-one fine arts high school students. According to the results of the research, it has been determined that the fine arts high school students have a positive attitude toward the piano lesson.

Dinç Altun (2014) conducted a study with ninety-four teacher candidates examining the metaphor perceptions of teacher candidates studying in the music teaching program concerning the concept of the piano lesson. In the results of the study, it has been determined that there are twelve categories in total as metaphors containing fear and anxiety, forced sanction situations, vital importance, compulsory need, time and place, illness and treatment, human, action, problem to be solved, an obstacle to be overcome, plant and belief metaphors, and that teacher candidates have generally negative attitudes towards piano education.

Although these studies in the literature are about piano lessons, no study has been found in which the metaphorical approaches of music teacher candidates regarding online piano lessons during the Covid-19 pandemic period were examined. It is thought that this aspect of the study can contribute to the related literature.

Purpose of the research:
This research was conducted to reveal the metaphorical perceptions of music teacher candidates about piano lessons during the pandemic period online education process. For this purpose, the sub-questions of the research were determined as follows: Regarding metaphorical perceptions of music teacher candidates regarding online piano lessons during the pandemic period;

- What is the distribution of the metaphors they produce?
- In which categories does it concentrate?
- What is the distribution in terms of female participants?
- What is the distribution in terms of male participants?
- What is the distribution in terms of students attending the 2nd grade?
- What is the distribution in terms of students attending the 3rd grade?
- What is the distribution in terms of students attending the 4th grade?
- What is the distribution in the context of students who attend online courses for 1 semester?
- What is the distribution in the context of students who attend online courses for 2 semesters?
- What is the distribution in the context of students who attend online courses for 3 semesters?

METHOD

Research Model

The research was carried out with the Phenomenology pattern, which is one of the qualitative research methods. Yıldırım and Şimşek (2013) state that the phenomenology method provides a suitable research ground in the research and interpretation of the cases that we are not unfamiliar with but whose meaning we cannot fully grasp.

Study Group

The study group of this research, which was conducted to reveal the metaphorical perceptions of music teacher candidates regarding piano lessons during the online education process during the pandemic period, consisted of students studying in Trabzon University Fatih Education Faculty Fine Arts Education Department, Music Teaching Department in the 2020 spring semester and 2020-2021 academic years and students who attended online piano lessons during the pandemic.

Criterion sampling, which is one of the purposive sampling methods, was preferred in the selection of the study group. Criterion sampling is “the study of all situations that meet a predetermined set of criteria” (Yıldırım &

Şimşek, 2013, p. 140). The criterion in this study was that the participants participated in online piano lessons and volunteered to participate in the study. All students who met this criterion were tried to be reached.

Table 1. *Distribution of the Study Group by Gender*

Gender		N
Female	S1, S2, S3, S4, S5, S8, S9, S10, S13, S14, SS15, S16, S17, S18, S20, S21, S22, S23, S24, S26, S28, S30, S31, S32, S33, S34, S35, S37, S38, S39, S40, S41	32
Male	S6, S7, S11, S12, S19, S25, S27, S29, S36	9
Total		41

Table 1 shows the gender distribution of the participants in the study group. According to the table data, thirty-two of the participants are females and nine are males.

Table 2. *Distribution of the Study Group by Class Variable*

Class	Participants	Total
2nd Class	S4, S5, S6, S7, S8, S9, S10, S11, S12, S13,	10
3rd Class	S3, S14, S15, S16, S17, S18, S19, S20, S21, S22, S23, S24, S25, S26, S27, S28, S29, S30, S31, S32, S33, S34, S35, S36, S37, S38, S39, S40,	28
4th Class	S1, S2, S41	3

According to Table 2 data, ten of the participants in the study group are second-grade students, twenty-eight are third-grade students, and three are fourth-grade students. There are only four piano students in the fourth grade in the department where the study was conducted. At the time of the study, one of the students could not be reached. Although the number of fourth-grade students is low in the data, almost all of the students who took piano lessons in the online process were reached. The total number of students in the third year of Trabzon University, Fatih Faculty of Education, Department of Fine Arts Education, Music Teaching Department, where the study was conducted, is fifty, and the total number of students in the second year is fifteen. The students who volunteered to participate in the study constituted the participants of the research.

Table 3. *Distribution of the Study Group in terms of the Number of Semesters in Which They Attended Online Piano Lessons*

Number of Semesters	Participants	Total
1 Semester	S11, S22, S23, S24, S26, S29, S31, S34, S36, S37, S38, S40	12
2 Semesters	S4, S5, S6, S7, S8, S9, S10, S12, S13, S19, S25, S27, S28, S30, S32, S35, S39	17
3 Semesters	S1, S2, S3, S14, S15, S16, S17, S18, S20, S21, S33, S41	12

Table 3 data shows the semester durations that the participants who make up the study group participated in online piano lessons. Compulsory piano lessons in the department where the study is conducted are carried out in two semesters starting from the 2018-2019 academic year, and students who choose the piano instrument individually continue in the following semesters. Students who stated that they attended an online piano lesson for one semester, among the participants who made up the study group, are the students who continue their lessons online due to the pandemic in the second semester of the compulsory piano lessons they completed with face-to-face education in the first semester. Students who passed the course successfully did not continue online piano education. The students who stated that they attended online piano lessons for two semesters are the first-grade students who registered to the department in the 2020-2021 academic year, the students whose branch of instrument is the piano, and the students who retake the lesson. Participants who stated that they attended online piano lessons for three semesters are students from all three classes whose branch of instrument is the piano, and students who retake the lesson. According to the table, there are twelve students attended online piano lessons for one semester, seventeen students attended two semesters and twelve students attended three semesters in the study group.

Data Collection Tools and Procedure

The study data were obtained through a form prepared and applied by the researcher to the students who attended their piano lessons online during the pandemic process. In the first part of the form, which consists of two parts, there were questions to determine the gender, class, and the number of semesters that students attended online piano lessons. In the second part, the phrase "Online piano lessons were like…… Because….." took place and the participants were asked to fill in the blanks with their own expressions. While collecting the data, the students

were explained about the metaphor and it was explained with examples of how they could express their feelings through metaphors. Then, the students were asked to write a metaphor that could express their feelings about online piano lessons in the blank in the first sentence of the form, and to write the reason why they chose this metaphor in the blank in the second sentence.

Data Analysis

Analysis of the data was carried out through content analysis. In content analysis, firstly the data is conceptualized, then the themes are reached with a logical arrangement and the facts become clear and understandable through these themes (Yıldırım & Şimşek, 2013). For this purpose, firstly, after the forms containing the data were collected, each form was given a number (such as S1 for Student 1), and all statements were transferred to the electronic environment. The data obtained from the participants were processed in five stages, including the stages of naming the analyses, screening and cleaning, compilation and category development, ensuring validity and reliability, and analysis (Saban, 2008).

When the data collected from the participants were counted, it was seen that a total of forty-two students participated in the study, but it was determined that one of the written expressions could not be considered as a metaphor and was excluded from the data. The remaining forty-one statements were grouped into categories with which they were conceptually similar. While creating the tables, a table was made for each category separately and the metaphors that make up that category and the participants expressing the metaphors are shown in the tables. Metaphor expressions were also included in the explanation parts of the tables, and the findings were supported by raw data.

To calculate the reliability of the research, all the metaphors related to the study and the categories they belong to were presented in the opinion of three faculty members who are experts in the field. After the coding was made by the experts, the coefficient of agreement between the encoders was calculated. The Krippendorff Alpha coefficient was used to calculate the consensus of expert opinions. "Krippendorff Alpha reliability coefficient takes a value of $0 \leq \alpha \geq 1$. A value of $\alpha=1$ indicates that there is a perfect fit between the encoders, and a closeness to $\alpha=0$ indicates that the fit is weak" (Krippendorff & Bock, 2008, cited by Okan & Mohan Kömürcü, 2020, p. 1422). In line with the expert opinions, the reliability calculations of the study were made and the Krippendorff Alpha coefficient was calculated as $\alpha=.94$. In this context, it can be said that the agreement between encoders is at an excellent level.

FINDINGS

In this section, the metaphors expressed by the study group participating in the research "for online piano lessons during the pandemic period" and the tables related to these metaphors are included.

Table 4. *Findings Regarding the Metaphors Stated by Students for the Pandemic Period's Online Piano Lesson*

Metaphor	Participant Expressing	Metaphor	Participant Expressing
Nightmare	S3, S22, S31, S30, S34	Life	S19
Watching a movie	S8, S26	Roly-poly-toy	S20
Amusement park	S13, S33	Soil	S21
Make a cake	S5	Sea	S23
Dead-end	S6	Wind	S24
Hazelnut garden	S7	Outer space	S25
To get lost	S2	Marathon	S27
Labyrinth	S9	Equation with unknowns	S28
Watching children playing outside	S10	Deep pit	S29
An insufficient lamp	S11	New beginning	S4
Computer game	S12	Foggy weather	S32
Seasons	S1	Night	S35
Flying balloons	S14	Soulless person	S36
Loves me loves me not	S15	Running but unable to move forward	S37
Flying leaves	S16	Fish out of water	S38
A long walk	S17	A peaceful sea	S39
Paralyzed person	S18	Making Someone Who Cannot Hear Listen to the Most Beautiful Song in the World	S40

Total	23	Missing puzzle piece	S41
		Total	18

When Table 4 data was analyzed, it was determined that the participants produced a total of thirty-six metaphors for piano lessons during the online education period. It is seen that among these metaphors, the metaphor of nightmare in the expressions of five people is followed by the metaphors of watching a movie, and an amusement park in the expressions of two participants, while other students expressed their feelings with different metaphors. When metaphors are examined conceptually, they are divided into two main themes; positive metaphors and negative metaphors, and five sub-themes that make up these themes. Four of these sub-themes were determined as negative metaphors theme (online piano lesson as a source of anxiety, online piano lesson as an element of uncertainty and confusion, online piano lesson as a repeated and boring element, online piano lesson as a factor that makes you feel bad) and one of them was determined as positive metaphor theme (online piano lesson as a source of happiness and excitement). These sub-themes are;

1. Online piano lessons as a source of anxiety
2. Online piano lessons as an element of uncertainty and confusion
3. Online piano lessons as a repeated and boring element
4. Online piano lessons as a factor that makes you feel bad
5. Online piano lessons as a source of happiness and excitement.

Table 5. *Categories of Metaphors Used by Participants for Pandemic Period Online Piano Lessons*

Theme	Sub-theme	Metaphor (participants expressing)	f	(%)
Negative metaphors	Online piano lessons as a source of anxiety	Nightmare (S22, S30, S34 S31, S3), Getting Lost in a City (S2), Dead End (S6), Hazelnut garden (S7), Watching children playing outside (S10), Labyrinth (S9), Sea (S23), Outer space (S25), Deep pit (S29), Running but unable to move (S37), Equation with multiple variables (S28)	15	36
	Online piano lessons as an element of uncertainty and confusion	Like the Seasons (S1), Loves me loves me not (S15), An Insufficient Lamp (S11), Flying Leaves (S16), Life (S19), Roly-poly-toy (S20), Soil (S21), Wind (S24), Foggy Weather (S32), Fish Out of Water (S38), Making Someone Who Cannot Hear Listen to the Most Beautiful Song in the World (S40), Puzzle (S41)	12	29
	Online piano lessons as a repeated and boring element	Watching a Movie Again (S8, S26), Night (S35), Soulless Person (S36)	4	10
	Online piano lessons as a factor that makes you feel bad	Flying Balloons (S14), Paralyzed Person (S18)	2	5
	Negative metaphors total		33	80
Positive metaphors	Online piano lessons as a source of happiness and excitement	Amusement Park (S13, S33), Make a cake (S5), Computer Game (S12), New beginning (S4), A long walk (S17), Marathon (S27), A peaceful sea (S39)	8	20
	Positive metaphors Total			
	The overall total		41	100

When Table 5 data is examined, it has been determined that thirty-six of the students who make up the study group produced a total of forty-one metaphors for online piano lessons. When Table 5 is examined, it was observed that the participants produced the most negative metaphors for online piano lessons (N=33, 80%), and it was noted that the frequency of positive metaphors was very low (N= 8, 20%). It is seen that the sub-theme of "online piano lesson as a source of anxiety", which was determined the most in terms of frequency of use in the theme of negative metaphors, consisted of fifteen interpretations, twelve of which were different from each other. Statements containing these metaphors in the raw data obtained;

Online piano lessons; it was like a nightmare. Because it was scary (S22); it was like a nightmare. Because it was stressful, I wanted it to end immediately (S31); it was like a nightmare. Because I was afraid of not being able to do it (S3); it was like a nightmare. Because I wanted it to end immediately (S34); it was like a nightmare. Because I could not participate in distance education (S30); it was like getting lost in a city. Because I didn't know how to

adapt (S2); it was like a dead end. Because I could not move forward (S6); it was like a hazelnut garden. Because I liken it to thorns and stinging nettles that prick our hands while picking hazelnuts (S7); it was like watching children playing outside. Because I wanted to play but I couldn't (S10); it was like a labyrinth. Because I got lost (S9); it was like a sea. Because I drowned in its depths (S23); it was like outer space. Because I got lost (S25); it was like a deep pit. Because I fell and got lost (S29); it was like running and running and not being able to move forward. Because I was getting very nervous (S37); it was like an equation with many unknowns. Because I didn't know anyone who could help (S28).

When the views of the participants, which were determined from the expressions of the twelve participants and constituted the sub-theme of the "online piano lesson as an element of uncertainty and confusion", were examined; online piano lessons were like the seasons. Because I was happy when I could play and sad when I couldn't (S1); it was like loves me loves me not. Because I was never sure if I loved (S15); it was like an insufficient lamp. Because there was no application (S11); it was like a leaf flying in autumn. Because it was both sad and exciting (S16); it was like my life. Because it was between existence and non-existence (S19); it was like a roly-poly toy. Because it was not falling down, but it was not standing either (S20); it was like soil. Because it both gave flowers and reminded death (S21); it was like the wind. Because it's blown and gone (S24); it was like foggy weather. Because nothing was clear (S32); it was like a fish out of water. Because there was anxiety and haste for those who did not have a piano at home (S38); it was like making someone who cannot hear listen to the most beautiful song in the world. Because we could not communicate (S40); it was like a missing puzzle piece. Because I couldn't see my mistake and couldn't quite learn (S41).

As can be seen in Table 5 data four different students produced three different metaphors regarding the online piano sub-theme as a repetitive, boring element on the sub-theme of the online piano as a repetitive, boring element evoked by the statements of the four participants, which is another sub-theme. According to these statements, online piano lessons; it was like watching a movie I watched over and over again. Because it was boring (S8); it was like watching a movie. Because I just watched and listened (S26); it was like night. Because as I listened to the lesson, I fell asleep (S35); it was like a soulless person. Because only I can feel the works I play (S36).

Two participants produced a metaphor for online piano lessons as "they are something that makes you feel bad". According to these metaphors, online piano lessons; it was like flying balloons. Because it went out of the window. It made felt bad (S14); it was like a paralyzed person. Because there were transfer problems (S18).

Contrary to these negative metaphors, eight of the metaphors produced by the participants describe online piano lessons as a source of happiness and excitement. Seven different metaphors stand out in this category. Online piano lessons according to raw data; it was like an amusement park. Because I was both nervous, excited, and enjoying (S13); it was like an amusement park. Because it was sometimes scary and sometimes fun (S33); it was like making a cake. Because it was enjoyable (S5); it was like computer games. Because when I failed, I was starting again (S12); it was like starting something new. Because it was exciting (S4); it was like a long walk. Because it was both tiring and full of new discoveries (S17); it was like a marathon. Because I wasn't sure if I would finish it or not. (S27); it was like a peaceful sea. Because it was relaxing (S39).

Table 6. *Distribution of metaphorical perceptions of female music teacher candidates regarding online piano lessons during the pandemic period*

Theme	Sub-themes	Participants expressing	f	%
Negative Metaphors	Online piano lessons as a source of anxiety	S2, S3, S9, S10, S22, S23, S28, S30, S31, S34, S37	11	35
	Online piano lesson as an element of uncertainty and confusion	S1, S15, S16, S20, S21, S24, S32, S38, S40, S41	10	31
	Online piano lessons as a repetitive, boring element	S8, S26, S35	3	9
	Online piano lessons as making you feel bad	S14, S18	2	6
	Negative metaphors total		26	81
Positive metaphors	Online piano lessons as a source of happiness and excitement	S4, S5, S13, S17, S33, S39	6	19
	Positive metaphors total			
	The overall total		32	100

In Table 6, all metaphor categories were examined in terms of the female gender variable. Considering this variable, it is seen that the most frequently created metaphors for online piano lessons are the negative metaphors in the context of the female gender variable. The most frequent expressions were in the sub-themes of the online piano lesson as a source of anxiety (f=11, 35%) and online piano lesson as an element of uncertainty and confusion (f=10, 31%). It was determined that there were six (19%) participants who defined the online piano lesson as a source of happiness and excitement with a positive metaphor theme.

Table 7. *Distribution of male music teacher candidates' metaphorical perceptions regarding online piano lessons during the pandemic period*

Theme	Sub-themes	Participants expressing	f	(%)
Negative Metaphors	Online piano lessons as a source of anxiety	S6, S7, S25, S29	4	45
	Online piano lessons as an element of uncertainty and confusion	S11, S19	2	22
	Online piano lessons as a repetitive, boring element	S36	1	11
	Online piano lessons as making you feel bad	-	-	-
	Negative metaphors total		7	78
Positive metaphors	Online piano lessons as a source of happiness and excitement	S12, S27	2	22
	Positive metaphors total			
	The overall total		9	100

In Table 7, all metaphor categories were examined in terms of the male gender variable. Considering this variable, it was determined that negative metaphors were produced in all sub-themes, just like in the woman variable. Similarly, as in the female variable, it was determined that the most frequently expressed negative metaphors were “online piano lesson as a source of anxiety (N=4 45%)” and “online piano lesson as an element of uncertainty and confusion (N=2 22%)”. The positive expressions used are composed of the opinions of two participants (22%).

Table 8. *The distribution of the metaphorical perceptions of the participants in the 2nd grade towards online piano lessons during the pandemic period*

Theme	Sub-themes	Participants expressing	f	(%)
Negative Metaphors	Online piano lessons as a source of anxiety	S6, S7, S9, S10	4	40
	Online piano lessons as an element of uncertainty and confusion	S11	1	10
	Online piano lessons as a repetitive, boring element	S8	1	10
	Online piano lessons as making you feel bad	-		
	Negative metaphors total		6	60
Positive metaphors	Online piano lessons as a source of happiness and excitement	S4, S5, S12, S13	4	40
	Positive metaphors total			
	The overall total		10	100

In Table 8 data, the metaphors produced by the second-grade student participants for online piano lessons were examined. Accordingly, it was determined that almost half of the students attending the second grade produced negative metaphors (f=6, 60%), however, almost half of the participants at this grade level expressed positive metaphors (f=4, 40%).

Table 9. *Distribution of metaphorical perceptions of third-grade participants regarding online piano lessons during the pandemic period*

Theme	Sub-themes	Participants expressing	f	(%)
Negative Metaphors	Online piano lesson as a source of anxiety	S22, S31, S3, S34, S30, S23, S25, S29, S28, S37	10	36
	Online piano lessons as an element of uncertainty and confusion	S15, S16, S19, S20, S21 S24, S32, S38, S40	9	32

	Online piano lessons as a repetitive, boring element	S26, S35, S36	3	11
	Online piano lessons as making you feel bad	S14, S28	2	7
	Negative metaphors total		24	86
Positive metaphors	Online piano lessons as a source of happiness and excitement	S17, S27, S33, S39	4	14
	Positive metaphors total			
	The overall total		28	100

According to Table 9 data, third-grade student participants mostly produced negative metaphors for online piano lessons (f=24, 86%). At this grade level, metaphors that evoke the sub-themes of "online piano lesson as a source of anxiety" and "online piano lesson as an element of uncertainty and confusion" were determined most frequently. The sub-theme of the online piano lesson as a positive metaphor, "a source of happiness and excitement", was formed by the expressions of four participants (14%).

Table 10. *The distribution of the metaphorical perceptions of the participants in the 4th grade towards online piano lessons during the pandemic period*

Theme	Sub-themes	Participants expressing	f	(%)
Negative Metaphors	Online piano lessons as a source of anxiety	S2	1	33
	Online piano lessons as an element of uncertainty and confusion	S1, S41	2	67
	Online piano lessons as a repetitive, boring element	-		
	Online piano lessons as making you feel bad	-		
	Negative metaphors total		3	100
Positive metaphors	Online piano lessons as a source of happiness and excitement	-	-	-
	Positive metaphors total	-		
	The overall total		3	100

As can be seen from the Table 10 data, all of the fourth graders produced negative metaphors for online piano lessons (f=3, 100%). When the sub-themes were examined, it was determined that "online piano lesson as an element of uncertainty and confusion (f=2, 67%)" was the most frequent sub-theme of the theme of the negative metaphor.

Table 11. *Distribution of metaphorical perceptions of participants who attend Online Piano Lessons for 1 semester towards online piano lessons during the pandemic period*

Theme	Sub-themes	Participants expressing	f	(%)
Negative Metaphors	Online piano lessons as a source of anxiety	S22, S23, S29, S31, S34, S37	6	50
	Online piano lessons as an element of uncertainty and confusion	S11, S24, S38, S40	4	33
	Online piano lessons as a repetitive, boring element	S26, S36	2	17
	Online piano lessons as making you feel bad	-		
	Negative metaphors total		12	100
Positive metaphors	Online piano lessons as a source of happiness and excitement	-	-	
	Positive metaphors total			
	The overall total		12	100

When Table 11 is examined, all of the participants who attended online piano lessons for one semester produced negative metaphors for online piano lessons (f=12, 100%). When the sub-themes are examined, as in all the other tables, while "online piano lesson as a source of anxiety (f=6, 50%)" was the most frequent, it was followed by "online piano lesson as an element of uncertainty and confusion (f=4, 33%).

Table 12. *Distribution of metaphorical perceptions of participants who attend Online Piano Lessons for 2 semesters towards online piano lessons during the pandemic period*

Theme	Sub-themes	Participants expressing	f	(%)
Negative Metaphors	Online piano lessons as a source of anxiety	S6, S7, S9, S10, S25, S28, S30	7	41
	Online piano lessons as an element of uncertainty and confusion	S19, S32	2	12
	Online piano lessons as a repetitive, boring element	S8, S35	2	12
	Online piano lessons as making you feel bad	-		
	Negative metaphors total		11	65
Positive metaphors	Online piano lessons as a source of happiness and excitement	S4, S5, S12, S13, S27, S39	6	35
	Positive metaphors total			
	The overall total		17	100

According to Table 12 data, it was seen that the participants who attended online piano lessons for two semesters mostly produced negative metaphors (f=11, 65%). When examined in terms of sub-themes, the most frequent sub-theme of "online piano lesson as a source of anxiety (f=7, 41%)" was determined among the views forming the theme. The sub-theme of the online piano lesson as a positive metaphor, “a source of happiness and excitement”, was formed by the expressions of six participants (35%).

Table 13. *Distribution of metaphorical perceptions of participants who attend Online Piano Lessons for 3 semesters towards online piano lessons during the pandemic period*

Theme	Sub-themes	Participants expressing	f	(%)
Negative Metaphors	Online piano lessons as a source of anxiety	S2, S3	2	17
	Online piano lessons as an element of uncertainty and confusion	S1, S15, S16, S20, S21, S41	6	49
	Online piano lessons as a repetitive, boring element	-		-
	Online piano lessons as making you feel bad	S14, S18	2	17
	Negative metaphors total		10	83
Positive metaphors	Online piano lessons as a source of happiness and excitement	S17, S33	2	17
	Positive metaphors total			
	The overall total		12	100

According to Table 13, it was observed that also the participants who attended online piano lessons for three semesters mostly produced negative metaphors (f=10, 83%). According to Table 13, it was observed that the participants who attended online piano lessons for three semesters mostly produced negative metaphors (f=10, 83%). When the sub-themes were examined, the most frequent sub-theme of "online piano lesson as an element of uncertainty and confusion (f=6, 49%)" was determined among the views that formed the theme of negative metaphors. It was determined that the sub-theme of "online piano lesson as a source of happiness and excitement", which is a positive metaphor, was formed by the expressions of two participants (17%).

CONCLUSION

The research was conducted to reveal the metaphorical perceptions of music teacher candidates about piano lessons during the pandemic period online education process. Metaphors enable us to understand the implicit ideas about a subject, situation, or event through similes, allowing for a comfortable understanding of values, beliefs, and attitudes about life. In this context, as in many disciplines and fields, it emerges as a way of data collection that makes subjects that are difficult to explain in the field of education easier to explain and interpretable (Çakmak, 2021; Gözel & Gündoğdu, 2021).

With the Covid-19 outbreak, studies investigating online education environments have become an increasingly popular study topic. As in all fields of education, there are many studies investigating the effect of online education applications in instrument education, which is an important sub-dimension of music education (Küçükkılınç, 2022; Ayaz Töral & Albuz, 2021; Sarıkaya, 2021; Sakarya& Zahal, 2020; Umuzdaş & Baş, 2020). These studies examine

the online education environments in music education and instrument education in terms of various variables and reveal the disadvantages as well as the advantages of online education. In the results of the related researches, it is stated that online education applications are advantageous in terms of providing technological experience, uninterrupted continuation of educational activities, and providing freedom of time and space. On the other hand, internet, connection problems, problems in the supply of technological tools, economic and even cultural approaches, loss of motivation, loss of performance were found to be disadvantageous for students. The finding that face-to-face education is generally preferred, especially in the context of instrument training practices, is another common result in the studies.

When these metaphors were analyzed and conceptually coded, it was seen that all expressions were grouped under two themes as positive and negative metaphors and in five sub-themes (online piano lesson as a source of anxiety, online piano lesson as a source of uncertainty and confusion, online piano lesson as a source of happiness and excitement, online piano lesson as a repetitive and boring element and online piano lesson as a feeling bad element) constituting these themes.

When the expressions forming the study data were examined, it was determined that the participants produced the most negative metaphors for online piano lessons (N=33, 80%). These metaphors consist of "nightmare, getting lost in a city, dead-end, hazelnut garden, watching children playing outside, labyrinth, sea, outer space, deep pit, running but unable to move forward, equation with many unknowns, like seasons, loves me or loves me not, an insufficient lamp, flying leaves, life, life, soil, wind, foggy weather, a fish out of the water, making someone listen to who can't hear the most beautiful song in the world, puzzle, watching a movie again, night, soulless person, flying balloons and paralyzed person". Demirbilek (2021) found a similar finding in his research titled "Metaphoric Perceptions of University Students on Distance Education". In the research, it is stated that the study group mostly produced negative metaphors for distance education.

The expressions in the data that evoke positive metaphors are an amusement park, making a cake, a computer game, starting something new, a long walk, a marathon, peaceful sea. It was noted that the frequency of creating positive metaphors in all data was quite low (N= 8, 20%). Başaran, Doğan, Karaoğlu, and Şahin (2020) found in their research that teachers could not interact sufficiently with students in online lessons during the distance education process. As it is known, piano lesson is a practical lesson. With this aspect, teacher-student interaction is of great importance in the success of the course. In the studies conducted (Cokyaman & Ünal, 2021; Umuzdaş & Baş, 2021; Sakarya & Zahal, 2020) it is stated that online education is not effective in the context of applied lessons, and it is stated that the main reason for this is that it creates limitations in interaction, which is an indispensable element for a practical course. In addition, the need for technology in online education, the inability of everyone to access the appropriate equipment to meet the needs of distance education, the technical problems that individuals who are defined as digital immigrants and who are unfamiliar with the use of technology may experience, and the technical disruptions in terms of technology and infrastructure are other important factors. As it is known, online education applications can be carried out regardless of time and place, wherever there is internet access. With this aspect, according to Demirbilek (2021, p.10), "distance education infrastructure needs to be further strengthened and developed". Another of the difficulties brought by online education is the possible lack of motivation and motivation disorders in students, and the difficulties that can be experienced in measurement and evaluation. Similarly, Demirbilek (2021) states in his study that measurement and evaluation in online education environments are not fair and emphasizes the necessity of transparency in evaluation processes.

