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EXAMINATION OF ATTITUDES OF UNIVERSITY STUDENTS IN DISTANCE EDUCATION ACCORDING TO SOME VARIABLES

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Abstract

We are conducting distance education due to the pandemic process that we are experiencing. This study has been performed with the purpose of determining what kind of attitudes students who experience this process are displaying and the factors affecting these attitudes. The attitudes of university students studying at a private university in the Turkish Republic of Northern Cyprus according to age, gender, grade level, internet connection problem, ability to use technology, suitability of distance education environment, and whether it is efficient or not were examined. Random sampling method was used in this research, which was conducted using the relational survey model, one of the quantitative survey models. The sample of the study is 128 university students, 64 men and 64 women studying at a private university. The data of the research were collected online using the personal information form and the Distance Education Attitude Scale prepared by the researchers. SPSS 25.0 software was used for statistical analysis of research data. The scores received by university students who have high level of internet connection problems from the Distance Education Attitude Scale were lower than other university students. It is believed that this study will make contribution to future research. Since this research will provide a positive attitude and broad view of university students towards computer environments, it contributes greatly to the field.

Keywords: Distance education, attitude, university student, internet and technology usage.

1. Introduction

Everyone living in the Turkish Republic of Northern Cyprus is going through an uncertain and troubled period like all over the world. In this period when we are in the pandemic process, our work life, home life and school life have changed under certain conditions.

Coronavirus Pandemic started in December 2019 in Wuhan region, the capital city of China. It quickly turned into an epidemic in Europe, North America, Asia-Pacific countries. The epidemic was declared as "pandemic" on March 11, 2020. Within the scope of security measures due to pandemic, countries closed border gates, social and cultural events were stopped, shopkeepers closed their shops, and a partial curfew was imposed. Education at all

levels, including higher education, was suspended on Monday, March 16, and distance education was put into implementation (Aslan, 2020).

Within the scope of coronavirus pandemic measures, due to the interruption of education and training activities all over the world, countries have rapidly implemented distance education both in order to prevent students from lagging behind their education life and to prevent students from experiencing difficulties such as not being able to graduate or losing semesters (Kurtuncu & Kurt, 2020).

When the researches carried out abroad are examined, it can be seen that Brinkerhoff and Koroghlanian (2005) displayed that the attitudes of the learners towards distance education were almost unstable. In some studies, it can be seen that attitudes towards distance education led to both positive and negative results (Belcheir & Cucek, 2002; Drennan, Kennedy & Pisarski, 2005). Similarly, when studies conducted in Turkey are examined, it has been found out that individuals who participated in distance learning programs indicated both positive and negative effects (Agır, Gur & Okcu, 2008).

In the research conducted by Ates and Altun (2008) on the 3rd and 4th grade students of the Department of Computer and Instructional Technologies (BÖTE), it was found out that there was no significant difference between their attitudes towards distance education by gender, grade and learning styles. However, it was determined that there was a significant difference between the attitudes towards distance education according to receiving distance education previously, experience of using computers, and perceived computer usage skills.

Technology includes dimensions such as product, production, information, purpose and meaning. Technology can be considered only as a machine, machine-producing machine, or technique in terms of production. All kinds of technology aims to protect life and to bring practical solutions to problems, and have a certain meaning in terms of trying to get to know our environment, our media and the universe. Therefore, technology has its own internal functioning (Usur, 2001).

Scientific knowledge and technology contribute mutually to each other's development (Habermas, 2001). Apart from its interaction with technology, science also develops as part of social relations.

Distance education is an application in which students and teachers are provided with the means of communication for the course materials and interaction for the integrity of education without being subject to time and space barriers (Sakar, 2017).

When relevant literature is analyzed, Yılmaz (2005) determined the positive effect of the use of technology in education on student achievement and attitude. Yavuz and Coskun (2008) evaluated their attitudes and thoughts regarding the use of technology in education in their research with elementary pre-service teaches. In the interviews, it has been revealed that students 'use of technological tools in teaching positively affects their attitudes and that students have positive ideas about technology usage.

1.1. Importance of the Study

Distance education, which we practiced from our homes as teaching staff due to the pandemic process we are experiencing, has shed light on the variables that we want to study in this research.

1.2. Objective of the Study

It is the study of attitudes of university students according to some variables in distance education.

1.2.1. Sub-objectives of the study

1. Do the scores obtained by the university students from the Distance Education Attitude Scale differ significantly by age group?

2. Do the scores obtained by university students from the Distance Education Attitude Scale differ significantly according to their gender?

3. Do the scores obtained by the university students from the Distance Education Attitude Scale differ significantly according to the grade level?

4. Are the scores obtained by university students from the Distance Education Attitude Scale differ significantly according to their ability to use technology?

