

# A Study on Attitudes of Postgraduate Students In Educational Sciences And Teaching Departments Towards Distance Education In Terms of Various Variables

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## ABSTRACT

The aim of this study is to investigate the attitudes of postgraduate students in the fields of educational science and teaching at universities in Türkiye towards distance learning, in terms of different variables, in the spring semester of the 2019-2020 academic year. Mixed method sequential explanatory design was used in the study. The sample of the study was determined using the snowball sampling method. The sample consisted of a total of 321 students, of which 238 were female (74.1%) and 83 were male (24.9%). The data of the study were collected through the Personal Information Form and the Attitude Towards Distance Education Scale. As a result of the analysis of the data obtained from the scale, it was found that the students' attitude towards distance education was undecided. As a result of the analysis, a significant difference at .05 level was found in favour of doctoral students according to the variable of postgraduate degree. A significant difference at the .05 level was found in favour of distance learning students according to whether they took distance learning before the pandemic, and in favour of distance learning students according to whether they took distance learning during the pandemic. The results of the research are important in terms of revealing the attitudes and opinions of students exposed to distance education with a rapid transition during the pandemic process.

**Keywords:** *Distance learning, post graduate education, educational sciences, attitude*

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## INTRODUCTION

Education is one of the most important processes that distinguish humans from other living beings. For this process, which begins with the existence of humankind, Kant said "human being can only become human through education" (Ang, 2006). Although one single definition for education is not sufficient, it is most commonly defined as: "Education is to provide the necessary assistance to the individual in the process of creating the desired change in his own life and deliberate behavior by gaining new skills and understanding" (Ertürk, 2013). In the beginning of humanity, activities such as protection from dangers, coping with nature, finding food, clothing and shelter were the basic

behaviors and skills that people should learn in order to survive (Oktay, 2018). The first educational activities related to this were taking place through transferring the knowledge from individual to individual. With the invention of writing, education has shown a shift from learning from the individuals to the written material (Dinçer, 2016).

The existence of the school is mentioned in the first written sources of human history. It can be said that as the knowledge of human beings increased and became more complex, schools have emerged as a result of the need for private individuals and institutions to transfer these to the younger generations. The function of the school, which was a very important institution in the primary, middle and recent ages, is discussed today, and many opportunities created by technology can be used as an alternative to school. The content and application of education may change according to the era and its conditions (Oktay, 2018). One of these applications is distance education. In the changing and transforming world, in parallel with the conditions and needs of the era, the first "distance education" activity started in Sweden in 1728 as "correspondence education" through postal services (Özbay, 2015).

The concept of distance education was mentioned for the first time in Türkiye in "Teacher Education Report" prepared by Dewey in 1924. It found its place in practice in 1956, when Ankara University Banking and Commercial Law Research Institute initiated the practice of correspondence education for employees working in banks (Kör, 2013; Sarıtaş, 2013). This process, which started with Ankara University, has passed through many stages in institutionalization. Activities carried out by the studies of both the Ministry of National Education and the Non-formal Higher Education Institution (YAYKUR) were left to the initiative of the universities with the Higher Education Law, numbered 2547, in 1981. With the Decree Law issued one year later, the distance education mission at higher education level was delegated to Anadolu University (Sarıtaş, 2013). Anadolu University's studies on distance education have pioneered and guided other universities (Elitaş, 2017). Other universities such as Istanbul University and Atatürk University have started to implement the distance education model in time.

The process of distance education, which began with correspondence in the world, has gained momentum with the spread of mass media such as tape, radio, television, video, computers, disk drives, printers, scanners and cameras, and Internet technologies, in parallel with the needs of the times and technological possibilities (Krotz, 2017; Elitaş, 2017). In its most current definition, distance education includes educational activities in which the teacher and learner are at different times and places, which are carried out through multimedia support and postal services, and which are accessed synchronously or asynchronously (Yücel, 2020).

