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UNIVERSITY STUDENT'S APPROACH TO DISTANCE EDUCATION AFTER THE TWIN EARTHQUAKES IN TURKIYE

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■Abstract

With the twin earthquakes that occurred on February 6, 2024, Türkiye experienced changes in the field of education like in many areas. Universities completed the spring semester with distance education - similar to the process during the pandemic period. In this study, it was aimed to evaluate the approaches of second-year students of Sivas Cumhuriyet University, Cumhuriyet Vocational School of Social Sciences to distance education after the earthquake, since they received education both in the formal and distance education process. For this purpose, the "University students' approach to distance education" scale consisting of three factors and 17 items was applied to the students. According to the results, it was seen that the scale items were collected under two factors. It was determined that these factors statistically did not differ according to the variables of "gender", "place of residence", "family income" and "reasons for not following the lessons", but they differed according to the variable of "follow-up status of lessons". As a result of the study, it can be said that students have more positive views on the distance education process implemented after the earthquake compared to the distance education implemented during the pandemic process.

Keywords: Distance education, Factor analysis, Survey analysis

Türkiye'de Gerçekleşen İkiz Deprem Sonrası Üniversite Öğrencilerinin Uzaktan Eğitime Yaklaşımı

■Özet

Türkiye, 6 Şubat 2024 tarihinde meydana gelen ikiz depremlerle birlikte birçok alanda olduğu gibi eğitim alanında da değişimler yaşamıştır. Üniversiteler bahar dönemini pandemi dönemindeki sürece benzer şekilde uzaktan eğitim ile tamamlamıştır. Bu çalışmada, Sivas Cumhuriyet Üniversitesi Cumhuriyet Sosyal Bilimler Meslek Yüksekokulu ikinci sınıf öğrencilerinin hem örgün hem de uzaktan eğitim sürecinde eğitim almaları nedeniyle deprem sonrası uzaktan eğitime yaklaşımlarının değerlendirilmesi amaçlanmıştır. Bu amaçla öğrencilere üç faktör ve 17 maddeden oluşan "Üniversite öğrencilerinin uzaktan eğitime yaklaşımı" ölçeği uygulanmıştır. Elde edilen sonuçlara göre ölçek maddelerinin iki faktör altında toplandığı görülmüştür. Bu faktörlerin "cinsiyet", "yaşanılan yer", "aile geliri" ve "dersleri takip etmeme nedenleri" değişkenlerine göre istatistiksel olarak farklılaşmadığı, ancak "dersleri takip etme durumu" değişkenine göre farklılaştığı tespit edilmiştir. Çalışma sonucunda öğrencilerin deprem sonrasında uygulanan uzaktan eğitim sürecine ilişkin görüşlerinin pandemi sürecinde uygulanan uzaktan eğitime kıyasla daha olumlu olduğu söylenebilir.

Anahtar Kelimeler: Uzaktan eğitim, Faktör analizi, Anket araştırması

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INTRODUCTION

Technological developments in the field of information and communication have made it possible for education systems independent of physical spaces such as schools and classrooms to continue education without interruption in situations that may develop suddenly. The distance education system is one of these systems (Tuncer & Taşpınar, 2008). Distance education allows students to access information that can be directly applied to social, educational, or business dynamics in any environment (Ball & Crook, 1997). Distance education is an interdisciplinary system that uses existing technologies with a pragmatist approach to eliminate the boundaries between students, teachers, and learning resources (Bozkurt, 2017). Rapid developments in technology have facilitated distance education (McBrien et al., 2009).

However, today it is difficult to say that distance education is a complete alternative to face-to-face education (Tuncer & Bahadır, 2017). In this regard, the degree of interaction in face-to-face education is seen as the most important deficiency of distance education (Huss et al., 2015). This problem may prevent achieving the desired efficiency and outputs (Kaysi, 2020). Distance education also has some disadvantages such as hindering socialization, not being able to benefit from practical courses, being dependent on technology, and being costly to create infrastructure (Gunawardena & McIsaac, 2013).

