

## University Students' Views on Distance Learning

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### Abstract:


This study aims to examine distance education practices of universities in Turkey during coronavirus (covid-19) pandemic according to views of undergraduate students. The method of this study is designed in the survey model. The study group consists of 1561 students studying at 44 universities. Simple random sampling method was used while selecting the study group. The data were collected by the researchers, with the 'Scale of Distance Education Views of University Students' which was developed within the scope of the study. Study data were analyzed with descriptive tests, t-test, and ANOVA tests. The findings of this research show that there is a significant difference in the university students' positive views about distance education in terms of their social lives, socio-economic factors, ability to learn independently, making themselves willing to learn, their willingness to go to school, adaptation to the lesson plan, school performance of the students, before and after course studies, devices they use for the education, the internet connection quality they have, their capability level to use the technology, access to course resources and the system of the university they are studying at. The findings of this study provide an important insight into the factor affecting students' views on distance learning, which need to be considered in the future conceptualization of such provision.

**Keywords:** Distance Education, Pandemic, University Student.


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## INTRODUCTION

The Coronavirus (Covid-19) pandemic, which emerged in the Wuhan Region of China towards the end of 2019 and has affected the entire world, has caused many changes in many areas of the life. Undoubtedly, one of these areas is education. With the risk of accelerating the spread of the virus, schools all over the world, starting from China started to be closed in order to prevent the virus's spread and control the virus in early 2020 (WHO,2020). In Turkey, on March 16, 2020, the Ministry of Education (MEB) announced that education suspended for three weeks at all levels (MEB, 2020). Moreover, in this three-week period, the Council of Higher Education (YÖK) also announced that they decided to suspend their activities, especially education practices for three weeks (YÖK, 2020). Following the increase in the number of cases, YÖK announced to the public its decision on March 19, 2020 that the theoretical courses of associate, undergraduate and graduate programs would continue with distance education. Distance education, which is one of the most dynamic and enriching forms of learning opportunities available when the possibility of applying face-to-face education becomes difficult, was the available alternative (Miltiadou & Yu, 2000).

Distance education is a planned systematic application of education technology in which the source and the recipient are in separate (distant) environments in most of the learning-teaching processes, and that allows its recipients for "individuality, flexibility and independence" in terms of teaching age, purpose, time, place and method; and materials, tools technologies and methods such as written and printed materials, audio tools, technologies, face-to-face education are used in learning-teaching processes, and communication and interaction between the source and the recipients are provided by interactive integrated technologies. (Uşun, 2006, s.20).

Distance education, being in a certain age range, being in a certain time period or being in a certain environment and developing technology encourage people to connect remotely (Arat & Bakan, 2011). Thousands of adults want to continue their education up to the university level, but they cannot continue their education due to restrictions like geography, vocation, and age so the distance education is a good option. Similar developments in the world continues to develop from past to present. The development of distance education in Turkey has taken place in proportion to the socio-economic conditions of the country. Although the first known beginning instance of distance education was in the 18th century in Turkey, the first activities of distance education were started in the middle of the 20th century. The first institution that carried out distance education activities at the university level was established as the Open Education Faculty in 1982, and it carried out this activity over radio and television in the first years (İşman, 2008). Today, Eskişehir Anadolu University, Istanbul University and Erzurum Atatürk University Open Education Faculties come to the fore as the drivers of distance education. Also, 2018 PISA data indicate that Turkey has an effective online portal and that many of the teachers and school principals

have the necessary technical and pedagogical skills to integrate digital devices into education (Moreno & Gortazar, 2020).

The pandemic which has been affecting Turkey since March 2020, has made distance education the focus of education. This rapid change has increased the need for innovations and updates that will enable students to get the highest benefit they can get. Distance education is affected by factors such as the opportunity, equipment, the ability of the students to use technology, attitudes towards distance education, family and teachers who provide education. It is seen that students can develop an attitude towards the functioning of the education system as well as towards the lessons. The aim of this study is to examine (socio-economics factors, capability of using technology, scholl performance, etc.) multidimensionally, the views of university students regarding the distance education practices applied in universities in Turkey during the Coronavirus (Covid-19) pandemic. It, therefore, aims to identify the problems encountered in the process and raise awareness about the future of distance education. In line with this purpose, answers to the following questions were sought;

1. Is there a significant difference in the thoughts on distance education of university students in terms of their social lives and socio-economic factors?