The distance education model has some advantages and disadvantages compared to face-to-face education. The advantages of distance education can be summarized as; time, space and cost savings, visual and audio design support, contributing to the entrepreneurship and decision-making skills of the individual, massifying and individualization of education, providing convenience to individuals with special needs, providing easy and updateable measurement and evaluation tools, eliminating the inequality of opportunity (Şeren, et al., 2020; Gör, 2023). Disadvantages of distance learning include problems of access to the Internet, the need for technological tools, the potential for the emergence of asocial individuals, the imposition of responsibility for learning on the individual, the lack of interaction, and the lack of security in measurement and evaluation (Elitaş, 2017; Şeren et al., 2020; Gör, 2023).

In addition to associate degree and graduate education, postgraduate education including master's and doctorate degree, specialty in medicine and proficiency in art are also carried out within universities. The aim of postgraduate education is to train researchers, scientists and human resources, of which the country is in need, with high qualifications in all branches (Bozan, 2012). According to the latest statistics, there are a total number of 208 universities, 129 of which are state and 79 of them are private universities, and there are 16,567 master's and 11,700 doctoral programs in their institutes. 82

of these universities have distance education programs at the master's level and the number of students attending them is 24,963 in total, of which 10,208 is female and 14,755 is male. There is no distance education doctorate program (Council of Higher Education, 2024).

Schools were closed due to the Corona virus (International Committee on Taxonomy of Viruses, 2020; World Health Organization, 2020), which emerged in China at the end of 2019 and spread rapidly all over the world. On March 10, 2020 by the appearance of the first cases in Turkey (General Directorate of Public Health, 2020) higher education institutions were also closed as a precaution and as of March 23, 2020, education has started again as distance education through digital environment (Council of Higher Education, 2020). Before the pandemic, nothing has changed for distance education students and they already have an attitude towards this education. Students who did not have distance education experience before the pandemic had to adapt to the process and developed a positive or negative attitude towards this practice.

The emotional, mental and behavioral reaction pre-tendency that an individual organizes against himself or any event, object or social issue around him based on his motives, feelings, knowledge and experiences is called "attitude". As stated in the definition, attitude has three constituent elements as emotional, mental and behavioral, and these elements are in an organizational relationship. Among these elements, the mental element includes what the individual knows about an object or a subject; emotional element determines how to approach to the emotional factor or subject or the related issue and behavioral element determines how the individual will behave towards the object or subject (İnceoğlu, 2010). For example; the joy of a child taking a math class in the third grade of primary school is not because of the love he felt for mathematics at that moment, but because he had this feeling before. In summary, attitude is one of the important factors in the emergence of human behavior. In this context, for an effective and useful distance education, users' attitudes towards distance education are more important than how the technological tools are advanced (Liaw, et al., 2007). When the attitude of students towards distance education and the reasons affecting it are determined correctly, better quality distance education environments can be created (Haznedar, 2012).

Although there are many studies regarding undergraduate students, teachers and lecturers related to distance education in Türkiye (Koloğlu, 2016; Bertiz, 2018; Ülkü, 2018; Boz, 2019; Etlioğlu & Tekin, 2020; Akgül, 2021; Ergün, 2022; Zulfikar, 2023; Yüzükırmızı, 2023), there is no study examining the attitudes of postgraduate students towards distance education. Based on this, since there is an opportunity and obligation for all postgraduate students to experience distance education during the pandemic process we are in, it is aimed in this study to examine the attitudes of students who receive 'postgraduate education' in the fields of 'educational sciences' and 'teachership' towards distance education in terms of various variables.

For this purpose, answers to the following questions were investigated:

- 1- Do attitudes towards distance education of postgraduate students studying in the fields of educational sciences and teaching show a significant difference according to gender, age, postgraduate degree, year of postgraduate education (such as course or thesis stage), whether continuing postgraduate education in the province they live, whether receiving distance education before the pandemic or started with the pandemic process?
- 2- How are these students' attitudes towards distance education?
- 3- What are their views on distance education?