This study aims to interpret the approaches of university students to distance education, which was compulsory started, and continued for one semester due to the February 6 earthquakes. Due to the magnitude of the earthquake and the effects of this disaster throughout the country, the Council of Higher Education of Turkiye (YÖK) announced that it was decided that it was appropriate to complete the spring semester of the 2022-2023 education and training year in the whole through distance education due to the Kahramanmaraş-based earthquake disaster (URL-1). In this context, it was possible to determine the views of vocational school 2nd year students, who experienced face-to-face education in the first semester and distance education in the following semester, on distance education, which type of education they prefer, and the factors affecting these preferences. To realize this, the “University students' approach to distance education” scale developed by Zorlutuna & Erilli (2022), aims to determine the university students' perspectives on the distance education system, their suitability for the distance education system, and their views on the courses conducted by distance education, was used.

In the distance education system, common motivating factors for students such as teachers, school environment, other students and extra-curricular activities such as sports are either absent or exist in a completely different way. Therefore, it is important to know the opinions of the students who switched from the face-to-face education system to the distance education system about the instructiveness, effectiveness, and personal suitability of this new system and the competence of the institution in this regard. It is a fact that many factors prevent education in a disaster environment such as an earthquake. Due to factors such as infrastructure problems and, the psychological and socioeconomic status of students, technical, institutional, and political actions should be taken together for the success of the distance education process (Pregowska, et al., 2021; Tanik Onal & Onal, 2023). With the help of the results of this study and other studies conducted for this purpose together, it will be possible to minimize the negativities in distance education or blended education system to be implemented in the future.

With the Covid-19 pandemic period, the whole world has learned the importance of the notion of distance education. To comprehend and successfully implement distance education, many academic studies on this subject have been brought to the literature in recent years. Zorlutuna & Erilli (2021) examine how students evaluate distance education during the pandemic period, which is that the participants prefer face-to-face education despite the increase in their grades in distance education. They attributed this to students' preference for social relationships and environments. Zorlutuna (2022), in her study on vocational college students, concluded that distance education can be a supportive element of face-to-face education in the following periods, but the idea that it cannot completely replace face-to-face education is dominant among students. Nayci (2021) examined the experiences of associate degree students regarding the online learning process implemented during the pandemic period and stated that students were reluctant to participate in distance education, had attention deficit problems, and needed help in applied courses. Akbal & Akbal (2020) investigated the most important problem experienced by students in distance education and concluded that physical conditions are the most important problem. It is also added that the second most important problem is the inadequacy of communication tools. Ünal et al. (2021) determined that about half of the students participating in their study had communication tools, but their online learning readiness levels were good despite having internet connection problems. Erkoca (2021) found that student interest in distance education decreased from the beginning to the end of the semester. Göldağ (2021), who aimed to determine the attitudes of students in vocational colleges towards distance education, found that students did not develop a positive or negative attitude towards distance education. The study also stated that male students' attitudes towards distance education are

more positive than female students. In terms of the grades of education, students in the 2nd grade have more positive attitudes towards distance education than the others. In terms of having a computer and internet, the attitudes of students who have a computer and students who have the internet are more positive towards distance education. It was determined that students who had problems in attending live classes had more negative attitudes towards distance education than students who did not have problems. Türkmen et al. (2021) aimed to identify the factors and problems affecting university students' satisfaction with the distance education system during the pandemic period. As a result, it was determined that the technical dimension, advantages, and independent learning style of distance education positively affect satisfaction with distance education, while the disadvantages of distance education negatively affect satisfaction. Doğan & Çelikten (2021) stated that students' opinions for distance education as advantageous due to accessibility and the efficiency of interactive courses. However, they find it disadvantageous in terms of vocational/practical courses and assessment and evaluation. It has been observed that students' attitudes and some characteristics affect their opinions about distance education. Koç (2023) stated that online education was less effective than face-to-face education in associate undergraduate students due to the earthquake. Students' satisfaction with distance education differs significantly depending on the availability of technological tools. Students stated that they had difficulties due to the negative psychological effects of the earthquake and infrastructure problems. It was determined that the most important advantages of distance education are having a flexible environment and listening to lecture recordings. However, not being able to do enough practice during distance education courses, inequality of opportunity, and lack of professional experience were seen as disadvantages.

