Journal of Educational Technology & Online Learning
Volume 6 | Issue 3 | 2023
http://dergipark.org.tr/jetol

The views of associate degree students from child development on distance education after the earthquake

Nuray Koç [a] *

[a] Bursa Uludağ University, Türkiye

Suggested citation: Koç, N. (2023). The views of associate degree students from child development on distance education after the earthquake. *Journal of Educational Technology & Online Learning*, *6*(3), 756-770.

Highlights

- The students' satisfaction with the distance education applied after the earthquake was less than the face-to-face education.
- The student's satisfaction with distance education did not differ significantly depending on gender, age, and grade level but according to having technological tools.
- In the distance education process after the earthquake, the most difficult situations for the students were the sadness caused by the quake, low motivation, and infrastructure problems.
- The advantages of distance education were a flexible environment, replaying lesson recordings, quick access to information, and being economical and saving time.
- The disadvantages of distance education were the difficulty of online processing of applied lessons, technological reasons, inequality of opportunity, lack of professional experience and internet shortage.

Abstract

This study aims to investigate the satisfaction and experiences of associate degree students from the child development department on distance education after the earthquake in Türkiye. The research was carried out in a mixed method embedded design with the participation of 133 associate degree students who studied in the child development department in a vocational school affiliated with Bursa Uludağ University in the spring term of the 2022-2023 academic year. The quantitate data were collected through "The Distance Education Satisfaction Scale of University Students." The qualitative data were obtained through a semi-structured interview with 20 students from the same study group. Descriptive statistics, Independent samples t-test, Mann-Whitney U test and Kruskal-Wallis H Test, and content analysis were used to analyze the data obtained. According to the findings, online education was less effective than face-to-face education due to the earthquake. The student's satisfaction with distance education differs significantly depending on having technological tools. The students stated that they had difficulties due to the adverse psychological effects of the earthquake and the infrastructure problems. It was determined that distance education's most significant advantage is having a flexible environment and listening to the course recordings. However, they were disadvantaged in not making enough applications during the lessons in online education.

Article Info: Research Article

Keywords: *Associate degree, child development, distance education, earthquake in Türkiye*

1. Introduction

Earthquakes, described as unpredictable geological events that can cause many losses of life and property, create many economic, sociological, and psychological effects as well as human loss and destruction (Williams & Shepherd, 2016). Türkiye frequently faces natural disasters, especially earthquakes, due to its geographical conditions. Our country is one of the most active earthquake zones in the world and has experienced many significant earthquakes over the years. The most significant, giant earthquakes in the

*Corresponding author. Bursa Uludağ University, Yenisehir Vocational School, Department of Child Development, Türkiye
e-mail address: nuraykoc@uludag.edu.tr

Doi: http://doi.org/10.31681/jetol.1326200
Received 12 Jul 2023; Revised 28 Aug 2023; Accepted 31 Aug 2023
ISSN: 2618-6586.

Republican period: December 27, 1939–Erzincan; August 17, 1999-Marmara; October 12, 1999-Bolu-Düzce and finally, Kahramanmaraş earthquakes (Solmaz & Ozel, 2012). These earthquakes caused widespread human loss, destruction, psychological trauma, and economic losses (Ozturk & Kirca 2023).

One of the most severe earthquakes of recent years is the earthquake centered in Kahramanmaraş on February 6, 2023. On the same day, earthquakes occurred in Pazarcık of Kahramanmaraş (7.8 Mw) and Elbistan of Kahramanmaraş (7.7 Mw) in Adana, Adıyaman, Hatay, Diyarbakır, Gaziantep, Kahramanmaraş, Kilis, Malatya, Osmaniye, Şanlıurfa and later, with the addition of Elazig, it caused significant damage in eleven provinces. These earthquakes, in which tens of thousands of losses were experienced, were recorded as Türkiye's second and third-largest earthquakes (ITÜ, 2023; Ozer, 2023).

Earthquakes, which have a significant, and long-lasting effect on society, cause unexpected changes from social transformations to differences in individual functionality. It can take years for the damaged areas to rebuild and for the survivors to resettle and restore order. In addition, earthquakes cause migration or displacement, and this can have negative consequences (Santos, 2010). Temporary or permanent displacement can disrupt social support systems and border conflict with interpersonal stress, resulting in increased nervous distress (Eray et al., 2017). In addition, other factors that negatively affect the psychological state of earthquake victims include sleep disorders, depression, anxiety, post-traumatic stress disorder, emotional problems such as fear, anger, embarrassment, feelings of guilt, self-confidence, loneliness, anxiety, and worry (Kurt & Gulbahce, 2019). On the other hand, people no longer need to experience the earthquake directly to be affected, and witnessing the events can cause psychological problems. However, of course, those who were most affected lived in the center of the earthquake, lived in danger of death, lost their loved ones, and witnessed their deaths. The symptoms that will occur in people exposed to such a significant trauma will also be very severe and devastating (Norris et al., 2002).

Unfortunately, one of the main areas affected by the earthquake was education. Due to the magnitude and effect of the earthquake across the country, on February 9, 2023, the Higher Education Council (YOK) announced that it was decided that it would be appropriate to complete the 2022-2023 academic year spring semester through distance education in the whole country. In addition, the dormitories of the Credit and Hostels Institution were opened to the use of earthquake victims, and all exams were held online in the spring term of 2023. Afterward, with the new decision taken by YOK on April 3, 2023, the face-to-face education system was started again in classrooms with voluntary student attendance in all universities (yok.gov.tr, 2023). Since almost all students evacuated their dormitories and returned to their hometowns, education at most universities continued as hybrid.