## RESEARCH METHOD

### Research Model

This research used a mixed methods and sequential explanatory design. In this design, mainly quantitative data are collected and qualitative data are collected in addition. Priority is usually given to quantitative data. Qualitative data are mainly collected to complement quantitative data. Analyses of the data are interrelated and are often combined in the data interpretation and discussion sections (Creswell, et al., 2017).

### Participants

The sample of the research consists of 321 students continuing their postgraduate and doctoral education in the fields of 'educational sciences' and 'teaching' during the 2019-2020 academic year spring semester in state and private universities in Turkey. The sample was created by 'snowball sampling method'. Snowball sampling is a type of sampling method based on finding new participants through the initial group formed, in those cases where information about the universe is insufficient and it is difficult to reach individuals who make up the universe. The term snowball defines a group that starts with small numbers and grows bigger as it rolls (Neuman, 2007; Corbetta, 2003).

**Table 1.** Frequency and Percentage Distribution of Demographic Characteristics of The Sample (N = 321)

Demographic Features		f	%
Gender	Female	238	74,1
	Male	83	24,9
Age	Between 22-25 years old	104	32,4
	Between 26-29 years old	91	28,3
	Between 30-34 years old	82	25,5
	Between 35-44 years old	44	13,7
Postgraduate Degree	Postgraduate	197	61,4
	Doctor's degree	124	38,6
Postgraduate Phase	Taking the courses	162	50,5
	Thesis writing phase	128	39,9
	Will take the qualifying exam or submit thesis proposal	31	9,7
Is postgraduate education continued in the province of residence?	Yes	178	55,5
	No	143	44,5
Was there any distance education before the pandemic?	Yes	125	38,9
	No	196	61,1
Has distance education been received during the pandemic process?	Yes	224	69,8
	No	97	30,2

As seen in Table 1, 238 (74.1%) of 321 postgraduate students forming the sample are female and 83 (24.9%) are male. 104 of the participants (32.4%) were between 22-25 years old, 91 (28.3%) were between 26-29 years old, 82 (25.5%) were between 30-34 years old, 44 (13%, 7) is between the

ages of 35-44.

197 (61.4%) of the students are continuing their master's degree, and 124 (38.6%) are continuing their doctorate. 162 of the students (50.5%) were in the taking course phase, 128 (39.9%) were writing their thesis; 31 of them (9.7%) stated that they would take the qualifying exam or submit a thesis proposal.

While the number of those who continue their postgraduate education in the province where they live is 178 (55.5%), the number of those who do not is 143 (44.5%). While 125 of the participants (38.9%) were educated by distance education before the pandemic, the number of those who did not is 196 (61.1%). The number of students who cannot receive distance education despite being in the pandemic process is 97 (30.2%).

Although 321 students participated in the study, 48 students gave appropriate answers to the open-ended question asked in the Personal Information Form in order to "get the opinions of the students about distance education" in accordance with the qualitative analysis. The demographic information of the students is presented in table.2.

**Table 2.** Frequency and Percentage Distribution of Demographic Characteristics of The Sample (N = 48)

Demographic Features		f	%
Gender	Female	39	81,2
	Male	9	18,8
Age	Between 22-25 years old	18	37,5
	Between 26-29 years old	18	37,5
	Between 30-34 years old	9	18,8
	Between 35-44 years old	3	6,2
Postgraduate degree	Postgraduate	34	70,8
	Doctor's degree	14	29,2

As it can be seen in Table 2; 39 (81.2%) of the 48 students that make up the sample of the qualitative question are female and 9 (18.8%) of them are male students. 18 (37.5%) of them were between 22-25 years old, 18 (37.5%) of them were 26-29 years old, 9 (18.8%) of them were 30-34 years old, and 3 (6.2%) of them were between 35-39 years old. While the number of students continuing their master's degree education is 34 (70.8%), the number of students continuing their doctorate degree education is 14 (29.2%).