During the Covid-19 pandemic that affected the whole world, distance education was implemented in all kinds of schools in Turkiye between March 23, 2020, and June 19, 2021 (URL-2). Approximately 2 years after the end of this extraordinary period, Turkiye experienced twin major earthquake disasters (7.8 Mw and 7.5 Mw) centered in Kahramanmaraş province on February 6, 2023, and 11 different provinces of Turkiye were significantly affected by this huge disaster (URL-3). As a result of this disaster, distance education was introduced in universities in the second semester of the 2022-2023 academic year in Turkiye (URL-1). In this study, it was aimed to evaluate the perspectives and attitudes toward distance education of Vocational School of Higher Education students who attended the first semester of the 2022-2023 academic year face-to-face and the second semester as distance education.

1. METHOD

A descriptive survey design method was used in this study. In survey research, information is usually collected from a large population by using answer options determined by the researcher. In survey research, researchers are interested in how opinions and characteristics are distributed in terms of individuals in the sample rather than why they originate (Fraenkel & Wallen, 2006). For this purpose, the scale of "University students' approach to distance education", which was developed by Zorlutuna & Erilli (2022) and validated with reliability, was used for the second-year students of Sivas Cumhuriyet University, Cumhuriyet Vocational School of Social Sciences.

For statistical comparison, chi-square analysis was used to compare the total scores of the participants with their demographic characteristics, t-test and ANOVA test for independent variables were used to compare the factor scores with their demographic characteristics, and Factor Analysis-Basic Component Method was used to investigate the factor loadings of the scale items. Statistical analyses were performed with SPSS.21 (Statistical Package for Social Sciences) statistical package program. The significance level was taken as 0.05 in all statistical comparisons.

Chi-square analysis is used to compare categorical variables in survey studies. The t-test for independent variables is used to compare two normally distributed group averages, and the ANOVA test is used to compare three or more group averages (Heeringa et. al, 2017). Similarly, in survey studies, Factor Analysis method is used to collect similar survey questions under the same group and to interpret and compare these groups. The main purpose of factor analysis is to analyze many variables that are thought to have a relationship between them. To facilitate the understanding and interpretation of the relationships between a group of multivariate variables whose purpose is to reduce or summarize into a small number of basic dimensions analysis technique (Hair et al., 2014). In other words Factor analysis is a method of analyzing a large number of variables that are correlated with each other. by revealing the main factors (structure of the relationship) of the data set the relationships between the concepts in the data set by the researcher to help make it easier to understand.

1.1. Population of Research

Vocational School of Social Sciences consists of 10 departments and has a total of 1215 registered students. Out of these 1215 students, 290 students, who were determined by Simple Random Sampling method, were surveyed. These students were selected for this study because they experienced both face-to-face and online education together during their academic

education. The survey was conducted online. Students were informed about the surveys through their academic advisors and the survey links were sent to the students.

1.2. Distance Education Scale

The scale, which aims to determine the students' perspectives on distance education, consists of 17 items and three sub-factors in a 5-point Likert type. Participants were asked to indicate their degree of agreement with the given statement. The scoring of the scale was evaluated by coding with the numbers "Strongly Agree" with 5, "Agree" with 4, "Undecided" with 3, "Disagree" with 2, and "Strongly Disagree" with 1. The lowest score that can be obtained from the scale is 17 and the highest score is 85. The higher the total score, the more positive the students' approach to distance education.

2. FINDINGS

The study was applied to the 2nd year students of Sivas Cumhuriyet University, Cumhuriyet Vocational School of Social Sciences, who just started university life in the 2022-2023 academic year and completed the first semester face-to-face and the second semester as distance education. Of the 1215 2nd year students, 290 people determined by random sampling method were surveyed and the results were statistically evaluated. Of these students, 64% are female, 65.5% live in the city center, and 19% have never followed distance education courses.

2.1. Statistical Analysis

In the statistical analysis, first descriptive statistics were given, then the scale questions were factor analyzed, and the statistical differences of the determined factors in terms of some demographic variables were investigated. To calculate the reliability of the items used in the scale, Cronbach's Alpha values were examined and calculated as 0.977 for the whole scale, 0.977 for Factor 1, and 0.955 for Factor 2. Table 1 shows the percentages of the answers given for demographic questions.