The sub-theme of "online piano lesson as a source of anxiety", which was determined the most in terms of frequency of use in the theme of negative metaphors, consisted of fifteen comments, twelve of which were different from each other. Twelve comments formed the sub-theme of "online piano lesson as an element of uncertainty and confusion". Four comments formed the sub-theme of "online piano lesson as a repetitive boring element". Two comments formed the "online piano lesson sub-theme as a making feel bad factor". The comments of eight participants also formed the sub-theme of online piano lessons as a source of happiness and excitement, pointing to the theme of positive metaphors. When the concepts created were examined, it was observed that the study group generally produced metaphors that evoked negativity regarding online piano lessons. This situation made us think that students were generally unhappy and afraid of online piano lessons that had to be conducted during the pandemic process. Aydınlı Gürler & Kılıç (2021) examined distance education as a metaphorical perception in undergraduate students in the music department and textile and fashion design department, and as a result of their studies, they determined that music department students mostly produced negative metaphors about distance education. Kaleli Yılmaz & Güven (2015), in their study titled "Determination Of Teacher Candidates Perceptions Of Distance Education Through Metaphors", determined that teacher candidates could not feel like real students in distance education applications, especially due to technical problems. However, in some studies examining attitudes towards piano lessons in the literature, it is stated that music teacher candidates have positive attitudes

towards piano lessons (Topalak, 2019; Yazıcı, 2019; Ünal, 2017; Sönmezöz, 2014). These mentioned studies are studies conducted in face-to-face education environments. This suggests that the online education process negatively affects students' attitudes toward piano lessons.

When the data are examined in terms of gender variables, it is seen that the metaphors produced by female participants and male participants are generally negative metaphors. Accordingly, twenty-six female participants (81%) and seven male participants (78%) produced negative metaphors. According to the results of the study, it can be said that the participants have almost equal views on online piano lessons in terms of gender. In the literature, there are studies examining the piano attitudes of teacher candidates (Kademli Güçlü, 2022; Tunç ve Baydağ 2021; Topalak, 2019; Ünal, 2017; Çevik ve Güven, 2011). When these studies are examined in terms of gender variables, it can be seen that female candidates have more positive attitudes towards piano than males. However, considering that these studies are also carried out in face-to-face education environments, it is noteworthy that online education environments negatively affect women. Atabek & Burak (2019) stated that experience has an effect on the use of technological tools, and stated that men generally use technological devices (computers, phones, tablets, etc.) more often than women, and therefore men may have higher self-efficacy in the context of technology. It can be said that this situation may have affected this result of the research.

According to the results of the research, the metaphors produced by the second-grade students in terms of the class variable are also negative metaphors as in the other variables. The expressions of six of the participants (60%) consisted of negative metaphors. Similar to the results of the study, Ünal (2017) determined in his study that the scores of the second-grade students in terms of the class variable consisted of the lowest scores. However, Sarp (2017) evaluated the attitudes of music teacher candidates who have just started undergraduate education towards the piano lesson and the problems they encounter. As a result of the study, it was concluded that the students included in the study did not agree with the following attitudes; the piano lesson is not liked, enjoyment not being taught of the course, the lesson is not interesting, the lesson is not a lesson that supports musical development, the lesson makes the person nervous. It can be said that this result, which does not coincide with our study data, may be because the lessons of our participants were conducted online.

It was determined that twenty-four of the third-grade students (86%), who constituted the study group of the research, made statements containing negative metaphors. Kademli Güçlü (2022) states that negative attitudes increase in piano education in upper classes. Contrary to this finding, which is in line with our study finding, Çevik and Güven (2011) determined in the analysis of the data of Çevik and Güven (2011) that the scores of the third grade students got the highest scores in the attitudes of the music teacher candidates towards the piano, taking into account the mean rank in terms of the class variable. This result is inconsistent with the data of our study. It can be said that this result may also be due to online education.

Because all the fourth-grade students produced negative metaphors in the study data, the degree of difficulty of the pieces played in piano lessons increases as the grade rises, and the participating students are individual piano branch students, it can be said that they are more afraid in the distance education process compared to other classes and have more difficulty in the lessons. We can see a study supporting this interpretation in Gün and Köse (2013). In their study where the researchers examined the attitudes of music students towards the piano, it was determined that the senior students of the music education department in the study group did not enjoy the piano lessons, that the piano was an obstacle, and that they felt bored after the lessons.

When all the expressions in the research were examined in terms of sub-themes, it was seen that all classes focused on the sub-themes of "online piano lesson as a source of anxiety and online piano lesson as an element of uncertainty and confusion". When the research data for the variable is interpreted, it can be said that the expressions of the participants in the study group in terms of the class variable do not differ and there are negative evaluations of online piano lessons at all grade levels. Similarly, Topalak (2019); Ünal (2017); Çevik & Güven (2011) did not find a statistically significant difference between classes in terms of class variables according to the total attitude scores they received as a result of the attitude scale they applied in their studies. The fact that these studies, which had similar results to our study, were conducted in face-to-face education environments showed that conducting the lessons face-to-face or online did not make a difference at the class level.

When the data were analyzed according to the semester duration of online piano lessons, it was determined that all of the participants (100%) who attended online piano lessons for one semester produced negative metaphors. In terms of sub-themes, the most frequent sub-theme was "online piano lesson as a source of anxiety" and "online piano lesson as an element of uncertainty and confusion". The majority of students (65%) who attended online courses for two semesters also expressed negative statements. However, in the variable of the semester in which online piano lessons are attended, positive metaphors were most frequently encountered for this semester level

(35%). In all three semester variables, it was determined that the majority of the participants (83%) produced negative metaphors. From the data, it has been determined that the students who produce metaphors "as a source of happiness and excitement" about online piano lessons are the students who attend online lessons for two or three terms, and none of the students who attend online piano lessons for one term have produced positive metaphors.

Considering the results of the research, to ensure that students and academicians are prepared for online education applications, it is suggested to organize and update education programs, and include more courses and course contents that will increase digital and technological literacy, that universities should encourage the use of applications such as flipped learning, which provides technical support, especially in applied courses such as instrument training, since they initially consist of semi-online semi-face-to-face education activities.

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Responsive Classroom Curriculum and its Impact on Student Behavior

Emily Cline, Lauren Lingle, Molly Ippolito, Kelly Ksiazek, Adel Al-Bataineh
Illinois State University, United States
atalba@ilstu.edu

ABSTRACT
The objective of this research was to observe any correlation between the implementation of social-emotional learning in the classroom and the social behaviors exhibited by students. Social-emotional programs, such as Responsive Classroom, have been observed to demonstrate positive effects on students' academic, behavioral, and social-emotional outcomes, as well as on the classroom climate. The relationships between social-emotional learning and student behaviors inside of the classroom was examined. This study shows positive impact related to utilizing the Responsive Classroom elements such as Closing Circle and Morning Meeting on students, teachers, and the classroom environment. This reflective and responsive time of the school day is a sacred time for students and teachers to connect, learn, and grow together.

INTRODUCTION
In schools today, teachers are required to meet the academic as well as the social-emotional needs of students. There is extensive research on this topic and how it is affecting overall school climate. Schools play a significant role in meeting students' social-emotional needs, as well as in their educational outcomes (Jayman, 2017). Our roles, as teachers, have changed. The classroom is focused on instructing students in standards-based educational content, in addition to group etiquette and social interaction skills. This is preparing them to enter the world outside of the classroom setting. While focusing on academics is certainly of importance, addressing social-emotional needs will empower students to be more successful in the job market and in their everyday lives.

Gregory and Fergus (2017) found that implementing social emotional lessons into the daily schedule created a healthier school environment and saw a decrease in disciplinary issues. Poulou (2017) found that the teacher-student relationship in the classroom is essential in academic success. When teachers engage in daily social-emotional lessons, they are encouraging positive social interactions between peers and adults. When respectful behavior is set as an expectation in the classroom, instead of only being integrated periodically throughout the year, students can focus on academics rather than social interactions. If students are required and encouraged to participate in daily social-emotional lessons, they form healthier relationships with both their teachers and peers. When the classroom climate is free of conflict, the students present less emotional and behavioral difficulties (Responsive Classroom, 2017).

Patterns in research on social-emotional learning (SEL) suggest that federal, state, and local policies should encourage all schools to focus on both students' academic and social-emotional development (Payton, et. al, 2008). Responsive Classroom is an effort that our school districts are doing to encourage consistent social emotional curriculum within the classroom setting.

> Responsive Classroom is an evidence-based education approach associated with greater teacher effectiveness, higher student achievement, and improved school climate. The approach was developed by a group of public elementary and middle school educators, who had a vision of bringing together social and academic learning throughout the school day. (Responsive Classroom, 2017, p.3)

Responsive Classroom practices four domains: Engaging Academics, Positive Community, Developmentally Responsive Teaching, and Effective Management. In addition, Responsive Classroom embraces a core belief as well as guiding principles. When guiding principles and the core belief are integrated together it is believed that the classroom and school will be more successful. Responsive Classrooms' Core Belief indicates that to be successful in and out of school, students need to be instructed in a set of social and emotional competencies, which include cooperation, assertiveness, responsibility, empathy, self-control, academic mindset, perseverance, learning strategies, and academic behaviors. Responsive Classroom's six Guiding Principles are as follows:

1. Teaching social and emotional skills is as important as teaching academic content.
2. How we teach is as important as what we teach.

3. Great cognitive growth occurs through social interaction.
4. How we work together as adults to create a safe, joyful, and inclusive school environment is as important as out individual contribution or competence.
5. What we know and believe about our students- individually, culturally, developmentally- informs our expectations, reactions, and attitudes about those students.
6. Partnering with families-knowing them and valuing their contributions- is as important as knowing the children we teach.

This is one approach to addressing the social deficit in today's classrooms. Teachers participate in professional development to learn how to implement Responsive Classroom within their own classrooms and are encouraged to have other teachers observe and offer suggestions (Responsive Classroom, 2017).

Social emotional lessons encourage students to become more aware of their emotions, give students strategies to manage conflict, and instruct them in how to collaborate with peers. While research has suggested the significant need for social emotional learning in the classroom, teachers have been encouraged to spend more time on core subject areas rather than focusing on SEL. If real changes are to be made, then it is essential that research is conducted to demonstrate the advantages of social-emotional lessons. This study hopes to discover how SEL lessons affect overall student behavior in the classroom and school. While also determining how SEL influences student relationships within the building.

According to Durlak, Weissberg, Dymnicki, Taylor, & Schellinger (2011), educators that embrace and promote social-emotional learning teach students that exhibit more positive attitudes, better overall behavior, and higher academic performance. SEL also develops school connectedness and overall engagement, both of which are important concepts for building relationships within a school (Usakli, & Ekici, 2018).

Despite the convincing body of research, schools lack a curriculum devoted to social-emotional education, and as a result, many students are at a disadvantage. When schools lack these programs, antisocial behavior often happens in the classroom. This can include poor academic performance, discipline issues, disaffection, lack of commitment, alienation, and an increased frequency of student dropouts. All these factors have the potential to limit success in school or even lead to a school's failure (Zins, Bloodworth, Weissberg, & Walberg, 2007).

Often, teachers feel like they have too many academic standards and simply do not have time to fit in another curriculum. However, Anderson (2015) explains, that educators should view a social curriculum as an integral part of their daily teaching instead of something else they need to fit in. Teaching students how to share, develop empathy for partners, excel in challenging situations, accomplish goals, and control impulsive behavior are just as important as academic skills (Anderson, 2015). Other educators claim that they do not know how to teach social-emotional skills. Anderson, 2015 states that social skills can be taught with the same structure that academic skills are taught. They should be modeled by the teacher, modeled by peers, coached in small groups or individually, practiced, and then potentially retaught before students acquire an understanding of the skill.

The primary focus of this study was to examine the influence of the Responsive Classroom Curriculum on student behavior at the upper elementary level. The upper elementary level is defined as third through fifth grade with student ages ranging from eight to eleven. "As classrooms become more diverse as a result of inclusion, the need to ensure that children develop pro-social and emotional skills and can create positive peer relationships in these settings becomes essential" (Sokal & Katz, 2017, p. 7). There has been a big push recently for schools to focus on the soft skills in combination with the core academic skills. The belief is that increased SEL awareness will increase positive classroom behaviors. "Current knowledge suggests that programs and approaches to enhance social and emotional growth hold promise for improving classroom social processes, peer interactions, and academic learning" (Rim-Kauffman & Chiu, 2007, p. 397). We want to focus specifically on implementing the Responsive Classroom Curriculum in schools that have students from diverse backgrounds including students that may have been affected by traumatic experiences as well as a population of "at risk" students. Slevin, Karweit & Madden (1989) define at risk students.

> One possible definition is that students who are at risk are those who, on the basis of several risk factors, are unlikely to graduate from high school. Among these risk factors would be low achievement, retention in grade, behavior problems, poor attendance, low socioeconomic status, and attendance at schools with large numbers of poor students. (p. 5)

As mentioned, an emphasis on SEL has heavily influenced the world of education in recent years. This study examined the true advantages that a social-emotional curriculum can have on the classroom and larger school environment. SEL programs, such as Responsive Classroom, have been observed to demonstrate positive effects on students' academic, behavioral, and social-emotional outcomes, as well as on overall classroom climate (Responsive Classroom, 2015). For this reason, the primary stakeholders throughout this study are both students and teachers. As teachers' model and demonstrate these skills, students develop and fine tune their social-emotional competencies. Consequently, educators can cover more academic content while students are able to flourish in their given educational setting. This study will reveal the significant, educational assets that a social-emotional program like Responsive Classroom has on both students and teachers alike.

Throughout our research, we hoped to answer the following questions regarding SEL and the use of Responsive Classroom:

1. In what ways does Responsive Classroom affect student success in the classroom?
2. Which aspect of Responsive Classroom is viewed as most important by teachers?
3. Responsive Classroom stresses the importance of building relationships. Do stronger relationships between teachers and students as well as between peers help students gain higher self-efficacy?
4. How will students' behaviors be impacted by the Responsive Classroom Curriculum?

RELATED LITERATURE

Social-emotional lessons encourage students to become more aware of their emotions, give students strategies to manage conflict, and instruct them in how to collaborate with peers. While research has suggested the significant need for social-emotional learning in the classroom, teachers have been encouraged to spend more time on core subject areas instead of focusing on social-emotional learning (SEL). "Current knowledge suggests that programs and approaches to enhance social and emotional growth hold promise for improving classroom social processes, peer interactions, and academic learning" (Rim-Kauffman & Chiu, 2007, p. 397).

If changes are to be made, then it is essential that research is conducted to demonstrate the advantages of the use of social-emotional lessons by teachers in the classroom. This study hoped to discover how SEL lessons affect overall student behavior in the classroom and within the school and how SEL influences student relationships within the building.

SOCIAL-EMOTIONAL LEARNING

Education means more than proficiency in content. The true purpose and function of schools should extend far beyond a place where students come to learn core subjects such as math, reading, and writing. Successful schools balance teaching basic skills while scaffolding a social environment to effectively build 21st century communication skills. Similar to academic disciplines, social-emotional learning (SEL) is best explained as a process by which skills are acquired, developed, and applied. Furthermore, SEL includes emotion management, effective problem solving, and positive relationship maintenance--competencies that clearly are essential for all students. Overall, SEL provides students with the ability to understand and regulate their emotions while equipping them with the necessary skills to understand the emotions of others. There are five overarching skills that are related to SEL: Self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Schonert-Reichl, 2017). Usakli and Ekici (2018) state that social-emotional learning is essential regarding the success of students, teachers, and school environments.

Research has shown many benefits of SEL, such as improved student ability to recognize and manage emotions, deepened understanding of emotional perspectives of others, interpersonal situational management, as well as increased responsibility in decision-making. SEL also develops school connectedness and overall engagement, both of which are significant components when it comes to building relationships within a school (Usakli, & Ekici, 2018). Although academics are not specifically measured in this study, according to researchers Patricia Jennings at the University of Virginia and Mark Greenberg at Pennsylvania State University, the level of quality maintained in teacher-student relationships, classroom management, and SEL programs all heavily influence student outcomes on both academic and social levels (Schonert-Reichl, 2017). Therefore, if the abilities of teachers are optimized in the implementation of SEL lessons, students' social-emotional and academic competencies will build and grow from year to year.

THE HISTORY OF SOCIAL-EMOTIONAL LEARNING

Social-emotional learning has had a timeless and enduring history that has withstood centuries worth of educational ideologies. The true origins of SEL date back to ancient Greece and Plato's reflections of education. Through his writings, he suggested a comprehensive curriculum that requires a balance of physical education, the arts, math, science, as well as character and moral judgement ("Social and emotional," 2011). Plato writes, "By maintaining a sound system of education and upbringing, you produce citizens of good character" ("Social and emotional," 2011). In more recent years, James Comer--a significant professor at the Yale Child Study Center and prominent voice in the field of education-- began a program called the Comer School Development Program. The program, launched in the 1960s, focused on the idea that "...the contrast between a child's experiences at home and those in school deeply affects the child's psychosocial development and that this in turn shapes academic achievement" ("Social and emotional," 2011). The Comer School Development Program chose two poor, low-achieving elementary schools in New Haven, Connecticut. With the help of the program, the school updated both academic and social policies that previously had adverse effects on the students in attendance. As a result, the academic performance of the two schools exceeded the national average and behavior problems had declined by the 1980s. James Comer's success drew attention to the SEL movement, encouraging a multitude of professional researchers to become involved. By the 1990's social-emotional learning has made its way as both a meaningful and significant approach to education. There is no denying the incessant need for teaching children how to be responsible, productive, caring, and engaged citizens ("Social and emotional," 2011). SEL has continued to support this pursuit throughout its long and lasting history.

SOCIAL-EMOTIONAL LEARNING AND ITS INFLUENCE ON EDUCATION

The influential role that social-emotional learning plays on education is undeniable. Without an emphasis on SEL, students lack a sense of unity among peers as well as the learning community, and struggle more with overall academic content. When schools lack these programs, students are often at a disadvantage and may exhibit a number of negative behaviors. These behaviors include poor academic performance, discipline issues, disaffection, lack of commitment, alienation, and an increased frequency of student dropouts. As a result, these consequences have the potential to limit success in school or even lead to a school's failure (Zins, Bloodworth, Weissberg, & Walberg, 2007). SEL is crucial to students, teachers, and schools in creating a safe environment as they work to build social skills, connect with peers through academic content, and to make connections with staff throughout the building. It is clear that a social-emotional curriculum influences the lives of those invested in education--but in what ways? Social-emotional learning is responsible for affecting behavior, relationships, as well as overall learning.

SOCIAL-EMOTIONAL LEARNING AND HOW IT AFFECTS BEHAVIOR

According to Schonert-Reichl (2017), a recent report from the National Council on Teacher Quality found that there is relatively little attention paid to classroom management in pre-service teacher education. Today's teachers do not feel equipped to deal with the behaviors they are facing within their classrooms every day. Teachers who lack skillful classroom management allow the behaviors of students to take over the academic learning and daily routines. Gregory and Fergus (2017) found that implementing social-emotional lessons into the daily schedule created a healthier school environment and enhanced educators' overall abilities to teach students social-emotional competencies. Equally important, the researchers also saw a decrease in negative student behaviors and discipline issues overall. With the implementation of a social-emotional curriculum, teachers will spend less time focusing on student behavior and more time on academics.

Many schools have found that implementing this multi-tiered system of support has led to a decrease in students being disciplined outside of the classroom through the use of in-school (ISS) or out-of-school (OSS) suspensions. Therefore, these students are not missing academic lessons (Gregory & Fergus, 2017). Instead of focusing on punishment for behavior, implementing SEL throughout schools has the potential to change the code of conduct within the building. Schonert-Reichl (2017) confirms that social and emotional skills can "be taught and measured [and] can promote positive development and reduce problem behaviors within the school setting"(p.138). Incorporating SEL within a classroom setting would create a healthier social-emotional environment, in addition to strengthening educators' own social and emotional competencies. Consequently, this leads to improved teacher abilities when it comes to instructing students (Gregory and Fergus, 2017).

SOCIAL-EMOTIONAL LEARNING AND HOW IT AFFECTS RELATIONSHIPS

Educators are encouraged to support students' social-emotional development, with the full knowledge that this support will result in non-academic outcomes, particularly in the areas of relationship building and psychological health (Konishi & Park, 2017). Most researchers agree that this human side of learning, which includes problem-solving,

communication, and self-knowledge, are of equal importance to the development of academic knowledge (Hoffman, 2017). However, despite this consensus, social emotional learning often takes a backseat to core subject material--the three Rs of reading, writing, and arithmetic--due to the pressures of standardized testing requirements (Konishi & Park, 2017). According to Poulou (2015), multiple studies have demonstrated that the role of the relationship between teachers and students is a strong predictor of student behavior. It is empathy, trust, and acceptance in these relationships that are the major contributors to students' emotional growth and development (Colley & Cooper, 2017).

Social learning theory suggests that the introduction and practice of social interactions influence the development of new behaviors. Ideally, this school-provided programming would translate to student home lives, as well (Domitrovich, Durlak, & Weissberg, 2017). In their research, Konishi and Park (2017) suggest that students who engage in social-emotional learning also exhibit good mental health in comparison to their peers who do not. Those students who do not have the same social emotional learning experiences tend to have poorer mental health, which may include anxiety or depression, and often have destructive relationships with peers and other people in their lives. Colley and Cooper (2017) point out that "all learning is emotion-based" and high-quality academic learning can only truly take place when social emotional abilities are adequately supported and taught (p. 12).

In her book, *Everyday SEL in Middle School*, Carla Philibert (2016) notes that an SEL equivalent to a standardized test exists in the form of students' everyday abilities to deal with stress and emotionally fired situations. Given that students frequently face these types of instances, it is pertinent that they are taught the necessary skills of communication and empathy. The essential nature of school-based academic learning is relational, meaning social emotional learning is required for students to both build and maintain relationships (Hoffman, 2017). Throughout their lives, students' management of their relationships with others will be crucial. Students without the abilities to effectively "negotiate conflict and resist pressure" will struggle to make their way in a world that deals in those skills (Colley & Cooper, 2017, p. 26). Engagement and self-esteem are the two most vital components of keeping students interested in their schooling. Both factors are inextricably linked to teacher-student and peer relationships, which rely upon social-emotional competencies (Hoffman, 2017).

SOCIAL-EMOTIONAL LEARNING AND HOW IT AFFECTS LEARNING

Twenty-first century schools instruct diverse students with a variety of strengths, interests, and motivations for learning. While some students participate daily and enjoy coming to school, others are less engaged and less motivated. Preparing students for their future requires an education that not only teaches academics but prepares them to collaborate, problem-solve and cooperate with those around them (Payton et al., 2008). Social emotional learning provides those skills and opportunities for students.

In a 2011 analysis of 213 studies that collectively included over 270,000 students, results indicated that participants who took part in SEL programming through their schools demonstrated higher academic gains than those who were not enrolled in similar programs (Collaborative for Academic, Social, and Emotional Learning, 2018). This analysis further demonstrates why social emotional learning is imperative for student success. Even considering this well-researched fact, SEL continues to be overlooked in the day-to-day school curriculum. SEL provides students with the necessary tools to interact with the world around them, including communication with themselves, their peers, teachers, and other adults. SEL also provides students with a sense of empathy while developing their sense of humanity. According to Jones and Kahn (2018), students who experience SEL in school are better able to work constructively and collaboratively with classmates, build a sense of perseverance, have a sense of overall purpose, and are much more likely to "maximize their opportunities and reach their full potential" (p. 16).

A RESPONSIVE CLASSROOM APPROACH

According to Baroody, Rimm-Kaufman, Larsen, & Curby (2014) Responsive Classroom is a social emotional learning intervention with an additional focus on the delivery of content. It was developed by the Northeast Foundation for Children (NEFC) with the idea that proper social-emotional learning will benefit a student academically and increase their overall well-being. There have also been studies to suggest increase in motivation and self-efficacy for teachers. Responsive Classroom is built on six guiding principles as well as specific strategies and competencies to help create a classroom environment that is conducive to learning. The principles stress the importance of social interactions, understanding bias, and the idea of promoting a community of learners even extending to their families. The practices are built upon the same ideals of creating a safe space for children to learn and explore. Some examples of these practices include Morning Meetings, setting rules and goals, brain breaks, modeling, logical consequences, and reflection.

The basis for this approach requires teachers to understand their students and respective families on a more personal level with a focus on building rapport and relationships (Arby, Rimm-Kauffman, Hulleman, & Thomas, 2012). This is the purpose behind some of the practices put in place with this particular SEL program. They continue to recognize that relationships remain important, yet the benefits and outcomes seem to change over the course of a child's educational career, starting from increased academic growth to motivation and achievement gains. The hope is that through these practices teachers would be able to create an environment free of behavior issues, while providing opportunities to interact with others and allow for academic choice.

The Responsive Classroom Approach can be used in multiple classroom settings with remarkably diverse students. Bruce, Fasy, Gulick, Jones, & Pike (2006) describe the benefits of Responsive Classroom approach in both special and general education classes, noting the academic benefits as well increased communication skills specifically of Morning Meetings. Morning Meetings are one of the key Responsive Classroom practices at the elementary level and are intended to promote socialization skills as well as establishing a community within the classroom.

Responsive Classroom recommends that during the first week of the school year students should begin to articulate academic and social learning goals, or what others may call *hopes and dreams*, for the school year. These should be goals that students can work on throughout the year. This goal setting sets a tone for students for the rest of the school year (The First Six Weeks of School, 2015). They are then responsible for their goals and holding their peers accountable. Considering that these goals are both social and academic, these goals will set the foundation for what students are learning throughout the school year.

Responsive Classroom provides educators with resources and strategies for establishing rules, interactive modeling, teacher language, responding to misbehavior, engaging academics, academic choice, and implementing subjects into Morning Meeting (Responsive Classroom Course for Elementary Educators, 2017). When students can use their strengths and interests to make a desired choice, their academic achievement increases.

Although the SEL movement has gained extensive recognition and took off in the 1990's, some of the major gaps in research include: an overwhelming variety of curriculums, teacher choice, and the interpretation of SEL. As mentioned, social-emotional learning involves a variety of programs and curriculums to enhance classroom climate and learning. Therefore, it can be difficult for research to provide generalizations for the entirety of the field (Hoffman, 2009). Different programs include different requirements. There are in school lesson-based curricula, in school non-lesson-based curricula, and out of school programs. As a result, these programs have conflicting requirements and varied practices. For example, some programs suggest different times each week to spend on skills, other programs work on or provide different skills to practice, while many programs offer a contrasting way to practice these skills in the classroom.

A second gap are the explicit circumstances throughout each classroom regarding SEL. All teachers set up their classrooms differently and will interpret the curriculum in diverse ways. Therefore, it can be extremely difficult to determine consistency between teachers and classrooms (Hoffman, 2009). Teachers also have control of when, where, and how often they incorporate SEL into the curriculum. Some educators see SEL as another burden to fit into their standard curriculum.

Finally, there is much confusion and concern over the definition of the term social-emotional learning. Each study has a different term for what SEL means and what it looks like in the classroom. Another way individuals can interpret SEL differently is through diverse cultures. Talking and reviewing emotions openly is a cultural preference of American White middle-class. It is also the norm to work towards preserving students' ability to express their emotions freely (Hoffman, 2009). Students from other cultures may be taught to manage their emotions very differently than a specific SEL curriculum (Hoffman, 2009).

METHODOLOGY

A qualitative approach was used to measure the effects of social-emotional learning in the classroom. Participating teachers collected qualitative data that pertains to the principles of Responsive Classroom. Four classrooms at four school districts in central Illinois were part of this study in which the researchers implemented different components of Responsive Classroom at different times.

Prior to the start of research, participating teachers filled out rubrics for each student. Data was gathered again at the midpoint of the study and at the conclusion of the research to see the effects Responsive Classroom may have on social-emotional behaviors. This rubric was intended to examine students' social-emotional behaviors within the classroom and throughout the school. The rubric consisted of social-emotional behaviors related to the research questions of this study paired with grade-level specific standards from the Illinois State Board of Education.