Distance education determines using the internet to access learning material, communicate with the instructor and other students in the learning process, and improve the experience (Ally, 2004). Today, distance education takes place mainly as web-based learning and mobile learning. Distance education is one of the most practical ways to provide equal education opportunities when suitable place, time, and conditions are not possible (Uzun et al., 2020). In the post-earthquake period in Türkiye, distance education was implemented, as in the pandemic period, during the holidays so that students can continue their education (Telli & Altun, 2021). However, a disaster environment such as an earthquake has many factors hindering education. Due to many factors, such as infrastructure problems, the psychological and socioeconomic status of students, technical, institutional, and political actions should be taken together for the distance education process to succeed (Pregowska, et al., 2021; Tanik Onal & Onal, 2023).

Since the reflection of the results of the earthquake affects the whole society, the possible problems that the students, who are not directly affected by the earthquake, may encounter, as well as the students who are victims of the earthquake, should be taken into consideration during the distance education process. For example, in the post-earthquake period, psychological conditions such as the fear of a repeat of the earthquake and the fear of losing loved ones can be seen in all students (Yildirim, 2023). For this reason, it is necessary to consider the psychological state of all students in the distance education process.

In addition to the compelling factors brought by the earthquake, there are other disadvantageous situations when distance education is not applied correctly. Among these, reasons such as the lack of direct interaction between the teacher and other students, the decrease in social ties, the lack of course materials that will provide short and clear learning, the lack of planning and revision of course times like face-to-face education, the prejudiced and unwillingness of the instructors can be listed (Koc, 2021; Telli, Yamamoto & Altun, 2023). Although there are studies on the physical destruction, psychological and socio-economic effects of the earthquake after the Kahramanmaraş earthquake, there are limited studies in the literature on distance education, especially in universities (Uguz, 2023; Telli, Yamamoto & Altun, 2023; Marangoz & Izci, 2023; Tetik & Albulut, 2023; Sonmez & Gokmenoglu, 2023; Erdogan, 2023; Sen, 2023; Yildirim, 2023). Thus, it is thought that this study, in which the experiences of university students in the distance education process will be transferred, will contribute to the field of distance education applied after the earthquake.

The current study examines associate degree child development students' satisfaction and experiences regarding the compulsory distance education application at universities due to the earthquake in Türkiye. For this aim, child development students from the vocational school at the university were interviewed with a satisfaction scale and semi-structured questions about their views on distance education experiences. For this purpose, the answers to the following research questions have been sought.

RQ1: What are the child development students' satisfaction levels with the distance education process after the earthquake?

RQ2: Do child development students' distance education satisfaction levels differ significantly depending on gender, age, grade level, and technological equipment?

RQ3: What difficulties did child development students face during the distance education process after the earthquake?

RQ4: What are the advantages and disadvantages of the distance education process after the earthquake according to child development students?

2. Methodology

2.1. Research Design

The study tried to determine the views of associate degree child development students about distance education experiences during the education term after the earthquake in Türkiye. For this purpose, one of the mixed research methods, the embedded design, was used in the study. In an embedded design, both types of data are collected and analyzed simultaneously, but one type of data is secondary to the other. An embedded design is used to strengthen or supplement conclusions from the primary type of research design (George, 2023). So this design is functional, mainly when research has limited time or resources (Creswell, 2013). Figure 1 presents the necessary information on the research design.