2. Is there a significant difference in the thoughts on distance education of university students in terms of their ability to learn independently, making themselves willing to learn, their willingness to go to school and adaptation to the lesson plan?

3. Is there a significant difference in the thoughts on distance education of university students in terms of school performance of the students, and their studies before and after courses?

4. Is there a significant difference in the thoughts on distance education of university students in terms of the devices they use for the education, the internet connection quality they have, their capability level to use the technology, access to course resources and the system of the university they are studying at?

## METHOD

This study in which the opinions of distance learning students during the coronavirus (covid-19) was developed with a quantitative approach in a research model. "Survey models are research approaches that seek to describe a past or present situation as it is. They try to define the event, person or object that is the subject of research in its own conditions and as it is "(Karasar, 2012). The questionnaire prepared for this was applied online and the opinions of university students about distance learning were determined.

### *Research Participant and Data Collection*

The sample of the study consisted of 1561 university students studying in different cities of Turkey, who voluntarily participated in the data collection tool. When identifying

students in the study group, an online questionnaire was used to make it more accessible to the participants from different areas. Due to the difficulty of meeting students during the pandemic, the research inventory was posted on social media, where teachers could contact distance learning students suitable for the study group from various universities, and participation was voluntary. The random distribution of students in the selection group according to various demographic variables is shown in Table 1.

**Table 1**

*Demographic data of students*

									Total
Gender		Woman	Man						
	n	1238	323						1561
	%	79,3	20,7						100
University type		State University	Foundation University						
	n	36	8						44
	%	82	18						100
Branch		Social Science	Health Sciences	Chemistry-Physics-Biology Sciences	Fine Arts				
	n	31	6	15	7				59
	%	53	10	25	12				100
Hometown		Cite	County	Town	Willage				
	n	871	559	56	75				1561
	%	55,7	35,8	3,5	4,8				100
Region		Mediterranean	Eastern Anatolia	Aegean	Southeastern Anatolia	Inner Anatolia	Black Sea	Marmara	
	n	7	4	5	5	7	4	5	37
	%	18,9	10,8	13,5	13,5	18,9	10,8	13,5	100

The data of the study were collected through "Scale of Distance Education Views of University Students" developed by the researchers. During the development process of the questionnaire, firstly, the relevant sources were examined. Afterward, the three lecturers from Special Education Department of Necmettin Erbakan University were consulted for the expert opinion on the content and scope validity of the questionnaire. The questionnaire, which was rearranged in line with expert views, was finalized after it was administered to 427 students. The questionnaire with a total of 25 questions was consisted of two parts which are, the first part with 5 closed-ended questions that aims to determine the demographic characteristics of the students and the second part with 20 closed and open-ended questions that aims to understand the views of university students on the distance education. Before the questionnaire was applied, a short explanation about the purpose of the research was given to the participants. Within this context, while conveying the research conditions to the participants, it was stated that the findings data would not be shared with third parties in any way, they could be informed about the results of the research if they choose, the participation is voluntary, and they could quit participation at any time they want. The questionnaire has lasted approximately between (8) and (13) minutes individually, for each participant.

### Data Analysis

Due to the normal distribution of the data and descriptive statistics (percentage, frequency, arithmetic mean and standard deviation), t-test and one-way analysis of variance / ANOVA were applied in the analysis of quantitative data. The aim of descriptive statistical methods is to understand the data, identify patterns and relationships, and use the results better (Gök at al., 2015). In this study, we have tried the presentation of the data of students concerning distance education to make descriptively.