Table 1. Descriptive Statistics for Demographic Questions

Variable	%	Variable	%
Gender		**Follow-up status of lessons**	
Woman	64	Regular Follow-up	31
Male	36	Follow Up Frequently	21.7
Place of Residence		Rarely Follow up	28.3
City Center	65.5	Never Follow	19
District Center	19	**Reasons for not following the course**	
Village-Town	15.5	No Computer/Tablet	6.5

Family Income Range		No Internet Connection	9.5
0-15.000 TL	65.2	Slow Internet Speed	32
15.001-30.000 TL	27.2	Working at a Job	36
30.001-45.000 TL	5.5	Preferring to Sleep	10.9
45.001-60.000 TL	0.7	Other	5.1
60.001-75.000 TL	0.7		
75.001 TL and Above	0.7		

Of the 290 students from 10 departments who participated in the survey, 64% were female and 36% were male. 65.5% of the students reside in the city center, 19% in the district center, and 15.5% in villages and towns. In follow-up status of lessons, it can be said that 31% of the students stated that they followed the courses regularly, 21.7% stated that they tried to follow the courses regularly but missed some courses, 28.3% stated that they rarely followed the courses and 19% stated that they could not follow the courses at all. When the students who could follow their lessons less or not at all were asked about the reasons for this, 30.3% stated that they had problems connecting to the internet, 34.1% stated that they had a job, 10.3% stated that they preferred to sleep, 9% stated that they did not have an internet connection and 16.3% stated that they had various other excuses.

Factor analysis was applied to the survey questions and the factors to which the questions were related were determined. According to the results of Kaiser Mayer Olkin (KMO=0.969) and Bartlett sphericity tests (p=0.000) -used to test the suitability of the data for factor analysis- it was determined that the questionnaire study was suitable for factor analysis. Based on the factor analysis results, it was determined that the 17-item scale was explained by 2 factors. These 2 factors explained 79.2% of the total variance. The distribution of the scale items to the factors and their factor loadings is given in Appendix.1. It is seen that the lowest factor loadings are given in the Appendix.1 is 0.535 and the highest is 0.854. For the two-factor structure, the first factor was named “Tutorialness and effectiveness” and the second factor was named “Personal suitability and Institutional competence”. Zorlutuna & Erilli (2022) revealed a 3-factor structure in their scale study. In that study, the “Tutorialness and effectiveness” questions given in Table 2 formed the first factor, while the “Personal suitability and Institutional competence” factor formed two different factor structures as “Personal suitability” and “Institutional competence”.

It was also investigated whether the answers given to all survey questions showed statistical differences in terms of demographic variables. While a statistical difference was found for the question “I prefer distance education to face-to-face education” according to

gender ($p<0.05$), no difference was found for the other questions ($p>0.05$). While a statistical difference was found between the answers given to all questions for the variable "Frequency of following the courses" ($p<0.05$), no statistical difference was found for the variable "Monthly income of the family" ($p>0.05$). Similarly, a statistical comparison of demographic variables according to the total scores of the questions constituting the factors was made and the results are shown in Table 2 (Min. and max. points for Factor 1 total score is 7 and 35, for Factor 2 total score is 10 and 50). Accordingly, no statistical difference was found for Factor 1 and Factor 2 total scores for the variables of gender, place of residence, reason for not following the course, and family monthly income ($p>0.05$). A statistical difference was determined for Factor 1 and Factor 2 total scores for the variable of following the courses ($p<0.05$). No statistical difference was found for the Factor 1 total score ($p>0.05$) for the departments in which the students studied, while a difference was found for the Factor 2 total score ($p<0.05$).

Table 2. Descriptive Stats and Statistical Comparison of Factor Total Scores According to Demographic Variables