5. Do the scores obtained by the university students from the Distance Education Attitude Scale differ significantly according to their internet connection problems?

6. Do the scores obtained by university students from Distance Education Attitude Scale differ significantly according to the suitability of the environment in which distance education is provided?

7. Do the scores obtained by university students from the Distance Education Attitude Scale differ significantly according to the efficiency of distance education?

2. Method

2.1. Research Model

Survey model was used in the research. The survey model is used in research that attempts to describe and explain “what” events, objects, assets, institutions, groups and various fields “are”. Questions about the information to be learned can be directed directly to the sample and can determine the attitudes of several people in a short time (Erden, 2007).

2.2. Sample Group

Purposeful sampling was used in the research. Purposeful sampling is preferred when it is desired to work in one or more specific cases that allow for in-depth research by selecting information-rich cases depending on the purpose of the research, meeting certain criteria, or having certain features. In the context of selected cases, the researcher tries to understand nature and social events or any phenomena and to discover and explain the relationships between them (Buyukozturk, 2012).

It consists of 128 university students, of 64 men and 64 women, studying at a private university in the Turkish Republic of Northern Cyprus.

2.3. Data Collection Tools

The data of the research were collected by applying an online questionnaire. Before starting the research, the necessary permission was obtained from the scientific research ethics committee and data was collected on a voluntary basis. In order to reach the demographic characteristics of the researchers, the personal information form prepared by the researchers and the Distance Education Attitude Scale developed by Agır, Gur and Okcu in 2007 were used to determine the attitudes of the participants to distance education. The scale contains 21 items, 14 positive and 7 negative, and is in the form of Five Likert. An increase in the scale scores means that there is a positive attitude towards distance education.

2.4. Statistical Analysis of Data

SPSS 25.0 software was used for statistical analysis of research data.

Cronbach's Alpha reliability coefficient of the answers given by university students to the Distance Education Attitude Scale was found to be 0.890.

The distribution of university students according to their socio-demographic characteristics, experience of internet connection problem, competence levels of using technology, distance education environment and their opinions on efficiency are determined by frequency analysis.

Descriptive statistics about the items in the Distance Education Attitude Scale of university students and their total scores were shown.

Nonparametric hypothesis tests were used in the comparison of the scores of university students according to their socio-demographic characteristics, internet connection problem, competence levels of using technology, their opinions about distance education environment and efficiency, and it was seen that the Distance Education Attitude Scale does not fit the normal distribution. Accordingly, while the scores of Distance Education Attitude Scale according to the gender of university students were compared with Mann-Whitney U test, Kruskal-Wallis H test was used in other comparisons.

3. Findings

In this section, the findings obtained as a result of the statistical analysis of the collected data are included.

Table 1. Socio-demographic characteristics of university students

	Number (n)	Percent (%)
Age group		
20 age and younger	15	11,72
21-22 age	35	27,34
23-24 age	40	31,25
25 age and older	38	29,69
Gender		
Female	64	50,00

Male	64	50,00
Grade		
Freshmen	7	5,47
Sophomore	15	11,72
Junior	22	17,19
Senior	68	53,13
Graduate	16	12,50

Table 1 shows the distribution of university students participating in the research according to some socio-demographic characteristics.

When Table 1 is examined, it can be seen that among the university students who participated in the study, 11.72% were 20 years of age and younger, 27.34% were 21-22 years of age, 31.25% were 23-24 years of age, 29.69% wee 25 years of age and older, 50% were females and 50% were males, 5.47% were freshmen, 11.72% were sophomore, 17.19% were junior, 53.13% were senior, and 12.50% were graduate students.

Table 2. The distribution of the opinions of university students regarding the level of problems with internet connection, the level of competence to use technology, the suitability of the distance education environment and the efficiency of distance education

	Number (n)	Percent (%)
The level of problems with internet connection		
Low	25	19,53
Medium	73	57,03
High	30	23,44
The level of competence to use technology		
Insufficient	9	7,03
Partially sufficient	71	55,47
Sufficient	48	37,50
Suitability of distance education environment		
Appropriate	31	24,22
Partially appropriate	71	55,47
Inappropriate	26	20,31
Efficiency of distance education		
Efficient	15	11,72
Partially efficient	50	39,06
Not efficient	63	49,22

Table 2 shows the distribution of university students' competence levels of using technology, and the suitability of distance education environment and efficiency of distance education.