The effect size of the descriptive data obtained in the study was one of the questions, so the Cohen d value, which gives the effect size value, was calculated in the interpretation of the findings. The difference between the averages of two events or groups is called the effect size. Accordingly, the effect sizes are interpreted by considering the criteria of "d  $\geq$  1 very large effect, 0.8 large effect, 0.5 medium effect, 0.2 small effect".

### Ethical considerations

In this study, all rules stated to be followed within the scope of the "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed. None of the actions stated under the title "Actions Against Scientific Research and Publication Ethics", which is the second part of the directive, were not taken.

This study was approved by the Necmettin Erbakan University.

Ethical review board name: Necmettin Erbakan Ethics Committee

Date of ethics review decision: 20.10.2020

Ethics assessment document issue number: 01-2020/05

## RESULTS

In this section, statistical results of the analysis are presented for different variables regarding their effects on the views of students on distance education.

With the research, it is revealed that whether there is a difference in the views of students on distance education compared to their social life in normal education. The data obtained are shown in Table 2.

**Table 2**

*Comparison of students' views about distance education according to their social life in normal education.*

		N	X	SS	F	p	Significance
1	Intense	521	125,06	30,717			
2	Average	899	134,65	27,583	26,180	,000	Between 2-1, 3-1 and 2
3	Low	141	141,23	28,847			
	Total	1561	132,04	29,240			

When the data are analyzed, there is a significant difference (f: 26.180; p <0.05) in terms of distance education scores according to activity of the students' social life. The views

on the distance education of students who stated that their social life was moderately active in the normal education process before the Covid-19 pandemic are more positive than the students who stated that their social life was very active. The views on distance education of students who stated that their social lives were not active in the normal education process were more positive than the students who stated that their social lives were very active and moderately active.

The research showed how the views of students on distance education differ according to their socio-economic conditions. The data obtained are shown in Table 3.

**Table 3**

*Comparison of students' views about distance education according to their socio-economic conditions*

		N	X	SS	F	p	Significance
1	High	60	126,35	35,720			
2	Moderate	1309	134,25	28,548	25,513	,000	Between 2 and 3
3	Low	192	118,74	28,036			
	Total	1561	132,04	29,240			

When the data are analyzed, there is a significant difference ( $f: 25.513; p < 0.05$ ) in terms of the distance education scores of the students according to their economic conditions. The students with moderate economic conditions have more positive views of distance education than the students with low economic conditions.

The research was also examined whether there is a difference in students' views on distance education according to their ability to learn independently. The data obtained are shown in Table 4.

**Table 4**

*Comparison of students' views about distance education according to their independent learning skills*

	Independent Learning	Group Statistics						
		N	X	SS	t	df	p.	Cohen d
Views about D.E.	Yes	963	31,57	7,15	12,145	1559	,000	0.63
	No	598	27,10	6,93				
Their Own Situation Regarding the D.E.	Yes	963	33,52	7,38	11,866	1559	,000	0.61
	No	598	28,90	7,63				
Continuation of education during D.E.	Yes	963	39,46	8,16	7,845	1559	,000	0.40
	No	598	36,01	8,89				
Attitude towards D.E.	Yes	963	23,62	6,55	11,695	1559	,000	0.61
	No	598	19,69	6,28				
Homework During D.E.	Yes	963	11,04	4,16	10,564	1559	,000	0.55
	No	598	8,81	3,85				
Total	Yes	963	139,21	27,73	12,920	1559	,000	0.67
	No	598	120,51	27,90				

The data regarding students' views about distance education were analyzed with the t-test according to the students' ability to learn independently on their own, and the results obtained are shown in Table 4. When the data were analyzed, according to students' willingness to learn, there was a significant difference in terms of students' scores on the continuation of distance education, their thoughts on distance education, their attitudes

towards distance education, homework in the process of distance education, their own situation regarding distance education and their general views on distance education ( $p < 0.05$ ). It has been determined that distance education perceptions of the students who stated that they could learn by themselves were more positive than those who stated that they could not learn by themselves. The Cohen  $d$  value calculated with the data obtained for the variables with a significant difference among them is between 0.40 and 0.67, and according to this result, the difference has a moderate size.