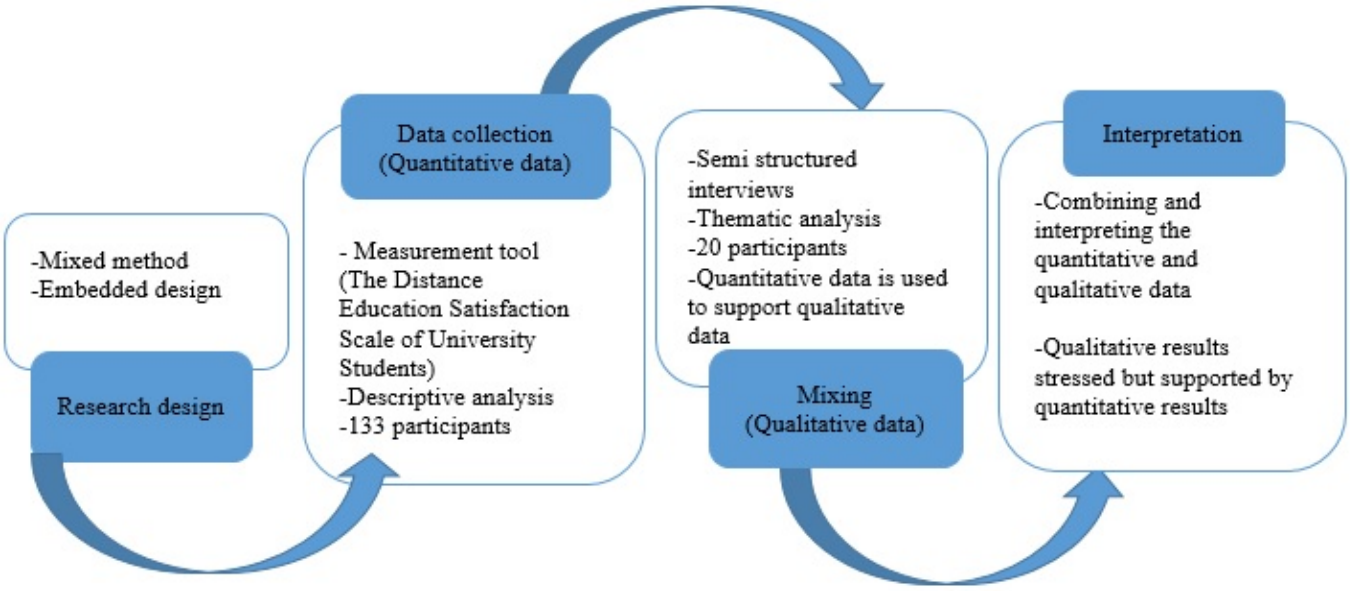

Fig. 1. Schematic presentation of the embedded research design

2.2. Data Collecting Tools

The study process was designed as a mixed method with a two-step approach. In this regard, in the first stage, the quantitative research method was used to define the views of child development students about distance education. The study's quantitative data have been collected from the students by "The Distance Education Satisfaction Scale of University Students" developed by Kafes and Yildirim (2021). The scale consists of 8 items and is in a 5-point Likert type ranging from Strongly Disagree to Strongly Agree. The lowest score that can be obtained from the scale is 8, and the highest score is 40. The higher the score obtained from the scale, the higher the student's satisfaction with distance learning is interpreted. There is no reverse item in the scale. The reliability coefficient of the scale was calculated as 0.87.

In the second stage, the study's qualitative data were obtained through a semi-structured interview with 20 child development students in associate degrees. The qualitative part of the study is about why they have positive or negative views about distance education and their experiences in this process.

2.3. Sampling or Study Group

The participants of this study were 133 associate degree students who studied in child development departments at the vocational school affiliated with Bursa Uludağ University in the spring term of the 2022-2023 academic year. All participants participated in the research voluntarily. The convenience sampling method was used for the study. In this approach, the investigators enroll participants based on their availability and accessibility to participate in the study (Creswell, 2013). In the qualitative part of the study, 20 volunteers were selected from the same sample. Semi-structured interviews were also conducted with these students. Detailed information about the participants is given in Table 1.

Table 1.

Demographic Information of the Participants

Demographic Characteristics		Quantitative group		Qualitative group	
		(f)	(%)	(f)	(%)
Gender	Female	130	% 97.7	17	% 85
	Male	3	% 2.3	3	% 15
Age	25 years and under	126	% 94.7	16	% 80
	26-29 years	5	% 3.8	3	% 15
	30-34 years	1	% 0.8	1	% 5
	35-39 years	1	% 0.8		
Grade level	First grade	57	% 42.9	9	% 45
	Second grade	76	% 57.1	11	% 55
Technological equipment	Yes	87	% 65.4	14	% 70
	No	46	% 34.6	6	% 30
Being from earthquake region	Yes	7	% 5.2	4	% 20
	No	126	% 94.7	16	% 80
Total		133	% 100	20	% 100

Table 1 shows that in the quantitative part of the study, most students in the study group were female (97.7%). Similarly, 126 students were 25 years and under (94.7%); when the class conditions were examined, it was revealed that 57 students (42.9%) were in the first year, while 76 (57.1%) students were in the second year. When examining owning and using a piece of technological equipment in the distance education process, it was determined that most students had a laptop or computer (65.4%). In the study group, seven students were from the earthquake region; three lost their houses and lived in tents. The houses of the other four students were damaged, and they moved with their families to their relatives in other cities. The same four students were also included in the qualitative group.

In the qualitative part of the study, 17 students (85%) were female, and most participants (80%) had similar ages; they were 25 and under. Likewise, most students in the qualitative group had technological equipment. As is seen, the class distributions among the participants were split almost in half. Nine students (45%) were in the first year, and eleven students (55%) were in the second year.

2.4. Data Analysis

The data obtained in the quantitative dimension of the explanatory sequential design were analyzed with the SPSS 28 statistical package program. Firstly, normality tests were conducted before starting the data analysis with quantitative data. The p-value was obtained as 0.06 in the Shapiro-Wilk normality test ($p<.05$). The skewness value was 0.304, and the kurtosis value was -0.408. When Kurtosis and Skewness values are between -1.5 and +1.5, it is accepted that the research shows a normal distribution (Tabachnick & Fidell, 2013). Parametric tests were used in the quantitative part of the study since these results indicated that the study data were normally distributed. The Shapiro-Wilk normality test, Cronbach's Alpha coefficient, arithmetic mean, standard deviation, Independent Samples t-Test, Mann-Whitney U test and Kruskal-Wallis H Test analysis were conducted in the data analysis. In the qualitative dimension of the study, the thematic analysis method was used to analyze the data. Categorical data was analyzed by frequency analysis and content analysis.

2.5. Validity and Reliability

In the study, the Cronbach Alpha reliability coefficient, one of the internal consistency measures for scale reliability, was calculated to ensure the reliability of the quantitative dimension. In order for Cronbach's Alpha coefficient to be considered sufficient, it should be above 0.70 (Buyukozturk, 2016). As a result of the analysis, Cronbach's Alpha reliability coefficient was found at 0.80 for the overall scale. In addition, to

ensure the internal validity of the qualitative dimension of the study, direct quotations from the study group were used in the analysis. While preparing the interview questions to ensure external validity, expert opinion was taken about the tool's suitability for the study. Furthermore, a pilot study was conducted with two students who were not involved in the study group. In order to ensure the internal consistency of the study, independent interview codes were created by another expert in the field. Items that were or were not common between the researcher's and the expert's markings were separated and calculated by Miles and Huberman's formula. A 70% and above ratio in this formula indicates that the data is consistent and reliable (Miles & Huberman, 2015). In the research, the consistency rate was calculated at 90%. Also, this reliability level indicates that the assessment is reliable.