Participating teachers kept observation logs throughout the duration of the study. The observation logs included records of specific behaviors seen in the school setting. Participating teachers kept reflective journals throughout the study that was used for Responsive Classroom component launch dates, details that pertain to the different components of the lessons, and considerations for moving forward with social-emotional lessons specific for their classroom. At the completion of the study, the participating teachers exclusively completed a survey that was intended to help identify the effects these Responsive Classroom components have on social interactions, academics, behavior, and overall success. Participating teachers assigned a numerical value of 0-5 for every student and each corresponding behavior. A score of 0 indicated that the student never demonstrated the listed behavior, while a score of 5 indicated that the student regularly demonstrated the listed behavior.

Participating teachers completed a survey at the end of the study. The survey used a five-point Likert scale to examine the degree social-emotional lessons were beneficial in their classrooms, the ways in which social-emotional lessons affected students, in addition to the overall quality of specific components of Responsive Classroom. The survey included a comment section that allowed the researchers to look for trends in their responses.

After the completion of the rubrics, the researchers analyzed and summarized the data by graphing the initial, midpoint, and end of study rubric scores. This data was organized into a bar graph displaying the ways in which Responsive Classroom principles have had an impact on the social-emotional behaviors indicated by the rubric.

Once the surveys have been administered to the teachers participating in the study, the data was summarized by analyzing the amount of time that teachers spent teaching social-emotional lessons vs. academic content, while also examining the success of student behavior and relationships inside the classroom setting. Finally, the teacher surveys were studied for common trends and themes.

The research was set-up to include a diverse population sample. All four participating schools have a wide range of differences including the numbers, age, and gender of students in attendance, the racial makeup of students, as well as the socio-economic status of the surrounding communities. A diverse group of participants allows for more realistic and valid results. The research also examined multiple data points across a span of roughly 5 months to identify successes of Responsive Classroom. The participating teachers also have more than four years of teaching experience and have been able to use the first half of the school year to identify specific behaviors to target when implementing Responsive Classroom. This allowed for more reliable feedback in the teacher's journal and observation logs for the classroom.

The following questions regarding social-emotional learning and the use of *Responsive Classroom* was investigated throughout the research:

1. In what ways does *Responsive Classroom* affect student success in the classroom?
2. Which aspect of *Responsive Classroom* is viewed as most important by teachers?
3. *Responsive Classroom* stresses the importance of building relationships. Do stronger relationships between teachers and students as well as between peers help students gain higher academic achievement and/or higher self-efficacy?
4. How will students' behaviors be impacted by the *Responsive Classroom* Approach?

DEFINITION OF TERMS

The following terms were used in the study:

- Responsive Classroom -- an evidence-based approach to teaching that focuses on engaging academics, positive community, effective management, and developmental awareness
- Social-emotional learning -- a wide range of skills, attitudes, and behaviors that can affect a student's overall success in school
- Socio-economic status -- the social standing or class of an individual or group

This research was intended to be as sound as possible. However, gaps in data may exist largely because each participating teacher began at a different point with Responsive Classroom. While some teachers had never implemented any of the Responsive Classroom principles, other classrooms have them embedded within their daily routines. Each classroom and school were diverse and what works in one classroom may not work in another. This study was be limited in that results may be unique to the schools in the study and may not apply to all schools in general. One semester of collecting data on social-emotional learning lessons might not be enough to show definitive results in terms of the effect of the lessons. The high population of students being pulled out of the classroom or high mobility within the district may skew the data. The study was reliant on educators to include the social-emotional learning curriculum in the classrooms. Depending on other requirements placed on the teachers, school functions, and other daily tasks, this may prove difficult to consistently follow through with. Although some scores may show significant growth for students throughout the study, the growth may not be an effect of using Responsive Classroom in the curriculum.

DATA ANALYSIS AND INTERPRETATION

The objective of this research was to examine the correlation between the implementation of social-emotional learning in the classroom and the social behaviors exhibited by students. Researchers examined students from four different schools of many sizes, in three different towns located in Illinois. The relationships between social-emotional learning and student behaviors inside the participating classrooms were also examined. More specifically, the following questions regarding SEL and Responsive Classroom were investigated:

1. In what ways does Responsive Classroom affect student success in the classroom?
2. Which aspect of Responsive Classroom is viewed as most important by teachers?
3. Responsive Classroom stresses the importance of building relationships. Do stronger relationships between teachers and students as well as between peers help students gain higher self-efficacy?
4. How will students' behaviors be impacted by the Responsive Classroom Curriculum?

Throughout the research, participating teachers completed rubrics on their students without personal identifiers created to assess the Illinois Social-Emotional standards. The rubrics assessed the following social-emotional standards: 1A Identify and manage one's emotions and behavior. 1B Recognize personal qualities and external supports. 1C Demonstrate skills related to achieving personal and academic goals 2A Recognize the feelings and perspectives of others. 2B Recognize individual and group similarities and differences. 2C Use communication and social skills to interact effectively with others. 2D Demonstrate an ability to prevent, manage, and resolve interpersonal conflicts in constructive ways 3A Consider ethical, safety, and societal factors in making decisions. 3B Apply decision-making skills to deal responsibly with daily academic and social situations 3C Contribute to the well-being of one's school and community. The graph is compiled of averaged data from all four classrooms by each individual standard.

After completing the rubrics, researchers analyzed and summarized the data by graphing the initial, midpoint, and end of study rubric scores. This data was organized into a bar graph illustrating the ways in which Responsive Classroom principles have had an impact on the social-emotional behaviors indicated by the rubric. At the end of the survey, participating teachers were also given a survey to determine the effectiveness of Responsive Classroom. Once the educator survey was administered, the data was summarized into pie graphs showing the amount of time that teachers spent teaching social-emotional lessons vs. academic content, while also examining the success of student behavior and relationships across the classroom setting. Finally, the teacher surveys were studied for common trends and themes. The following themes emerged from the data:

THEME 1: BUILDING COMMUNITY

The first major theme that emerged from the data was that Responsive Classroom elements such as Morning Meetings and Closing Circles, positively affect building a classroom community. This finding specifically connects to the research question, do stronger relationships between teachers and students as well as between peers help students gain higher self-efficacy? The research data from fig. 1 shows the positive impact Closing Circles and Morning Meetings have on students. Recognizing the feelings and perspectives of others, demonstrating an ability to prevent, manage, and resolve interpersonal conflicts in constructive ways are both areas that students grew. Considering the ethical, safety, and societal factors in making decisions, applying decision-making skills to deal responsibly with daily academic and social situations, and contributing to the well-being of one's school and community.

In analyzing researchers' field notes, they provide insight into the growth of students throughout the study. One researcher shared in their field notes that, "Students understand that closing circle is a time when we can reflect on

our day, say goodbye to classmates, and learn from one another - building community." Schonert-Reichl (2017) confirms that social and emotional skills can "be taught and measured [and] can promote positive development and reduce problem behaviors within the school setting"(p.138). Researchers also shared the positive impact of Closing Circles on their end of the day routine and students' behavior during pack up. An example of one researcher's field notes stated, "Closing Circles help end the day on a positive note no matter how the day started or how the day went." Another researcher described, "Students are starting to help each other become more self-aware. Reminding each other of their goals, choosing partners that will improve them. They are relying on their classroom family for support."

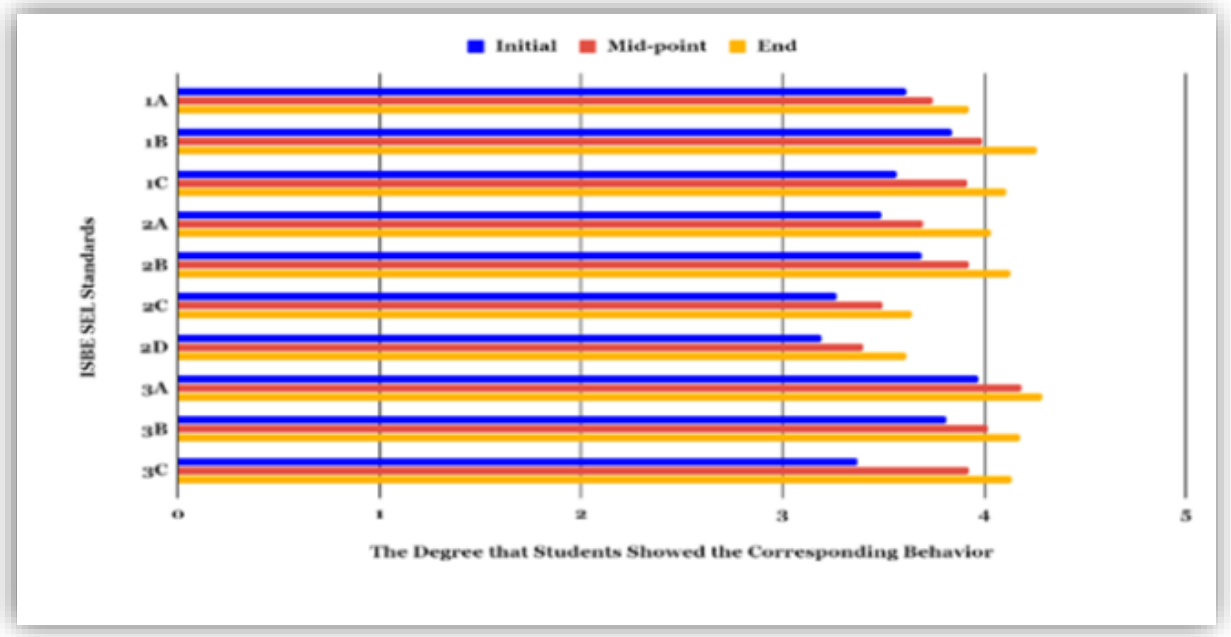

Figure 1. Effectiveness of Responsive Classroom.
Note. The figure shows the average of how teachers rated their students on each ESL standard from the beginning of the study to the end. The degree is determined with 5 representing the most and 1 being the least.

According to Jones and Kahn (2018), students who experience SEL in school are better able to work constructively and collaboratively with classmates, build a sense of perseverance [and] have a sense of overall purpose…" (p. 16). These skills all promote a positive classroom community.

Closing Circle and Morning Meetings not only help build classroom community between peers in the classroom but also help establish student to teacher relationships as well. Incorporating social-emotional lessons within a classroom setting creates a healthier social-emotional environment, in addition to strengthening educators' own social and emotional competencies. Consequently, this leads to improved teacher abilities when it comes to instructing students (Gregory and Fergus, 2017). A researcher explained, "I learned a lot about my students that I did not know before. Much of what students shared gave a clearer picture into potential socio-economic and traumatic issues. I was surprised at how much I learned about my students." Gregory and Fergus (2017) found that implementing social-emotional lessons into the daily schedule created a healthier school environment and enhanced educators' overall abilities to teach students social-emotional competencies. Instead of focusing on student behavior, implementing social-emotional lessons throughout schools has the potential to change the code of conduct across the building.

Figure 1 illustrates how standard 2D (Demonstrate an ability to prevent, manage, and resolve interpersonal conflicts in constructive ways) has drastically improved for participating students involved in this study. Students gained understanding and knowledge on how to respectfully problem solve through issues by identifying consequences of a solution and specific conflicts. In addition, reflecting on standard 3B (Apply decision-making skills to deal responsibly with daily academic and social situations), students showed growth by describing ways to promote the safety of themselves and others, while generating alternative solutions to problems. Figure 2 shows that 100% of the researchers

believed that using Responsive Classroom elements improved the interactions between students and made them more respectful.

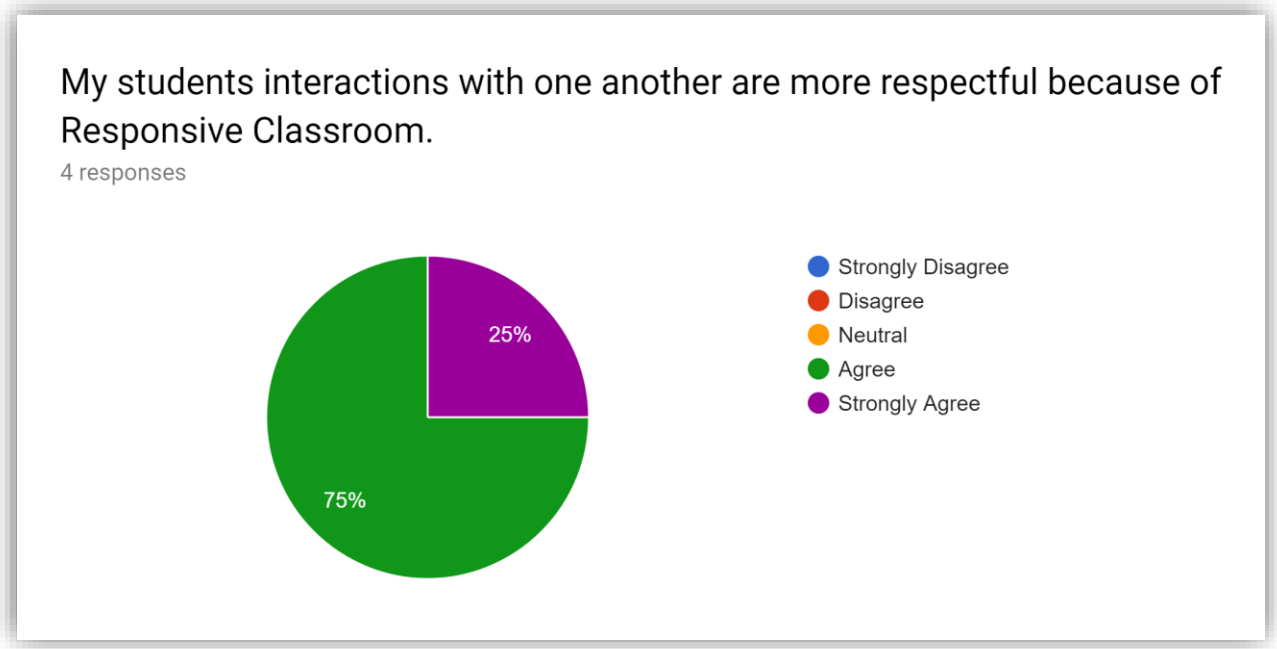

Figure 2. Improved student interactions due to Responsive Classroom.
Note: This figure shows the teacher researchers opinions of the impact Responsive Classroom had on student interactions

THEME 2: COMMUNITY SKILLS

Our research has identified a second common theme; we have found that the addition of Responsive Classroom's Morning Meeting or Closing Circle encouraged communication between student to student, staff to student and staff to staff. This key finding is connected to many of the research questions and provides a better understanding for the impact Responsive Classroom has on students and their social-emotional learning.

A research question we continued to refer to throughout the study was, in what ways does Responsive Classroom affect student success in the classroom? Student success in the classroom is impacted by the communication skills students possess. Mahmud (2014) states, "…oral communication proficiency contributes greatly to academic performance." Our study found that student communication skills increased through the addition of Responsive Classroom elements. One researcher described in their field notes that, without any facilitating from the teacher after the implementation of Closing Circle, two students explained to one another that their feelings were hurt due to the other student's actions. Through their conversation students were able to problem solve their issues appropriately and independently. Another researcher wrote, "[The students] understand how to communicate with one another during these meetings." Teacher field notes as well as researcher surveys also support the idea that communication skills have increased since the implementation of Closing Circle or Morning Meeting. As shown in figure 1 pictured above, our data projects a clear increase from the beginning to the end of the study regarding student communication skills addressed in ISBE standard 2C (Use communication and social skills to interact effectively with others). These findings show that the implementation of Responsive Classroom methods can lead to improved communication skills between students and staff.

Across all researchers' classrooms we have discovered that the addition of Morning Meeting or Closing Circle has helped provide opportunities for students to engage with one another in a safe, open space. Students use this time to practice and build their communication skills. One teacher recognized that when Morning Meeting was first implemented one student did not want to communicate with their peers. As the study continued, this child progressively improved his communication skills and participated in meeting time and in class time. Responsive

Classroom elements allow for the opportunity to gain experience from one another, build relationships and connections with peers, share stories, and positively engage with students and staff alike.

These findings are supported in other research as well. The Responsive Classroom Website states, "Independent research has found that the Responsive Classroom approach is associated with higher academic achievement, improved teacher-student interactions, and higher quality instruction." The key findings of communication skills as a common theme across the four classrooms as well as the additional research provide significant support for the benefits that Responsive Classroom holds.

THEME 3: FOSTERING RELATIONSHIPS

The third overarching theme that was found through investigating and interpreting data, was that implementing Responsive Classroom fosters relationships inside the classroom setting. One of the questions that the study addressed were the ways in which Responsive Classroom affects student success in the classroom. Responsive Classroom encompasses social and academic skills into a learning environment that is responsive to all students' strengths and needs. Through the implementation of Morning Meeting and Closing Circle, students were able to develop relationships with their peers and teachers more frequently. For example, one participating researcher's field notes, in response to a prompt asking students what their favorite part of the day was, read as follows: "Hanging out with my friends and seeing my teacher."

The analysis and interpretation of field notes led the researchers to believe that fostering relationships led to academic success. One participating researcher's field notes, in response to a prompt asking students what made them laugh today, "The student related his laughter to our reading lesson on Hyperboles. After they shared, the class laughed with the student about that item." This observation note identifies that students are building relationships with one another and are comfortable to share with each other. These observations also show that students are connecting their feelings to their academic successes. Another participating researcher stated, "This was the first time where a student brought up how they helped someone else accomplish the closing circle topic. This shows that closing circle and Responsive Classroom practices help encourage positive relationships between peers."

THEME 4: GOAL SETTING

A fourth overarching theme that became discernible throughout the consideration and interpretation of related research data, was the notion that Responsive Classroom practices encourage goal setting. One question this study addressed was the ways in which student behaviors were impacted by a Responsive Classroom curriculum. Because much of what Responsive Classroom emphasizes focuses on the use of reflective skills, it came as no surprise that student behaviors were significantly impacted by participating more in the goal setting process. Through the implementation of Morning Meeting and Closing Circle, students were articulating academic and social-emotional goals more regularly. For example, one participating researcher's field notes, in response to a prompt asking students how they can show focus during the next school day, read as follows: "Student 2 responded that his wish was to become a better reader...and student 18 wished that everyone could practice great listening skills in order to really hear each other during closing circle."

A second question investigated throughout the course of this study, uncovered the degree to which Responsive Classroom affected student success in the classroom. The analysis of field notes led to the discovery of an undeniable pattern across the research. As students were setting more academic and social-emotional goals, they were doing so with their own strengths and areas of improvement in mind. Furthermore, students began to really tailor their specific goals to a more day by day and need by need basis. A participating researcher's observations and field notes, disclosed later in the study, explained that "...students were sharing more specific [goals]. One student did not just say I want to get better in math, that student said, 'I want to memorize all of my multiplication math facts.'" These observations illustrate clearly that students were beginning to develop better understandings about both their academic strengths as well as potential areas for improvement. A second participating researcher observed students choosing partners based on their strengths and weaknesses, or partners that will "...help push them." Because students now have a better understanding of their personal academic and social-emotional skills, they are better able to make deliberate decisions and seek out appropriate supports that will influence their overall accomplishments in the classroom. Student cognizance of academic and social-emotional strengths and weaknesses, paired with purposeful working partnerships, are both observed behaviors that demonstrate students' trajectory for success in the classroom.

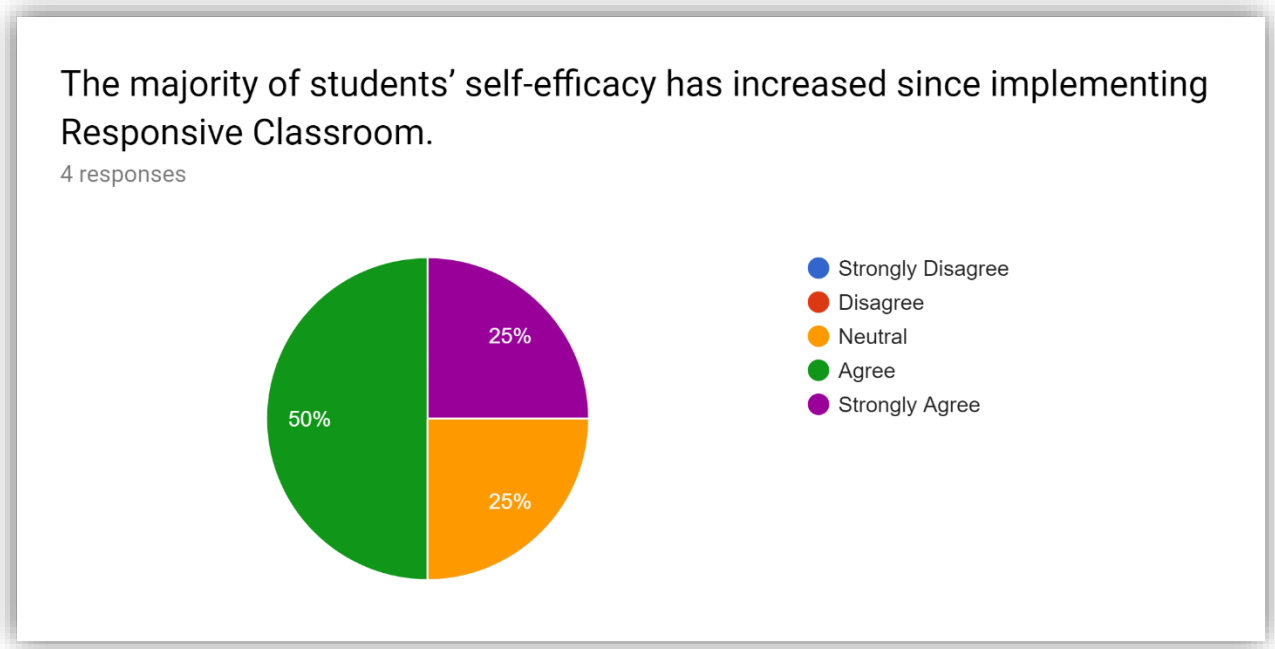

Figure 3. Improved student self-efficacy due to Responsive Classroom.
Note: This figure shows the teacher researchers opinions of the impact Responsive Classroom had on student self-efficacy

Figure 1 Clearly illustrates the key role of goal setting in education. From start to finish, student scores show that areas of the rubric that focused on goal setting behaviors, grew immensely. Social-emotional standards 1B (recognize personal qualities and external supports) and 1C (demonstrate skills related to achieving personal and academic goals), pictured on fig. 1, show consistent and steady growth when comparing scores from the initial, mid-point, and end of the study.

According to the teacher survey, given at the end of the data collection window, and the data shown on fig. 3, 75% of the participating educators found that Responsive Classroom significantly increased self-efficacy for most students in their classrooms.

The information and statistics listed above align with and confirm the previous findings examined in the literature piece of this study. Jones and Kahn (2018), referenced earlier, explained that students involved with SEL in school are better able to work constructively and collaboratively with classmates, build a sense of perseverance, have a sense of overall purpose, and are much more likely to "maximize their opportunities and reach their full potential"--all skills needed for goal setting in the classroom (p. 16). This study, heavily supported by previous studies, demonstrates that goal setting is an inherent part of any educational setting. For students to grow and thrive, they must possess an awareness of their strengths and embody the perseverance and drive to accomplish future goals. Social-emotional curriculums, like Responsive Classroom, teach and model these goal-setting behaviors. These elements better prepare students to engage with critical thinking and cope with potentially challenging circumstances both inside and outside of school walls. These skills will undoubtedly follow students as they work their way through our school system and beyond, as they face the everyday demands of life, employment, and adulthood.

In the end, our research shows the positive impact the Responsive Classroom elements such as Closing Circle and Morning Meeting can have on students, teachers, and the classroom environment. This reflective and responsive time of the school day is a sacred time for students and teachers to connect, learn, and grow together.

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APPENDIX A

Rubric

Directions: Fill out one rubric per child. There should be no personal identifiers included and all rubrics should be anonymous.

ISBE SEL Standard	**0**	**1**	**2**
1A Identify and manage one's emotions and behavior.	Student cannot show a variety of emotions during role play.	Student sometimes shows a variety of emotions during role play.	Student can show a variety of emotions during role play.
1B Recognize personal qualities and external supports.	Student cannot describe the qualities needed for a successful student.	Student can describe the qualities needed for a successful student.	Student can describe the qualities needed for a successful student and understands how and from whom they can ask for help when needed.
1C Demonstrate skills related to achieving personal and academic goals	Student cannot identify a personal area for growth.	Student can identify a personal area for growth, but is unsure how to approach the goal.	Student can identify a personal area for growth and describe the steps needed to achieve that goal, including addressing potential obstacles.
2A Recognize the feelings and perspectives of others.	Student cannot distinguish between verbal and non-verbal cues and messages.	Student can distinguish between verbal and non-verbal cues and messages.	Student can distinguish, describe, and label the differences between verbal and nonverbal cues and messages.
2B Recognize individual and group similarities and differences.	Student cannot describe the differences between humans in stories.	Students can describe the differences between humans in stories.	Students can describe the difference (including culture and social) between humans in stories and real life.
2C Use communication and social skills to	Student cannot express how they feel when	Student can somewhat express how they feel	Student can express how they feel when they've

interact effectively with others.	they've been hurt emotionally.	when they've been hurt emotionally.	been hurt emotionally while practicing reflective listening.
2D Demonstrate an ability to prevent, manage, and resolve interpersonal conflicts in constructive ways	Student cannot identify the consequences of a solution.	Student can identify the consequences of a solution.	Student can identify the consequences of a solution and identify passive, aggressive, and assertive conflict resolution behaviors.
3A Consider ethical, safety, and societal factors in making decisions.	Student cannot describe the consequences of breaking classroom or school rules.	Student can describe the consequences of breaking classroom or school rules.	Student can describe the consequences of breaking classroom or school rules and identify factors that make a situation unsafe.
3B Apply decision-making skills to deal responsibly with daily academic and social situations	Student cannot describe ways to promote the safety of themselves and others.	Student can describe ways to promote the safety of themselves and others.	Student can describe ways to promote the safety of themselves and others and generate alternative solutions to problems.
3C Contribute to the well-being of one's school and community.	Student cannot brainstorm ways to contribute to their community.	Student can brainstorm ways to contribute to their community.	Student can brainstorm ways to contribute to their community and develops a plan.

APPENDIX B

Teacher Survey

Directions: At the end of the study, please mark which category you believe is most appropriate for the statement. You may only choose one category per statement.

Statement	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Responsive Classroom has positively impacted my classroom.					
I plan to use Responsive Classroom again next school year.					
I feel that Responsive Classroom took up too much academic time.					
My students overall behavior has improved because of Responsive Classroom.					
My students have improved academically because of Responsive Classroom.					
My students interactions with one another are more respectful because					

of Responsive Classroom.					
The majority of students' self-efficacy has increased since implementing Responsive Classroom.					

Which aspect of Responsive Classroom do you believe has most significantly impacted teaching and learning in your classroom? Why?
Additional Comments:

Secondary School Students' Opinions on Educational Robotic Applications

Mehmet KOCA
Phd Student, Faculty of Education Department of Mathematics and Science Education, Firat University, Elazig-Turkey
mehkoca44@gmail.com
ORCID: https://orcid.org/0000-0003-3000-1066

İsmail TÜRKOĞLU
Prof. Dr., Faculty of Education Department of Mathematics and Science Education, Firat University, Elazig-Turkey
isturkoglu@firat.edu.tr
ORCID: https://orcid.org/0000-0001-7454-7605

ABSTRACT
In this study, it is aimed to determine the opinions of secondary school students about educational robotics applications. The case study, which is one of the qualitative research methods, was used in the research. The research was carried out with 7th grade students of two different secondary schools in the Battalgazi district of Malatya province in the 2021-2022 academic year. The study group of the research consisted of 18 students, who were determined according to the purposive sampling method. In the study group, science lesson teaching was carried out with educational robotic applications for about two months. The data of the study were obtained with a semi-structured interview form consisting of seven questions developed by the researchers. Descriptive analysis method was used in the analysis of the obtained data. As a result of the research, most of the students stated that they liked the activities, associated the applications with daily life, their interest in the science lesson increased, they worked in collaborative groups, the lessons were fun, and they wanted robotics training sets to be used in their lessons in the future. In addition, some of the students stated that they found the applications confusing at the beginning of the studies, that they had difficulties in the coding part and that there were in-group discussions. In line with the findings, suggestions were made regarding the use of robotic applications in teaching science courses.
Keywords: Science Teaching, Educational Robotic Applications

1. INTRODUCTION

In our age, in line with the need for technology-oriented society and conscious citizens, the expectation from education is increasing day by day in order to close the gap between the currently applied science literacy level and the goals to be achieved (Demiral, 2017). When we look at the developments in the last century, it shows that the limits of science and technology are far beyond our imagination (Hurd, 1998). There is a need for individuals who know where and how to use the information obtained in accordance with the 21st century, who can analyze which solutions are appropriate in the face of problems, and who know the accuracy of the ways to reach scientific information, thanks to technology that has accelerated with scientific developments (İşman & Gürgün, 2008). Countries that are aware of this situation are developing faster depending on the rapid progress of science and technology and are trying to innovate in many ways (Aydınlı &Avan, 2017). In the face of this change in technology, teaching plans are regularly renewed in order to enable students to learn in various ways. With the advances in computer technologies, the use of multimedia tools such as animation, graphics, text and sound in educational environments is becoming widespread. Distance education, online education, smart boards, tablets, technology and design-based classes, technological materials made with the help of 3D printers, robots and legos are just a few of them. This situation requires an educational design that offers a richer educational environment to students by diversifying learning (Daşdemir & Doymuş, 2012; Ventola, 2014; Simon & Tim, 2019).