The study also examined whether there is a difference in the views of the students regarding distance education according to their ability to make themselves willing to learn. The data obtained are shown in Table 5.

**Table 5**

*Comparison of students' views on the distance education according to their willingness to learn by themselves.*

	Enthusiasm for learning	Group Statistics						
		N	X	SS	t	df	p	Cohen d
Views about D.E.	Yes	1122	31,54	6,97	15,410	1559	,000	0.87
	No	439	25,56	6,67				
Their Own Situation Regarding the D.E.	Yes	1122	33,69	7,15	17,059	1559	,000	0.95
	No	439	26,80	7,21				
Continuation of education during D.E.	Yes	1122	39,54	8,12	10,616	1559	,000	0.58
	No	439	34,56	8,81				
Attitude towards D.E.	Yes	1122	23,30	6,55	11,593	1559	,000	0.66
	No	439	19,08	6,21				
Homeworks During D.E.	Yes	1122	11,02	4,08	13,261	1559	,000	0.76
	No	439	8,05	3,66				
Total	Yes	1122	139,08	27,09	16,460	1559	,000	0.92
	No	439	114,06	26,74				

When the data were analyzed, according to students' willingness to learn, there was a significant difference in terms of students' scores on the continuation of distance education, their thoughts on distance education, their attitudes towards distance education, homework in the process of distance education, their own situation regarding distance education and their general views on distance education ( $p < 0.05$ ). According to this analysis, distance education perceptions of students who can make themselves willing to learn are more positive than others. The Cohen  $d$  value calculated with the data obtained for the variables with a significant difference among them is between 0.58 and 0.76, and according to this result the difference has a moderate size. It can be said that Cohen's  $d$  value is between 0.87-0.95, and accordingly the difference has a large degree of effect size.

The research revealed whether there is a difference in students' views on distance education according to their willingness to go to school. The data obtained are shown in Table 6.

**Table 6***Comparison of students' views about distance education according to their willingness to go to school*

		N	X	SS	F	p	Significance
1	High	858	122,77	27,933			Between 2 and 1, 3 and 1-2
2	Average	574	141,09	25,224	121,408	,000	
3	Low	129	153,45	30,701			
	Total	1561	132,04	29,240			

When the data are analyzed, there is a significant difference in terms of the distance education scores of the students according to the students' willingness to go to school ( $f: 121.408; p < 0.05$ ). It is seen that students with moderate willingness to go to school have more positive views of distance education than students with a high level of willingness to go to school; It is observed that students with a low level of willingness to go to school have more positive views of distance education than students with a high level of willingness to go to school and students with a moderate level of willingness to go to school.

Whether the views of the students on distance education differ according to their adaptation to the lesson plan was also examined in this study. The data obtained about how students' views about distance education differ accordingly are shown in Table 7.

**Table 7***Comparison of students' views about distance education according to their adaptation to the lesson plan*

	Following the plan	Group Statistics			t	df	p	Cohen d
		N	X	SS				
Views about D.E.	Yes	958	31,56	7,32	12,014	1559	,000	0.63
	No	603	27,14	6,65				
Their Own Situation Regarding the D.E.	Yes	958	33,81	7,43	13,944	1559	,000	0.72
	No	603	28,47	7,25				
Continuation of education during D.E.	Yes	958	39,50	8,37	8,048	1559	,000	0.41
	No	603	35,97	8,54				
Attitude towards D.E.	Yes	958	23,26	6,84	8,676	1559	,000	0.45
	No	603	20,29	6,11				
Homeworks During D.E.	Yes	958	11,01	4,21	10,108	1559	,000	0.53
	No	603	8,88	3,80				
Total	Yes	958	139,15	28,82	12,704	1559	,000	0.66
	No	603	120,76	26,21				