When Table 2 is examined, it is determined that 19.53% of university students have low level problems, 57.03% have medium level problems and 23.44% have high problems regarding internet connection during distance education. In terms of using technology, 7.03% of university students consider themselves insufficient, 55.47% partially sufficient, and 37.50% sufficient. 24.22% of university students think that the environment where distance education is conducted is appropriate, 55.47% think that it is partially appropriate, and 20.31% think that it is inappropriate. 11,72% of university students think that the distance education is an efficient, 39,06% think that it is partially efficient, and 49,22% think that is not efficient.

Table 3. The scores university students received from the Distance Education Attitude Scale

	N	$\bar{x}$	SD	Below	Above
Distance Education Attitude Scale	128	55,47	16,31	21	104

Descriptive statistics regarding the scores obtained by university students included in the study from Distance Education the Attitude Scale are given in Table 3. It was determined that the university students received an average score of 55.47 ± 16.31 from the scale. The lowest and the highest scores obtained by university students from the Distance Education Attitude Scale was 21 and 104, respectively.

Table 4. Comparison of the scores university students received from the Distance Education Attitude Scale by some socio-demographic characteristics

	N	$\bar{x}$	SD	M	SO	χ^2 / Z	p	Difference
Age group								
20 age and younger	15	51,80	17,96	48,00	52,90	13,210	0,004*	1-4
21-22 age	35	49,11	14,31	47,00	50,60			2-4
23-24 age	40	56,18	15,63	53,50	66,18			3-4
25 age and older	38	62,03	16,05	62,00	80,12			
Gender								
Female	64	54,02	16,88	51,00	59,46	-1,537	0,124	
Male	64	56,92	15,73	57,00	69,54			
Grade								
Freshmen	7	55,86	10,30	62,00	67,00	3,021	0,554	
Sophomore	15	51,60	13,65	53,00	56,43			
Junior	22	52,18	19,65	49,50	55,57			

Senior	68	57,00	13,72	55,50	69,00
Graduate	16	56,94	24,75	51,00	64,13

**p<0,05*

Table 4 shows the results of the Kruskal-Wallis H test and Mann-Whitney U test performed as regards comparing the scores of university students included in the research from the Distance Education Attitude Scale according to some socio-demographic characteristics.

According to the age groups of the university students participating in the study, the difference between the Distance Education Attitude Scale by age groups was determined to be statistically significant (p <0.05). University students aged 25 and over received a higher score on Distance Education Attitude Scale than students in other age groups.

It was determined that there was no statistically significant difference between the scores of university students included in the research according to their genders and their grade levels (P> 0.05).

Table 5. Comparison of the scores obtained by university students from the Distance Education Attitude Scale according to their level of problems with internet connection, the level of competence to use technology, the suitability of distance education environment and the efficiency of distance education

	N	$\bar{x}$	SD	M	SO	χ^2	p	Difference
The level of problems with internet connection								
Low	25	58,52	10,57	58,00	74,22	12,661	0,002*	1-3
Medium	73	58,22	16,91	56,00	69,74			2-3
High	30	46,23	15,75	43,00	43,65			
The level of competence to use technology								
Insufficient	9	47,33	10,59	52,00	47,50	2,201	0,333	
Partially sufficient	71	55,45	16,35	56,00	64,65			
Sufficient	48	57,02	16,94	55,50	67,47			
Suitability of distance education environment								
Appropriate	31	63,16	20,40	63,00	78,48	10,946	0,004*	1-2
Partially appropriate	71	55,27	13,64	53,00	65,19			1-3
Inappropriate	26	46,85	13,43	48,50	45,94			2-3
Efficiency of distance education								

Efficient	15	81,53	12,93	77,00	116,37	54,791	0,000*	1-2
Partially efficient	50	59,10	12,16	62,00	75,79			1-3
Not efficient	63	46,38	11,47	47,00	43,19			2-3

**p<0,05*

Table 5 shows the results of the Kruskal-Wallis H test conducted to compare the scores of university students from the Distance Education Attitude Scale according to their opinions regarding the internet connection problem, technological competence levels, the suitability of distance education environment and efficiency of distance education.

When Table 5 is analyzed, it was determined that the difference between the scores received by university students included in the study from the Distance Education Attitude Scale according to their level of experiencing internet connection problems was statistically significant ($p < 0.05$). The scores received from the Attitude towards Distance Education Scale by university students who have a high level of internet connection problem were lower than other students.

It was determined that there was no statistically significant difference between the scores obtained by university students from the Distance Education Attitude Scale according to their level of seeing themselves adequate in terms of using technology ($p > 0.05$).

There was a statistically significant difference between the scores received by university students included in the study from the Distance Education Attitude Scale according to the suitability of the distance education environment ($p < 0.05$). The scale scores of university students who stated that the distance learning environment is appropriate are higher than other students. In addition, university students who stated that the environment where distance education is partly appropriate was higher than university students who stated that the environment of distance education was not appropriate.