The education systems of our age, on the other hand, aim to raise individuals with 21st century skills by taking all these into account. Considering the 21st century skills that come to the fore in education, one of the prominent skills among them is technology skill. Individuals with this skill are defined as using technology effectively, taking part in the internet and social networks, having sufficient knowledge and equipment for technology. It is predicted that technology will enter every area of our lives day by day, and that accessibility is experienced, and students' technology use skills will develop in future education activities, they will take responsibility in this area and their behavior will be more affected by technology (Günç, Odabaşı & Kuzu, 2013). Therefore, the development of education systems should support the acquisition of these skills and classroom education activities should be designed for this purpose. The methods and techniques used should support this purpose, and student-centered approaches should be adopted to ensure effective learning, and methods, techniques and approaches that provide interaction and cooperation, and create rich learning environments with technological tools and software should be included (Kotluk & Kocakaya, 2015). For all these reasons, an educational approach has been created by putting

forward the need for students to grow up with knowledge in the fields of science, technology, engineering and mathematics (Science, Technology, Engineering, Mathematics - STEM) from an early age (Akgündüz Aydeniz, Çakmakçı & Çavaş, 2015).

Industry 5.0 is spoken, following technological and scientific developments closely is one of the requirements of the information age (Zhao, 2003). Our country, which is aware of the necessities of the technology age we live in, carries out many different activities in which technology and design studies are carried out, where the creativity of the students, where scientific activities are carried out, robot technologies are used, in line with the national technology move started. At the top of these are the Aviation, Space and Technology Festival (TEKNOFEST), experimental technology workshops, the Scientific and Technical Research Council of Turkey (TÜBİTAK) research projects, and international MEB robot competitions. These activities aim to raise individuals with 21st century skills, by encouraging our young people to think, observe, wonder and investigate what they are curious about, so that they can find solutions to the problems they will encounter in the future. Worldwide underwater robotics program (WaterBotics), robotic camps (Roboparty), First Lego League-FLL (First Lego League), Junior's First Lego League- FLLJr (First Lego League Junior) middle school students (RoboCupJunior) and World Robot Olympics-WRO (World Robot Olympiad) robotics and coding are used within the scope of competitions (Akarca, 2019; Eguchi , 2014).

When all these are taken into account, it is seen that there is an innovation called “Robotics” in the technological fields. This field has become a part of the science education process, which includes the fields of science and engineering, by bringing together and integrating different disciplines (Koç Şenol & Büyük, 2015). Robotics is an important field in science education and it can be seen that it provides some skills to learners as a result of studies and activities related to this field. In these activities, which are based on design and programming processes, students are observed to find alternative solutions to problems and become practical in this regard, an increase in their ability to use technology and their willingness to construct designs with their own creativity (Costa & Fernandes, 2005).

Literature on educational robotic applications, which is one of the current approaches in the field of science education, is examined, it is seen that there are many studies that are generally based on robotic coding under the name of STEM studies (Acar et al., 2018; Akçay, 2018; Chen & Chang, 2018; Kaya, Newley , Deniz & Yeşilyurt, 2017; Khanlari , 2013; Nall, 2016; Okkesim, 2014; Ortiz 2010; Strawhacker & Bers, 2015; Sullivan, 2016; Whitehead , 2010). In these studies, it has been stated that robotic applications provide many different contributions to science education. When the countries that are the pioneers in education are examined, it is seen that they have started to give software, coding and robotics training to their students at a very young age, even starting from the pre-school period (Eisenberg, 2013). In this study, it was aimed to determine the opinions of secondary school students about educational robotic applications used in teaching science courses.

2. METHOD

2. 1. Model of the Research

Designed as a case study, which is one of the qualitative studies. Millan (2000) defines case study as a method in which one or more events, programs, social groups or interconnected situations are examined in depth (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz & Demirel, 2019).

2. 2. Working Group

This research was carried out with 7th grade students in two separate public schools in the Battalgazi district of Malatya province in the 2020-2021 academic year. In determining the qualitative study group of this research, criterion sampling, one of the purposeful sampling types, will be used. Criterion sampling includes the study of situations that meet a set of predetermined criteria (Yıldırım & Şimşek, 2011). The criterion in this research is to participate in studies related to educational robotic applications or design thinking activities. On the basis of voluntariness, 18 students were selected from each group and formed the qualitative study group.

2. 3. Research Data Collection

In the scope of the research; The teaching of the force energy unit of the 7th grade science course was carried out with educational robotic applications. The research lasted 8 weeks with the data collection process. Educational plans for educational robotic applications were made by adhering to the MEB plan, which shows in which time the gains of the force and energy unit taught during the research will be given. The activities used in the lessons were designed by adhering to these teaching plans. Before the implementations, the students were divided into heterogeneous groups of five or six, and a president and a writer were selected for the groups, and the students were asked to give names to the groups they were in. After the activities carried out within the scope of educational robotic applications were examined by science education experts, their final shapes were given and the applications

were started. mBot robotics training set was used during the applications. Makeblock mBot is an easy-to-use open source robot kit designed for children to use and learn to program.

In the application phase, the students completed the worksheets prepared in advance within the framework of the lesson plans for educational robotics applications by following the engineering design process 'Determine the problem, imagine, plan, design, test and develop.

2. 4. Data Collection Tools of the Research

The data for the purpose of the research will be collected with a semi-structured interview form, which is one of the qualitative research data collection tools.

Before creating the semi-structured interview form, the studies conducted by the researchers were examined by scanning the literature (Akman Selçuk, 2019; Çam, 2019; Akyol Ertuğrul, 2020; Gülgün, 2020; Çiftçi, 2020; Koca, Karabulut & Türkoğlu, 2021). Questions were prepared for the purpose of the research. These questions were examined by 2 experts in the field of curriculum and teaching, 3 experts in the field of mathematics and science education, and 3 Turkish teachers. In line with the suggestions received from the experts, necessary arrangements were made in the interview form and the final form was given to the seven-question interview form. With semi-structured interview forms, answers were sought to questions such as what they liked and disliked in the activities carried out within the scope of the research, how they contributed to the work with groups, what were the difficulties and differences they encountered during the studies, what they paid attention to during the practices. In order to ensure the impartiality of the data collection tools, the students' views were presented in the research as expressed by the students and without any changes.

2. 5. Analysis of Research Data

Content analysis method was used in the analysis of the research data. The purpose of content analysis is to present similar data obtained under certain themes on a regular basis (Aktaş, 2016). In the analysis of the data, the stages of coding the data specified by Yıldırım and Şimşek (2011), then classifying the codes obtained and forming the themes that best explain these codes, and arranging the data according to these codes and themes, were followed.

Within the scope of the reliability study of content analysis, coding and themes made independently by different researchers who are experts in the field were compared, and similar ones were marked as "Agreement" and those that were different were marked as "Disagreement" (Miles & Huberman, 1994). As a result of the calculations, the reliability of the research was calculated as 89%. The fact that the reliability calculations were over 70% showed that the research was reliable. During the analysis, each participant was given a code. These codes are indicated as RÖ1, RÖ2 ,…….. RÖ18 for prospective science teachers.

3. FINDINGS AND COMMENT

The findings and interpretation obtained from the analysis of the students' views on educational robotic applications are included in this part of the study. The analysis of the questions in the interview form, respectively, and the data obtained as a result are given below in the form of tables.

The themes, frequency and codes given to the students regarding the analysis of the answers given to the question "What are your thoughts on the educational robotic applications performed during the teaching of the science course?" are presented in Table 1.

Table 1. Students Findings Regarding His Thoughts on Educational Robotic Applications During the Teaching of Science Course

Student Views on Educational Robotic Applications	Frequency	Code
Learning with Fun	13	RÖ1, RÖ2, RÖ4, RÖ6, RÖ7, RÖ8, RÖ9, RÖ10, RÖ11, RÖ13, RÖ14, RÖ15, RÖ18
Increasing Interest in the Course	8	RÖ3, RÖ4, RÖ5, RÖ7, RÖ9, RÖ10, RÖ16, RÖ17
Learning New Information	7	RÖ1, RÖ4, RÖ5, RÖ12, RÖ14, RÖ15, RÖ16
Willingness for the Course	7	RÖ1, RÖ3, RÖ5, RÖ10, RÖ11, RÖ13, RÖ16
Contributing to the Future	5	RÖ5, RÖ8, RÖ9, RÖ13, RÖ15

Developing Individual Skills	4	RÖ2, RÖ12, RÖ14, RÖ18
Permanent learning	2	RÖ4, RÖ17

When Table 1 is examined; stated that among the thoughts that many students expressed about robotic applications, they learned by having fun, they increased their interest and desire for the lesson, and they reached new information. Some of the students stated that they developed their individual skills and that they would benefit from such practices in the future.

The opinions of some students about educational robotic applications during the teaching of the science course are given below.
"It's a very nice application, I became interested in writing code and the lessons were fun. I wish I could always do educational robotics applications, I already loved the science lesson, and I loved it more with robotic applications." (RO10)
"Robotic applications made me happy. In this project, I was coding before, like the piano and apple picking game, but I think it is both good and educational to code a robot and do it with my friends in the group and my teacher." (RO7)
"I think we did a good job with a nice robot and nice coding. I want to teach and code with this and similar robot activities. I think we will need to use coding and robots in the future." (RO13)
"I think it was a good work, it was a different subject processing technique, we developed ourselves against such robotic applications." (RO12)
"Our lessons were fun, we learned new information. Our engineering skills have increased. It brought me closer to technology." (RO14)

The themes, frequency and codes given to the students regarding the analysis of the answers given to the question "What did you like about the activities with robotic training sets?" are presented in Table 2.

Table 2. Students Findings Regarding the Favorites in the Activities with Robotic Education Sets

Student Opinions about what they liked in the activities with robotic education sets	Frequency	Code
Ability to use the Robot	12	RÖ1, RÖ5, RÖ6, RÖ7, RÖ8, RÖ10, RÖ11, RÖ12, RÖ13, RÖ15, RÖ17, RÖ18
Activity-based Appreciation	11	RÖ1, RÖ2, RÖ3, RÖ4, RÖ7, RÖ8, RÖ9, RÖ13, RÖ14, RÖ15, RÖ16
Funny and Enjoyable Lessons	9	RÖ4, RÖ5, RÖ7, RÖ9, RÖ11, RÖ12, RÖ14, RÖ16, RÖ18
Coding Practices	6	RÖ4, RÖ6, RÖ7, RÖ12, RÖ15, RÖ17
Working as a Group	3	RÖ6, RÖ8, RÖ18
Working Independently	3	RÖ10, RÖ11, RÖ14

When Table 2 is examined; In line with the robotic applications, the students stated that they liked using robots the most, that the lessons were fun, and that they liked some of the activities more. In addition, some students stated that they enjoyed coding, working in groups and doing activities independently.

The opinions of some students about what they liked in the activities with robotic education sets are given below.
"I liked managing robots with codes the most and demolishing the houses we built from Jenga within the events . The more I code, the more I like it. It was also nice to manage the robot by speaking English in this training set and everything was a lot of fun." (RO7)
"I really liked using the robot, managing it by coding and working in groups while doing these activities." (RO6)
"I liked the activities and practices we did with the robot, especially the obstacle avoidance project." (RO13)
"I loved the robot debris and barrier-free transportation because it was so much fun and we were happy to be able to work freely." (RO14)

"I like that we can do applications on the robot, for example, change the color of the led light, encode songs on the robot, and do anything we want. I also like that we can produce solutions and write codes when there are problems." (RO10)

The themes, frequency and codes given to the students regarding the analysis of the answers given to the question "What did you not like about the activities with robotic training sets?" are presented in Table 3.

Table 3. Students Findings Regarding Dislikes in the Activities with Robotic Education Sets

Student Opinions About What They Didn't Like About the Activities With Robotic Education Sets	Frequency	Code
There is No Activity that I Don't Like	13	RÖ1, RÖ2, RÖ3, RÖ4, RÖ5, RÖ6, RÖ8, RÖ9, RÖ11, RÖ12, RÖ13, RÖ15, RÖ16
Troubles Within the Group	4	RÖ7, RÖ14, RÖ17, RÖ18
Insufficient Lesson Hours	2	RÖ10, RÖ18
Partially dissatisfied (Based on some Specific Activities)	1	RÖ14

When Table 3 is examined; The majority of the students stated that there was no application that was not liked by the studies. Despite this, some students said that they had problems in the group, the lesson hours were short and they did not like some activities.

The opinions of some students about what they liked in the activities with robotic education sets are given below.
"Actually, everything was very good, but I think there was a problem, it was about the group, not the training set. At first, when we couldn't build the robot, everyone got a little confused while talking to each other, but when we did, this problem was solved." (RO7)
"Sometimes I couldn't get along with my friends. It was a problem. Also, I didn't like the Tozkoparan event because I couldn't do it." (RO14)
"There was no activity that I didn't like, it was all very nice." (RO9)
"There was nothing I didn't like, it was a very fun application, it was a good time." (RO11)
"The activities were great fun, I just didn't like the lack of class hours." (RO10)

The themes, frequency and codes given to the students regarding the analysis of the answers given to the question "What are the difficulties and differences you encounter in the process of educational robotics applications?" are presented in Table 4.

Table 4. Students Findings Concerning Their Thoughts on the Challenges and Differences Encountered in the Process of Educational Robotics Applications

Student Views on Challenges and Differences Encountered in the Process of Educational Robotics Applications	Frequency	Code
Difficulties in Coding	9	RÖ5, RÖ7, RÖ8, FÖ6, RÖ10, RÖ11, RÖ12, RÖ16, RÖ18
Intra-Group Incompatibility	5	RÖ2, RÖ3, RÖ9, RÖ14, RÖ17
Initial Concerns	5	RÖ5, RÖ10, RÖ14, RÖ11, RÖ18
Controlling the Robot	5	RÖ1, RÖ2, RÖ6, RÖ13, RÖ15
Time Shortage	3	RÖ4, RÖ6, RÖ13

When Table 4 is examined; The students stated that they had difficulties in coding in general, however, the inconsistencies in the group and the worries at the beginning of the practices forced them. Some of the students stated that they had difficulty in controlling the robot and that they had difficulties in terms of time.

The opinions of some students about the difficulties and differences encountered in the educational robotics applications are given below.

"Sometimes we would try to quickly complete the tasks outlined in the worksheets because we had limited time. This situation forced us a little." (RO4)
"The hardest thing for me was to write code. Because the code was different with Scratch , it was different with Mblock , but as I learned, I equated them both." (RO7)
"At the beginning, it was very difficult for me and my team to control and connect the robot. But eventually we found a solution to that too." (RO1)
"I had some difficulty in coding and working with the group was a different and beautiful thing. Another requirement is that I was a little excited because it was my first time doing such events and I couldn't do much coding." (RO11)
"I had a hard time controlling the robot from the tablet, but I tried and succeeded, and during the activities, I had little arguments with my friends." (RO2)

The themes, frequency and codes given to the students regarding the analysis of the answers given to the question "What did you pay attention to while performing educational robotic applications?" are presented in Table 5.

Table 5. Students Findings Regarding What He Pays Attention To While Performing Educational Robotic Applications

Student Opinions on Things Considered While Performing Educational Robotics Applications	Frequency	Code
Do Not Harm the Robot	11	RÖ3, RÖ5, RÖ6, RÖ7, RÖ9, RÖ10, RÖ11, RÖ13, RÖ15, RÖ17, RÖ18
Correct Encoding	10	RÖ2, RÖ5, RÖ6, RÖ7, RÖ8, RÖ10, RÖ11, RÖ14, RÖ16, RÖ17
Following the Guidelines (Worksheets)	6	RÖ1, RÖ2, RÖ3, RÖ5, RÖ8, RÖ14
Working as a Collaborative Group	5	RÖ3, RÖ4, RÖ8, RÖ9, RÖ12,
Respecting Ideas	4	RÖ1, RÖ11, RÖ12, RÖ18
Listening to Teacher Alerts	2	RÖ2, RÖ8,

When Table 5 is examined; Most of the students stated that they took care not to damage the robot and to do the coding correctly. Some students stated that they pay attention to follow the instructions, work in collaborative groups, respect everyone's opinion and listen to the teacher's warnings during the studies.

Some students' opinions on what they pay attention to while performing educational robotics applications are given below.
"I was careful to work collaboratively, to find common ground and act accordingly, and to respect each other's ideas." (RO12)
"We paid the most attention to the problems that would happen to the robot if we made a mistake, for example, we tried to protect the robot so that if we did the forward code incorrectly, it wouldn't crash." (RO7)
"We took care to get the opinions of our friends and to do the coding properly. We also took care to use our robot well." (RO11)S
"We took care not to damage the robot and break parts of it." (RO13)
"I was careful not to harm the robot, to work as a team, and to follow the order of tasks on the worksheet." (RO3)

The themes, frequency and codes given to the students regarding the analysis of the answers given to the question "How did you contribute to the studies conducted with the group?" are presented in Table 6.

Table 6. Students Findings Concerning Their Opinions About How It Contributes to Group Studies

Student Views on Educational Robotic Applications	Frequency	Code
Helping Group Members	10	RÖ1, RÖ3, RÖ4, RÖ5, RÖ6, RÖ8, RÖ11, RÖ14, RÖ16, RÖ18
Filling in the Activity Sheet	7	RÖ2, RÖ3, RÖ6, RÖ9, RÖ10, RÖ12, RÖ15

Writing Code	6	RÖ2, RÖ3, RÖ6, RÖ7, RÖ10, RÖ17
Expressing an Idea	5	RÖ1, RÖ8, RÖ12, RÖ13, RÖ14,
Motivating the Group	3	RÖ4, RÖ13, RÖ18
Managing the Robot	2	RÖ14, RÖ17

When Table 6 is examined; Many students stated that they contributed to the work done with the group by helping group members, filling out the activity sheet, writing code and expressing their own ideas. In addition, some students stated that they participated in the studies by motivating the group and helping the management of the robot used in the applications.

Some students' views on how they contributed to the group work are given below.
"I wrote my own comments and said the answers correctly, I believe I gave motivation to my group." (RO13)
"It was good that we worked as a group because when we had difficulties where we could not do, I would get the support of our friends and I helped my friends when they needed it." (RO5)
"I made the biggest contribution by helping my team when it saw mistakes and raising awareness for my team." (RO4)
"I tried to continue the activity by answering the worksheet that our teacher gave us and putting forward ideas together." (RO12)
"I contributed by writing code because I became a good programmer and since I have mastered the main codes, he contributed by writing the desired codes." (RO7)

"Do you want to have such applications during the teaching of the science course? The themes, frequency and codes given to the students regarding the analysis of the answers given to the question "Why?" are presented in Table 7.

Table 7. Students Findings Related to Requesting Robotic Applications During the Teaching of Science Course

Student Opinions on Desire to Have Robotic Applications During the Teaching of Science Course	Frequency	Code
Positive Feedback		
Being of Enjoyable and Funny	12	RÖ1, RÖ2, RÖ3, RÖ5, RÖ6, RÖ7, RÖ8, RÖ9, RÖ11, RÖ13, RÖ15, RÖ16
Better Learning Practices	7	RÖ1, RÖ2, RÖ3, RÖ6, RÖ7, RÖ13, RÖ14
Being Curious	4	RÖ2, RÖ4, RÖ5, RÖ17
Generating Solutions to Real-Life Problems	4	RÖ9, RÖ10, RÖ12, RÖ17
Benefit from robotic applications	4	RÖ8, RÖ11, RÖ14, RÖ17
Increasing in Knowledge	4	RÖ4, RÖ8, RÖ10, RÖ12
Negative Opinions		
Being Boring	1	RÖ18

When Table 7 is examined; students Opinions on the desire to have robotic applications during the teaching of the science course are given under the "positive" and "negative" sub-themes. In the sub-theme of positive opinions, many students who wanted robotic applications to continue in the lessons explained that the reason for this was that the lessons were fun and they learned the lesson better. Some students think that robotic applications; He stated that he would like to use it again in his lessons because it is interesting, can produce solutions to daily life problems, will benefit from such applications in the future and provide new information to be learned.

The positive opinions of some students regarding the situation of wanting robotic applications during the teaching of the science course are given below.
" Yes , because the more we learn about technology, the more we can find solutions to the challenges we face in daily life." (RO12)

"I would like. It's fun and time goes by so fast. Besides, I don't get bored, there were very good lessons, I think it will be useful for me in the future." (RO11)
" Yes , I would because I learned coding while learning my lessons, I was able to solve different kinds of problems, I learned new information. Therefore, I would like to practice robotics in my lessons in the future." (RO10)
" Yes , because we learn things that will be useful in our real life, and the lessons were not boring and fun." (RO9)
" Yes , because we were learning something new while doing robotic activities and it was continuing in our lessons. I believe it will contribute a lot to me in the future, and most importantly, you had a fun time." (RO8)

In the sub-theme of negative opinions, there is a student who does not want robotic applications to continue in the lessons. He explained the reason for this situation as it can be boring to do similar applications all the time.
The negative opinions of some students regarding the situation of wanting robotic applications during the teaching of the science course are given below.
"No I do not want to. In fact, while these types of applications are fun at first, dealing with robots and code all the time can be boring at times." (RO18)

4. RESULTS AND DISCUSSION

In this research, the opinions of the students about the educational robotic applications carried out with the secondary school students were taken. Within the scope of the research , answers were sought to questions such as what the students liked and did not like in the activities, how they contributed to the work done in groups, what were the difficulties and differences they encountered during the studies, what they paid attention to during the practices . The answers given by the students were gathered under certain themes.

Many students stated that they learned by having fun, they increased their interest and desire for the lesson, they reached new information, and some students stated that they developed their individual skills and that they would benefit from such applications in the future. They stated that they mostly liked using robots, entertaining lessons and some activities during robotic applications. In addition, some students stated that they enjoyed coding, working in groups and doing activities independently. However, many students who want robotic applications to continue explained the reason for this situation as the lessons were fun and they learned the lesson better. Some students think that robotic applications; He stated that he would like to use it again in his lessons because it is interesting, can produce solutions to daily life problems, will benefit from such applications in the future and provide learning new information. In the literature review, the results supporting the research were reached (Akman Selçuk, 2019; Çam, 2019; Kılıçkıran, Korkmaz & Çakır, 2020; Small & Fat, 2017; Ruf, Mühling & Hubwieser, 2014; Plunder, 2020). Ruf, Mühling & Hubwieser (2014) stated that robotic activities were found fun by students and facilitated their learning. Kılıçkıran, Korkmaz & Çakır (2020) stated that the robotic coding training they carried out in their research positively affected the students participating in the research and they found the activities enjoyable.

The students stated that they had difficulties in coding in general during the robotic applications, however, the incompatibilities occurring within the group and the worries at the beginning of the applications forced them. Some of the students stated that they had difficulty in controlling the robot and that they had difficulties in terms of time. In addition, most of the students stated that there was no application that was not liked by the studies. Despite this, some students said that they had problems in the group, the lesson hours were short and they did not like some activities. In fact, a student who did not want robotic applications to continue explained the reason for this situation as that it would be boring to make similar applications all the time. Çam (2019) stated that at the beginning of the robotic-assisted programming study, students had prejudices and concerns about the lesson and that they had difficulty in coding in the process. Koç (2019) stated in his research that robotic-assisted STEM activities take a lot of time. Star Durak, Karaoğlan Yılmaz & Yılmaz (2018) in his research examining students' views on robotic design activities, concluded that the students saw this process as fun but challenging.

Many of the students stated that they took care not to damage the robot during the applications and to make the coding correct. Some students stated that they pay attention to follow the instructions, work in collaborative groups, respect everyone's opinion and listen to the teacher's warnings during the studies. Many students stated that they contributed to the work done with the group by helping their group members, filling out the activity sheet, writing code and expressing their own ideas. In addition, some students stated that they participated in the studies by motivating the group and helping the management of the robot used in the applications. When similar studies are examined in the relevant literature, it is stated that the students participating in the robotics games like the group work, they have reached the level where they can help their friends, develop their personal ideas and designs (Akman Selçuk, 2019; Çam 2019).
Based on the results of the research, some suggestions for educational robotic applications are given below Suggestions are given;

- The use of robotic applications in lessons can be expanded.

- In line with the results obtained, changes can be made to take into account robotic applications while updating the science course curriculum.
- robotic applications on different variables such as students' motivation and self-efficacy can be investigated.
- Students participating in robotic applications can participate in scientific competitions such as TÜBİTAK TEKNOFEST where autonomous vehicles are used and project studies can be researched.

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The Evaluation of Political Party Leaders' Persuasion and Confidence Levels by their Followers on Twitter: The Case of Düzce

Aytekin İŞMAN
Professor Dr. at Sakarya University Faculty of Communication

Engin DAĞDEVİREN
Student of Communication Studies PhD. Programme, Institute of Social Sciences, Sakarya University

ABSTRACT
Twitter is one of the most popular social media channels and, due to its structure, it is more suitable for information sharing, persuasion, and the use of public relations methods than the other frequently used social media channels (e.g., Facebook, Instagram, TikTok). Twitter is one of the most used channels by political parties and party leaders in Turkey and in the world. In this study, the confidence and persuasion levels of the Twitter accounts of the leaders of the political parties in the Turkish Grand National Assembly were evaluated in line with the views of the Twitter followers living in Düzce. Within the scope of the research, the 'Confidence and Persuasion Scale in Interpersonal Communication' developed by Karadoğan (2003), was applied to 400 Twitter users over the age of 18 living in Düzce. To check the reliability of the scale, the Cronbach Alpha test was applied, and the alpha value was obtained as 0.9086 (Karadoğan, 2003, p. 240). The data obtained were analyzed with the SPSS package program and the findings and detailed explanations were given. As a result of the collected opinions, it was revealed to what extent the leaders of the political parties were perceived as reliable and persuasive, and the reasons were examined. In addition, the differences between being reliable and persuasive in social media and being reliable and persuasive in interpersonal communication were evaluated. As a result of the research, recommendations were made for social media influencers to create reliable and persuasive profiles. It is thought that these recommendations will be beneficial to individuals and institutions who actively use social media in public relations, such as companies, advertisers and artists, especially political parties, and their leaders.
Keywords: social media; Twitter; persuasion; confidence; political party leaders

INTRODUCTION
Communication, by nature, is a process that people use to give meaning to their environment, to exchange information and to influence others since their birth. This process, which was carried out interpersonally in the past, could be carried out through different channels with the existence of technology and thus various communication channels. With the development of the Internet and Web 2.0 technology, social media channels, which have found a place in society, are communication tools that are frequently used by billions of people today. These channels, which have most of the interpersonal communication dynamics, provide an advantage in terms of reaching more people with less time and energy. Today, every person and institution of the society, from artists to politicians, from athletes to health professionals, from news channels to religious institutions, have social media accounts in order to benefit from this advantage. Communication has traditionally been defined as the field of research on how people influence others or are influenced by them. When evaluated in this context, communication is a social phenomenon and should be included in the scope of social sciences. However, today, communication has become a multidisciplinary concept due to different interpretations of various disciplines, and its definition varies within the scope of the discipline, purpose and method used (Krauss & Fussell, 1996). In addition to this, relatively newly emerging communication channels, depending on the developing technology, have also revealed new communication forms and methods. The Internet's entry into our lives and becoming interactive is not a long time ago, but reaching so many people in such a short time has undoubtedly made it in a different position among all communication channels.