The data about the students' views on distance education were analyzed with the t-test according to the students' adaptation to the lesson plan, and the results obtained are shown in Table 7. When the data were analyzed, there was a significant difference in terms of the students' scores regarding the continuation of distance education, their thoughts about distance education, their attitudes towards distance education, homework in the process of distance education, their own situation regarding distance education and their general views on distance education according to the students' adaptation to the plan ( $p < 0, 05$ ). These analyses show that distance education perceptions of the students who adapt to the lesson plan are more positive than those who do not. The Cohen d value calculated with the data obtained for the variables with a significant difference among them is 0.41 for education during D.E. and 0.45 for attitude towards D.E., according to these values, the



difference has a small effect. However, for other variables, the Cohen's *d* value is between 0.53-0.72, and the difference has a moderate effect size. According to the research findings, it was revealed that the students' adaptation to the lesson plan caused a differentiation in the distance education perceptions of the students. It has been determined that the distance education perceptions of the students who stated that they adopt the lesson plans properly were more positive than the students who did not.

With the research, it is revealed that whether there is a difference in students' views on distance education according to their school performance. The data obtained are shown in Table 8.

**Table 8**

*Comparison of students' views about distance education regarding their performance in classes*

		N	X	SS	F	p	Significance
1	High	517	127,88	30,730			
2	Average	1014	134,23	28,285	8,222	,000	Between 2 and 1
3	Low	30	129,83	27,587			
	Total	1561	132,04	29,240			

When the data are analyzed, there is a significant difference ( $f: 8.222; p < 0.05$ ) in terms of distance education scores according to students' school performance. It is seen that students with average school performance have more positive views on distance education than students with high school performance.

Whether there is a difference in the views of the students on distance education according to their studies before the lessons are examined. The data obtained are shown in Table 9.

**Table 9**

*Comparison of students' views about distance education according to their studies before courses*

		N	X	SS	F	p	Significance
1	No studying	404	132,24	28,089			
2	0-1 hour	534	124,38	29,434	61,507	,000	Between 1 and 3-4, 2 and 3-4, 3 and 4
3	1-2 hours	577	138,73	27,492			
4	2-3 hours	46	135,43	36,810			
	Total	1561	132,04	29,240			

When the data are analyzed, there is a significant difference in terms of distance education scores ( $f: 61.507; p < 0.05$ ) according to the students' studies before the lessons. It is proven that students who do not study have more positive views of distance education than students who study 0-1 hours have more positive views on distance education than students who study 1-2 hours and students who study 2-3 hours, and students who study 1-2 hours have a more positive view of distance education than students who study for 2-3 hours.

It is revealed that whether there is a difference in the views of the students on distance education according to their studies after the lessons. The data obtained are shown in Table 10.

**Table 10**

*Comparison of students' views about distance education according to their studies after courses*

		N	X	SS	F	p	Significance
1	No studying	260	147,03	28,082			
2	0-1 hour	386	141,09	25,806	101,304	,000	Between 1 and 2, 3
3	1-2 hours	543	131,10	26,440			and 4, 2 and 3 and
4	2-3 hours	372	113,54	27,294			4, 3 ile 4
	Total	1561	132,04	29,240			

When the data are analyzed, there is a significant difference (f: 101.304;  $p < 0.05$ ) in terms of the distance education scores of the students according to their studies after the lessons. It is seen that students who do not study have more positive views of distance education than students who study 0-1 hours, students who study 1-2 hours and students who study 2-3 hours; students who study 0-1 hours have more positive views on distance education than students who study 1-2 hours and students who study 2-3 hours, and students who study 1-2 hours have a more positive view of distance education than students who study for 2-3 hours.

With the research, it is revealed whether there is a difference in the views of students on distance education according to the devices they follow. The data obtained are shown in Table 11.

**Table 11**

*Comparison of students' views about distance education according to which technological device they use for distance education*

		N	X	SS	F	p	Significance
1	Computer	404	132,24	28,089			
2	Phone	534	124,38	29,434	23,457	,000	Between 1-2, 3-1
3	Multiple Devices	577	138,73	27,492			and 2
4	Tablet	46	135,43	36,810			
	Total	1561	132,04	29,240			

When the data are analyzed, there is a significant difference in terms of the distance education scores of the students according to the devices that students follow distance education (f: 23.457;  $p < 0.05$ ). It is seen that the students who follow the distance education on a computer have more positive views of distance education than the students who follow distance education on a phone, students who follow distance education on over one device have more positive views of distance education than students who follow distance education from computers and phones.