	Reasons for not following the course	***mean***	***s.d.***	***p-value***
Total	No computer/smartphone/tablet	50.000	22.345	0.781
	I don't have an internet package	49.346	22.588	
	Internet connection problem	52.886	20.749	
	I'm working at a job	53.101	20.908	
	I prefer to sleep instead of waking up early	56.200	22.775	
	Other	48.071	17.117	
Factor1	No computer/smartphone/tablet	19.056	10.270	0.67
	I don't have an internet package	17.962	10.945	
	Internet connection problem	19.023	10.138	
	I'm working at a job	19.899	9.933	
	I prefer to sleep instead of waking up early	21.500	11.088	
	Other	16.643	8.705	
Factor2	No computer/smartphone/tablet	30.944	12.605	0.787
	I don't have an internet package	31.385	12.452	
	Internet connection problem	33.864	11.257	
	I'm working at a job	33.202	11.589	
	I prefer to sleep instead of waking up early	34.700	12.324	
	Other	31.429	9.104	
	Follow-up status of lessons	***mean***	***s.d.***	***p-value***
Total	I followed my lessons regularly	73.056	19.493	0.000
	I followed my lessons frequently. but there were lessons I missed.	52.079	17.403	
	I could rarely keep up with my lessons	45.024	13.423	
	I couldn't follow my lessons	37.327	15.392	
Factor1	I followed my lessons regularly	29.767	8.786	0.000
	I followed my lessons frequently. but there were lessons I missed.	18.730	8.714	

	I could rarely keep up with my lessons	15.256	6.663	
	I couldn't follow my lessons	12.636	7.233	
Factor2	I followed my lessons regularly	43.289	11.022	0.000
	I followed my lessons frequently. but there were lessons I missed.	33.349	9.575	
	I could rarely keep up with my lessons	29.768	7.851	
	I couldn't follow my lessons	24.691	9.229	
	Family income range	***mean***	***s.d.***	***p-value***
Total	0-15.000 TL	53.624	21.592	0.99
	15.001-30.000 TL	53.924	21.377	
	30.001-45.000 TL	54.813	24.419	
	45.001-60.000 TL	46.000	2.828	
	60.001-75.000 TL	59.000	35.355	
	75.001 TL and Above	59.500	31.820	
Factor1	0-15.000 TL	19.815	10.431	0.963
	15.001-30.000 TL	20.342	10.257	
	30.001-45.000 TL	20.688	12.142	
	45.001-60.000 TL	15.000	0.000	
	60.001-75.000 TL	23.000	16.971	
	75.001 TL and Above	23.000	15.556	
Factor2	0-15.000 TL	33.810	11.831	0.967
	15.001-30.000 TL	33.582	11.733	
	30.001-45.000 TL	34.125	12.633	
	45.001-60.000 TL	31.000	2.828	
	60.001-75.000 TL	36.000	18.385	
	75.001 TL and Above	36.500	16.263	
	Gender	***mean***	***s.d.***	***p-value***
Total	Male	56.533	20.687	0.104
	Woman	52.243	21.998	
Factor1	Male	21.552	9.849	0.059
	Woman	19.146	10.693	
Factor2	Male	34.981	11.555	0.101
	Woman	33.097	11.882	
	Place of residence	***mean***	***s.d.***	***p-value***
Total	City Center	52.995	21.482	0.254
	District Center	58.073	22.893	
	Village-Town	51.956	20.215	
Factor1	City Center	19.726	10.351	0.243
	District Center	22.036	11.130	
	Village-Town	18.778	9.842	
Factor2	City Center	33.268	11.802	0.288
	District Center	36.036	12.133	
	Village-Town	33.178	11.159	

The correlation coefficient between Factor 1 and Factor 2 was determined strongly with the same direction ($r=0.888$) and statistically significant ($p<0.05$). The percentages of the students' answers to the questions are given in Table 3 (1: Strongly Disagree, ..., 5: Strongly Agree).

Table 3. The Percentages of The Student's Answers to the Items

	Percentages of Answers (%)				
Items	**1**	**2**	**3**	**4**	**5**
Q1	35.9	16.9	11.4	10.3	25.5
Q2	30.3	23.1	10.3	10.7	25.5
Q3	33.8	13.4	13.1	9	30.7
Q4	34.5	17.2	13.8	7.6	26.9
Q5	31.7	20.7	13.1	10.3	24.1
Q6	27.6	17.2	13.4	12.1	29.7
Q7	21.4	16.9	17.6	15.5	28.6
Q8	15.2	15.9	15.9	20.7	32.4
Q9	19	16.2	13.8	18.3	32.8
Q10	10	6.9	16.2	29	37.9
Q11	15.5	10.3	11	25.2	37.9
Q12	19	20.7	14.1	17.2	29
Q13	12.1	10.7	22.8	29	25.5
Q14	13.4	13.8	23.4	24.5	24.8
Q15	12.4	21	19	19.7	27.9
Q16	11.4	12.8	21.7	28.6	25.5
Q17	15.9	21	28.3	14.5	20.3