SOCIAL MEDIA
Among the forms of communication offered by internet technology, the most effective and common channels are social media channels. The main reasons for the prevalence and effectiveness of these channels are that they are easy to use, constantly updated, allow versatile use and versatile sharing, and are accessible to anyone with an internet connection. They allow people to get their ideas, photos, videos, status, and updates to a large number of people with little effMean Social media are web-based communication tools that allow users to communicate without time and place restrictions. Social media is difficult to define because it is difficult to determine what should be considered social media. According to Kaplan and Haenlein (2010, p. 60,61), to define the term social media, it is necessary to know the difference between social media and two similar concepts called ‘Web 2.0’ and

'User Generated Content'. It is necessary to consider Web 2.0 as a platform for the development of social media and User Generated Content as the sum of all the activities that users do on social media. Web 2.0, unlike Web 1.0, allows internet users to contribute to and modify content on the web.

Bozarth (2010, p. 11) considers social media as fruits of the Web 2.0 platform, unlike Web 1.0 platforms where content is produced by journalists, writers, or mass media executives, and defines them as platforms where content is created and modified by users. According to the author, social media platforms can have different goals such as communication, collaboration, communities, reviews/opinions, and multimedia. 'Social media' is the phenomenon that encompasses activities, practices and behaviors among groups of people who gather online to share information and opinions using Web-based applications that enable the creation and transmission of content in the form of words, images, videos and sounds. (Safko and Brake, 2009, p. 6). Social media, unlike traditional media, give users the opportunity to actively engage in a communication process through information sharing, dissemination, and exchange of ideas. (Chan-Olmsted, Cho and Lee, 2013, p. 152).

MICRO-BLOGS AND TWITTER

Microblogs, as the name suggests, are 'micro' versions of blogs. Users can share their ideas, interests or express themselves (Jansen, Sobel, Zhang & Chowdury, 2009, p. 3860), usually no more than 200 characters (Java, Finin, Song & Tseng, 2007, p. 56). These are the channels that people can see and interact with and share on their personal pages. In another definition, "microblog refers to the activity in which users post short text updates about minor details such as what they read, think and experience in their daily life and work activities" (Zhao and Rosson, 2009, p. 243).

Blogs and microblogs may sound like the same thing; however, there are two important differences between them. First, blogs are social media channels used to post articles or ideas in a relatively long and detailed form; however, microblogs are channels used to send ideas and/or notifications in a short and fast manner (Ebner & Schiefner, 2008, p. 156). Therefore, microblogs are faster ways to spread messages, thereby reducing the time it takes for followers to read posts. The second difference is between update speeds. An active blogger updates his blog every few days, while a micro blogger can post too many updates in a day (Java et al., 2007, p. 57).

The most famous micro-blogging site is Twitter (www.twitter.com). Twitter is "a micro-blogging platform that allows its users to send and receive information from people on their 'followers' and 'followed' lists." (İşman & Dağdeviren, 2018, p.1). The logic of Twitter is to connect people from all over the world and to allow them to share updates with people on their followers list. Updates are usually in text forms and have a 140 character limit. However, they are not limited to text only, users can share links, videos, photos and GIFs. Other people in their network can view posts and interact by commenting, liking and retweeting (sharing the posts on their own Twitter accounts). Twitter is the largest micro-blogging platform with 326 million active users worldwide (Hootsuite & We are Social, 2019, p. 81). When people follow a friend on most online social networking sites like MySpace and Facebook, they are automatically followed by them. However, in the case of Twitter, a follower does not need to be followed by a follower in return. There is a 140-character limit for their posts, so the information in the posts should be written neatly and more carefully, keeping it short and not exceeding the limit. Users can not only share text, but also send images, videos, and external links (İşman & Dağdeviren, 2018). The important features that distinguish Twitter from other social media channels are that it does not take much time to share and follow the shares because short texts or updates are shared, and the update speed is higher than other channels (Java, Song, Finin, & Tseng, 2007). Considering these features and advantages of Twitter, it can be understood why it is such a widely used social media channel. Twitter has become the focus of attention of political parties, artists, companies and news organizations, in short, all individuals and institutions that want to establish relations with the public, especially in Turkey.

CONFIDENCE AND PERSUASION IN POLITICAL COMMUNICATION

Although political communication traces its roots to the earliest classical works of Aristotle and Plato, modern political communication studies is an interdisciplinary field of study that draws from communication, political science, journalism, sociology, psychology, history, rhetoric and other fields (Kaid, 2004). Many definitions of political communication have been developed, but none have gained universal acceptance. Perhaps the simplest and most valid definition is Chaffee's (1975, p. 15): "Political communication is the role of communication in the political process.". Based on this definition, we can name all kinds of communication activities of those who deal with politics to reach the public as political communication. This style of communication, which was done interpersonally in the earliest times, has been made through newspapers, radio, television, and recently, the internet, respectively. With the decline in the demand of traditional media and the increase in internet use, social media channels have become popular for political communication. Citizens have had new opportunities for political participation and communication by participating in interest groups, interacting with political institutions and

candidates, and exchanging and discussing political information with other citizens (Himelboim, Lariscy, Tinkham, & Sweetser, 2012). Since the most popular communication medium among people today is social media, these channels have also been the focal point of political communication. After all, the purpose of political communication is to reach as many people as possible at a time and to persuade society by instilling a sense of trust.

POLITICAL PARTIES

Political parties are indispensable institutions in democratic societies. Political parties are democratic institutions that allow people to express themselves politically and participate in politics (Gökçe, 2013, p. 66). Many different approaches have been proposed to define political parties, and these definitions have changed in terms of organizational structures, functions and methods of coming to power (Tan, Çiçek, & Koçar, 2015, p. 352). According to Özbudun (1974, p. 4), political parties are "political communities with a permanent and stable organization that try to seize or maintain the state administration by gaining the support of the people". Political parties, and indirectly the leaders and spokespeople of political parties should stay in constant contact with the society, not just during election times. The fact that they do this through social media channels is due to the 'interactivity' advantage of social media and the opportunity to make it to a large audience with less expense and effort (Özkan & Türkmen, 2020, p. 8).

PURPOSE OF THE RESEARCH

Where there is a majority of the society, it is expected that there will be individuals and institutions whose goal is to reach the society. Social media platforms, which are actively used by billions of people today - 3.8 billion people in the world use social media - are among the most suitable places to carry out political communication activities. In Turkey, 64% of the population uses social media actively and people aged 16-64 spend an average of 2 hours and 51 minutes a day on social media (We Are Social & Hootsuite, 2020). In a medium with such a large audience, it is inevitable that there will be people and institutions that carry out public relations work, from companies to public institutions, from artists to politicians.

One of the most preferred social media channels for carrying out activities on political communication is Twitter. Twitter is a micro-blogging site (up to 140 characters can be used in posts) that allows people to exchange information with people on their 'followers' and 'followed' lists (İşman & Dağdeviren, 2018, p. 1). On Twitter, users can share posts, photos, videos, locations and updates, like and comment on posts. Twitter has 339,600,000 users in the world and 11,800,000 users in Turkey (We Are Social & Hootsuite, 2020). Although the number of Twitter users in Turkey is not as high as other social media channels such as Facebook (37,000,000 users) and Instagram (38,000,000 users), the reason why this research is conducted on this platform is that it is thought that people follow the agenda, news and political parties in Turkey on this social media platform.

In this research, it is expected that the confidence and persuasion levels of politicians will play a key role in both interpersonal political communication and social media communication. In this context, the 'Confidence and Persuasion Scale in Interpersonal Communication' developed by Karadoğan (2003) was applied to 400 Twitter users over the age of 18 living in Düzce in order to measure the 'confidence' and 'persuasion' factors in interpersonal communication. Within the scope of the research, it is aimed to reveal to what extent the people, who make up the sample of the research, find the political party leaders they follow on Twitter confident and persuasive.

Another aim of the research is to compare the expectations of people from confidence and persuasion in interpersonal communication, which was revealed in another research (Karadoğan, 2003), and their expectations from confidence and persuasion in the social media that will be reached within the scope of this study. In this context, the findings obtained within the scope of the research will be compared with the findings obtained from the above-mentioned research and the expectations of people from confidence and persuasion in 'interpersonal communication' and from confidence and persuasion in 'online communication' will be compared. The reasons for the differences, if any, will be examined and the dynamics of two different types of communication will be explained.

Finally, in the light of the findings obtained in the research, it is aimed to reveal people's expectations of 'confidence' and 'persuasion' in social media. The findings of the study, which will be carried out on the example of Twitter and political party leaders, will be generalized and recommendations will be made to people and institutions that carry out public relations work in social media.

IMPORTANCE OF RESEARCH

Social media channels are communication platforms used by billions of people all over the world daily, and they are used by people for multiple purposes. The penetration of internet technology and social media channels into

social life and the rapid spread of their use among people has triggered intense research in this area. For this reason, the effects of social media use and the purposes of people's use of social media have been the subjects of much research in recent years. There is a rich literature on social media in Turkey and in the world containing studies which aim to reveal the usage reasons, habits and preferences of students (Başoğlu & Yanar, 2017; DeGroot, Young, & VanSlette, 2015; Erdemci, 2017; Kurt, Aktaş, & Turan, 2019; A. Şahin, Welder and Aytop, 2016; Yavuz, 2020), of teachers and academics (Küçükali and Serçemeli, 2019; Nochumson, 2020; Willet, 2019), of people from all circles nationally (Agrifoglio, Black, Metallo and Ferrara, 2012; Kijek, Angowski, & Skrzypek, 2020; Pentina, Basmanova, & Zhang, 2016).

There are also studies conducted around the world in the context of the use of social media as political communication tools (Abid, Harrigan, & Roy, 2020; Bakardjieva, 2015; Baldwin-Philippi, 2014; Bode, 2016; Bowman, 2017; Ekman & Widholm, 2014; Enli & Simonsen, 2017; Gil de Zúñiga, Barnidge, & Diehl, 2018; Harris & Harrigan, 2015; Hendriks, Duus & Ercan, 2016; Himelboim et al., 2012; Kruse, Norris & Flinchum, 2017; Loader & Mercea, 2011; Macková, 2016; Ohme, 2019; Park, 2019; Scaramuzzino and Scaramuzzino, 2017; Stewart, 2017; Valenzuela, Halpern, Katz, and Miranda, 2019). However, studies examining the use of social media as a political communication tool in our country (Andı, Aytaç, & Çarkoğlu, 2019; Aydın & Gülsoy, 2017; Bostancı, 2014; Dilber, 2018; Doğan & Alptekin, 2018; Doğan, 2020; Metin, 2016; Şahin , 2017) is less in number compared to the world. It is hoped that this study will fill this gap in the literature of our country and inspire new studies.

The research is designed to reveal how confident and persuasive the political party leaders are on their Twitter accounts, in the light of their followers' opinions. In this context, the criteria of 'confidence' and 'persuasion', which are interpersonal communication qualities, will be examined for the first time on social media platforms, which are online communication platforms, through the context of Twitter. The expectations of people of confidence and persuasion in interpersonal communication and their expectations of confidence and persuasion in communication on social media platforms will be compared on this occasion. In this context, the research is unique in that it compares two different types of communication, interpersonal communication, and online communication within the scope of field research. In the light of the findings obtained from the research, suggestions will be presented to individuals and institutions engaged in political communication activities through social media. These suggestions are expected to be beneficial to people and institutions using social media in public relations as well.

THEORETICAL FRAMEWORK

People try to exert social influence in a variety of ways. What other people think of us is important to all of us. People observe the behavior of others and imitate them. In addition, people deliberately instruct each other on what to believe and how to behave individually, through formal teaching mechanisms, and within social groups such as family and friends. Moreover, people influence each other informally through chat. This influencing process can be called 'social communication' and is referred to as 'opinion leadership', 'word-of-mouth' or 'buzz' in different situations (Goldsmith & Goldsmith, 2011).

Researchers in a wide variety of fields, including computer science, information science, sociology, and communication sciences, are currently studying social communication on the Internet. New studies emerge every day and show that people on the Internet have a powerful influence on the attitudes and behaviors of others. Especially in social media, politicians have been actively communicating with the society for a long time and trying to gain the trust of the public and persuade them in their posts.

This research is related to the 'Social Impact Theory (SIC)'. According to SIC, individual behavior is influenced by three social processes: adjustment, identification, and internalization. Adjustment indicates that an individual acts to conform to the ideas of others who are important to him. For example, users may consider following the ideas of the opinion leaders mentioned above. Identification reflects individual identification with a community, feelings of belonging and attachment are included in identification. For example, users can develop feelings of membership, influence, and value in an online community through increased user experiences. Internalization reflects that the individual accepts the influence because his values are compatible with the values of the group members (Zhou, 2011, p. 69).

According to Goldsmith and Goldsmith (2011, p. 119), there are 4 strategies to create/change behavior in social relations and/or human management: punishment method, reward method, persuasion method and the most effective one is social influence method. The punishment method is applied to erase the undesirable behavior and thus a shift to the desired behavior can be achieved. The reward method is used to reinforce the desired behavior. The purpose of the persuasion method is to create voluntary behavior change with the message given. However, the effectiveness of the method depends on several factors, including the sources of information, the channel

through which it is transmitted, the characteristics of the recipient of the information, and the nature of the persuasive message. Behavior-changing strategies combine features of all three of these approaches to maximize effectiveness. Even then, what is overlooked is perhaps the most important influence researchers can identify: the influence of other people. Social influence is a very powerful shaper of human behavior. It can affect almost any type of behavior and its effects are often unnoticed or unconscious. In this context, the extent to which political party leaders in Turkey create social impact on Twitter must be directly proportional to the sense of trust and persuasion ability they create on their followers. Thus, their impact on society will increase in direct proportion to the size of the social impact they create.

LITERATURE REVIEW

Doğan and Alptekin (2018) examined the social media usage practices of members of the Grand National Assembly of Turkey. First, it was revealed which MPs use Twitter and which do not. Later, they analyzed the Twitter posts of 514 MPs with personal Twitter accounts. The extent to which MPs use Twitter, the content of their posts, and their distribution by geographical regions, gender and political party were revealed. The Twitter accounts of 514 MPs were monitored for 30 days and their posts were analyzed using 'content analysis'.

A total of 50,855 tweets were sent from the accounts followed within the scope of the research and the number of tweets on Twitter is as follows: Marmara Region MPs (16,436 tweets), Aegean Region MPs (7,465 tweets), Central Anatolia Region MPs (6,358 tweets), Black Sea Region MPs (6,030 tweets), Mediterranean Region MPs (5,967), Southeastern Anatolia Region MPs (4,453 tweets) and Eastern Anatolia Region MPs (4,146 tweets). The ratio of the number of MPs and the number of tweets reveals that Aegean Region MPs are the most active users of Twitter (4.01 tweets per person per day), while Central Anatolia Region MPs are the least active users (2.61 tweets per person per day). It was also observed that male MPs used Twitter more intensively than female MPs. In addition, when the intensity of Twitter usage is analyzed, it is explained that the tweets of the Justice and Development Party (AKP) MPs constitute 54.9% of the total number of tweets, but this is since they have 59% of the total number of MPs. When analyzed on a party basis, the number of tweets per MP is as follows: Republican People's Party (CHP): 4.27 tweet, Good Party (İYİ): 3.82, Nationalist Movement Party (MHP): 3.44 tweets, Justice and Development Party (AKP): 3.06 tweets, independent MP: 2.83 tweet and Peoples' Democratic Party (HDP): 1.99 tweets. One of the findings of the research is that MPs who do not hold senior positions within the party or who are not ministers use Twitter more actively. Finally, the topics and rates of the posts made during the 30-day period are as follows: 20,200 tweets (around 40%) were about party activities, 12,009 tweets (24%) about parliamentary activities, 11,084 tweets (around 21%) about other issues and 7,562 tweets about celebrations (around 15%).

The research is important in terms of showing that Twitter is a social media platform that is popular among politicians in Turkish politics. However, the question arises as to how politicians' posts are perceived by users. This study will attempt to answer this question by analyzing users' evaluation of the credibility and persuasiveness profile of political party leaders on Twitter.

Aydın and Gülsoy (2017) conducted a field study on the impact of political party leaders' use of social media on young voters. The sample of their study consisted of students from a state university in Turkey and they used an online survey tool to collect data. In the study, which had a sample size of 786, people were asked about their social media using habits and questions about social media and democratic participation, and their opinions were collected with a 5-point Likert-type questionnaire.

According to the findings, the respondents in the sample stated that they use Skype (28.6%) the most among social media sites, followed by WhatsApp (28.1%), Instagram (22.9%), Google+ (20.7%), Twitter (20%) and Facebook (17.9%). In terms of the purposes of social media use, the responses of the respondents were as follows: sharing (25.2%), commenting on political issues (24.2%), following political party leaders (21.7%), following the agenda (20.7%), chatting (19.5%) and following friends (17.9%).

The most important findings of the research are the views of young voters on political communication and social media. Accordingly, 73.4% of young voters agreed with the view that 'social media has the power to organize and mobilize young voters' and 64.3% agreed with the view that 'political party leaders should promote and evaluate the projects of the party they represent through social media'. In this context, it can be concluded that the effective use of social media platforms by party leaders for political communication may affect voter behavior. Based on this, it can be concluded that credible and persuasive social media accounts are important for political party leaders to establish positive communication with the public.

In another study, Dilber (2018) examined the social media use of political parties and party leaders in Turkey. It comparatively revealed which social media channels political parties and party leaders use. Categorical content

analysis technique was used to analyze the data. Accordingly, the content of the messages on the social media channels of the parties and leaders included in the sample were categorized according to their meanings.
The findings reveal that AKP has the highest number of followers in almost all channels (Facebook, Twitter, Instagram, Google+), followed by MHP and then CHP. It was observed that these parties and their leaders used their social media accounts to reach, inform, promote and persuade their voters.

In the research, it was stated that the fact that social media channels are not one-way like traditional media, but rather allow interaction, makes the use of these channels compulsory for political parties. In this respect, it was underlined that political communication activities to be carried out in these channels should be skillfully conducted. Since being reassuring and persuasive are among the key elements of successful political communication, it is important for the literature and politicians to reveal to what extent political party leaders are perceived as reassuring and persuasive.

Gökçe et al. (2014) aimed to reveal the opinion leaders operating in social media in Turkey. They analyzed more than 10 million active Twitter users in Turkey and created social network graphs of these users. Using a program designed to analyze complex information flows, they analyzed the paths and reach of Twitter posts and tried to identify the opinion leaders and intermediaries. Within a 3-month period, posts and interactions on Twitter following an important political event were included in the sample.

According to the findings of the research, it was revealed that the people who carry out political communication activities are opinion leaders. However, contrary to popular belief, opinion leaders were found to be mostly columnists, journalists and television programmers, rather than political parties and party leaders.

In this context, political party leaders need to use social media channels more effectively and expertly in order to become opinion leaders. Since this study will reveal the extent to which political party leaders are perceived as reassuring and persuasive on a social media channel, it is thought that the findings and recommendations to be given will be valuable for everyone who conducts political communication activities.

In another study, Ekmekci (2010) introduced the lack of social trust in Turkey and evaluated its political effects. He conducted the research with the literature review method and gave the results under separate headings.

In his research, he emphasized that Turkey ranked 55th out of 57 countries in the social trust index and stated based on research that Turkish people do not trust political party leaders in particular. He also stated that the search for a 'strong leader' will increase in countries with a high lack of social trust. In this context, he cited the 'World Values Survey' as an example and mentioned that while the average of 'would be very good' and 'would not be bad' responses to the question on 'strong leader' was 38.1% for 55 countries, this rate was 58.9% in Turkey.

As Ekmekci's (2010) research reveals, there is a problem of trust in politicians and political parties in Turkey. This problem needs to be solved by politicians and political parties who want to establish more effective political communication. This research will provide findings and recommendations to help people and organizations in need.

Another study on the role of social media in political communication is Householder and LeMarre (2014). In this study, the researchers conducted an experimental study to measure the extent to which a politician is perceived as trustworthy on Facebook. In the design phase of the experiment, Facebook accounts were created for one fictitious Democratic and one fictitious Republican senatorial candidate. In fact, these fictionalized Facebook pages are exactly the same from their posts to their photos, the only difference being whether they are 'Democrat' or 'Republican'. In this context, they sat 126 university students in front of a computer and asked them to analyze the Facebook profile of this non-existent senatorial candidate. Then a specially designed questionnaire with sub-dimensions of 'personal closeness', 'trustworthiness', 'information reliability', 'political party predisposition' and 'political interest/knowledge' was administered to the respondents.

As a result of the study, it was found that trustworthiness is related to personal closeness (having similar tastes, social environment, background, etc.). Knowledge, merit and strength of claims also have an impact on credibility. Finally, it has also been found that trustworthiness increases political participation, in other words, people are more likely to participate politically when there are political parties and/or leaders they trust.

As the above research reveals, effective use of social media accounts is key to building a credible and persuasive profile. In this respect, it is necessary to reveal the extent to which people and institutions engaged in political

communication activities are perceived as reliable and persuasive. This situation is important in terms of eliminating deficiencies in order to display a better profile.

Another study was conducted by Harris and Harrigan (2015) during the 2010 UK election campaign. The researchers analyzed the election campaigns of two liberal democratic candidates (one candidate in the city of Winchester and the other candidate in the city of Romsey) on social media (Twitter, Facebook and YouTube). In the research, they aimed to find out to what extent election campaigns conducted on social media can be effective and to reveal their benefits and harms.

As a result of the research, both candidates stated that Twitter is the best social media channel for political communication. They listed the following reasons why Twitter is so effective: it allows for instant information and interaction, it is very useful for calling voters to action at local events, and the use of hashtags (#) is very useful for agenda setting.

The results of the study confirm that Twitter is the most appropriate medium to carry out political communication activities. It is known that billions of people around the world actively use different social media channels. At the same time, it is also known that each social media channel stands out with one dimension. Some are designed for sharing photos, while others are designed for sharing short videos. Twitter, on the other hand, is preferred more than other social media channels for political communication, as mentioned earlier and as this study proves. The reason for conducting this research on Twitter is that Twitter is considered to be more useful and more preferred than other social media channels for political communication in Turkey.

METHOD

This research is designed as a descriptive research type. Descriptive studies attempt to describe, understand, compare, compare, classify, analyze, and interpret certain types of phenomena on individuals, groups, or institutions (Cohen, Manion, & Morrison, 2005, pp. 169). This type of research is concerned with how the current situation is related to some events that influence it (Best and Kahn, 1998, pp. 113).

RESEARCH DESIGN

Relational survey model was used in the study. The correlational survey model allows researchers to investigate the variation between two or more variables and their severity (Karasar, 2005, pp. 78). In this direction, this study will try to establish and explain the link between variables such as age, gender, education level, following political party leaders on Twitter, and the extent to which political party leaders on Twitter are trustworthy and persuasive.

DATA COLLECTION TOOL

In this study, survey technique was used to collect data. The survey technique is the best alternative among scientific methods for collecting data over a period of time to describe the nature of the phenomenon at hand and to reveal the relationship between specific events (Cohen, Manion, & Morrison, 2005, pp. 170).

POPULATION

The population of the study consists of people over the age of 18 living in Düzce province. Participation in the research is entirely voluntary.

SAMPLE

Within the scope of the research, 'Trust and Persuasion Scale in Interpersonal Communication' developed by Karadoğan (2003) was applied to 112 Twitter users over the age of 18 living in Düzce province. Cronbach Alpha test was applied to check the reliability of the scale and the alpha value was obtained as 0.9086 (Karadoğan, 2003, p. 240).

DATA ANALYSIS

The data obtained were analyzed with Microsoft Excel program and the findings and detailed explanations are given. Research findings are presented systematically, mostly through percentage tables and descriptive tables.

LIMITATIONS

This research is limited to people over the age of 18 living in Düzce province in December 2020.

ASSUMPTIONS

It was assumed that the participants gave sincere answers to the survey questions. In addition, it was assumed that the selected sample has the power to represent the population.

FINDINGS

A total of 112 people participated in the survey and the findings are presented in tables in this section. Explanations of the given tables are given below the tables.

Table 1: Distribution of participants by gender

Gender	**Frequency**	**%**
Female	52	46,4
Male	60	53,6

Of the 112 participants, 52 (46.4%) were female and 60 (53.6%) were male. In this context, the gender of the participants was almost equally distributed.

Table 2: Distribution of participants by age

Age	**Frequency**	**%**
18-25	36	32,1
26-35	33	29,5
36-45	29	25,9
46-55	9	8
56-65	5	4,5
66 and above	0	0

As can be seen from the table above, the majority of the respondents are young people. Participants aged 18-25 years (n: 36) constituted 32.1% of the sample, and participants aged between 26-35 years (n: 33) constituted 29.5% of the sample, and participants aged 36-45 years (n: 29) constituted 25.9% of the sample, and participants aged 46-55 years (n: 9) constitute 8% of the sample and participants aged 56-65 (n:5) constitute 4.5% of the sample. Within the scope of the research, there are no participants aged 66 and over. The middle-aged and elderly groups were reluctant to participate in the research, which is why their numbers are so small. During the research, it was observed that young people were more willing to participate in the survey.

Table 3: Distribution of Participants by Level of Educational

Level of Educational	**Frequency**	**%**
Primary education	3	2,7
High School	8	7,1
Associate Degree	10	8,9
Bachelor’s Degree	66	58,9
Master's Degree	9	8
PhD Degree	16	14,3

It was observed that most of the people who volunteered to participate in the study (58.9%) were undergraduates. Primary school graduates (2.7%) showed the least participation. Bachelor's degree graduates were followed by PhD graduates (14.3%), associate's degree graduates (8.9%), master's degree graduates (8%) and high school graduates (7.1%).

Table 4: Distribution of Participants by Occupation

Occupation	**Frequency**	**%**
Student	38	34,5
Housewife	6	5,5
Worker	6	5,5
Officer	40	36,4
Administrator	6	5,5
Tradespeople	3	2,7
Private Sector Employee	3	2,7

Self-employment (Lawyer, Medical Doctor, Pharm., Engineer, etc.)	8	7,3
Did not specify occupation	2	1,7
Total	112	100

The majority of the participants were civil servants (36.4%) and students (34.5%). These groups were followed by self-employed workers (7.3%), housewives (5.5%), workers (5.5%), managers (5.5%), tradespeople (2.7%) and private sector employees (2.7%).

Table 5: Twitter Use of the Participants

Twitter Use	**Frequency**	**%**
Uses Twitter	66	58,9
Does Not Use Twitter	46	41,1
Total	112	100

Participants were asked the question 'Do you use Twitter?' at the beginning of the survey and according to the answers given, 41.1% (46 people) of the participants do not use Twitter, while 58.9% (66 people) use Twitter.

Table 6: Following Recep Tayyip Erdoğan's Twitter Account

Question: "Do you follow Recep Tayyip Erdoğan's Twitter account?"	**Frequency**	**%**
Yes	22	33,3
No.	44	66,7

In this context, the survey continued with 66 respondents. The next question asked to Twitter users was "Do you follow Recep Tayyip Erdoğan's Twitter account?". 22 (33.3%) participants answered 'Yes' and 44 participants (66.4%) answered 'No'.