Whether there is a difference in the views of the students concerning distance education according to the quality of the internet they use is analyzed. The data obtained are shown in Table 12.

**Table 12***Comparison of students' views about distance education according to their internet connection quality*

		N	X	SS	F	p	Significance
1	High Quality	611	143,71	28,180			
2	Partly Good	554	129,59	26,518	114,244	,000	Between1 and 2-3,
3	Have Problems	396	117,47	27,090			2 and 3
	Total	1561	132,04	29,240			

When the data are analyzed, there is a significant difference ( $f: 144,244; p < 0.05$ ) in terms of the distance education scores of the students according to the quality of the internet they use. It is seen that students with good internet quality have more positive views on distance education than students with partly good internet quality and students who have problems with internet quality, and students with partly good internet quality have more positive views on distance education than students who have problems with internet quality.

Whether there is a difference in students' views on distance education according to their level of technology usage is examined. The data obtained are shown in Table 13.

**Table 13***Comparison of students' views about distance education according to level of technology usage*

		N	X	SS	F	p	Significance
1	Sufficient	933	137,97	29,165	64,258	,000	Between 1 and 2-3,
2	Partly sufficient	521	125,80	26,340			2 and 3
3	Insufficient	107	110,74	27,230			
	Total	1561	132,04	29,240			

When the data are analyzed, there is a significant difference in terms of distance education scores ( $f: 64,258; p < 0.05$ ) according to students' level of technology usage. The findings showed that students with a sufficient level of technology usage have a more positive view of distance education than students with a partly sufficient level of technology usage and students with an insufficient level of technology usage, and students whose technology usage level is partly sufficient have more positive views on distance education than students with insufficient technology usage levels.

Whether there is a difference in the views of the students concerning distance education according to the opportunity to access course resources is examined. The data obtained are shown in Table 14.

**Table 14***Comparison of students' views about distance education according to their opportunity to access course resources*

		N	X	SS	F	p	Significance
1	Sufficient	711	142,53	27,648			
2	Partly sufficient	687	126,73	26,246	126,591	,000	Between 1 and 2,
3	Insufficient	163	108,70	28,544			1-3 and 2-3
	Total	1561	132,04	29,240			

When the data are analyzed, there is a significant difference ( $f: 126,591; p < 0,05$ ) in terms of the distance education scores of the students according to the students' opportunity to access resources. As it is seen in the findings students who have sufficient access to course resources have more positive views of distance education compared to students who have partly sufficient access to course resources and students whose opportunity does not access course resources. Also, students who have partly sufficient access to course resources have more positive views of distance education than students who have insufficient access to course resources.

The study also examined whether there is a difference in the views of students on distance education according to the distance education system of the universities. The data obtained are shown in Table 15.

**Table 15**

*Comparison of students' views about distance education according to university's distance education system*

	Distance Education System	Group Statistics						
		N	X	SS	t	df	p	Cohen d
Views about D.E.	Yes	832	33,53	6,21	24,750	1559	,000	1.25
	No	729	25,66	6,32				
Their Own Situation Regarding the D.E.	Yes	832	35,53	6,42	23,879	1559	,000	1.20
	No	729	27,43	6,97				
Continuation of education during D.E.	Yes	832	42,29	6,87	23,719	1559	,000	1.19
	No	729	33,40	7,93				
Attitude towards D.E.	Yes	832	24,66	6,32	17,457	1559	,000	0.88
	No	729	19,21	5,96				
Homeworks During D.E.	Yes	832	11,87	3,88	18,828	1559	,000	0.95
	No	729	8,26	3,66				
Total	Yes	832	147,88	23,83	28,034	1559	,000	1.42
	No	729	113,96	23,86				

The data about the students' views on distance education according to the distance education system of the university were analyzed by t-test and the results obtained are shown in Table 15. When the data are analyzed, there is a significant difference in terms of the students' scores on the continuation of distance education, their thoughts about distance education, their attitudes towards distance education, homework in the process of distance education, their own situation regarding distance education and their general views on distance education according to the distance education system of the university ( $p < 0,05$ ). It can be said that the Cohen d value calculated for the variables with a significant difference among them on the data obtained is between 0.88 and 1.42, and the difference has a large effect size.