2.6. Research Procedures

At the beginning of the study, ethics committee permission was obtained from Bursa Uludağ University Social and Human Sciences Research and Publication Ethics Committee with the session decision numbered 2022/05 on 27.05.2022. The data collection process of the research was carried out in the second half of the 2022-2023 academic year. Quantitative data of the research; was obtained from 133 students studying at the university's associate child development department via a scale called "The Distance Education Satisfaction Scale of University Students." Before the data were collected, the students were informed about the study.

The qualitative data were collected using a semi-structured interview form with 20 volunteers from the sample group. Separate interviews were conducted with each student and lasted 20-25 minutes. In addition, the researcher conducted a focus group interview with same 20 students. The students who participated in the interview were coded as S1, S2, S3, S4. During the preparation stage of the interview questions, the opinions of two experts in the field were taken. Since the analysis of quantitative and qualitative data will be handled together, attention has been paid to the similarity between the questions of the scale and the interview questions used in the qualitative dimension.

3. Findings and Discussions

This study aims to reveal students' experiences, criticisms, and suggestions regarding the compulsory distance education practices in universities due to the earthquake. For this purpose, an answer was sought to the students' general satisfaction with "distance education" during the education after the earthquake. In this context, the first research question is, "What are the child development students' satisfaction levels with the distance education process after the earthquake?". One hundred thirty-three students answered to scale. These results of the scale are shown in Table 2.

Table 2.

The Findings of Student's Satisfaction with Distance Education Process After the Earthquake

Questions	N	$\bar{X}$	S.d.
Q1-Distance education was an easy process to get used to.	133	2.54	1.25
Q2-The distance education process is as efficient as face-to-face education.	133	2.19	1.31
Q3-Education at the university should continue in the form of distance education partially.	133	2.41	1.42
Q4-The distance education process has positively affected my success.	133	2.63	1.36
Q5-In the distance education process, the lessons start on time.	133	2.93	1.34
Q6-During the distance education process, I did not have a problem that was not caused by my internet and computer.	133	2.63	1.44
Q7-Whenever I want, I can reach the lecturers/staff who teach during the distance education process.	133	3.25	1.35
Q8-In the distance education system, I was okay with the system in my homework and projects.	133	3.09	1.54
Total	133	21.70	7.18

When Table 2 is examined, it is seen that the lowest average among the questions about students' satisfaction towards distance education is in the "Q2-The distance education process is as efficient as face-

to-face education" question ($\bar{X}$= 2.19). It was also revealed that the highest average was in the "Q7-Whenever I want, I can reach the lecturers/staff who teach during the distance education process" question ($\bar{X}$= 3.25). The minimum score that can be obtained for the full scale is eight, and the maximum score is 40. When the average of the total scores in the table is examined ($\bar{X}$= 21.70), it has been revealed that the group's satisfaction with distance education is generally at an average level.

The second question of the research is, "Do child development students' distance education satisfaction levels differ significantly depending on gender, age, grade level, and technological equipment?" The results are shown in Table 3-4-5-6.

The number of male participants in the study is quite limited, so the limited sample size cause nonparametric tests to be used. The findings obtained regarding the child development students' satisfaction with distance education according to gender are given in Table 3.

Table 3.

Mann-Whitney U Test Results Regarding Distance Education Satisfaction of Child Development Students by Gender

	Group	N	Mean Rank	Sum of Ranks	U	p
Total Score	Female	130	66.57	8653.50	138.500	.391
	Male	3	85.83	257.50		
	Total	133				

**p<.05*

As seen in Table 3, although the male students' scores in the study groups were higher than the female students' scores, no statistically significant difference was found (p>0.05).

In the results, the limitations expressed for the gender variable are also valid for the age variable, so cause nonparametric tests to be used again for this variable. The findings obtained regarding the child development students' satisfaction with distance education according to age are given in Table 4.

Table 4.

Kruskal-Wallis H Test Results Regarding Distance Education Satisfaction of Child Development Students by Age

	Group	N	Mean Rank	χ2	df	p	Between groups
Total Score	25 years and under	126	64.84				
	26-29 years	5	100.40				
	30-34 years	1	121.50	7.926	3	.048	25 years and under 26-29 years
	35-39 years	1	118.00				
	Total	133					

**p<.05*

When Table 4 was examined, it was concluded that the satisfaction levels of child development students with distance education differ significantly according to age (p=0.48, *p<.05*). In addition, there was a significant difference according to age, there was a difference found between 25 years under and 26 -29 years (p=0.39). Accordingly, those aged 25 and under scored $\bar{X}$= 64.84 on average, and those aged between 26-29 scored $\bar{X}$= 100.40 on average. The findings obtained regarding the child development students' satisfaction with distance education according to grade level are given in Table 5.

Table 5.

Independent Samples t-Test Results Regarding Distance Education Satisfaction of Child Development Students by Grade Level

Dimension	Grade Level	N	$\bar{X}$	S	df	t	p
Total Score	First grade	57	21.24	7.31	131	-0.64	.523
	Second grade	76	22.05	7.10			

**p<.05*

According to Table 5, in which students' satisfaction with distance education is examined according to grade levels, first and second-year students' satisfaction with distance education is close to each other. Therefore, there was no statistically significant difference between the scores.

The results obtained regarding the child development students' satisfaction with distance education according to technological equipment are given in Table 6.

Table 6.