Table 7: Scale Items and Frequency and Percentages of Responses (Recep Tayyip Erdoğan)

Item 1: Recep Tayyip Erdoğan's Twitter feed is reliable.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	18,2	
2	2	9,1	
3	4	18,2	
4	4	18,2	
5 (Completely agree)	8	36,4	
Total	22	100	3,4545
Item 2: Recep Tayyip Erdoğan is confident on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	9,1	
2	1	4,5	
3	3	13,6	
4	6	27,3	
5 (Completely agree)	10	45,5	
Total	22	100	3,9545
Item 3: Recep Tayyip Erdoğan is respectful on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	4,5	
2	5	22,7	
3	2	9,1	
4	5	22,7	
5 (Completely agree)	9	40,9	

Total	22	100	3,7272
Item 4: Recep Tayyip Erdoğan is outspoken on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	13,6	
2	3	13,6	
3	6	27,3	
4	2	9,1	
5 (Completely agree)	8	36,4	
Total	22	100	3,4090
Item 5: Recep Tayyip Erdoğan is calm on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	9,1	
2	4	18,2	
3	7	31,8	
4	2	9,1	
5 (Completely agree)	7	31,8	
Total	22	100	3,3636
Item 6: Recep Tayyip Erdoğan is courteous on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	9,1	
2	3	13,6	
3	7	31,8	
4	2	9,1	
5 (Completely agree)	8	36,4	
Total	22	100	3,50
Item 7: Recep Tayyip Erdoğan is consistent in his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	13,6	
2	2	9,1	
3	7	31,8	
4	2	9,1	
5 (Completely agree)	8	36,4	
Total	22	100	3,4545
Item 8: Recep Tayyip Erdoğan does not lie on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	6	27,3	
2	2	9,1	
3	5	22,7	
4	2	9,1	
5 (Completely agree)	7	31,8	
Total	22	100	3,0909
Item 9: What Recep Tayyip Erdoğan says on Twitter does not contradict each other.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	6	27,3	
2	6	27,3	
3	1	4,5	
4	3	13,6	
5 (Completely agree)	6	27,3	
Total	22	100	3,1363

Item 10: Recep Tayyip Erdoğan stands by what he says on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	18,2	
2	6	27,3	
3	3	13,6	
4	1	4,5	
5 (Completely agree)	8	36,4	
Total	22	100	3,00
Item 11: Recep Tayyip Erdoğan chooses the right words on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	4,5	
2	2	9,1	
3	6	27,3	
4	3	13,6	
5 (Completely agree)	10	45,5	
Total	22	100	3,8636
Item 12: Recep Tayyip Erdoğan does not use exaggerated expressions on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	5	22,7	
2	3	13,6	
3	6	27,3	
4	0	0	
5 (Completely agree)	8	36,4	
Total	22	100	3,1363
Item 13: Recep Tayyip Erdoğan's Twitter posts and his behavior are consistent with each other.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	13,6	
2	6	27,3	
3	4	18,2	
4	0	0	
5 (Completely agree)	9	40,9	
Total	22	100	3,2727
Item 14: There is a unity in Recep Tayyip Erdoğan's Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	13,6	
2	1	4,5	
3	9	40,9	
4	2	9,1	
5 (Completely agree)	7	31,8	
Total	22	100	3,4090
Item 15: Recep Tayyip Erdoğan does not give evasive answers to questions asked on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	13,6	
2	2	9,1	
3	9	40,9	
4	2	9,1	
5 (Completely agree)	6	27,3	
Total	22	100	3,2727
Item 16: Recep Tayyip Erdoğan has been able to adapt to Twitter.			

Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	18,2	
2	0	0	
3	3	13,6	
4	5	22,7	
5 (Completely agree)	10	45,5	
Total	22	100	3,3181
Item 17: Recep Tayyip Erdoğan is sincere on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	6	27,3	
2	2	9,1	
3	4	18,2	
4	3	13,6	
5 (Completely agree)	7	31,8	
Total	22	100	3,0909
Item 18: Recep Tayyip Erdoğan has a proper stance on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	9,1	
2	2	9,1	
3	3	13,6	
4	7	31,8	
5 (Completely agree)	8	36,4	
Total	22	100	3,7727
Item 19: Recep Tayyip Erdoğan pays attention to the way he dresses on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	4,5	
2	0	0	
3	4	18,2	
4	3	13,6	
5 (Completely agree)	14	63,6	
Total	22	100	4,3181
Item 20: Recep Tayyip Erdoğan is sympathetic on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	18,2	
2	2	9,1	
3	6	27,3	
4	3	13,6	
5 (Completely agree)	7	31,8	
Total	22	100	3,3181
Item 21: Recep Tayyip Erdoğan's speech on Twitter is smooth.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	4,5	
2	0	0	
3	5	22,7	
4	4	18,2	
5 (Completely agree)	12	54,5	
Total	22	100	4,1818
Item 22: Recep Tayyip Erdoğan is charismatic on Twitter.			
Opinion	**Frequency**	**%**	**Mean**

1 (Completely disagree)	4	18,2	
2	0	0	
3	4	18,2	
4	5	22,7	
5 (Completely agree)	9	40,9	
Total	22	100	3,6818

As can be seen from the table above, Twitter followers are most likely to agree on item 19 (mean: 4.3181) and item 21 (mean: 4,1818). In this context, followers think that Recep Tayyip Erdoğan pays attention to his clothing and his speech is smooth on Twitter. On the other hand, the followers showed the least agreement with item 10 ('Recep Tayyip Erdoğan stands by what he says on his Twitter posts.' mean:3.00), item 17 ('Recep Tayyip Erdogan is sincere on Twitter.' mean: 3,0909), item 8 ('Recep Tayyip Erdoğan does not lie on his Twitter posts.' mean: 3,0909) and item 12 ('Recep Tayyip Erdoğan does not use exaggerated expressions in his Twitter posts.' mean: 3,1363).

Table 8: Following Kemal Kılıçdaroğlu's Twitter Account

Question: "Do you follow Kemal Kılıçdaroğlu's Twitter account?"	**Frequency**	**%**
Yes	22	33,3
No.	44	66,7

Another question asked to Twitter users who participated in the survey was "Do you follow Kemal Kılıçdaroğlu's Twitter account?". 22 (33.3%) participants answered 'Yes' and 44 participants (66.4%) answered 'No'.

Table 9: Scale Items and Frequency and Percentages of Responses (Kemal Kılıçdaroğlu)

Item 1: Kemal Kılıçdaroğlu's Twitter posts are reliable.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	18,2	
2	0	0	
3	10	45,5	
4	4	18,2	
5 (Completely agree)	4	18,2	
Total	22	100	**3,1818**
Item 2: Kemal Kılıçdaroğlu is confident on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	13,6	
2	1	4,5	
3	7	31,8	
4	7	31,8	
5 (Completely agree)	4	18,2	
Total	22	100	**3,3636**
Item 3: Kemal Kılıçdaroğlu is respectful on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	9,1	
2	2	9,1	
3	5	22,7	
4	4	18,2	
5 (Completely agree)	9	40,9	
Total	22	100	**3,7272**
Item 4: Kemal Kılıçdaroğlu is outspoken on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	18,2	

2	0	0	
3	4	18,2	
4	6	27,3	
5 (Completely agree)	8	36,4	
Total	22	100	**3,6363**
Item 5: Kemal Kılıçdaroğlu is calm on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	9,1	
2	3	13,6	
3	5	22,7	
4	4	18,2	
5 (Completely agree)	8	36,4	
Total	22	100	**3,5909**
Item 6: Kemal Kılıçdaroğlu is courteous on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	9,1	
2	3	13,6	
3	3	13,6	
4	4	18,2	
5 (Completely agree)	10	45,5	
Total	22	100	**3,7727**
Item 7: Kemal Kılıçdaroğlu is consistent on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	18,2	
2	1	4,5	
3	6	27,3	
4	4	18,2	
5 (Completely agree)	7	31,8	
Total	22	100	**3,4090**
Item 8: Kemal Kılıçdaroğlu does not lie on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	5	22,7	
2	2	9,1	
3	5	22,7	
4	5	22,7	
5 (Completely agree)	5	22,7	
Total	22	100	**3,1363**
Item 9: What Kemal Kılıçdaroğlu says on Twitter does not contradict each other.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	18,2	
2	1	4,5	
3	8	36,4	
4	3	13,6	
5 (Completely agree)	6	27,3	
Total	22	100	**3,2727**
Item 10: Kemal Kılıçdaroğlu stands by what he says on his Twitter			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	18,2	
2	0	0	

3	6	27,3	
4	4	18,2	
5 (Completely agree)	8	36,4	
Total	22	100	**3,5454**
Item 11: Kemal Kılıçdaroğlu chooses the right words on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	13,6	
2	2	9,1	
3	6	27,3	
4	4	18,2	
5 (Completely agree)	7	31,8	
Total	22	100	**3,4545**
Item 12: Kemal Kılıçdaroğlu does not use exaggerated expressions on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	6	27,3	
2	5	22,7	
3	2	9,1	
4	5	22,7	
5 (Completely agree)	4	18,2	
Total	22	100	**2,8181**
Item 13: Kemal Kılıçdaroğlu's Twitter posts and his behavior are consistent with each other.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	5	22,7	
2	1	4,5	
3	6	27,3	
4	3	13,6	
5 (Completely agree)	7	31,8	
Total	22	100	**3,2727**
Item 14: There is a unity in Kemal Kılıçdaroğlu's Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	5	22,7	
2	2	9,1	
3	4	18,2	
4	4	18,2	
5 (Completely agree)	7	31,8	
Total	22	100	**3,1818**
Item 15: Kemal Kılıçdaroğlu does not give evasive answers to questions on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	5	22,7	
2	0	0	
3	3	13,6	
4	8	36,4	
5 (Completely agree)	6	27,3	
Total	22	100	**3,4545**
Item 16: Kemal Kılıçdaroğlu has been able to adapt to Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	9,1	
2	1	4,5	
3	7	31,8	

4	4	18,2	
5 (Completely agree)	8	36,4	
Total	22	100	**3,6818**
Item 17: Kemal Kılıçdaroğlu is sincere on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	5	22,7	
2	1	4,5	
3	5	22,7	
4	4	18,2	
5 (Completely agree)	7	31,8	
Total	22	100	**3,3181**
Item 18: Kemal Kılıçdaroğlu has a proper stance on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	5	22,7	
2	2	9,1	
3	4	18,2	
4	5	22,7	
5 (Completely agree)	6	27,3	
Total	22	100	**3,2727**
Item 19: Kemal Kılıçdaroğlu pays attention to the way he dresses on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	9,1	
2	1	4,5	
3	4	18,2	
4	4	18,2	
5 (Completely agree)	11	50	
Total	22	100	**3,9545**
Item 20: Kemal Kılıçdaroğlu is sympathetic on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	18,2	
2	2	9,1	
3	4	18,2	
4	6	27,3	
5 (Completely agree)	6	27,3	
Total	22	100	**3,3636**
Article 21: Kemal Kılıçdaroğlu's speech on Twitter is smooth.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	9,1	
2	2	9,1	
3	4	18,2	
4	5	22,7	
5 (Completely agree)	9	40,9	
Total	22	100	**3,7727**
Item 22: Kemal Kılıçdaroğlu is charismatic on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	5	22,7	
2	3	13,6	
3	5	22,7	
4	6	27,3	

5 (Completely agree)	3	13,6	
Total	22	100	**2,9545**

According to the findings, the participants mostly agreed with item 19 (‘Kemal Kılıçdaroğlu pays attention to his dressing on his Twitter posts.’ mean: 3,9545), item 6 (‘Kemal Kılıçdaroğlu is courteous on his Twitter posts.’ mean: 3,7727), and item 21 ('Kemal Kılıçdaroğlu's speech on his Twitter posts is smooth.' mean: 3,7727) among the items about Kemal Kılıçdaroğlu. In this context, his followers highly agree with the views that Kemal Kılıçdaroğlu pays attention to his dressing on Twitter, that he is level in his posts and that his speech is smooth. However, item 12 ('Kemal Kılıçdaroğlu does not use exaggerated expressions on his Twitter posts.' mean: 2,8181) and item 22 (‘Kemal Kılıçdaroğlu is charismatic on Twitter.’ mean: 2,9545), were the views that the followers agreed with the least among the other items. In this context, his followers agree relatively less with the views that Kemal Kılıçdaroğlu does not use exaggerated expressions on Twitter and that he is charismatic.

Table 10: Following Devlet Bahçeli's Twitter Account

Question: "Do you follow Devlet Bahçeli's Twitter account?"	**Frequency**	**%**
Yes	16	24,2
No.	50	75,8

Another question asked to the Twitter users who participated in the survey was "Do you follow Devlet Bahçeli's Twitter account?". To this question, 16 (24.2%) participants answered 'Yes' and 50 (75.8%) participants answered 'No'.

Table 11: Scale Items and Frequency and Percentages of Responses (Devlet Bahçeli)

Item 1: Devlet Bahçeli's Twitter posts are reliable.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	12,5	
2	1	6,3	
3	2	12,5	
4	7	43,8	
5 (Completely agree)	4	25	
Total	16	100	**3,6250**
Item 2: Devlet Bahçeli is confident on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	12,5	
2	0	0	
3	1	6,3	
4	8	50	
5 (Completely agree)	5	31,3	
Total	16	100	**3,25**
Item 3: Devlet Bahçeli is respectful on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	2	12,5	
3	1	6,3	
4	7	43,8	
5 (Completely agree)	3	18,8	
Total	16	100	**3,3125**
Item 4: Devlet Bahçeli is outspoken on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	0	0	
3	1	6,3	

4	8	50	
5 (Completely agree)	4	25	
Total	16	100	**3,6250**
Item 5: Devlet Bahçeli is calm on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	25	
2	2	12,5	
3	5	31,3	
4	4	25	
5 (Completely agree)	1	6,3	
Total	16	100	**2,75**
Item 6: Devlet Bahçeli is courteous in his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	1	6,3	
3	5	31,3	
4	4	25	
5 (Completely agree)	3	18,8	
Total	16	100	**3,1875**
Item 7: Devlet Bahçeli is consistent in his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	0	0	
3	2	12,5	
4	8	50	
5 (Completely agree)	3	18,8	
Total	16	100	**3,50**
Item 8: Devlet Bahçeli does not lie in his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	1	6,3	
3	4	25	
4	4	25	
5 (Completely agree)	4	25	
Total	16	100	**3,3125**
Item 9: What Devlet Bahçeli says on Twitter does not contradict each other.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	25	
2	1	6,3	
3	5	31,3	
4	2	12,5	
5 (Completely agree)	4	25	
Total	16	100	**3,0625**
Item 10: Devlet Bahçeli stands by what he says on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	1	6,3	
3	2	12,5	
4	6	37,5	

5 (Completely agree)	4	25	
Total	16	100	**3,4375**
Item 11: Devlet Bahçeli chooses the right words on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	1	6,3	
3	4	25	
4	3	18,8	
5 (Completely agree)	5	31,3	
Total	16	100	**3,3750**
Item 12: Devlet Bahçeli does not use exaggerated expressions on his Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	4	25	
2	2	12,5	
3	4	25	
4	2	12,5	
5 (Completely agree)	4	25	
Total	16	100	**3,00**
Item 13: Devlet Bahçeli's Twitter posts and his behavior are consistent with each other.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	2	12,5	
3	4	25	
4	3	18,8	
5 (Completely agree)	4	25	
Total	16	100	**3,1875**
Item 14: There is a unity in Devlet Bahçeli's Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	1	6,3	
3	5	31,3	
4	3	18,8	
5 (Completely agree)	4	25	
Total	16	100	**3,25**
Item 15: Devlet Bahçeli does not give evasive answers to questions on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	0	0	
3	4	25	
4	6	37,5	
5 (Completely agree)	3	18,8	
Total	16	100	**3,3750**
Item 16: Devlet Bahçeli has been able to adapt to Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	12,5	
2	0	0	
3	5	31,3	
4	3	18,8	
5 (Completely agree)	6	37,5	

Total	16	100	**3,6875**
Item 17: Devlet Bahçeli is sincere on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	0	0	
3	4	25	
4	5	31,3	
5 (Completely agree)	4	25	
Total	16	100	**3,4375**
Item 18: Devlet Bahçeli has a proper stance on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	12,5	
2	0	0	
3	2	12,5	
4	7	43,8	
5 (Completely agree)	5	31,3	
Total	16	100	**3,8125**
Item 19: Devlet Bahçeli pays attention to the way he dresses on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	12,5	
2	0	0	
3	2	12,5	
4	1	6,3	
5 (Completely agree)	11	68,7	
Total	16	100	**4,1875**
Item 20: Devlet Bahçeli is sympathetic on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	1	6,3	
3	4	25	
4	5	31,3	
5 (Completely agree)	3	18,8	
Total	16	100	**3,25**
Article 21: Devlet Bahçeli's speech on Twitter is smooth.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	12,5	
2	0	0	
3	2	12,5	
4	5	31,3	
5 (Completely agree)	7	43,8	
Total	16	100	**3,9375**
Item 22: Devlet Bahçeli is charismatic on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	3	18,8	
2	0	0	
3	4	25	
4	5	31,3	
5 (Completely agree)	4	25	
Total	16	100	**3,4375**

As can be seen from the table above, his followers stated that they mostly agreed with item 19 (‘Devlet Bahçeli pays attention to the way he dersses on his Twitter posts.’ mean: 4,1875) and item 21 ('Devlet Bahçeli's speech on Twitter posts is smooth.' mean: 3,9375) from their views on Devlet Bahçeli. On the other hand, the items that the followers least agree with were item 5 (‘Devlet Bahçeli is calm on his Twitter posts.’ mean: 2.75) and item 12 (‘Devlet Bahçeli does not use exaggerated expressions on his Twitter posts.’ mean: 3.00).

Table 12: Following Meral Akşener's Twitter Account

Question: "Do you follow Meral Akşener's Twitter account?"	**Frequency**	**%**
Yes	16	24,2
No.	50	75,8

The next question asked to the Twitter users participating in the survey was "Do you follow Meral Akşener's Twitter account?". To this question, 16 (24.2%) participants answered 'Yes' and 50 (75.8%) participants answered 'No'.

Table 13: Scale Items and Frequency and Percentages of Responses (Meral Akşener)

Item 1: Meral Akşener's Twitter posts are reliable.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	0	0	
3	3	18,8	
4	3	18,8	
5 (Completely agree)	9	56,3	
Total	16	100	**4,1875**
Item 2: Meral Akşener is confident in her Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	0	0	
3	3	18,8	
4	3	18,8	
5 (Completely agree)	9	56,3	
Total	16	100	**4,1875**
Item 3: Meral Akşener is respectful on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	0	0	
2	0	0	
3	3	18,8	
4	2	12,5	
5 (Completely agree)	11	68,8	
Total	16	100	**4,50**
Item 4: Meral Akşener is outspoken on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	0	0	
2	0	0	
3	3	18,8	
4	2	12,5	
5 (Completely agree)	11	68,8	
Total	16	100	**4,50**
Item 5: Meral Akşener is calm on Twitter.			
Opinion	**Frequency**	**%**	**Mean**

1 (Completely disagree)	1	6,3	
2	0	0	
3	7	43,8	
4	2	12,5	
5 (Completely agree)	6	37,5	
Total	16	100	**3,75**
Item 6: Meral Akşener is courteous on her Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	0	0	
2	2	12,5	
3	3	18,8	
4	3	18,8	
5 (Completely agree)	8	50	
Total	16	100	**4,0625**
Item 7: Meral Akşener is consistent on her Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	0	0	
3	3	18,8	
4	5	31,3	
5 (Completely agree)	7	43,8	
Total	16	100	**4,0625**
Item 8: Meral Akşener does not lie on her Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	12,5	
2	0	0	
3	7	43,8	
4	1	6,3	
5 (Completely agree)	6	37,5	
Total	16	100	**3,5625**
Item 9: What Meral Akşener says on Twitter does not contradict each other.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	2	12,5	
2	1	6,3	
3	4	25	
4	1	6,3	
5 (Completely agree)	8	50	
Total	16	100	**3,75**
Item 10: Meral Akşener stands behind what she says on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	1	6,3	
3	4	25	
4	3	18,8	
5 (Completely agree)	7	43,8	
Total	16	100	**3,8750**
Item 11: Meral Akşener chooses the right words on her Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	0	0	

2	2	12,5	
3	2	12,2	
4	0	0	
5 (Completely agree)	12	75	
Total	16	100	**4,3750**
Item 12: Meral Akşener does not use exaggerated expressions on her Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	1	6,3	
3	7	43,8	
4	1	6,3	
5 (Completely agree)	6	37,5	
Total	16	100	**3,6250**
Item 13: Meral Akşener's Twitter posts and behavior are consistent with each other.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	1	6,3	
3	3	18,8	
4	4	25	
5 (Completely agree)	7	43,8	
Total	16	100	**3,9375**
Item 14: There is a unity in Meral Akşener's Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	0	0	
3	4	25	
4	4	25	
5 (Completely agree)	7	43,8	
Total	16	100	**3,50**
Item 15: Meral Akşener does not give evasive answers to questions asked on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	1	6,3	
3	5	31,3	
4	1	6,3	
5 (Completely agree)	8	50	
Total	16	100	**3,8750**
Item 16: Meral Akşener has been able to adapt to Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	0	0	
3	3	18,8	
4	5	31,3	
5 (Completely agree)	7	43,8	
Total	16	100	**4,0625**
Item 17: Meral Akşener is sincere on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	0	0	

3	3	18,8	
4	2	12,5	
5 (Completely agree)	10	62,5	
Total	16	100	**4,25**
Item 18: Meral Akşener has a proper stance on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	0	0	
3	3	18,8	
4	2	12,5	
5 (Completely agree)	10	62,5	
Total	16	100	**4,25**
Item 19: Meral Akşener pays attention to the way she dresses on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	0	0	
3	2	12,5	
4	2	12,5	
5 (Completely agree)	11	68,8	
Total	16	100	**4,3750**
Item 20: Meral Akşener is sympathetic in her Twitter posts.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	0	0	
3	3	18,8	
4	1	6,3	
5 (Completely agree)	11	68,8	
Total	16	100	**4,1250**
Article 21: Meral Akşener's speech on Twitter is smooth.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	0	0	
2	0	0	
3	4	25	
4	0	0	
5 (Completely agree)	12	75	
Total	16	100	**4,50**
Item 22: Meral Akşener is charismatic on Twitter.			
Opinion	**Frequency**	**%**	**Mean**
1 (Completely disagree)	1	6,3	
2	0	0	
3	4	25	
4	0	0	
5 (Completely agree)	11	68,8	
Total	16	100	**4,25**

According to the findings, the opinions about Meral Akşener received more participation by the participants than the leaders of other political parties. Her followers showed high agreement with most of the statements about Meral Akşener. The opinions with the highest participation are item 4 (‘Meral Akşener is outspoken on Twitter.’ mean: 4.50) and item 5 (‘Meral Akşener is calm in her Twitter posts.’ mean: 4.50). The items with the lowest rate of participation by the followers are item 8 (‘Meral Akşener does not lie on her Twitter posts.’ mean: 3,5625)

and item 12 (‘Meral Akşener does not use exaggerated expressions in her Twitter posts.’ mean: 3,6250). However, the point to be noted here is that although these rates are low in Meral Akşener's case, they are higher than the scores of other political party leaders.

Table 14: Comparative table of political leaders according to item mean scores

Items	**Mean Score**			
	Recep Tayyip Erdoğan	**Kemal Kılıçdaroğlu**	**Devlet Bahçeli**	**Meral Akşener**
1) Twitter posts are reliable.	3,4545	3,1818	3,6250	4,1875
2) He/She is confident in their Twitter posts.	3,9545	3,3636	3,25	4,1875
3) He/She is respectful on Twitter.	3,7272	3,7272	3,3125	4,50
4) He/She is outspoken on Twitter.	3,4090	3,6363	3,6250	4,50
5) He/She is calm in his Twitter posts.	3,3636	3,5909	2,75	3,75
6) He/She is courteous in their Twitter posts.	3,50	3,7727	3,1875	4,0625
7) He/She is consistent in their Twitter posts.	3,4545	3,4090	3,50	4,0625
8) He/She does not lie on Twitter.	3,0909	3,1363	3,3125	3,5625
9) What he/she says on Twitter does not contradict each other.	3,1363	3,2727	3,0625	3,75
10) He/She stands by what he/she says on Twitter.	3,00	3,5454	3,4375	3,8750
11) He/She chooses the right words in Twitter posts.	3,8636	3,4545	3,3750	4,3750
12) He/she does not use exaggerated expressions in his/her Twitter posts.	3,1363	2,8181	3,00	3,6250
13) Twitter posts and behavior are consistent with each other.	3,2727	3,2727	3,1875	3,9375
14) There is a unity in Twitter posts.	3,4090	3,1818	3,25	3,50
15) He/She does not give evasive answers to questions asked on Twitter.	3,2727	3,4545	3,3750	3,8750
16) He/She has been able to adapt to Twitter.	3,3181	3,6818	3,6875	4,0625
17) He/She is sincere on Twitter.	3,0909	3,3181	3,4375	4,25
18) He/She has a proper stance on Twitter.	3,7727	3,2272	3,8125	4,25
19) He/She pays attention to the way he/she dresses on Twitter.	4,3181	3,9545	4,1875	4,3750
20) He/She is sympathetic on Twitter.	3,3181	3,3636	3,25	4,1250
21) His/Her speech is smooth in his/her Twitter posts.	4,1818	3,7727	3,9375	4,50
22) He/She is charismatic on Twitter.	3,6818	2,9545	3,4375	4,25
Overall Mean Score	**3,5103**	**3,4132**	**3,4090**	**4,0710**

When the total scores of the survey items are compared, it is seen that the leader of the political party with the highest level of reassuring and persuasiveness is Meral Akşener (mean: 4,0710). Meral Akşener is followed by Recep Tayyip Erdoğan (mean: 3,5103). Kemal Kılıçdaroğlu is in the third place with a mean score of 3,4132, while Devlet Bahçeli is in the last place with a mean score of 3,4090.

Political leaders scored the most points on item 19. According to this item, Twitter followers think that political party leaders pay attention to their clothing and appearance in their Twitter posts. On the other hand, as can be seen from the table, political party leaders received the lowest scores from their followers on item 12. Accordingly, Twitter followers do not agree with the view that political party leaders 'do not use exaggerated expressions' in their Twitter posts. Another prominent point is seen in item 5. In this context, Twitter users think that Devlet Bahçeli was less calm in his Twitter posts compared to other political party leaders (mean: 2,75). Another point worth noting is charisma on Twitter. According to item 22, Meral Akşener is the most charismatic leader (mean: 4,25). She is followed by Recep Tayyip Erdoğan (mean: 3.6818), Devlet Bahçeli (mean: 3.4375) and Kemal Kılıçdaroğlu (mean: 2.9545). However, Twitter followers perceive a unity and consistency in the posts of all leaders. In terms of adapting to the Twitter platform, Meral Akşener scored the highest mean (4,0625). Devlet

Bahceli (mean: 3.6875) and Kemal Kılıçdaroğlu (mean: 3,6818) scored very close to each other in this context. The political party leader with the lowest score for adapting to Twitter is Recep Tayyip Erdoğan (mean: 3,3181). One more political leader was included in the survey. This political leader is HDP co-chair Pervin Buldan. When respondents were asked the question 'Do you follow Pervin Buldan's Twitter account?', only 2 respondents (3%) answered 'Yes'. 97% of the participants (64 people) stated that they do not follow Pervin Buldan on Twitter. Since the sample was very small and the answers given by the following two people contained the lowest scores for all items, the data obtained for Pervin Buldan were not tabulated and were excluded from the study.

DISCUSSION AND CONCLUSION

The appropriate items of the 'Trust and Persuasion Scale' prepared by Karadoğan (2003) were used for the Twitter platform in this study. A total of 112 people aged 18 and over living in Düzce province participated in the study. The research continued with 66 participants using Twitter. The opinions of the participants on the accounts of the political party leaders they follow on Twitter are given in tables above. Finally, the views of the participants on the Twitter accounts of all political leaders (Recep Tayyip Erdoğan, Kemal Kılıçdaroğlu, Devlet Bahçeli and Meral Akşener) are given comparatively in a summary table.

According to the findings, Meral Akşener is the political party leader that respondents trust the most and has the ability to persuade (mean. 4,0710). Meral Akşener is followed by Recep Tayyip Erdoğan (mean. 3,5103). They are followed by Kemal Kılıçdaroğlu (mean. 3.4132) and Devlet Bahçeli (mean. 3,4090).