The answers to some questions given in Table 3 were compared with the answers given in the original scale study, Zorlutuna & Erilli (2022). Accordingly, 41.8% of the students agreed with the question “I feel more comfortable in distance education courses than in face-to-face education courses”, while this rate was 27.1% in the original scale. While 39.7% of the students agreed with the question “I prefer distance education to face-to-face education”, this rate was determined as 20.8% in the original scale. While 50.1% of the students agreed with the question “I think distance education provides the flexibility of location and time saving”, this rate was 34.1% in the original scale. While 66.9% of the students agreed with the question “One of the advantages of distance education is that it allows me to repeat the lessons whenever I want”, this rate was 43.4% in the original scale. While 34.5% of the students agreed with the question “I think that distance education courses are equivalent to face-to-face education”, this rate was 19.6% in the original scale. It is seen that there is a positive change in students' views on distance education compared to their views on distance education during the Covid-19 process.

3. RESULTS and DISCUSSION

Distance education can be defined as a form of education in which the main elements are the physical separation of teachers and students during instruction and the use of various technologies to facilitate student-teacher and student-student communication. Distance education, which is indispensable for companies, institutions, and large-scale training today in

terms of providing flexibility of place and time, is not preferred in higher education except in compulsory cases. Distance education, which was implemented all over the world during the Covid-19 pandemic process, has been replaced by face-to-face education again with the end of the pandemic process.

Universities in Turkiye, as in the whole world, completed the 2020-2021 academic year with distance education and then switched back to face-to-face education in 2021-2022 (URL-2). However, on February 6, 2023, the largest twin land earthquake recorded in the world occurred in Turkiye, and 11 cities were severely affected. Thereupon, the Turkish Higher Education Institution announced that universities were switching to distance education, and the second semester of 2023 was completed with distance education (URL-1). After the earthquake, it was not possible to continue face-to-face education in the earthquake zone due to the situation of the students and the lack of physical environment. Since the university dormitories in the provinces close to the region were allocated to earthquake victims, face-to-face education became impossible there as well. Since students living in the earthquake zone but studying in distant cities would have difficulties in continuing their education face-to-face, distance education was introduced in universities all over Turkiye as a solution.

Unlike the distance education implemented during the Covid-19 pandemic, this time, the fact that both educational institutions and students were experienced in recent history made this period more comfortable and less problematic. However, the differences between distance education and face-to-face education allowed for different interpretations, especially in universities. To investigate these differences, this study evaluated the results of the survey applied to university students who spent one semester of the 2022-2023 academic year with face-to-face and one semester with distance education. The 'University Students' Approach to Distance Education' scale developed by Zorlutuna and Erilli (2022) was applied to undergraduate students in universities. In this study, the 'University Students' Approach to Distance Education' scale was applied to associate degree students and the students' views on distance education applied in this compulsory period were investigated.

3 factors were identified in the original scale (Tutorialness and effectiveness, Personal suitability, and Institutional competence). In this study, the items that formed the "Tutorialness and effectiveness" factor formed the same factor, while the items of the second and third factors were collected in the other factor. The fact that the institutional competence and personal suitability factors identified in the original study are the same factor in this study can be explained by the fact that both students and instructors have changed compared to the previous distance education process. It is thought that the availability of course materials, their

experience in providing distance education, and the faster and smoother operation of the internet infrastructure of the universities enabled almost all of the lecturers to go through this process smoothly and successfully. From the students' point of view, the fact that they can go out, be in social environments, and stay in contact with their friends outside of the distance courses is thought to be a factor in the fact that their suitability does come to the fore. The socialization of the students outside the lessons is also effective in minimizing the differences of opinion about distance education and course instructors.