#### Data Collection Tool

"Personal Information Form" and "Attitude Scale towards Distance Education" were used to collect data in the study.

#### Personal Information Form

In the Personal Information Form prepared by the researchers, 7 closed ended questions were prepared to determine the participants' gender, age, continuing graduate degree and education stage, whether they continue their graduate education in the province where they lived, whether they received distance education before the pandemic, and whether they could receive distance education during the pandemic process. And there was one open-ended question to get their opinions about distance education.

### ***Attitude Scale towards Distance Education***

In the scale developed by Kışla in 2005 to measure the attitudes of university students towards distance education, there are a total of 35 items, 7 of which have negative and 28 of which have positive meanings. The answers that can be given to the items in the scale prepared in the five-point Likert type consist of "strongly disagree (1)", "disagree (2)", "undecisive (3)", "agree (4)" and "strongly agree (5)". The highest score that can be obtained from the scale is 175, and the lowest score is 35. Some items are reversely scored. High scores from the scale show that the attitude towards distance education is positive.

Exploratory factor analysis (EFA) was conducted to determine the factor loadings of the items and to determine the sub-dimensions within the scope of the construct validity of the scale. It was determined that the factor item loadings of all items were above .30 and the number of factors was limited to one. In addition, it was decided that the scale has content validity in line with the feedback received by referring to the opinions of five experts.

Cronbach Alpha was applied for the internal consistency of the scale and the reliability coefficient was found to be .89 (Kışla, 2005). A reliability coefficient of .70 or higher means that the reliability of the scale is sufficient (Büyüköztürk, 2014).

### **Collection of Data**

Since the universities were closed and it was aimed to get access to the postgraduate students studying in different universities in Turkey, the e-mail addresses of the students and lecturers from the summary or abstract books from the congresses in educational science and field of teaching were obtained. The purpose of the study was explained by sending e-mail to these addresses (n = 1000). And an address link of the data collection tools that were transferred to the electronic environment was also sent. In addition, it was requested to send the address link to the people they know who continue their postgraduate education in the fields of "educational sciences" and "teaching". The owners of the social media pages for postgraduate education were also asked to share the address link with their followers. It is not known exactly how many people were reached in this way, but the number of scales answered was 321. It took approximately three weeks to collect the data. During this period, participants were reminded at regular intervals.

### **Data Analysis**

In order to analyse the data obtained in this research, a package programme that performs data analysis in a computer environment was used. Descriptive statistics such as frequencies, percentages and cross tabulations were used to analyse the demographic data of the students. Skewness and kurtosis coefficients were analysed to determine whether the data were normally distributed. As a result of the analysis, the skewness value of the data was determined to be .361 and the kurtosis value was determined to be -.176. In the literature, the normality assumption of kurtosis and skewness values is accepted in the range of +1 and -1 (Morgan, et al., 2004; Büyüköztürk, et al., 2018). In the comparison of quantitative data, since the number of samples is more than 30, the data show normal distribution and the data distribution is homogeneous (Eymen, 2020), "independent group t-test" was used to determine the difference between two groups and "one-way analysis of variance (ANOVA)" was used to calculate the differences between more than two groups. The results obtained were evaluated with a 95% confidence interval and a 5% significance level.

Content analysis was applied to the answers to the open-ended question added to the Personal Information Form in order to get the students' views on distance education. Themes and sub-themes belonging to the codes generated from the data are extracted in the content analysis (Yıldırım & Şimşek, 2011). According to this; The opinions were grouped into two categories as 'positive' and 'negative', and four themes emerged in each category.