During the research, it was observed that the number of followers of political leaders Devlet Bahçeli and Meral Akşener on Twitter was lower than the other two leaders. Since having a large number of followers on social media platforms means reaching more people and communicating more effectively, it is recommended that these two leaders work to reach more followers. In particular, Pervin Buldan, who was removed from the scope after the research, is followed by only 3% of the participants (2 people). This could mean that Pervin Buldan does not use Twitter very effectively. This leader is also advised to use Twitter more effectively to increase her followers.

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The Subtitling of Taboo Language: A Cultural Study of Selected English and French Movies Subtitled into Arabic

Professor Nevine Sarwat
Institute of Applied Linguistics and Translation, Faculty of Arts, Alexandria University
nevine.sarwat@alexu.edu.eg

Ayten Adel
Institute of Applied Linguistics and Translation, Faculty of Arts, Alexandria University
ayten.adel@pua.edu.eg

ABSTRACT
The current study attempts to tackle the problematics of subtitling of taboo language of American films subtitled into Arabic. This study particularly deals with the English film “My Dirty Grandpa” and “Madame Claude” on Netflix and their Arabic subtitling. The study approaches its object of study utilizing Battistella’s (2005), Schjoldager’s (2008) Allan and Burridge (2006) models as a framework. The study aims to examine the taboo language utilized in American films subtitled into Arabic according to Battistella’s (2005) model. The current study also aims to describe Schjoldager’s (2008) strategies that are adopted in subtitling taboo language of American films subtitled into Arabic.

INTRODUCTION
This study aims to investigate how translators address Arab audience’s society and culture to translate taboo language of American films subtitled into Arabic according to Allan and Burridge (2006)’s model. The results reveal that English and French films utilize different types of taboo language to express their culture. The results also reveal that translators utilize different subtitling strategies to deliver the cultural meanings of the American original text to Arab audience. As a result, translators attempt to bridge the cultural gap between the source language and the target text to address Arab audience’s culture and society.

REVIEW OF LITERATURE
The current study looks on the issues of taboo language subtitling in the Engishfilm "My Dirty Grandpa," and the French film “Madam Claude” as well as their Arabic translations. Because of the limits of subtitling, there is a greater loss in subtitling than there is in written translation (Bogucki, 2004). Speech characteristics are lost while switching from speech to writing mode. As a result, the translator's ability to change from what is being said to what is written at the bottom of the screen is crucial.

METHODOLOGY
Taboo language, or objectionable language, is classified into four sorts, according to Battistella (2005, p.72), and manifests itself in the following ways:
1) Epithet
2) Impoliteness
3) Vulgarity
4) Obscenity

The current study applies Schjoldager ,Gottlieb and Klitgard (2008) model of analysis which consists of twelve strategies that translators can use while subtitling audio visual texts. According to Schjoldager et al. (2008, p.89), there are two main categories: a) macro strategies and b) micro strategies and each category works on a specific level of translation. The twelve strategies manifest themselves in the following:

1) Direct transfer
2) Calque
3) Direct translation
4) Oblique translation
5) Explicitaion
6) Paraphrase
7) Condensation
8) Adaptation
9) Addition
10) Substitution

11) Deletion
12) Permutation

Keith Allan and Kate Burridge (2006)'s Politeness and Impoliteness Perspective:
Allan and Burridge (2006,p.29) stated that the discussions of taboo and language censorship naturally lead to discussions of politeness and impoliteness, as well as their interactions with the three strategies that manifest themselves in the following:

1) Euphemism (sweet talking)
2) Dysphemism (offensive speech)
3) Orthophemism (straight talking)

It is worth noting that the phrase euphemism (Greek eu 'good, well' and pheme'speaking') is widely-known, whereas dysphemism (Greek dys-'bad, unfavourable') is rarely used in everyday speech. We invented the word orthophemism (Greek ortho- 'proper, straight, normal,' cf. orthodox) to describe straightforward or neutral phrases that are neither sweet-sounding, evasive, or too courteous (euphemistic), nor harsh, rude, or offensive (harsh, blunt, or offensive) (dysphemistic).To make things easier, we've coined the word X-phemism to refer to the entire collection of euphemisms, orthophemisms, and dysphemisms.To clarify the distinction between orthophemism and euphemism, consider the following:

1) An orthophemism differs from a euphemism in that it is more formal and direct (or literal).
2) A euphemism is usually more informal and metaphorical (or indirect) than its orthophemism counterpart.
3) Dysphemisms, like euphemisms, are more informal and metaphorical than orthophemisms

As a result, we propose that X-phemisms (the sum of orthophemisms, euphemisms, and dysphemisms) are linked. The current study utilizes the following figure that X-phemisms model by Allan and Burridge'(2006)

Figure (1)

X-phemisms Model by Allan and Burridge (2006

ANALYSIS

French Source Text	**Arabic Target Text**	**Translation Strategy**	**Explanation/ Quality assessment**
Que la plupart des homes nous traitent comme des putes **(Madame Claude Film) 2021**	ادركت مبكرا ان الرجال يعاملوننا كاعاهرات	Direct translation and euphemistic strategy (formal target text)	The translator translated the word directly to keep the translation faithful and deliver the same taste of the original.At the same time, the translator decided to euphemize the word "putes" and utilizes"عاهرات"to address Arab viewers culture. The subtitler decided to change the taboo word of the source text in a formal way because viewers could be family members who expect to read euphemistic translation for taboo words.
Qu'est ce qu'il y a ? Putain de merde	ماذا هناك؟ اللعنة	Euphemistic expression	The translator utilized of translating using a less expressive term to translate the word "putain de merde" In other words, the translator switches to a more formal word that, in contrast to the insult, is acceptable to the intended audience.
De ta bite quetufourres partout	قضيبك الذى تدخلة فى كل مكان	Direct translation and formal language	The translator translated the word directly to keep the translation honest. The subtitler tends to deliver the same taste of the source text. At the same time, the translator decided to euphemize the word "ta bite" by using modern standard Arabic to translate the word to Arab audience politely.

Ah si! Tue s un pute pute	بلى انت عاهر ____	Omission and euphemisim	The subtitler tends to omit the word "pute" because it was repeated. Also, the translator euphemized it by using the word "عاهر"instead which a formal word to respect the culture of Arab audience.
French Source Text	**Arabic Target Text**	**Translation Strategy**	**Explanation/ Quality assessment**
Un sale con	الحقير	Omission and substitution	The omission of the source text affected the target text, but at the same time the translator addresses Arab audience culture and society. The omission of the source text word made the translation sounds unnatural, however, the subtitling aims to respect the Arab audience culture and society by toning down taboo language.
English Source Text	**Arabic Target Text**	**Translation Strategy**	**Explanation/ Quality assessment**
Old woman **fucking** murdered like that. **(Dirty Grand pa Film) 2017**	امرأة عجوز تقتل _____هكذا	Omission	The omission of the source text affected the target text, but at the same time the translator addresses Arab audience culture and society. The omission of the source text word made the translation sounds unnatural, however, the subtitling aims to respect the Arab audience culture and society by toning down taboo language.
You motherfucker	اللعنه	Euphemism and Substitution	The translator decided to euphemize the word "motherfucker" and utilizes"اللعنة"to address Arab viewers culture. The subtitler decided to change the taboo word of the source text in a formal way because viewers could be family members who expect to read euphemistic translation for taboo words.
You're not well because your wife justdied	أنت لا تشعر بالتحسن بسبب وفاة زوجتك	substitution	The translator decided here to substitute the word "died" with"passaway" in order to respect the audience's culture. Arabs tends to use "passaway" which is "وفاه" instead of "died" which "مات" because it is less offensive and euphemized. The subtitler tend to subsitue the words to respect Arab audience's culture.
Out of my way, buttfuckers!	ابتعدوا عن الطريق، أيها الأوغاد	Euphemism	The euphemism aims to tone down taboo language of the source text. The euphemisim of the source text word made the translation sounds unfaithful, but, the subtitling aims to respect the Arab audience culture
I have one fucking month left, Dick!	تبقى لي شهرٌ واحد_ لعين يا (ديك)	Adaptation	The adaptation of the source text affected the target text, but at the same time the translator addresses Arab audience culture. The adaptation of the source text word made the translation sounds unnatural, but, the subtitling aims to tone down taboo language.

FINDINGS AND CONCLUSION

This research aims to determine the translation methodologies and taboo language categories used to depict banned phrases that may offend Arab audiences. As a result, the subtitling procedures used to render prohibited terms did not provide a perfect counterpart, but they did aid to convey content in order to address Arab culture. To make the English film" MyDirty Grandpa," and the French Film " Madame Claude" accessible, several subtitling procedures were used, and they were euphemized to address Arab audience culture and society.

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Using ICT Tools in Distant EFL Classes: The Voice of Teachers and Students

Gonca Subaşı (Corresponding author)
ELT Department, Anadolu University, Eskisehir, Turkey
goncas@anadolu.edu.tr
https://orcid.org/0000-0001-7049-5940

Songül Taş
School of Foreign Languages, Ahi Evran University, Kırşehir, Turkey
songultas@ahievran.edu.tr
https://orcid.org/ 0000-0003-2590-6063

Fatma Solmaz
School of Foreign Languages, Ahi Evran University, Kırşehir,Turkey
fatmasolmaz@ahievran.edu.tr
https://orcid.org/ 0000-0001-8706-5728

ABSTRACT
The rapid development of information technologies leads to big changes in every part of life involving the education process since they provide opportunities to accomplish various instructional goals by responding to different learning styles (Bagapova, Kobilova and Yuldasheva, 2020). Hence, it is very crucial to be aware of the impact of using ICT tools in language classes in distance education, which is becoming more common with each passing day in the pandemic period and thereafter. Thus, this study aimed to investigate the perceptions of both teachers and students about using ICT tools in synchronous or asynchronous language classes in distance education. The EFL teachers at a state university in Turkey introduced some ICT tools in distance learning during a whole educational year both in synchronous classes and asynchronously via video shares. At the end of the year, both the students and the teachers at the same university were asked to respond to an interview on the implementation of ICT tools into the language classes and their perceptions of them. The results indicated that both teachers and students had common points on the advantages of using web tools in online language classes, particularly for more active participation and permanent learning. The findings of the current study contribute to the understanding of the role of ICT tools in distant EFL classes and suggest for further studies on the relevant issue in other contexts with a wider number of participants. It is also recommended to future educators to integrate such tools into their method of teaching to develop their skills in using technology. To do so, the EFL teachers need to be introduced by recent technologies and tools and how to integrate them into their classes during their teacher training process.
Keywords: ICT Tools, EFL learning, Distant EFL Education, EFL Learners' Perceptions, EFL Teachers' Perceptions

1. INTRODUCTION
We live in an era of rapid changes and development in every field of life involving education and technology. Those two components affect each other reciprocally such that the extensive advancement of information technologies leads to considerable changes also in the education process (Biletska, Paladieva, Avchinnikova, and Kazak, 2021; Hubackova and Ruzickova, 2011). As well as its other gains, new technologies provide opportunities to achieve various educational objectives (e.g., integrated language skills, critical thinking, and cooperative skills) by responding to different learning styles (Bagapova, Kobilova, and Yuldasheva, 2020).

The fast development of ICT (Information and Communication Technology) has changed the language teaching pedagogy for all the constituents as teachers, curriculum developers, and researchers since it has made it possible to design, develop, manage, and assess the learning process (Rathore, 2011). Accelerated by those new impetuous developments in internet technologies, ICT and education have consistently strived to put the most of technology to the best pedagogical use by considering the specific needs of language learners (Trajanovic, Domazet, and Misic-Ilic, 2007). In that, they have always been attempting to find ways of utilizing ICT to be able to assist and enhance language learning (Floris, 2014; Kieu, Anh, Tran, Nga, and Ho, 2021; Qizi, 2021).

Integrating computer and multimedia technologies with language instruction paves a way for English language instructors to increase the quality of language instruction. Moreover, it helps learners to take part in their learning process by developing individual learning. In that, learners can construct their own language learning process by using related software and computer technology (Bagapova et al., 2020; Erbaş, Çipuri, and Joni, 2021). Thus, ICT

has been addressed to enhance the learners' competence to choose the best exercise, work autonomously and make connections between their work in English and other subjects (Korkmaz and Öz, 2021; Rathore, 2011).

Besides the abovementioned opportunities that the ICT provides for the language learning process, it has also made it possible to teach and learn a new language in distance education. Although foreign language teaching seemed to require only a conventional, face-to-face, teaching method until recently, now, it has been clear that the newest teaching methods along with modern technology could be successfully utilized even in language teaching. In that, distance education permits flexibility of time, place, space, and pace, for the learners who cannot be present in a face-to-face classroom unlike traditional classes (Tarchi, Brante, Jokar, and Manzari, 2022; Vorobel and Kim, 2012).

There has been a dramatic expansion of distance education in the last decade with the new opportunities in language learning being made available to new audiences throughout the world. Many teachers, researchers, and language learners have realized the potential convenience of those new opportunities and environments in distance education such as online learning, distributed learning, and blended learning (White, 2006). Therefore, this type of education has been recently adopted by many educational institutions, and it has been expanding remarkably with ICT support (Hubackova and Ruzickova, 2011).

In addition to the rapid changes and developments in technology and the opportunities it provides for language learning environments both in face-to-face and distance learning environments, it has been a must rather than a choice for language instructors to implement those facilities into their classes to the best advantage considering the current condition of the world, being through a pandemic period where most of the countries, including Turkey, have preferred distance education rather than the face-to-face one because of that Covid-19 threat. Besides all other fields of life, the COVID-19 pandemic affected educational institutions negatively since they could not carry out their work face-to-face under pandemic conditions (Karaosmanoğlu, Metinnam, Özen, and Adıgüzel, 2022). Thus, distance education in every branch has gained much popularity among researchers and syllabus designers throughout the world. For this reason, many educational institutions have begun looking for the best and newest teaching models to meet their students' needs, provide more effective learning activities, and promote a distance learning environment that motivates the students (Tayebinik and Puteh, 2012). Asghar, Barberà, and Younas (2021), quite recently, investigated the pre-service teachers' readiness and acceptance of the mobile learning technology in Pakistan during the COVID-19 pandemic and revealed that the willingness to use mobile-learning technology was significantly affected by the level of personal innovativeness, service quality, and social influence. Mobile learning has been accepted as an effective strategy in distance education in addition to computer-based technologies since learners can easily access the required information via their mobile phones. These features of mobile learning have led educators to integrate mobile learning with English teaching and learning in the distance education program (Asghar et al., 2021; Tayebinik and Puteh, 2012).

Despite the development of ICT fostering language education, there are a lot of questions in educators' minds on how to develop an effective online language course. In that, educators might be reluctant to teach online because of the absence of face-to-face communication with their students, an over-emphasis on grading, and their limited skills in technology or pedagogical strategies for online teaching (Andrade, 2015). The list of questions arises in teachers' minds on language teaching online goes on like: "Is it possible to teach an L2 or FL at a distance? What do educators need to know about the difference in context and mode of delivery? Which instructional strategies are most effective in such classes? How should language teachers develop materials and assess students in distance education classes?" (Tarchi et al., 2022; Vorobel and Kim, 2012).

Although it is evident that ICT facilitates language learning by providing opportunities for both instructors and learners, it is still uncertain how to integrate ICT into language classrooms. It is even more crucial to be aware of the impact of using ICT tools in language classes in distance education, which is becoming more common with each passing day in the pandemic period and thereafter.

This study attempts to investigate the impact of using ICT tools in synchronous or asynchronous language classes in distance education by implementing some tools, namely; Google Forms, Mentimeter, Flipgrid, Kahoot, Quizlet, Duolingo, Hypersay, and Weizer.me to a preparatory class at a public university of Turkey during the pandemic period (for two semesters) and carrying out an online written interview with the students and teachers to get their perspectives on the implementation of those tools in the synchronous EFL classes.

2. THE REVIEW OF LITERATURE

Current literature on the relevant issue was analyzed and presented by dividing them into three main themes as: implementing ICT tools in language education, language instruction in distance education, and incorporating ICT tools into distance language education.

2.1. Implementing ICT Tools in Language Education

Using ICT tools in language instruction has been a very popular topic among educational researchers with the fast development of technology and web tools and their availability to language learners, particularly in the last decade. As an earlier example of empirical studies conducted on the subject matter, Chen (2008) studied the factors affecting teachers incorporating the Internet into their teaching by implementing a mixed methods design in the Taiwanese context and suggested continuous professional development emphasizing technology implementation in language instruction was necessary. In the study (Fuchs and Akbar, 2013) it was depicted that nearly half of the participants did not experience using technology in teaching in the USA though most of them believed in the importance of using ICT in the classroom. Hafifah and Sulistyo (2020) demonstrated that the ICT literacy levels of instructors in Indonesian universities were significantly correlated with their training experiences, the internet frequency usage, and ICTs integration in language teaching. In contrast to Fuchs and Akbar's study, the instructors in Indonesia were ICT literate and ready to implement ICT in their instructional setting. Aşık, Köse, Yangın-Ekşi, Seferoğlu, Pereira, and Ekiert (2020) compared language teacher training contexts in ICT integration in Turkey, Poland, and Portugal, and suggested that the three contexts had parallel strategies and challenges for technology preparation of the teacher trainees.

Addressing a specific tool, Korkmaz and Öz (2021) investigated the impact of the "Kahoot!" game on the reading comprehension improvement of ELT department students studying at a state university in Turkey, and through the findings, they pointed out that Kahoot could be a useful tool to enhance the learners' motivation by improving to their reading skills. Clark and Gruba (2010) indicated that the site Livemocha had some counter-productive pedagogical impediments to language learning such as flaws in site design. Massi, Patrón, Verdú, and Scilipoti (2012) conducted an interesting study aiming to stimulate reflection about the potential of using Facebook, with university students in the ELT classroom. Through the outcomes of the reflections, the systematic use of social networking media was suggested by the researchers since it provides learners with access to open cyberspace in multiple ways. The following year, Back (2013) also relied on the same tool, data from Facebook, to investigate learner interaction during study abroad, and showed that social media data could be utilized to gain a detailed view of learner interactions while abroad. Güvendir and Gezgin (2015) also conducted a study exploring the effect of a Facebook game (Pearl Peril), which requires English vocabulary knowledge, on the same social media tool, on students' English vocabulary development and observed that a social media game could significantly and positively affect English vocabulary development of the learners. Quite recently, Shodiyev (2022) also paid particular attention to the use of Facebook as a social network in teaching foreign languages to people from the older age group and pinpointed that the social community was helpful for adult learners by surpassing the psychological barriers that they have seen before.

Mondahl and Razmerita (2014), from a more general perspective, studied how the use of social media tools in the learning process affected foreign language learning and concluded that social media platforms facilitated collaborative learning and problem-solving. In their quite recent study, Kumar, Malabar, Benyo, and Amal (2021) presented a detailed analysis of the role of multimedia tools and technology in teaching English in non-English speaking nations in their study and underlined that the use of multimedia technology can ensure effective language teaching and enhance learners' linguistic abilities. In a similar study in the same year, Biletska et al. (2021) also pointed out the role of technology tools in enhancing students in completing the tasks assigned to them more quickly.

Regarding the viewpoints of the EFL learners on the employment of technological tools in a language classroom, Awad (2013) found out that seventh graders had relatively positive attitudes regarding using computers in language classes whereas the age of the learners had an impact on the attitudes of learners. Grosu and David (2013) also discussed the issue of e-learning, as perceived by students and foreign language trainers at a university and revealed that the differences presumed before the study was not as many as expected. In the same year, Hsu (2013) searched the issue from the learner's perspective by investigating specifically the end-user's perception of MALL through cross-cultural analyses and clarified that there were significant differences among the participants with different cultural backgrounds.

The study conducted by Martins (2014) concluded that Web 2.0 tools had a positive impact on the communicative competence and motivation of undergraduate English language learners. Similarly, Aljaser (2019) found that e-learning increased the motivations for learning of fifth-grade primary students in Saudi Arabia, and the e-learning environment was effective in the development of the academic achievement of the learners. Another motivation

study was carried out by Henry (2019) on elementary schoolers in Sweden, and likewise, integrating ICT increased their motivation; the learners were positive about blogging. Besides, Lin, Groom, and Lin (2013) explored the experiences of a group of Taiwanese ESL students who used a blog-assisted language learning (BALL) methodology and suggested that second language writing students were enthusiastic about BALL; however, they were not motivated enough to voluntarily participate in second language blogging activities in practice. In a recent study, Xiangming, Liu, and Zhang (2020) examined learners' language anxiety in technology-assisted settings with mobile learning technology in a longitudinal study in China and figured out that the mobile learning tool (Rain Classroom) affected the students positively.

Liton (2015), on the other hand, investigated students' real perception and efficacy of technology-mediated language classrooms and indicated that the students were immersed in the learning process actively and enthusiastically, whereas many of them did not know how to integrate technologies into their learning process. Besides, Basal (2015) conducted a study to find out how English language teacher trainees perceived flipped classrooms and to present how to implement a flipped language classroom and found out that prospective English teachers held positive perceptions toward the application of flipped classrooms in face-to-face courses.

Allam and Elyas (2016), also, attempted to explore the perceptions of EFL teachers toward using social media as a tool at the university level in the Saudi context and proposed that most of the participants believed in the instructional value and advantages of using social media in language classrooms. In the same year, with a different sample, Ogwu (2016) compared teacher trainee students' electronic learning technology readiness, competence, and their constraints in Botswana and Nigeria and concluded that students in Nigeria were prepared better and more competent. Similarly, Turgut (2017) also designed a study with a different context comparing TPACK (technological pedagogical content knowledge) among teacher candidates, pre-service and in-service English as foreign language teachers in Turkey and found a significant difference among those three groups of participants. The following year, Phan (2018) conducted a study on the relevant theme by empirically investigating the teacher's perspective on the possible implications of the recent changes in ELT with the Vietnamese context and uncovered the disconnections between ELT teachers' beliefs on their students' needs and their actual practices in the classroom. Ma (2017), on the other hand, investigated the issue from the learners' point of view by carrying out a multi-case study to provide a detailed understanding of Hong Kong university students' perspectives and practices considering their individual mobile learning experiences and found out that the students used varied e-resources and tools for language learning.

Sun, Lin, You, Shen, Qi, and Luo (2017) conducted a more specific study by integrating a mobile SNS into first grade EFL classes in China and indicated that the gains in English fluency by the experimental group were significantly larger while both classes' speaking skills improved. Another study that investigated the academic achievement of the learners' using ICT was done by Karaaslan et al. (2018) and in the study, they concluded that using synchronous and asynchronous games and activities contributed to the university students' intrinsic motivation in a preparatory school in Turkey. In addition, Akay and Gümüşoğlu (2020) investigated how the implementation of LMS affected the language proficiency of English preparatory students and found that the use of LMS by students in their language learning process predicted their proficiency and midterm scores significantly. More recently, Kieu, Anh, Tran, Nga, and Ho (2021) pursued a study about the effectiveness of using technology in learning English for university students and examined the impacts of teaching on the four skills. Relying on the findings of their study, they emphasized that using technology in learning English promoted learners' language skills and promoted the English learning process. In their study with elementary school students, Erbaş, Çipuri, and Joni (2021) indicated that technology served as a facilitator for learning and teaching English besides leading the teachers to a better way of teaching. The same year in the Thai context, Kundu, Jumpakat, and Karpklon (2021) searched secondary school teachers' technology use and perceptions of the use of technology in their classes and revealed that most of the teachers had knowledge of technological tools and had integrated technologies with certain types of tools. In another study, Kundu, Bej, and Dey (2021) examined the impact of teachers' ICT self-efficacy on their perceived online teaching-learning preparedness and concluded that the participants had a low level of ICT self-efficacy which was positively and moderately correlated with their online teaching-learning preparedness.

2.2. Language Instruction in Distance Education

Distance education has become more than a choice for today's conditions both with the rapid developments in ICT and because of the unfortunate pandemic period in the world. Thus, it is essential to explore the ways which promote learning better in distance education for all the subjects involving language instruction. On a related issue, Murphy, Shelley, and Baumann (2010) explored the student perceptions of effective distance tutors and concluded that students look for tutors who were enthusiastic, approachable, supportive, and committed, and who created a group atmosphere. In the same year, Işık, Karakış, and Güler (2010) examined the issue from postgraduate

students' point of view and revealed that there was a generally positive attitude toward distance learning. In a more recent attempt, Ekmekçi (2015) investigated students' satisfaction and needs with English courses in a distance education program and revealed that a great majority of the students were satisfied with the distance education English course. Similarly, Lin, Zhang, and Zheng (2017) examined the roles of motivation and learning strategies, and the mediation effect of learning strategies, in K-12 online learning and concluded that motivational variables did not predict online-learning outcomes while online-learning strategies played an important role in online language learning. Likewise, Çakır, Karademir, and Erdoğdu (2018) examined the correlation between distance education motivation levels, online experiences, and satisfaction of university students in Turkey and demonstrated that students' online experience, and computer skills, and students' satisfaction were meaningful predictors of their distance education motivation.

Hurd (2007), on the other hand, examined language learning anxiety in distance learning with a huge sample in Open University in the UK and pinpointed that anxiety was an influential factor in language learning at distance learning, like face-to-face learning, mainly in speaking. Similarly, Pichette (2009) compared anxiety profiles of classroom and distance language learners in Canada and concluded that there was no difference in anxiety profiles between classroom and distance learners. In the same year, Sakar (2009) evaluated the senior students' perceptions of online courses given by the Open Education Faculty in Turkey and showed that there was a high demand for online courses though some only participated in the courses before the exams. Zhang and Cui (2010) also investigated the learning beliefs of distance English language learners in China and revealed that most of the students showed similar beliefs and perceptions as learners in conventional classrooms about language learning; they believed that it took a long time and effort. In their quite recent study with EFL student teachers at a state university in Ankara, Turkey, Yetkin and Alagözlü, (2022), also explored their anxieties in their distant microteaching experience and found a moderate level of anxiety among those student teachers. Göloğlu-Demir and Çetin (2022) also pursued a study on the perceptions of teacher candidates regarding the virtual classroom environment by using metaphors and resulted that there is a problem in virtual classrooms as more than half of the participants produced negative metaphors for the virtual classroom.

Guichon (2010) carried out a case study aiming to design a desktop videoconferencing platform specifically dedicated to synchronous language teaching and presented three functionalities as helping teachers to plan the online session, communicate more effectively, and keep track of some of their learners' production for ulterior feedback. Ng and Confessore (2011) examined the relationship between the levels of learner autonomy among adult learners in a distance learning environment in Malaysia and indicated that learning styles, perceived learning environment, and computer technology experience were positively linked to learner autonomy, and distance learners in Malaysia had a relatively low level of learner autonomy. McDaniels, Pfund,and Barnicle (2016) also designed a mixed-methods study with elderly learners to be able to provide ways of creating dynamic learning communities in synchronous courses. At the end of the study, graduate students and post-doc participants reported high satisfaction with the online training and increased confidence in their mentoring.

In a quite recent study, Viktorova (2020) aimed to distinguish pedagogical conditions for an effective distance learning introduction into foreign language education of the elderly with Ukrainian adult learners and confirmed that the ability to learn under certain conditions such as overcoming the age-related stereotypes even increases instead of decreasing at the end of the study. Another study by Zheng, Lin, and Kwon (2020) investigated the effect of the student, instructor, and course factors on high school students' online-learning success in English language and literature courses, using data on their actual learning activity and course-design elements in the USA and showed that individuals' credit-recovery status had a significantly negative impact on learning outcomes while the numbers of logins and login duration and both had significantly positive effects on final grades and interestingly.

Shelley, Murphy, and White (2013) explored language teachers with different backgrounds and their experience moved into distance/blended language teachers at distance universities in the UK and Australia. The study revealed that mostly, the teachers relied on their prior experiences as language learners rather than their pre-service training. In a recent study (Bailey and Lee, 2020) conducted on teachers in South Korea, clear relationships between online teaching experience and expectations were found. Quite recently, Tarchi et al. (2022) investigated how the pre-service teachers perceived online learning during the transition from face-to-face to emergency distance education and suggested for preservice teachers develop a flexible approach to self-regulated learning (SRL) finding underdeveloped conceptions of online learning. As a brand-new study in-press, Dovrat (2022) explored the perceptions of teachers and students on technological tools used for online teaching in an Israeli English for Academic Purposes (EAP). The outcomes of the study yielded that learning management system quizzes and emails were effective learning and communication tools according to the teachers and learners, but they differed in terms the efficacy of videoconferencing, recorded videos, personal phone calls and text messaging. In brief,

technological tools for communication could be harnessed to form and sustain supportive workgroup specifically for the times of crises for online teaching and learning.