Independent Samples t-Test Results Regarding Distance Education Satisfaction of Child Development Students by Technological equipment

Dimension	Technological equipment	N	$\bar{X}$	S	df	t	p
Total Score	Yes	87	24.14	7.12	131	0.97	.030*
	No	46	20.16	7.28			

**p<.05*

When Table 6 was examined, it was seen that students have laptops, computers, tablets, etc. It has been found that there is a statistically significant difference between their satisfaction with distance education according to their technological equipment (p=0.030, p<.05). Accordingly, it has been observed that students who have technological equipment are more satisfied with the distance education process after the earthquake.

In the second part of the study, a qualitative data was gathered from 20 volunteer students. In the research, the third research question, "What difficulties did child development students face during the distance education process after the earthquake?". Table 7 presents the themes and categories obtained from the data. These are explained with frequency (f) values and quotations are included.

Table 7.

The Findings of Difficulties of Students Face During Distance Education Process After the Earthquake

Theme	Sub-theme	Frequency (f)
Infrastructure difficulties	Internet disconnection	15
	The lesson system expels the student from the lesson	12
	Having a quota of the internet used	7
	Lack of technological tools	4
	Lack of internet in the earthquake region	3
Environmental difficulties	Lack of suitable working environment at home	10
	Economic reasons	9
	Crowded family atmosphere	6
Individual difficulties	Inability to actively participate in the lesson	13
	Low motivation	11
	Asocialization	8
	Lack of experience	8
	Distractibility	7
	Difficulty in exams and homework	5
Effect of Earthquake	Sadness for loss and death	20
	The focus is on the earthquake	17
	Despair	12
	Earthquake anxiety	11
	Fear of losing loved ones	7

As seen in Table 7, The difficulties faced by students in distance education process after the earthquake were gathered under four main themes. The first of these was the theme of "Infrastructure difficulties." Most of the students had infrastructure problems due to an internet connection (f:15), and The lesson system

expelled the student from the lesson (f:12) problem. The opinions of the students regarding these difficulties are given below.

"I live in the village, and the internet was not working well in my house; the internet was often disconnected. Therefore, to be able to listen to the lessons better, I sometimes left the house and listened to the lesson in a place with internet access." (S-7)

"*The system can kick you out during lessons or exams. If the system does not allow it when you try to enter again, you cannot continue the lesson, and the subject is left unfinished. You have to complete the subject by listening to the lesson recording again. This is a waste of time."* (S-12)

The second theme was determined as "environmental difficulties." When this theme was examined, it was revealed that the students mostly had problems due to the lack of suitable working environment at home (f:10) and economic reasons (f:9). A student's opinion is as follows:

"After the earthquake, we left Gaziantep and temporarily moved to our relatives in Ankara. Our house was severely damaged, and my father's workplace was destroyed. That is why I got a part-time job because I had to work for economic reasons. I could not attend most of the lessons." (S-8)

The third theme was determined as "individual difficulties." When this theme was examined, it was revealed that the students mostly had problems due to the inability to actively participate in the lesson (f:13) and low motivation (f:11). The opinions of one of the students about this theme is given below.

"*We had an online experience during the pandemic period. Since I could not attend the lessons regularly during that process, I never wanted them to be online again. It disappointed me that we received online education in our last year.*" (S-11)

The fourth theme was determined as the "effect of earthquakes". When this theme was examined, it was revealed that the students mostly had problems due to the sadness for loss and death (f:20). The focus is on the earthquake (f:17) and despair (f:12). The quotations of the participants about this theme is given below.

"I lost my sister and nephew in Hatay due to the earthquake. We went to Tekirdağ to stay with my uncles. I could not attend the lessons at all in terms of both my psychology and opportunities." (S-9)

"I am not in the earthquake region, but we followed the news constantly, thinking that a new alive people would be rescued from the wreckage, and we were distraught. I couldn't focus much on the lessons because our minds and hearts were there." (S-17)

"The images on TV were awful. It is a terrible thing to see the state of people and despair. In this case, I didn't feel like going to lessons, especially in the first weeks." (S-3)

"After the earthquake, I wondered if the same quake had happened in the Marmara region. I am more afraid of losing my family than myself. I couldn't sleep at night for a while for fear of earthquakes, so sometimes I couldn't attend some morning lessons". (S-1)

The fourth question of the research is, "What are the advantages and disadvantages of the distance education process after the earthquake according to child development students?". The answers given to the question are shown in Table 8.

Table 8.

The Findings of Advantages and Disadvantages of Distance Education Process After the Earthquake

Theme	Sub-theme	Frequency (f)
Advantages	Flexible space and environment	17
	Replaying lessons recordings	16
	Quick access to information	12
	Economical	12
	Saving on time	10
	The richness of visual presentations	9
Disadvantages	The difficulty of online processing of applied lessons	18
	Inequality of opportunity	12
	Lack of professional experience	11
	Internet shortage	10
	Lack of participation as attendance is not compulsory	10
	Overexposure to technology	9
	Failure to learn	8
	Disadvantages of online exams	7
	Poor communication	7
	Inexperience	6
	Physical deformation (back and eye pain)	4
	Lack of a friendly atmosphere in the classroom	3

As seen in Table 8, the advantages and disadvantages of the distance education process after the earthquake were gathered under two main themes. The first theme is "advantages." Accordingly, the students stated that distance education provides the most advantages in Flexible space and environment (f:17), Replaying lessons recordings (f:16), Quick access to information (f:12), and being economical (f:12). The opinions of the students about this theme is given below.