**FINDINGS**

Under this heading, the findings regarding the level of attitudes of the graduate students participating in the study towards distance education, whether the attitudes show a significant difference according to the demographic characteristics specified in the aims, and their views on distance education are included, respectively

**Quantitative Findings**

**Table 3.** Descriptive Statistics Regarding the Attitude Scores of the Participants towards Distance Education

Attitude Scale	N	R	Min	Max	$\bar{x}$	Median	Sd
	321	124	43	167	101,24	98	23,22

As can be seen in Table 3, while the range is 124, the minimum score obtained from the scale is 43 and the maximum score is 167. The median is 98 and the scale total score average of the participants (n = 321) who are considered to have a normal distribution because it is close to the arithmetic mean is 101.24. The standard deviation was calculated as 23.22. The arithmetic mean score of the participants on a five-point Likert-type scale is 2.89. Accordingly, students' attitudes towards distance education are close to the "undecisive" level.

**Table 4.** Independent Group t Test Results Conducted to Determine Whether the Scores of the Attitude Scale Towards Distance Education Differentiated According to the Gender Variable

Groups	N	$\bar{x}$	Ss	Sh $\bar{x}$	t Test		
					T	Sd	p
Female	238	2,87	,652	,0423	-,667	319	,505
Male	83	2,93	,695	,0763			

As seen in Table 4, there is no significant difference between the genders according to the results of the independent group t test conducted to determine whether the attitude scores differ according to the gender variable ( $p > 0.05$ ).

**Table 5.** Results of One-Way Analysis of Variance (ANOVA) to Determine Whether the Scores of the Attitude Scale towards Distance Education Differentiated According to the Age Variable

Group	$\bar{x}$ and ss Values					ANOVA results			
	N	$\bar{x}$	ss	Variance	KT	Sd	KO	F	p
Between years old	22-25	104	2,86	,636	Between the groups	2,974	3	,991	
Between years old	26-29	91	2,78	,671	Within the groups	137,889	317	,435	2,279 ,079
Between years old	30-34	82	2,94	,682	Total	140,873	320		
Between years old	35-44	44	3,08	,643					

According to the one-way analysis of variance ANOVA results in Table 5, which was done to determine whether the attitude scores differ according to the age variable, the lowest mean score of

2.86 belongs to the age group between 22-25, the highest mean score of 3.08 belongs to participants aged between 35-44. However, this difference is not statistically significant ( $p > 0.05$ ).

**Table 6.** Independent Group t Test Results Conducted to Determine Whether the Scores of the Attitude Scale towards Distance Education Differentiated According to the Variable of Continuing Graduate Education Degree Variable

Groups	N	$\bar{x}$	ss	$Sh_{\bar{x}}$	t Test		
					T	Sd	p
Postgraduate	197	2,81	,635	,0453	-2,536	319	,012
Doctor's degree	124	3,01	,691	,0621			

According to Table 6; As a result of the independent group t test conducted, a significant difference at the level of .05 was found in favor of doctoral students ( $x_{3,0} = 3.01$ ).

**Table 7.** Results of One-Way Analysis of Variance (ANOVA) Conducted to Determine Whether the Scores of the Attitude Scale towards Distance Education Differentiated According to the Variable of Continuing Graduate Education Stage

$\bar{x}$ and ss Values					ANOVA Results				
Group	N	$\bar{x}$	ss	Variance	KT	sd	KO	F	p
Taking the courses	162	2,89	,694	Between the groups	,001	2	,001		
Thesis writing phase	128	2,89	,612	Within the groups	140,872	318	,443	,002	,998
Will take the qualifying exam or submit thesis proposal	31	2,89	,724	Total	140,873	320			

According to the one-way analysis of variance (ANOVA) results in Table 7 to determine whether the attitude scores differ according to the graduate education phase variable, the average of all groups is the same and there is no statistically significant difference between the groups ( $p > 0.05$ ).