2.3. Incorporating ICT Tools into Distance Language Education

With the spread of distance education all around the world especially with the recent pandemic period, it has been more than a need to be able to search and find ways of making use of this type of education with optimum output. It has also been a very crucial issue for language instructors how to manage this process while teaching a language that requires communication and interaction as much as possible. In that, how the implementation of ICT tools fosters language instruction and learning is an important matter to focus on since they could be perceived as the only means of interaction between the learners and instructors in distance education. Hence, the current studies covering this issue should be viewed and more studies are needed to be conducted accordingly to be able to understand and find the best ways to make a profit from this new educational system.

An earlier study in the related field was conducted by Wang (2007) examining videoconferencing-task-design principles in distance language learning (DLL) and revealed that all participants were positive about the technological capabilities and user-friendliness of NetMeeting and its support for task completion. Another early attempt on the relevant topic was made by Hrastinski (2007) in the same year investigating how the use of synchronous chat may affect student participation in online discussions and indicated that the use of synchronous chat affected participation positively. Moreover, Lenkaitis (2020) examined learner autonomy in online synchronous courses using ZOOM and showed that ZOOM provided a collaborative autonomous learning environment that connected students together and allowed them to practice their L2 skills. More recently, Alfadda and Mahdi (2021) analyzed the correlation between the variables of the technology acceptance model (TAM) on using Zoom application in language learning and found a positive correlation.

Concerning the phases that teachers go through, as an earlier study, Levy, Wang, and Chen (2009) carried out a project focusing on understanding and supporting the processes that experienced face-to-face language teachers undergo to become confident and competent online tutors. The main results of the project revealed that though there were differences between the two online tutors featured in the paper, there were many similarities. Meskill and Anthony (2014) also explored language educators' practices while teaching a foreign language in synchronous courses and demonstrated that the online instructors designed their synchronous sessions by using specific structuring strategies. Similarly, Huang (2020) compared students' perception of teacher roles in face-to-face and online learning in a blended classroom context and concluded that the cognitive role of teachers was notable in face-to-face classes while the managerial role of teachers was perceived more dominantly in online classes. On the other hand, Tuncay and Uzunboylu (2012) investigated how English language teachers were successful in the blended and online e-learning course, their e-learning training needs, and how gender, age, workplace, school, and second life usage variables affect this success; and concluded that no matter their background, all the teachers improved their e-learning competences with the training.

Hampel (2009) searched for the teachers' skills that enable them to foster interaction and collaboration in online language learning and revealed that online classroom settings, especially synchronous environments that allowed for speaking, were often characterized by a tutor-centered approach to teaching. Akimovaa (2015), also, examined a distance learning platform, MOODLE, to investigate distant learning technologies in teaching the theory of English and found the module beneficial for its mobility and convenience and it made the students autonomous learners, and even though it provided objective assessment, some students commented about lack or delayed feedback. Likewise, Fryer, Bovee, and Nakao (2014) investigated the motivational patterns of the students in a blended learning course and the possible reasons of the learners for motivation towards e-learning in Japan using MOODLE and KSU myWord and indicated that the students' motivational sources were their ability beliefs, effort beliefs and value of the task dimensions.

In terms of exploring the impact of e-learning, Farooq, Asmari, and Javid (2012) performed quantitative research to analyze the effectiveness of e-learning in English language teaching programs in the distance education context in Pakistan and they concluded that the e-learning facilities in distance education improved the participants' performance in respect of access, interaction, and cost. Matukhin and Zhitkova (2015) explored the effectiveness of the use of blended learning technology in English language teaching and concluded that using technological tools lowered the affective filter of the learners, increased their self-confidence, and self-awareness, and revealed their learning potential. The following year, Politis and Politis (2016) examined the relationship between an online learning environment supported by Blackboard Collaborate and the skills and traits of knowledge acquisition and found out that easy access the Blackboard Collaborate and an effectively designed structure could enhance learners' problem understanding and communication.

Addressing the perceptions of adult learners on both ICT and types of language courses, Arrosagaray, González-Peiteado, and Pino-Juste (2019) explored 627 Spanish adult students' attitudes towards the use of ICT depending on the modality of their courses (face-to-face, blended and distance) and figured out that most of the students found ICT beneficial on their learning regardless of the mode they follow. Moreover, Suwantarathip (2019) explored the satisfaction levels of the students taking an English course at blended learning mode and indicated that students' overall computer literacy, their perception of the instruction, and attitudes towards blended learning had a positive correlation with satisfaction. On the other hand, Norozi, Revzani, and Ameri-Golestan (2020) pursued a study to look into the effect of flipped teaching on the Iranian EFL learners' grammar learning and retention and concluded that flipped teaching improved both learners' language learning and retention. In their recent systematic review, Hein, Wienrich, and Latoschik (2021) analyzed 54 articles and indicated that immersive learning environments can address the challenges of digitization in educational systems.

After examining the existing studies on the relevant topic in the literature, it is seen that the studies are mostly conducted on the students using mixed-methods or quantitative methods of using ICT in language learning. In addition, it is observed that most of the studies are cross-sectional or examined the effect of one specific tool in the classroom setting. It could be concluded that there is a need for more longitudinal and qualitative research on the use of more than one ICT tool in the distance learning setting.

The current study aims to investigate the English language teachers' and learners' perceptions of using various ICT tools (Google Forms, Mentimeter, Flipgrid, Kahoot, Quizlet, Duolingo, Hypersay, and Weizer.me) and the advantages and disadvantages of these tools in distance learning setting in an educational year. The research questions addressed in this study are:

- What are the perceptions of the EFL teachers in the Turkish context on using ICT tools in distant EFL learning?
- What are the perceptions of the EFL learners in the Turkish context on using ICT tools in distant EFL learning?

3. METHODOLOGY

The present study employs a qualitative research design which enables to get detailed information about in a research phenomenon and develop a better understanding of the phenomenon (Creswell, 2012). Given that, the current study follows an online written interview study procedure, which gives sufficient time to the participants to reflect on the questions and answer them effectively (King, Horrocks, and Brooks, 2018). It supplies flexibility in terms of location and availability of the participants and nature of the topic as well as saving time and financial resources (James, 2016; King, Horrocks, and Brooks, 2018). Besides, Opdenakker (2006) argued that online data collection tools which enable asynchronous communication of time and space are advantageous in terms of cost, avoidance of disturbances such as noise, and providing more time to reflect on the questions. According to Mann and Stewart (2002), online interviews allow "contextual naturalness" in the studies examining the internet use of the participants. Considering the above-mentioned advantages, an online written interview procedure was chosen in the present study to collect data.

The participants were administered an online written interview asking their opinions on the integration of ICT tools used in the distance language classes during the two semesters of an educational year. It particularly examined the emerged themes in the students' and teachers' reports on the five open-ended types of questions.

3.1. Participants

The participants of the current study were chosen based on convenience sampling, that is, the participants who were willing and available for the study were included in the study (Creswell, 2012). In this case, the participants of the present study were preparatory school students and teachers from a state university in Turkey in the educational year 2020-2021. The students' age varied from 18 to 20 years. They were from the Department of International Relations of the Faculty of Economics and Administrative Science. The students were at B1 level according to the institutional proficiency test. On the other hand, the teachers were English instructors who had teaching experience varying from five years to ten years. They were graduates of English Language or English Language and Literature Departments and while two of them followed their master's degrees, others were following their Ph.D. in the field of English Language or English Language and Literature.

The teachers and students filled out a consent form that demonstrated that they voluntarily agreed to take part in the research. Then, the students attended twenty-four hours of synchronous English courses during a week. They used various ICT tools, (Google forms, Mentimeter, Nearpod, Flipgrid, Kahoot, Quizlet, Duolingo, Hypersay, and Weizer.me) both synchronous and asynchronously.

3.2. Instrument

The data collection tool was an online written interview in which questions were formed based on the literature and ELT field expert opinion was taken on the question for the validity of the questions. The students and teachers completed the interview via Google Forms. They were asked to indicate and express their opinions on the tools implemented. The following five questions were directed in the interview for teachers:

1. Which web tools did you use in your 2020-2021 academic year synchronous foreign language lessons? (Google forms, Mentimeter, Nearpod, Flipgrid, Kahoot, Quizlet, Duolingo, Hypersay, and Weizer.me)
2. Could you briefly evaluate the tools you used in synchronous foreign language lessons by specifying their positive and negative aspects?
3. Could you briefly compare the synchronous foreign language lessons with which web tools are used/not used?
4. Would you recommend using, continuing (if used), or increasing online tools in synchronous foreign language lessons?
5. If you have any other comments and suggestions, can you specify them?

The five interview questions directed to the students were as follows:

1. What online tools were used in your synchronous foreign language lessons in the 2020-2021 academic year? (Google forms, Mentimeter, Nearpod, Flipgrid, Kahoot, Quizlet, Duolingo, Hypersay, and Weizer.me)
2. Could you briefly evaluate the tools used in your synchronous foreign language lessons by stating their positive and negative aspects?
3. Could you briefly compare the courses in which the mentioned tools were used and those that were not?
4. Would you recommend using, continuing (if used), or increasing (tools) online tools in synchronous foreign language lessons?
5. If you have any other comments and suggestions, can you specify them?

As could be observed above, the interview questions directed to the students and the teachers were all in the same vein to be able to compare their opinions on the use of ICT tools in distant EFL learning properly.

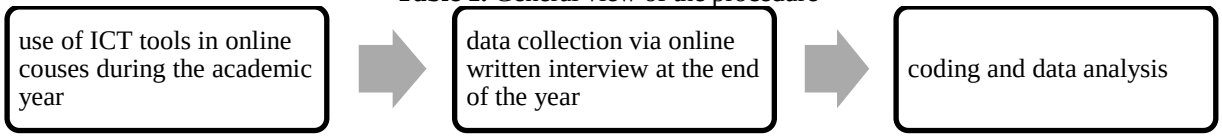
3.3. Procedure

The students attended twenty-four hours of synchronous English courses during a week. The instructors introduced some ICT tools in distance learning during a whole educational year both in synchronous classes and asynchronously via video shares. They used various ICT tools in the synchronous main course and skills classes they took. They used tools like Google Forms, Mentimeter, Nearpod, etc. in synchronous courses while using the tools like Flipgrid asynchronously. At the end of the year, both the 42 students in the preparatory classes and the 15 teachers at the same university were invited to respond to an interview on the implementation of ICT tools into the language classes and their perceptions of them. 18 out of 42 students actively participating in the online synchronous classes and 8 instructors of the foreign languages department delivering online synchronous EFL classes during the year responded to the interviews via the Google Forms platform in a written way. The consent of the participants was taken for the interview in terms of ethical issues and the interview was completed in L1, Turkish, to overcome any possible language barrier.

3.4. Data Analysis

The data gathered from the open-ended questions in the online written interviews were analyzed based on the qualitative content analysis scheme of Creswell (2012). The data was first translated to English and divided into chunks. The chunks were coded, the emerging themes were decided accordingly by the two researchers separately and the different ideas were discussed together to establish reliability. The inter-rater reliability was measured by calculating percentage agreement, which resulted in a clearly acceptable level of interrater reliability (91%). Emerging themes and sub-categories were provided with their frequency, and they were discussed in-depth in the results section.

Table 1. General view of the procedure



3.5. Trustworthiness

The trustworthiness of the current study was enabled via data triangulation. Data triangulation aims to increase the validity of the present study (Golafshani, 2003). The data triangulation was carried out via the inclusion of different

groups of participants such as the instructors and students. Moreover, the interview questions which were formed based on the literature were checked by the three ELT field experts. Lastly, the coding process was performed separately by three researchers. Then, they came all together to reach consensus on the coding procedure, in this way, the inter-rater reliability of the study was increased. All the steps mentioned contributed to the trustworthiness of the present study.

4. RESULTS

Through the analysis of the data, four emerging main themes were the tools used in language classes, the positive and negative aspects of using ICT tools in distant EFL classes, the comparison of the distant EFL classes with and without ICT tools, and the views on the continuity of using ICT tools in distant EFL classes.

4.1. Tools used in language classes

From the teachers' and students' responses, it was observed that various tools were used in the online EFL classrooms during the term by both students and the teachers at that university. In the utterances of students and teachers, the most used web tools were Google forms, Mentimeter, Nearpod, Flipgrid, Kahoot, Quizlet, Duolingo, Hypersay, and Weizer.me.

Table 2. Percentages of the ICT tools used in language classes

	With ICT tools vs without ICT tools	***f (n)***	***f %***
Teachers	Google forms	6	27%
	Mentimeter	5	23%
	Flipgrid	5	23%
	Kahoot	2	9%
	Nearpod	2	9%
	Other tools	2	9%
Students	Google forms	14	14%
	Mentimeter	16	17%
	Flipgrid	16	17%
	Kahoot	17	18%
	Nearpod	14	15%
	Other tools	18	19%

4.2. Positive and negative perceptions of using ICT tools in distant EFL classes

As could be clearly observed from the answers of both teachers and students in Table 3, which demonstrates the number of people who mentioned each of the advantages and disadvantages of using ICT tools in distant EFL classes, on the use of ICT tools in synchronous EFL classes, the positive sides of using those tools are perceived and emphasized more by the two components whereas only the technical problems were mentioned as the negative side of using ICT tools by both the teachers and the students.

Table 3. The perceptions of teachers and students on using ICT tools in distant EFL classes

	Positive perceptions	**f (n)**	**f %**	**Negative perceptions**	**f (n)**	**f %**
Teachers	Interaction	4	50	Technical problems	2	1
	Benefits	2	25			
	Feedback	2	25			
	Assessment	1	13			
Students	Facilitator for grammar learning	7	39	Technical problems	5	28
	Facilitator for vocabulary learning	5	28			
	Benefits	5	28			

On the use of ICT tools in online synchronous EFL classrooms, as for the positive side, all the students indicated that those tools helped them to actively take part in the lesson and practice their vocabulary and grammar knowledge. Student-7 said: *'I do not think there is a negative side, I think that we participated in the lesson more actively, which was positive'.* In the same vein, Student-11 stated: *'The tools used in the courses enhanced our learning since the words and topics were easier to memorize.'*

Also, the students reported that the tools used helped them to monitor their learning process and practice on the subjects that required more practice. For instance, Student-3 indicated: *'On the positive side, we were able to see where we made more mistakes. The negative aspect was that online education was sometimes difficult to understand.'* Student-13 said*: 'I was able to see my strengths and weaknesses. After the topics were over, they had positive effects on me for repetition. I learned more words.'*

However, some of the students reported that the tools like Flipgrid and Live Worksheets did not work well in practice as they had some technical problems. For instance, Student-1 said: *'It's all very nice, but I got a little bored using the Live Worksheet*s*.'* Similarly, Student-2 commented: *'Mentimeter, Kahoot, and Live worksheets have been an online tool that helps a lot in terms of vocabulary and topic reinforcement. I think that the Flipgrid application does not have a positive side because we had a lot of trouble uploading homework due to both my connection and technical problems with the application.'*

Like the students, the teachers also highlighted the advantages of using online tools in synchronous EFL classes. To exemplify, Teacher-1 said: *'It provides the active participation of the students. It provides the opportunity for the students to see and interpret each other's activities. I don't think there is a drawback when used correctly.*' Teacher-2 gave detailed information on which skills those tools helped more by saying: *'Google forms as a writing tool (helpful for tracking students' writing performance instantly); Mentimeter as a tool for students to give instant opinions about the subject in the lessons (The answers given were especially useful in warm-up activities); Flipgrid for speaking activities (useful to create a classroom environment where students can see each other's videos, the option to put subtitles, etc.)'* Teacher-5 also listed the 3 main advantages of using the mentioned tools as: *'1. They are very useful for feedback and measurement evaluation. I can see how successful they were when they completed the activities quickly and practically. I can give feedback accordingly, or I try to address the missing points in the lesson. They bring up a lively and different atmosphere in the lessons. Including different tools instead of following the books like recipe books helps to keep the excitement alive. 3. Each tool has its own pros and cons (free account features, etc.). It is very advantageous to be able to use the tool that suits what I need. If a tool does not consist of reporting activities, I include it in in-class activities. I prefer those who provide detailed reports for assignments. So, it is shaped according to the needs…'*

For the disadvantages of using the ICT tools in language classes, the teachers mostly complained about the technical and linking problems. For example, Teacher-2 specifically mentioned the difficulties of using Flipgrid: *'I think that Flipgrid application does not have a positive side because we had a lot of trouble uploading homework due to both my connection and technical problems of the application.'* Teacher-5 stated more generally about the tools saying: *'Technical problems can be the biggest disadvantage. If I use it in class, there is usually a problem with the link, some students are somehow unable to participate in the activity. In this case, I usually can't do much and I have to tell the student to follow my screen sharing. Also, when I use it as homework, there may still be problems and therefore I receive a lot of emails/messages, which means extra time for me.'* Teacher-6 directed attention to the timing issue of using such tools in online classes by stating that they required preparation in advance and when it was used for the first time, the students had difficulty in understanding how to use it, in that, time was wasted in the lesson until students got used to it.

4.3. The comparison of the distant EFL classes with and without ICT tools

As shown in Table 4, both teachers and students had common points on the advantages of using web tools in online language classes, particularly for more active participation and permanent learning.

Table 4: The comparison of the distant EFL classes with and without ICT tools

	With ICT tools vs without ICT tools	***f (n)***	***f %***
Teachers	Interaction	5	63
	Pedagogical appropriateness	2	25
	Fun	1	13
Students	Facilitator	7	39
	Interaction	6	33
	Fun	5	28

When the students compared the classes during which the ICT tools were implemented with the ones without using them, they attracted attention to the functionality of the tools by helping to make them actively participate in the lesson and make their knowledge permanent. Student-2 specified on one of the tools by stating: *'I think that in the lessons where Mentimeter is used, I and my friends in the class have more active participation compared to the lessons that we do not use.'* Student-4 also added that those tools make the lessons more competitive and fun by claiming: *'When we use it, the lessons are more fun, and we are in a race in the classroom. After the lessons, using*

these tools enhances our understanding.' Student-5 shortly summarized those two functions as: *'It made the lesson more enjoyable, we had more fun, we learned more.'* Quite similarly, Student-14 stated: *'These applications make the lesson more interesting and understandable.'* Student-16 focused on how those tools helped them to take part actively in the online lessons by stating: '*Thanks to the tools used in the lesson, I wanted to participate more, but when they are not used in some lessons, I was in the backstage.'*

Although most of the students did not remark on the lessons, they did not use the mentioned tools, and some of them drew attention to how they were affected negatively when those tools were not used. In that, they indicated some issues like; learning could not be permanent, the students are distracted easily, and lessons are more monotone. Student-9 drew attention to that issue by indicating *'When these tools are not used, the lessons taught are hardly remembered. And after two or three days we can completely forget what we learned'* Student-12 shortly mentioned the distraction issue by stating: *'I was easily distracted in lessons without online tools.'* Student-13 also pointed out '*When we do not use these tools, the lesson is a bit unattractive and when we use it, it keeps the lesson more dynamic.'* Student-17 also emphasized the advantages of the tools in making the recently introduced knowledge more permanent by pinpointing: '*In lessons where tools are not used, whether it is a word or a subject, we sometimes do not remember it when we study again, but when we learn in an enjoyable way, that is, when we use the applications, we listen to the lesson without getting bored, and when we do an activity or test after the lesson, we remember it earlier thanks to the applications in the lesson.'*

When the teachers compared the lessons with ICT tools to the ones without those tools, they mostly focused on the advantage of those tools in making the students participate in the lessons more actively. Teacher-1 stated on that issue: *'I think that the interest of the students is higher in the lessons where I use web tools and that such activities contribute positively by increasing the sense of belonging of the students to the community.'* Teacher-2 attracted the same advantage by adding the enjoyment and feedback factors by indicating: *'When web tools are used, lessons become more fun and student participation increases. Positive feedback is received from students.'* Teacher -5 also added the function of tools in following the students in distant education by claiming: '*When it is used, student participation increases, I think that it makes students feel that they are under control and their participation in the lesson is important.'*

About the lessons without using web tools, the teachers drew attention to the monotony of the lessons. Teacher-4 directly indicated that lessons without web tools were more monotonous. Teacher-7 also underlined the same monotony issue and added that lessons became more teacher-centered when the tools were not used by indicating *'When web tools are not used, lessons become more monotonous, and students are less active. Lessons seem more boring, unattractive and became more teacher-centered.'*

Only one teacher (Teacher-6) highlighted the use of those web tools appropriately in the right context by stating: *'Actually, using a web tool is not something miraculous. Of course, my class doesn't have to go well just because I used some web tools. The important thing is to use the tool with the appropriate pedagogy. I don't find it right to use a tool just for a change. I mean, I also had a lesson that went bad by using a tool or vice versa, I did not use a tool, but the desired goal and motivation in the lesson were achieved. To sum it up, if these tools are used according to the pedagogical relevance and dynamics of our classroom, then they will be fruitful.'*

4.4. The continuity of using ICT tools in distant EFL classes

The statements of both teachers and students in this study demonstrated that using web tools in online synchronous EFL classrooms should be sustained since they make the classes more interactive and beneficial.

Table 5: The continuity of using ICT tools in distant EFL classes

	Eager to continue to use ICT tools		Cautious to continue to use ICT tools	
	f (n)	**f %**	**f (n)**	**f %**
Teachers	8	100	4	50
Students	18	100	1	6

As a common point to be stated by all the teachers was the eagerness of the continuity of using those tools, and the number of tools used in the online EFL classrooms, all the teachers who responded to the interview agreed on the continuity of using those tools. Whereas some of them suggested being precautious about increasing the number of tools to be used. For instance, Teacher-3 suggested: '*Yes, I recommend the use of online tools, although it is difficult for teachers to go out of the regular class. But I think even the current number of these tools is, in fact, largely sufficient. Unfortunately, most of us do not know about it because we do not use it much.*' Teacher-5 stated: *'I strongly support its use, but I think the number of tools used should be limited*.'

When it comes to the students' opinions on the same matter, only one student (Student-10) reported that the amount of the tools used in the synchronous EFL classes during the year was adequate and there was no need to increase the amount and frequency. All the others expressed their pleasure and suggested further and more frequent use of web tools in their lessons. Student-3, for instance, stated: *'I would definitely recommend it because when we do not understand the subject, we have the opportunity to immediately correct our mistakes when we do something about it.'* Similarly, Student-9 stated: *'I would definitely recommend it, it helps a lot with the lessons. I wish this one and the other similar applications were used more.'*

5. CONCLUSION and DISCUSSION

Implementation of ICT tools in the language classroom has been a crucial issue for all the components of language education since there has been a rapid change in every part of educational contexts because of the technological developments all around the world. Furthermore, the concept of distant learning has been widely considered and accepted by many institutions considering its convenience and advantages. In addition to those changes in education, the pandemic period has pushed people towards distant education all around the world emergently without a long and proper preparation process. In that, the implementation of ICT tools into language classes, particularly in distant learning, is a crucial and new issue which is needed to be studied further.

Considering that scarcity, the current study aimed at investigating the students' and teachers' perceptions of using ICT tools in synchronous EFL classes by delivering an online written interview to the teachers and prep students at a state university in Turkey after a whole educational year during the pandemic. The two research questions addressed at the beginning of the study were answered by analyzing the responses of the participants to the interview questions by implementing a thematic analysis with two coders by realizing a percentage agreement.

For the first research question considering the teachers' perceptions on the use of web tools in distant synchronous language lessons, it was concluded that teachers perceive positively using those tools, especially for making the lessons more interactive and fun. Additionally, they suggested further usage of those tools appropriately and in a cautious number according to the pedagogical needs of the students and the requirements of the lessons. In the same direction, as an answer to the second research question considering the students' perceptions, the students who took part in this study also indicated that they found the lessons with web tools more beneficial and interactive, particularly helping them to participate in the lesson easily and to remember the recently learned grammatical rules and vocabulary.

The present study contributes to the understanding of both teachers' and students' conceptions of online language learning in distance education in line with the study of Tarchi et al. (2022), which involved only teachers. Similar to the outcomes of the study of Asghar et al. (2021), it is hoped that the findings of this study would be helpful for teacher education institutions to develop infrastructure, policy, and instructional strategies to enhance language teaching with technology and better learning of the students. As stated by Demir and Sönmez (2021), becoming an alternative to face-to face instruction during the pandemic, distance teaching was proved to be an indispensable part of future teaching practices, and what's more, hybrid teaching (partially online and partially in-class) would be the demand of educational institutions rather than solely having face-to-face education; therefore, it is suggested that universities train their teaching staff for this type of education. It is also suggested that ICT courses and e-learning classes should be the integral components of the curriculum of teacher education to encourage teachers to cope with this new mode of teaching (Razkane, Sayeh and Yeou, 2022).

Through the outcomes of the current study, it has been evident that the use of multimedia technology fosters learners' thinking and linguistic abilities; thus, these technological devices could be utilized more effectively in language classrooms owing to the fact that technology-enhanced foreign language learning offers authentic materials, opportunities to practice language skills and enjoyable activities to be participated (Amin and Sundari, 2020). As it was also suggested by Kumar et al. (2021), this study also proposed for language instructors to teach English using multimedia technology in their classrooms since this might lead their students to become more involved and responsible for their learning compared to the face-to face learning environment (Demir and Walker, 2022). To exemplify, some tools might make an effective change in learners' roles from passive receivers to active respondents and even feedback givers and providers (Saeed, Alharbi and Yassin, 2021). In brief, online learning opened opportunities for students to cultivate self-discipline and self-control over their studies and life and paved the way for them to work on their own using online resources to become independent and autonomous learners (Zhang and Wu, 2022).

To be able to realize the previous suggestions, teachers and students should be introduced and educated on the web tools which could be implemented in their classrooms considering the levels of their students. As Qizi (2021) also suggested, most of the issues in language learning could be overcome through incorporating technology and

appropriately trained teachers. In that, more courses on how to integrate technology in language classrooms both in distant and in face-to-face formal training should be added to the curriculum of the teacher training programs, particularly in terms of compulsory and elective courses. Hence, the importance of introducing courses on using new technologies in classrooms should be considered to develop future teachers' digital skills (Biletska et al.,2021) in addition to in-service training workshops to make teachers familiar with the internet web-based technology and its pedagogical aspects (Öz, 2014) because the findings of Civelek, Toplu and Uzun's study (2021) revealed that the EFL teachers, who had been taught about the educational technologies have more positive attitudes online instruction and they are more capable to implement this type of instruction. The scope of this in-service training could also be on the use of tools and possible remedies to technological problems that EFL teachers may encounter during synchronous and asynchronous online education (Erdoğan and Yazıcı, 2022). That's to say, upskilling of EFL instructors in increasing digital competences to establish successful online teaching and overcome the mentioned shortcomings might help to fill the teaching gaps encountered by many of these teachers (Krsmanovic, 2022).

This study also underlines the fact that schools have the appropriate materials and conditions to develop teaching with technology, such as the internet and computers. Erbaş, Çipuri, and Joni also (2021) pointed out the importance of technology integration in the curriculum and supplying the appropriate conditions at the schools for both the teachers and the students. To illustrate, institutions may consider hiring support staff helping ELF teachers while dealing with technological challenges (Erdoğan and Yazıcı, 2022) since these teachers need to be familiarized with the effective use of tools and applications and armed with some tactics to find out sound solutions to technological issues (İpek and Üstünbaş, 2021). As a final implication, as Koet and Aziz (2021) stated after a systematic review regarding teachers' and students' perceptions toward distance learning during the pandemic, educational policymakers, authorities, and other stakeholders should investigate each issue in-depth and find feasible solutions to help teachers and students who are under big pressure of distance learning.

Although this study posed an important issue by investigating a current matter via qualitative tools, the findings are difficult to generalize because of some limitations. First, it has involved a small sample of only one institution. In that, involving different institutions with different grades and departments might be better for further studies to make the results more comprehensive. Secondly, this study used only qualitative data which could be supported by some quantitative and experimental ones in further studies.

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