"Especially for the morning lessons, it was great luck to start the lesson comfortably without leaving the house. I didn't spend my whole day on the roads." (S-5)

"I could only participate some lessons when the house environment was available. I could complete my deficiencies in all subjects by listening to the recordings of the lessons." (S-6)

When the education turned to distance education, I left my dorm room and returned home this year. It could have forced me economically if the education had been face-to-face. In this respect, distance education has provided me with great convenience." (S-20)

The second theme was determined as "disadvantages". When this theme was examined, it was revealed that the students mostly had disadvantages due to the the difficulty of online processing of applied lessons (f:18), inequality of opportunity (f:12), and lack of professional experience (f:11). The quotations of the participants about this theme is given below.

"Applications are very important for our lessons. Although distance education is suitable for theoretical lessons, I think it didn't enough for applied lessons subjects alone." (S-4)

"*The applied lessons should be done face to face. If we graduate without seeing the preschool child or practicing with them, we will be like a fish out of water. We will have difficulty.*" (S-16)

"Even though some of my friends are distance education, I have not seen some of them in any class during the semester, while I constantly attend the lessons. Because the exams were online, those who did not participate in the lessons also got high grades. This situation was unfair." (S-14)

4. Conclusion, Discussion and Suggestion

Natural disasters; are caused by natural factors and can have serious negative consequences such as illness, injury, and death. Earthquakes, one of these natural disasters that affect societies physically, socially, psychologically, and economically, remain in the memory of societies. Their effects can continue afterward (Sahin & Sipahioglu, 2002). This study focused on the satisfaction and experiences of associate degree students from the child development department in their distance education process after the earthquake.

According to the research findings, the lowest score among students' satisfaction with distance education is "The distance education process is as efficient as face-to-face education." ($\bar{X}$= 2.19). Furthermore, "Education at the university should continue in the form of distance education partially." ($\bar{X}$= 2.41) items. In other words, associate degree students of the child development department did not find the distance education given during the post-earthquake online education process as effective as face-to-face education. In addition, it has been revealed that they are not willing to take the education given at the university as distance education, even partially. The expressions in the semi-structured interviews with the students and the scale results are similar. In the interviews, the students stated that the child development program entirely through distance education is inappropriate, especially since there are applied lessons. In a similar study, Nayci (2021) examined the experiences of associate degree students regarding the online learning process applied during the pandemic and stated that students were reluctant to participate in distance education, had attention deficit problems, and needed help in applied courses.

In the study, whether there is a significant difference between students' satisfaction with distance education according to gender, age, grade level, and technological tools was also examined. Accordingly, the student's satisfaction with distance education did not differ significantly depending on gender and grade level. However, according to technological tools ($p=0.030$, $p<.05$), students with tools such as computers, tablets, and laptops to participate in distance education are significantly more satisfied with distance education than other students. According to Eken et al. (2020), for the efficient implementation of distance education, there is a need for devices such as computers and mobile phones, in addition to technical infrastructure such as internet connection, troubleshooting hardware problems and providing appropriate software and applications. In order to maintain distance education, students in need should be provided with appropriate technological equipment.

In the results, age variables make a statistically significant difference in student satisfaction ($p=0.048$, $p<.05$). It was found that male students over 25 years old and first-year students were more satisfied with distance education according to the student's average scores. In the interviews, students over 25 stated they were satisfied with distance education, especially regarding the economy. Economic difficulties such as unemployment after the earthquake, rent increases, and costs are also challenging for students. Economic impossibilities students face in the distance education process can make it difficult for them to continue their education with distance education, just as not having technological tools (Parker & Steenkamp, 2012).

According to the findings obtained in the interviews, the difficulties faced by the students in the distance education process due to the earthquake were gathered under four main themes. The most significant difficulty among them was undoubtedly the adverse psychological effects of the earthquake. Almost all students stated that they were deeply saddened by the earthquake (f:20), had difficulty adapting to the lesson (f:13), had low motivation (f:11), and distracted attention (f:7). Studies have shown that earthquakes can cause psychiatric diseases such as depression, sleep disorders, low motivation and bad substance use in the society in the short term (Chen et al., 2007). In addition, it has been determined that children and adolescents experience long-term post-traumatic stress reactions and mental disorders even years after earthquakes (Salcioglu et al., 2003; Dai et al., 2016). As can be seen from other studies in the literature, this finding of the research revealed the necessity of educational planning that will psychologically support all students, especially those coming from the earthquake region, in the new academic year.

Furthermore, infrastructure problems have also forced students into the distance education process. Problems such as internet interruptions (f:15), students being kicked out of the system due to problems arising from the system during lessons and exams (f:12), students not being able to attend all classes due to using quota internet (f:7) prevented students from actively participating in all lessons. In addition, students who had to work due to economic reasons (f: 9) and the lack of an environment suitable for listening to lectures at home (f: 10) stated that they could not participate in the lessons in distance education. In addition, the lack of obligation to attend the classes negatively affected the students' regular class participation. Although the education returned to the hybrid system in the middle of the spring semester, many students needed help attending the face-to-face lessons because most students returned to their hometowns since they were not obligated to attend the lessons.

In the distance education process after the earthquake, the students stated that they provided the most advantage in terms of a flexible working environment (f: 17), listening to the recordings of the lessons (f: 16), and easy access to information (f: 12). In addition, the fact that applied courses are not suitable for distance education (f: 18), inequality of opportunity in education because all students are not at an equal socio-economic level (f: 12), and the lack of professional experience of students (f: 11) were seen as the main negative aspects of distance education by students. Among the students, the second-grade level students who have experienced distance education during the pandemic process have been the students with the lowest motivation individually. In the interviews, second-grade level students are concerned that the applied courses they take with distance education will create a deficiency in their professional life in the future.