**Table 8.** Independent Group t Test Results Conducted to Determine Whether the Scores of the Attitude Scale towards Distance Education Differentiated According to the Variable Whether Continuing Graduate Education in the Province of Residence

Groups	N	$\bar{x}$	ss	$Sh_{\bar{x}}$	t Test		
					T	sd	p
Continues in the province of residence	178	2,82	,628	,0471	-1,961	319	,051
Continues in another province	143	2,97	,698	,0583			

In Table 8, independent group t test analysis results are given to determine whether the attitude scores differ according to the variable of whether the students continue their graduate education in the province where they live or not. Looking at the results, it can be seen that there is no statistically significant difference ( $p > 0.05$ ).



**Table 9.** Independent Group t Test Results Conducted to Determine Whether the Scores of the Attitude Scale towards Distance Education Differentiated According to the Variable Whether Graduate Students Received Distance Education Before the Pandemic or Not

Groups	N	$\bar{x}$	Ss	$Sh_{\bar{x}}$	t Test		
					T	sd	p
Distance education before pandemic	125	3,03	,655	,0586	3,036	319	,003
Distance education after pandemic	196	2,80	,654	,0467			

As seen in Table 9, as a result of the independent group t test, it was determined that the attitude scores towards distance education were significant at the level of .05 in favor of the students who received distance education ( $\bar{x} = 3.03$ ) before the pandemic ( $p < .05$ )

**Table 10.** Independent Group t Test Results Conducted to Determine Whether the Scores of the Attitude Scale towards Distance Education Differentiated According to the Variable Whether Graduate Students Get Access to Distance Education During Pandemic Process

Groups	N	$\bar{x}$	Ss	$Sh_{\bar{x}}$	t Test		
					T	sd	p
Access to distance education during pandemic	224	2,94	,694	,0464	2,303	219,96	,022
No access to distance education during pandemic	97	2,77	,570	,0579			

Table 10 shows the results of the independent group t test conducted to determine whether the attitude scores of the students who received distance education during the pandemic process and the students who could not. Accordingly, attitude scores are significant at .05 level in favor of students who could receive distance education ( $\bar{x} = 2.94$ ) during the pandemic.

**Qualitative Findings**

Although 321 students participated in the study, since 97 (30.21%) left unanswered the open-ended question asked in the Personal Information Form to "get their views on distance education" and on the other hand, 176 participants (54.82%) gave answers such as "no change, positive, negative, etc." which were not suitable for the content analysis they were not evaluated. In this case, content analysis was conducted for 48 (14.95%) students who responded. The views were collected in two categories as 'positive' and 'negative', and four themes emerged in each category. Findings related to this are presented in Table 11.

**Table 11.** Frequency and Percentage Distribution of Participants' Views on Distance Education

Category	Themes	F
Responds reflecting positive views	Saving of time	8
	Not having transportation problems	7
	Possibility to record courses	4
	Affordability	3
Responds reflecting negative views	Communication problems	28
	Technical problems	12
	Increase in the course load	11
	Shortening in the course hours	7

As seen in Table 11, 8 of the positive opinions of the graduate students participating in the study on distance education are included in the theme of 'saving of time ', 7 of 'not having the transportation problem', 4 of 'the possibility of recording courses' and 3 of 'affordability'.

Examples of these positive opinions are:

E 15: *"I am taking my education in a different city from where I live. In fact, it can be said that distance education was better for me, because I am a classroom teacher and it was difficult for me to go to the classes and come back. I can attend classes regularly thanks to distance education. "*

E 36: *"It affected my motivation positively. Since I prepare for the public personnel exam at the same time, courses take less time and I use the time which I spend to go the faculty to stay at home and get prepared for the exam "*

E 29: *"Recording the lesson and having the chance to listen to the lesson again increases the effectiveness of the lesson. Since the graduate courses was relatively harder, we were unavoidably missing some important points because we did not have the chance to listen to the course again later in face-to-face education. "*

E 46: *"I think lessons are more positive and efficient. In addition to being easy and efficient to use materials, presentations, assignments and document sharing, I think it makes a lot of economic contribution."*

Of the negative opinions about distance education, 28 are under the theme of "communication problem", 12 of them "technical problems", 11 of them "increase in the course load", and 7 of them "shortening of the course hours".