## DISCUSSION

The large majority of students dis-affirmed the idea that distance education is more effective than face-to-face education. This proves that students prefer face-to-face education. In the last decade, distance education applications have become widespread in our country (Gürer, Tekinarslan & Yavuzalp, 2016). With the COVID-19, distance education process has

become more widespread than ever. As a result of this study, it has been revealed that face-to-face education is preferred more than distance education according to university students, and lecturers, also the students need training related to distance education. Keskin and Özer (2020) also stated in their study that the majority of participating students do not find the distance education as effective as face-to-face education. It also findings shows that students have a negative attitude towards distance education.

The study also showed that students who are more successful in their school have a more positive attitude than students who are not as successful. It is thought that the success of students at school reflects on distance education positively, and successful students take part in distance education more willingly. The research showed that students who describe their social lives as an average among the choices of intense/average/low exhibit more positive attitudes than students who think that their social lives are very active and their social lives are very low. A distance education technical and psychological support unit students can reach at any time should be established that students can reach at any time so that students can organize their social life and educational activities more efficiently. Activities in which the school blends in with society should be organized with a unit. The students who remain passive in social life should be integrated into social life, and the students who are very active in social life should be guided in organizing their lives.

The research showed that the students who follow the distance education on a computer have a more positive view of distance education than the students who follow the distance education on a phone, and students who follow distance education on over one device have a more positive view of distance education than students who follow distance education from computers and phones. It should be emphasized that this situation may be related to the factors like technology, quality of internet connection, and socio-economic status. The results of the study are similar to the study by Barış (2015). Students mostly prefer to connect via mobile devices. It is recommended that universities provide device support for distance education to students who need it (e.g. poor). In addition, some problems that the students experience affect distance education negatively. For example, computer malfunctions and sharing a computer with their family members (Sakarya & Zahal, 2020) or system access problems (Altun Ekiz, 2020) may affect students negatively. Even though distance education makes many things easier in life, it also brings an economical burden. Distance education barriers are also directly related to economic status of a family (Atasoy, Özden & Kara, 2020). Karatepe, Küçükgençay and Peker (2020) stated in their study that the majority of students attend classes over landline from mobile phones and computers. The study identified that the problems experienced during the connection are related to the connection, not the device. At the end of the study, it has been revealed that the attitude towards distance education is directly proportionate to the quality of internet connection. To address this problem, technical support units for distance education should be established at universities. These units should provide technical support to all

stakeholders at all times and the problems that arise should be corrected as soon as possible (Durak, 2017).

As the results indicated, students who stated that they can learn independently on their own have more positive attitudes towards distance education than students who have weaker self-learning skills. One of the basic advantages of distance education is to be able to adjust your own learning speed and progress individually. Keskin and Özer (2020) indicated that almost half of the students can adjust their learning pace individually in their study with undergraduate and graduate students. Thus, the ability to organize their self-learning is important. The result of the study also supports Keskin and Özer's findings.

The results showed that students who stated that they were more willing to learn also have a more positive attitude towards distance education. It is thought that the desire to learn also causes a positive effect on distance education. Many subjects, such as the materials used in distance education, the content of the course, communication styles, and how to transfer information to the students should be planned carefully (Tuncer & Taşpınar, 2008). It should be done with active participation and be well-planned in order for distance education to become the most efficient (Türkoğlu, 2003). Students who abide by distance education plans have more positive attitudes than students who do not abide by distance education plans. It is thought that the planning made according to this situation is beneficial and not following the planning has a negative effect on the students benefiting from distance education, and this reflects on their perception of distance education. Therefore, students' forming positive perceptions about themselves and improving their affective characteristics may reflect their views on distance education positively.