When the distance education process applied due to the earthquake is examined in general, the result was the opposite, even though it was used for university students living in the earthquake region to benefit from equal opportunities in education. Namely, the students in the earthquake region experienced a severe collapse both in psychological and socioeconomic terms; they may have had to take shelter in a tent or with a relative. These students were often unable to attend lessons due to internet outages in the earthquake region or the fact that they could not attend online education comfortably with the relatives they were staying with temporarily. However, other students who were not directly affected by the earthquake and lived in the countryside could not attend lessons regularly for similar reasons. In this process, students' need for "security and shelter," which is among the basic needs in Maslow's Hierarchy of Needs, may not have been solved. In cases where such needs have been satisfied, the need for electricity, internet, or technological equipment or a study area remained to be some other problems for these students. It would be unfair to expect students to get high-level needs, such as success and self-actualization, which are at the top of the hierarchy (Kula & Cakar, 2015). In this respect, although most of the students in the study wanted to attend the lessons, it was observed that they had difficulties due to such impossibilities.

In order to eliminate the grievances caused by the infrastructure as a country and not to decrease the education quality of the applied departments at the university, a hybrid system was adopted in education with the decision taken by YOK in the middle of the spring semester. However, since the decision was announced late and the dormitories were evacuated for the earthquake victims, all students returned to their homes. In addition, the fact that attendance is not required and the exams will be online negatively affected the students' decision to return to the university for face-to-face education. When all these reasons came together, the spring semester had to be completed mainly with distance education.

As a result, the importance of a well-designed distance education became apparent again, first during the pandemic, then the earthquake. At this point, universities should evaluate the distance education processes they implement well, revise and improve their systems according to the students' needs, and raise awareness of the faculty on this issue (Cigdem & Ozkan, 2022). This research includes only the post-earthquake distance education experiences of associate degree students from the child development department. In this respect, the results can be enriched by taking the opinions of the students in different departments of the universities. As another suggestion, it can be suggested to use or develop appropriate Web 2.0 tools to

integrate universities' applied lessons into distance education. In addition, instead of a general distance education program, comprehensive distance education programs explicitly developed for different university fields can be prepared, and qualified road maps can be found for universities in Türkiye for possible similar situations.

References

Ally, M. (2004). Foundations of educational theory for online learning. *Theory and Practice of Online Learning*, 2, 15-44.

Buyukozturk, S. (2016). *Sosyal bilimler için veri analizi el kitabı* (22. Baskı). Ankara: Pegem Akademi.

Chen, C. H., Tan, H. K. L., Liao, L. R., Chen, H. H., Chan, C. C., Chen, C. Y., ... & Lu, M. L. (2007). Long-term psychological outcome of 1999 Taiwan earthquake survivors: a survey of a high-risk sample with property damage. Comprehensive Psychiatry, 48 (3), 269-275.

Creswell, J. W. (2013). Araştırma deseni: Nitel, nicel ve karma yöntem yaklaşımları (S. B. Demir, Ed. ve Çev.). Ankara: Eğiten Kitap

Crosslin, M. & Dellinger, J. T. (2015). Lessons learned while designing and implementing a multiple pathways xMOOC + cMOOC. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2015*. Chesapeake, The USA.

Cigdem, H. & Özkan, U. B. (2022). Do vocational college students ready for online learning in post-COVID instruction?. *Journal of Educational Technology and Online Learning*, 5 (2), 432-442.

Dai, W., Chen, L., Lai, Z., Li, Y., Wang, J., & Liu, A. (2016). The incidence of posttraumatic stress disorder among survivors after earthquakes: a systematic review and meta-analysis. *BMC Psychiatry*, *16*(1), 1-11.

Eken, O., Tosun, N., & Tuzcu Eken, D. (2020). Covid-19 salgını ile acil ve zorunlu uzaktan eğitime geciş: genel bir değerlendirme. *Milli Eğitim Dergisi*, 113-128.

Erdogan, B. (2023). Depremin sosyolojisi: 6 Şubat felaketinin toplumsal ve kültürel boyutları. *TRT Akademi*, *8*(18), 718-725. DOI: 10.37679/trta.1306900

George, T. (2023). *Mixed Methods Research | Definition, Guide & Examples.* Scribbr. Retrieved August 21, 2023, from https://www.scribbr.com/methodology/mixed-methods-research/

Istanbul Technical University-ITU (2023). 6 Şubat 2023: 04.17 Mw 7,8 Kahramanmaraş ve 13.24 Mw 7,7 Kahramanmaraş depremleri: Ön inceleme raporu. İstanbul Teknik Üniversitesi.

Kafes, A. Y., & Yildirim, A. (2021). Üniversite öğrencilerinin uzaktan eğitim memnuniyeti ölçeği'nin geliştirilmesi: geçerlik ve güvenirlik çalışması. *Electronic Turkish Studies*, *16*(6), 1641-1657.

Koc, E. S. (2021). Nasıl bir uzaktan eğitim? 1 yılın sonunda yapılan çalışmaların değerlendirilmesi. *International Anatolia Academic Online Journal Social Sciences Journal*, 13-26.

Kula, S., & Cakar, B. (2015). Maslow ihtiyaçlar hiyerarşisi bağlamında toplumda bireylerin güvenlik algısı ve yaşam doyumu arasındaki ilişki, *Bartın Üniversitesi İ.İ.B.F. Dergisi*, *6*(12), 191-210.