Examples of these negative opinions are:

E 2: *"Although our communication with my teacher continues, of course it is not as effective as it was during face-to-face communication. Honestly, I cannot say that I get a lot of efficiency from distance education. "*

E 22: *"Our teachers think that we are always available and can work comfortably because we are at home 24/7, but this is not the case. More homework burden put on us. "*

E 24: *"Meeting face to face is more motivating. There are various technical problems in distance education due to the program. "*

E 48: *"The efficiency of the lessons decreased as the duration of the lessons was shortened and the discussions decreased."*

## DISCUSSION AND CONCLUSION

In this study, the attitudes of students continuing their master's and doctoral education in the fields of 'educational sciences' and 'teaching' towards distance education were determined; it was examined whether their attitudes showed a significant difference according to various variables (gender, age, level and stage of graduate education, whether graduate education was continued in the province of residence, whether they received distance education before the pandemic, whether they received distance education during the pandemic) and their opinions on distance education were taken.

According to the Attitude Scale towards Distance Education applied, it was determined that the attitudes of graduate students were close to "undecisive". It can be thought that this situation is due to the insufficient distance education experience of the participants. Similar results were found in some studies (Dick, Case & Burns, 2001; Kışla, 2005; Ateş & Altun, 2008; Özdemir, et al., 2009; Kaya & Durmuş, 2010; Şimşek, İskenderoğlu & İskenderoğlu, 2010). There are also other studies conducted

with lecturers (Süer, et al., 2005) and university students (Ojo & Olakuluhin, 2006; Aydın, 2012) that show the attitude towards distance education is positive.

The results regarding the comparison of the attitudes of postgraduate students and their demographic characteristics are as follows:

It has been found that the attitudes towards distance education do not show a significant difference according to the 'gender' variable. Similar results were obtained when the relevant literature was examined (Kışla, 2005; Ateş and Altun, 2008; Şimşek, et al., 2010).

No significant difference was found in the attitudes of students towards distance education according to the "age" variable. As the majority of the participants are between the ages of 22-35, as well as being young may cause this situation, it may also be because all students continuing to postgraduate education need technological tools both during the course and thesis stage and therefore, they are prone to use them.

When how participants' attitudes differ according to the ongoing "graduate degree" was examined, it has been determined that there is a significant difference in favor of doctoral students, that is, the attitude scores of doctoral students towards distance education are significantly higher than graduate students. This result is also supported by other research results in the literature (Çiftçi, et al., 2010; Kaya & Durmuş, 2010; Haznedar, 2012). Haznedar (2012) found a significant difference between 1st, 2nd and 4th grades in favor of 4th grade, and between 2nd and 3rd grades in favor of 3rd grade in the study he conducted with university students. In the study conducted by Kaya and Durmuş (2010) with the first and fourth grade students of the education faculty, it was observed that there was a significant difference in the attitudes of the students in favor of the 4th grade. According to the results, as the education level of the students increases, their positive attitude scores towards distance education also increase. It can be interpreted that as the level of education increases, students' perspective changes, their experience of using technology increases, and they manage their own processes better by adopting a self-study discipline.

No statistically significant difference was found in the attitude scores of the students towards distance education according to the "graduate education phase" variable. Considering that during the coronavirus pandemic we are in, distance education is applied at all levels of education, the fact that universities have not yet fully settled their systems and faculty members cannot adapt to the process may have caused students not to develop a clear attitude in a positive or negative direction.

In the study, no significant difference was found between "continuing postgraduate education in the province of residence or not" variable and the attitude scores towards distance education. Although distance education has advantages such as time, space and cost savings (Uşun, 2006; Ağır, 2007) it may be thought that this result is caused by the consideration or experiencing disassociation of the students, putting the responsibility of learning on the participants and possible internet access problems.