As it can be seen from the results in Table 2, a statistical difference was found only in terms of the variable 'course follow-up status' in multiple comparisons. It is thought that the fact that the rate of those who do not follow the courses is significantly lower than the other follow-up periods affect this result. It is seen that the fact that the distance education system of the university provides the opportunity to watch the courses again, while those who do not follow the courses work in a certain job, keeps the rate of those who follow all the courses only at 31%. The decrease in the sense of belonging to the university by the students who follow the courses less or not at all has also allowed them to have less ideas about institutional competence. The fact that the lecturers were experienced in the Covid-19 process led to a faster and more intensive distance education process this time. This is thought to have led to a differentiation in the learning and activities of the students who followed the courses less. When we look at the problems of students not being able to follow the lessons, the problem of slow internet was mentioned second after the issue of working at any job. It is thought that the average decrease in the course follow-up time of students living in villages is related to this. It was observed that students who tried to follow the lessons on their mobile phones had significant decreases in their lesson follow-up time due to the problem of not having (running out of) internet.

Zorlutuna and Erilli (2022) conducted a survey on distance education at Sivas Cumhuriyet University and found a statistical difference in terms of gender, monthly income of families and accommodation of students. The main reason for not finding a statistical difference according to these variables in this study is that the sample of this study is limited to vocational high school students. In general, it is thought that the fact that students with a similar demographic structure study in vocational schools, unlike faculties, leads to the similarity of the variables that may affect distance education. It is known that the most important problems encountered in distance education are technological opportunities. In addition to this, it can be shown that the factor that affects the course follow-up the most is that the students work at a job. In recent years, due to the increasing economic pressures and high price increases affecting families and students, there

has been an increase in the number of students working part-time outside of class hours. In Zorlutuna and Erilli's (2022) study, technological problems with 15.3%, lack of internet package with 30.3% and working excuses with 22.5% were shown as the problems of not being able to follow the course. In this study, technological problems were determined with 15.9% and not having an internet package with 29.1%. These 2 values were almost the same as the results of the previous study. However, in this study, the proportion of students with a job increased by 12% to 34.1%. This result can be interpreted as a brief indication that students' priorities have changed.

When we look at the few studies conducted with the distance education process after the earthquake, it can be said that it is similar to the distance education in the Covid-19 process. Koçer and Koçak (2024) concluded in their study that earthquake trauma and negative attitudes towards distance education negatively affected students' psychological states (anxiety). In addition, it was determined that as the students' attitudes towards distance education became negative, their anxiety increased, there was a difference between the psychological state of the students and being in the earthquake zone or feeling the tremor, and there was a significant difference between the economic status of the students and both their psychological state and earthquake trauma. Telli Yamamoto and Altun (2023) concluded that the majority of the population affected by the earthquake faced significant difficulties in accessing education due to destruction, displacement and lack of appropriate educational environments. Erdoğdu and Atabay (2023) stated that distance education provided to students during natural disasters such as earthquakes has positive (flexibility, time creation, accessibility, sustainability) contributions as well as negative (loss of motivation, lack of interest in the course, interaction and communication problems) factors. In addition, it was also stated that this process provides students with some opportunities (individual research and enquiry, various educational opportunities, class participation) but also contains various risk factors (inefficiency in applied courses, cognitive and physical fatigue, permanent learning problems). In her study, Koç (2023) stated that although distance education was intended to be used for university students living in the earthquake zone to benefit from equal opportunities in education, the results obtained as a result of the analyses were the opposite.

The distance education process in the Covid-19 period started suddenly and no information was given about when it would end. In the distance education process due to the earthquake, it was predetermined that the process would be for only one academic year. The lack of uncertainty helped students not to be under pressure and to adapt to the process very quickly. In Zorlutuna & Erilli's (2022) study, the rate of students who followed the courses

regularly and frequently was 38.4%, while this rate increased to 52.7% in this study. Even this difference may be enough to explain the difference in factor distribution.

Despite some disadvantages, distance education is a good alternative for students who want more convenience and flexibility while continuing their education. The major benefit of distance education is that it allows students to access a large number of learning tools with minimal financial resources. Online courses are made even more interactive through the use of various video conferencing software. This enhances the ability to learn, specialize, or retain knowledge about a particular subject. The importance of a well-designed distance education has reemerged first during the pandemic and then again during the earthquake.