Kurt, E., & Gulbahce, A. (2019). Van depremini yaşayan öğrencilerin travma sonrası stres bozukluğu düzeylerinin incelenmesi. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi,* 957-972.

Marangoz, M., & Izci, Ç. (2023). Doğal afetlerin ekonomik, sosyal ve çevresel etkilerinin 6 Şubat 2023 Kahramanmaraş merkezli depremler bağlamında girişimciler açısından değerlendirilmesi. *Sosyal ve Beşeri Bilimler Araştırmaları Dergisi*, *24*(52), 1-30.

Miles, M. B., & Huberman, A. M. (2015). *Nitel veri analizi*. (Çev. S. Akbababa Altun ve A. Ersoy*).* Ankara: Pegem Akademi.

Nayci, Ö. (2021). Online learning readiness of associate degree students and their experiences regarding online learning process. *International Journal of Eurasian Education and Culture*, 12, p. 235-285. Doi: 10.35826/ijoecc.324.

Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002) 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981-2001. *Psychiatry: Interpersonal and Biological Processes 65*(3):207-239.

Ozer, M. (2023). Education policy actions by the ministry of national education after the historical earthquake disaster on February 6, 2023 in Türkiye. *Bartın University Journal of Faculty of Education*, *12*(2), 1-14.

Ozturk, M., & Kırca M., (2023). Kahramanmaraş merkezli depremler sonrası için akademik öneriler. *Özgür Publications*. DOI: https://doi.org/10.58830/ozgur.pub99. License: CC-BY-NC 4.0

Parker, M., & Steenkamp, D. (2012). The economic impact of the Canterbury earthquakes. *Reserve Bank of New Zealand Bulletin*, 13-25.

Pregowska, A., Masztalerz, K., Garlińska, M., & Osial, M. (2021). A Worldwide journey through distance education from the post office to virtual, augmented and mixed realities, and education during the COVID-19 pandemic. *Education Sciences*,1-26.

Sahin, C., & Sipahioglu, S. (2002). *Doğal afetler ve Türkiye.* Ankara: Gündüz Eğitim ve Yayıncılık.

Salcioglu, E., Basoglu, M., & Livanou, M. (2003). Long-term psychological outcome for non-treatment-seeking earthquake survivors in Turkey. *The Journal of nervous and mental disease, 191*(3), 154-160.

Santos, I.V. (2010). The Effects of earthquakes on children and human development in rural El Salvador. In: Fuentes-Nieva, R., Seck, P.A. (eds) Risk, Shocks, and Human Development. Palgrave Macmillan, London.

Sen, S. (2023). Kahramanmaraş depremlerinin ekonomiye etkisi. *Diplomasi ve Strateji Dergisi,* 4, 1-55

Solmaz, G., & Ozel, A. (2012). Türkiye'de deprem tekrarlanma zamanının tahmini ve neotektonik bölgelere göre depremselliğin markov zinciri ile incelenmesi. *Cankaya University Journal of Science and Engineering*, *9*(2), 125-138.

Sonmez, E. D., & Gokmenoglu, T. (2023). Understanding the teachers' disaster preparedness beliefs. *International Journal of Disaster Risk Reduction*, *85*, 103511.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics*. Boston: Pearson.

Tanık Önal, N. & Önal, N. (2023). Online learning and teaching experiences of preservice science teachers during Covid-19 pandemic. *Journal of Educational Technology and Online Learning*, 6 (2) , 295-314.

Telli, S. G., & Altun, D. (2021). Coronavirus (Covid-19) pandemisi doneminde cevrimici öğrenme. *Üniversite Araştırmaları Dergisi*, 90-107.

Telli, Yamamoto, G., & Altun, D. (2023). Türkiye'de deprem sonrası çevrimiçi öğrenmenin vazgeçilmezliği, *Üniversite Araştırmaları Dergisi*, *6*(2), 125-136.

Tetik, N., & Albulut, I. I. (2023). "6 Şubat 2023'te yaşanan depremin ekonomik ve finansal etkileri: ihracat üzerinden bir inceleme. *Kahramanmaraş Merkezli Depremler Sonrası İçin Akademik Öneriler*, *Gaziantep: ÖZGÜR*, 93-103.

Uguz, Ş. (2023). Depremlerin görünmez yıkımı: insanların psikolojik sağlığı üzerindeki etkileri. *Turkish Journal of Family Medicine and Primary Care*. *17*(1): 6-9.

Uzun, G. Ö., Es, A. Ç., & Evram, G. (2020). Examination of attitudes of university students in distance education according to some variables. *Near East University Online Journal of Education*, *3*(2), 104-115.

Williams, T. A., & Shepherd, D. A. (2016). Victim entrepreneurs doing well by doing good: Venture creation and well-being in the aftermath of a resource shock. Journal of Business Venturing, *31*(4), 365-387.

Yildirim, S. (2023). 6 Şubat kahramanmaraş depreminin psikososyal etkisi ve depremzedelere yönelik sürdürülebilir müdahalenin önemi üzerine bir gözlem araştirmasi. *Anasay*, 133-153. DOI: 10.33404/anasay.1286368

yok.gov.tr. (2023, 04 05). *Üniversitelerde bahar eğitim ve öğretim dönemi açılışı ikinci bir duyuruya kadar geçici olarak ertelendi*.yok.gov.tr: https://www.yok.gov.tr/Sayfalar/Haberler/2023/universitelerde-bahar-egitim-ve-ogretim-dönemi-acilisi-ikinci-bir-duyuruya-kadar-gecici-olarak-ertelendi.aspx adresinden alındı