It is seen from the comparison of students' views about distance education according to their willingness to go to school that students with a high desire to go to school have a more positive attitude than other students. Students' ideas should be taken for the planning process of social areas within universities in order to increase students' liking for school, and the quality of the school should be increased by determining the expectations of the students from the school.

It is beneficial for students to develop their own learning skills in order to carry out distance education more effectively and to be able to form more positive views. It has been determined that the perceptions on the distance education of the students who review the lessons after the classes in the distance education process are more positive than the students who do not. It is known that the success points of the group that has repeated and corrected lessons are higher (Alacapınar, 2006).

It has been found that students with better internet usage skills have a more positive attitude than students with lower internet usage skills. In the information age we live in, people need to know the innovations in accessing information in order to benefit from the information sufficiently, and this can only happen with technology (Naralan, 2008). Gömleksiz and Pullu (2020) stated in their study that some students cannot follow the

educational practices in distance education properly because of financial incapacibilities such as not having their own computers.

It has been revealed that university students who find the distance education application of the university is sufficient have more positive attitudes than the students who do not find the distance education system of the university is sufficient. According to this result, it is suggested that think that universities should develop distance education systems by taking the opinions of students. Durak, Çankaya and İzmirli (2020), stated that the majority of the participants expressed their satisfaction with the learning management system and course software system used by the university. Besides, they stated that they did not know if the instructors were ready for longer-term of distance education. Therefore, universities should also complete their institutional structuring. Distance education applications, which are implemented before the institutional structuring is completed, will keep students away from educational processes rather than benefiting (İşman, 2011). For this reason, it is beneficial for all our universities to have the infrastructure and equipment that provide effective distance education. Necessary basic equipment should be provided in order for students to benefit from distance education activities to the maximum potential. Today, in order to participate in all distance education services, including online lessons, a high-speed internet connection, a receiver such as a computer, tablet or phone and a quiet home environment are required.

## RECOMONDATIONS

It is thought that the results of this study may guide new studies to be done. Development and change in distance education continue day by day, this study needs to be supported by additional research. Furthermore, it is believed that it would be useful to conduct research on psychosocial factors that strongly influence student motivation and participation. Along with that, it is recommended to conduct research with other parties in the education field.

## CONCLUSION

In this study, the opinions of university students regarding distance education, which has become the basic education method in Turkey and around the world due to the coronavirus COVID-19 pandemic, were analyzed. In this study, the thoughts of university students about the continuation of distance education, their perceptions of themselves in distance education, their thoughts about education practices in distance education, their thoughts about homework in distance education and students' attitudes were examined. As a result of the research, it was seen that demographic and socio-economic factors affect the perception of distance education.

With the research, it was concluded that women developed more positive attitudes towards distance education than men. According to the findings of the research, although they state that they have a negative attitude towards the lessons, many students feel more

comfortable with distance education compared to the classroom environment. It was concluded that students who stated that they were willing to learn more and more successful at school developed more positive attitudes towards distance education.

In the results of the research, most of the students stated they could take notes during distance education even though they are shy about asking questions of teachers. It may be beneficial for teachers to change their attitudes and create an environment where students can easily ask questions.

From the findings of this research, it was concluded that the students could not put forward a clear view regarding the distance education course durations. It has been determined that infrastructure indicators consisting of components such as internet connection and access devices are effective on students' perceptions of distance education. In order to improve the perception of students, it is proven that providing necessary infrastructure services and necessary support to students who have problems in personal access is important. According to the research, the fact that their university has advanced distance education systems caused students to develop positive attitudes towards distance education. Since the financial adequacy of students positively affects their perceptions of the distance education process, scholarship and student loan opportunities should be increased and students should be prevented from experiencing financial difficulties during the school period. As a result of it was concluded that the students found face-to-face education more beneficial. To make the student's experience with distance education more efficient, it should be ensured that teachers participate in training that can improve themselves in the field of distance education.



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