In the study, it was examined whether there is a statistically significant difference between the "receiving distance education before the pandemic or not" variable and the attitudes of students who received postgraduate education in the fields of "educational sciences" and "teaching" towards distance education. A significant difference was found in favour of those who received distance education before the pandemic. It can be seen that there is a significant difference in favor of the students who have received distance education during the pandemic process when the attitude scores of the students who have received and could not receive distance education during the pandemic. The result regarding the participation of students in distance education before the pandemic is also supported by other results in the literature (Brinkerhoff & Koroghlanian, 2005; Kışla, 2005). In another

study conducted with teachers, it was found that teachers who have knowledge about distance education have more positive attitudes towards distance education than those who do not (Ağır, 2007). These results show that individuals with distance education experience develop more positive attitudes towards distance education.

Content analysis was applied to the "views on distance education" of the students in the sample, and the opinions were collected in two categories as "positive" and "negative". Themes forming the category of positive opinions are; the elimination of the transportation problem, saving of time, possibility of recording courses and affordability. When the literature on the subject was examined, it was seen that there were studies supporting the results of the research (Ağır; 2007; Özköse, et al., 2013; Akçay, 2014; Ayvaci & Bebek; 2016). In Ağır's (2007) study, it is revealed that distance education provides an advantage in eliminating the transportation problem and recording the lessons, while Özköse, Arı and Çakır (2013) conducted a study with lecturers and it is prominent that distance education saves time. In the applied study conducted by Akçay (2014) with university students, the participants emphasized the advantages of distance education such as time-space flexibility, increased motivation, being economical and repeatability of the lessons, while Ayvaci and Bebek (2016) emphasized the opportunity to enroll courses. The themes that make up the negative opinions category are communication problems, increase in the course load, technical problems and shortening of the course hours. Studies in line with these results (Bonk, 2022; Falowo, 2007; Bilgiç & Tüzün, 2015) were found in the literature review. In the research conducted by Bonk (2022) for lecturers, technical problems and lack of sufficient infrastructure take place. In the study of Falowo (2007), the technical problems faced by the students and the communication barriers they face are the prominent themes. Finally, in the research of Bilgiç and Tüzün (2015), students are united under themes such as low participation in live lessons, lack of communication and feeling of loneliness of the individual.

As a result, the attitude levels of graduate students participating in this study towards distance education are moderate. These attitudes did not differ significantly according to the variables of gender, age, postgraduate education stage, and whether or not they continue postgraduate education in the province of residence. It was concluded that there was a significant difference in attitude scores according to the variables of continuing postgraduate education degree, whether or not to receive distance education before the pandemic, and whether or not being able to receive distance education during the pandemic. According to these results, it can be said that as the experience of the students about distance education increases, they show more positive attitudes. In addition, students' opinions about the positive and negative aspects of distance education are also compatible with the literature.

### **Suggestions**

Based on the results of the study, the following suggestions can be made to researchers and practitioners:

The research is limited to Masters and PhD students with a thesis. Information on this topic can be obtained by conducting studies on Master's students who do not write a thesis. This study is limited to graduate students in the field of education. However, education is an interactive process. It may be useful to conduct research that reveals the attitudes and opinions of academic staff, who play an important role in achieving the desired benefits of distance learning. In the qualitative data collected in the study, it was found that both students and lecturers lacked knowledge about distance education. Their knowledge and attitudes towards the subject can be improved by organising conferences and seminars on distance education for lecturers and postgraduate students. During the pandemic process, distance education was immediately implemented in universities. This rapid transition process has created some technical and infrastructural problems. The results of our research also support this situation. Therefore, in order to minimise the negative aspects of distance education, necessary and permanent technical infrastructure should be established in distance education systems of universities.

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