According to the opinions of university students about the efficiency of distance education, it was determined that there were statistically significant differences between the scores they received from the Distance Education Attitude Scale ($p < 0.05$). The scores of university students who think that distance education is efficient are higher than other students. In addition, university students, who stated that distance education is partially efficient, received higher scores from Distance Education Attitude Scale compared to university students who stated that it was not efficient.

4. Discussion

When we look at the comparison of the scores of university students from the Distance Education Attitude Scale according to their socio-demographic characteristics, university students aged 25 and over received higher scores from the Distance Education Attitude Scale than other students.

There was no significant difference between the scores of university students on the Distance Education Attitude Scale according to their gender and the level of their education. Consistent with the research results, Kırali and Alcı (2016) revealed that there was no significant difference between their gender variables and their views on distance education perceptions in their research with university students. When analyzed in terms of gender, the research findings reached by Fidan (2016) and Ateş and Altun (2008) show difference. It was

found that attitudes of male students towards distance education were higher than female students. In terms of gender, another study that does not show parallelism is the study conducted by Aydın (2012). Although it was determined in this study that male students are more satisfied with the teacher than female students, it was also found out that the female students achieved higher scores in terms of the task and social attraction factors of the conducted education.

When the research findings are analyzed in terms of grade level of university students, it is consistent with another research findings by Kısla (2005). Students' attitudes towards distance education do not differ significantly according to their grade levels.

In comparison of the scores obtained by university students from the Distance Education Attitude Scale according to their ability to experience internet connection and usage of technology, the scores of university students who experience high level of internet connection problems were found lower than other students from the Distance Education Attitude Scale.

According to the competence to use technology, there was no significant difference between the scores they received from the Distance Education Attitude Scale. As a similar result, in terms of internet connection, it was stated in the study conducted by Kışla, Sarsar, Arıkan, Meşhur, Şahin & Kokoç (2010) that some problems arising from both internet infrastructure and lack of technical staff in the distance education systems of institutions can negatively affect the education and training activities. As a similar result, Çandarlı and Yüksel (2012) stated that a number of technical problems experienced in the form of sound, image, bandwidth, and camera use may function as an obstacle to the active participation of students and teachers in the course.

In another study, which does not show parallelism with the research in terms of technology use adequacy, Drennan et al. (2005) stated that students with advanced computer skills easily adapt to the courses given by distance education and have positive opinions regarding distance education.

In terms of comparing the scores obtained by the university students from the Distance Education Attitude Scale according to the suitability of the distance education environment and the efficiency of the distance education, the scores obtained by the university students who stated that the environment where the distance education is appropriate is higher than other students.

The scores obtained by university students who stated that distance education is efficient are higher than other students. In the study conducted by Ural (2007), which is a research that does not show parallelism in terms of efficiency of distance education, it was concluded that students do not have a positive attitude towards distance education systems and technologies. On the other hand, in the study conducted by Ojo and Olakuluhin (2006), which is a research that is parallel in terms of the efficiency of education, it was stated that the attitudes and views of university students in Nigeria towards open distance education are generally positive.

5. Conclusion and Recommendations

According to the results of the research findings, there was no significant difference between the scores obtained by the university students from Distance Education Attitude Scale according to their gender, their grade level, and their ability to use technology. Attitudes of university students aged 25 years and over are more positive towards distance education.

University students who have a high level of internet connection problems have more negative attitudes towards distance education. Moreover, the attitudes of university students who think that the distance education environment is appropriate and distance education is efficient towards distance education are more positive.

On the other hand, attitudes of students who stated that distance education is partly efficient is more positive than students who state that distance education is not efficient.

This research was conducted on university students. It is believed that the researches on study groups with different characteristics will make a different contribution to the literature.

In addition to the quantitative research method, by using qualitative research methods, more in-depth findings can be reached regarding attitudes, of students and their views on the environment and efficiency of distance education.

Researches can be conducted to determine the benefits of the virtual classroom environments used by students for the teaching process, how sufficient the teaching is, and to what extent it has reached the teaching objectives.

In-service trainings may be offered to faculty members who deliver distance education. Studies on determining and developing the distance education application competencies of faculty members who will take part in distance education can be conducted. In addition, researches can be performed to determine the distance education attitudes of faculty members.

They can make contribution to the realization of effective teaching in terms of increasing the student satisfaction of institutions delivering distance education.

This research is limited to university students studying at a private university in the Turkish Republic of Northern Cyprus. The collection of data in this study was limited by the Distance Education Attitude Scale.

6. Conflict of interests

The authors declare that there is no conflict of interest.

7. Ethics committee approval

The authors received the ethical approval of the study from the Near East University Educational Sciences Ethics Committee.

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