To prevent inequality of opportunity in education in unpredictable disasters such as earthquakes and floods, distance education emerges as a suitable education model. However, the fact that the earthquake disaster affected 14 million people in 11 different cities brought with it the problems of communication infrastructure, shelter, nutrition, and transportation. For this reason, when the distance education process applied due to the earthquake is examined in general, although it was used for university students living in the earthquake zone to benefit from equality of opportunity in education, the result was the opposite (Koç, 2023).

Distance education limits social interaction. This may affect the concentration of students in the courses and reduce the expected success. In this study, university students' views on distance education after the earthquake disaster were investigated. As a result of the study, it was determined that university students had a more positive perspective on distance education compared to the Covid-19 pandemic process. It is thought that the short time between the two distance education practices, the experiences gained from the previous one, and the socialization opportunities of the students are effective in these results. The fact that there were no problems with personal suitability and institutional competence and that these factors, which were two separate sub-factors in the original scale, were combined in this study may also be attributed to this. Unpredictability and uncertainty are the causes of fear and failure. However, the fact that not all the students surveyed were affected by the earthquake in the first degree may also be the reason for this positive outlook.

Distance education is the most important alternative learning method applied when face-to-face education is not possible. Although its theoretical form seems applicable to people, the difficulties encountered during implementation have shown that this method also has its conveniences and difficulties. Regarding distance education, studies on student attitudes before the pandemic, although the attitudes of students were generally positive, studies have been

conducted that determined that this situation changed in the pandemic (Sari & Nayir, 2020; Alsubaie, 2022; Bakhov et al., 2021). In addition to problems such as serious changes in students' social lives and negative effects on their psychology, it has been determined that there are increases in problems such as depression and anxiety (Saraswathi et al., 2020; Alasmari, 2021). It can be said that the distance education process implemented during the earthquake was more positive and relatively more qualified due to the past experiences of students and teachers. In both psychological and sociological terms, Turkey has passed this process more successfully than expected. As a result, the importance of a well-designed distance education has re-emerged first during the pandemic and then during the earthquake process. At this point, universities should evaluate the distance education processes they implement well, revise and improve their systems according to the needs of the students and raise awareness of their instructors on this issue (Çiğdem & Özkan, 2022). Distance education should not be considered only in emergencies, prejudices and mistakes should be evaluated, and the factors necessary for successful applications in online learning should be examined and improved in line with student needs.

Ethical Permissions of the Research

In this study, all rules specified within the scope of the "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed. None of the actions mentioned under the title of "Actions Contrary to Scientific Research and Publication Ethics", which is the second part of the directive, have been carried out.

Name of the board that made the ethical evaluation: Sivas Cumhuriyet University Social Sciences Scientific Research Proposal Ethics Evaluation Board.

Date of ethical evaluation decision: 17.10.2023; ethical evaluation document issue number: 2023/17.

After obtaining the necessary permission, the data of the study were collected between October 18-31, 2023.

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APPENDIX

APPENDIX 1. The Distribution of The Scale Items to The Factors and Their Factor Loadings

Items	Factor 1	Factor 2
Q1: I understand and learn the lessons given in distance education more easily than in face-to-face education	0,854	
Q3: I prefer distance education to face-to-face education	0,844	
Q2: Distance education makes me more active in class	0,841	
Q5: Distance education ensures that learning lessons are permanent	0,841	
Q4: I think that the courses in distance education are equivalent to face-to-face education	0,824	
Q6: I feel more comfortable in distance education classes than in face-to-face education classes.	0,794	
Q7: Distance education allows me to use my time more efficiently.	0,751	
Q13: I think that the course material sharing of the lecturers is sufficient		0,835
Q10: One of the advantages of Distance Education is that it allows repeating continuously		0,795
Q16: I find the information/announcements made by our university during the distance education process sufficient		0,795
Q14: I think that the dominance of the instructors in distance education courses is sufficient		0,764
Q15: During the distance education process, I can easily communicate with our department teachers and assistants		0,711
Q12: The flexible structure of distance education suits my lifestyle		0,688
Q11: I feel more comfortable in distance education exams than in face-to-face education exams		0,635
Q8: I need the flexibility to attend class whenever and wherever I want.		0,606
Q17: In our distance education courses, instructors use new and different materials		0,566
Q9: I think distance education provides space flexibility and time savings.		0,535