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INVESTIGATING THE RELATIONSHIP AMONG INSTRUCTORS' TECHNOSTRESS AND TECHNOLOGY ACCEPTANCE LEVELS AND THEIR ATTITUDES TOWARDS DISTANCE EDUCATION[1]

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ABSTRACT

In this study, the aim was to examine the relationship between instructors' technostress and technology acceptance levels and their attitudes towards distance education. The sample of this study consists of 957 instructors who use distance education method in their courses in universities located in the Eastern Anatolia Region of Turkey. Quantitative method was used in the study. The research collected data with the "Attitude Toward Distance Education Scale", "Technostress Scale" and "Technology Acceptance Scale". The data obtained were analyzed using SPSS 22 and Amos 26. The data were analyzed using t-test, ANOVA, Bonferroni, correlation, multiple regression and structural equation modeling. In addition, the eta-square (η2) value was calculated to determine the degree of significant difference between the groups. Research findings revealed that there were found to be significant differences in instructors' attitudes towards technostress, technology acceptance and distance education in terms of gender, discipline, title and seniority variables. In addition, technological acceptance predicts technostress directly and negatively; technological acceptance predicts attitude towards distance education directly and positively; technostress predicts attitude towards distance education directly and negatively.As a result, it has been determined that the technostress and technological acceptances of the instructors affect their attitudes towards distance education.

Keywords: Technostress, technological acceptance, attitude towards distance education, instructors, higher education.

[1] This work was derived from the related part of the doctoral thesis entitled "Investigating the Relationship Among Instructors' Technostress and Technology Acceptance Levels and Their Attitudes Towards Distance Education" of Hilal UĞRAŞ.

INTRODUCTION

Under the collective name of information and communication Technologies (ICT), various sub-branches such as TV, mobile phone technology, net, satellite and computer technologies are changing and developing day by day. Education, health, environment, culture, arts and entertainment industries have been impacted by these changes and when information is shared and transferred, it turns into an activity that will add value to society (Hoffman, Novak, & Venkatesh, 2004). Accessing and transferring information that we need to fulfil in this activity requires individuals to use information and communication technologies (Uslu, Şahin, & Çam, 2012). This necessity has resulted in the development and use of ICT in all areas of our lives. One of the areas where the developments in online technologies have shown their impact and used has been educational environments (Işık, 2016).

Educators use technology in many different ways in educational environments and are constantly looking for better educational strategies towards improving student-learning performance on the long run (Gleason, 2012). In this search, information and instructional technology emerges as a structure that helps to make complex educational practices more efficient. Moreover, expeditious growth of web-based learning technologies clear the way for striving towards unlimited potential in the process of lifelong education (Açıkalın, 2014) through ICT, applied teaching and computer assisted learning (Moye, 2009). Trainers who aren't competent in these areas may find it difficult to transition to new teaching methods, adjust innovative teaching methods and use the multitude of assessment techniques that are supported by technological advances. This difficulty was first defined as technostress by Brod (1982) as "a modern adaptation disease caused by the inability to adapt to new technologies" (Akınoğlu, 1993). Technostress is a stress reaction such as anxiety, anxiety, fear, anger and restlessness arising from the stress process arising from technology-related causes (Weil & Rosen, 1997; Yener, 2018). Changing information communication technology causes technostress in educators in the process. Because in the process, the position of the teacher in the classroom has changed from being just a "transmitter of information" to a "complex designer of learning environments" (Gros & Silva, 2005) where technology is utilized as a method of teaching ve learning. Under current educational advancements, educators are expected to integrate technology into their classroom teaching both positively and effectively (Graham, Burgoyne, Cantrell, Smith, St Clair, & Harris, 2009). Educators are constantly struggling with the utilizing available time to keep up with advancing technologies and related innovations in pedagogy (Tarus Gichoya & Muumbo, 2009; Voet & De Wever, 2017). Futhermore, educators often view technology as tools for preparing lessons, presenting information, or engaging students; however, they should also have sufficient skills and competencies to design and implement innovative utilization of technology in the process of teaching and learning (Chen, 2008; Munyengabe, Yiyi, Haiyan, & Hitimana, 2017). Therefore, teachers' performance in integrating pedagogically appropriate pedagogical technology into the class is important for innovation in education (Koh, Chai, & Lim, 2017; Schildkamp, Wopereis, Kat-De Jong, Peet, & Hoetjes, 2020).

The degree of the instructors to closely follow these developments related to technology and to keep up with the developments is closely related to their acceptance of technology. Because education is a field where there are great benefits in the inclusion of new technologies. ICT currently have a wide range of use in the assistance of knowledge transfer and knowledge acquisition. In this context, it is worth questioning why users decide to adopt and accept or reject a technology. Recently, applying the principles of the research that assesses technology acceptance to educators' teaching and learning practices has become widespread (Al-Emran, Imtiaz, & Maarop, 2014; Teo, 2011) thus, the necessity of incorporating technology into the educational context in a meaningful way was emphasized (Scherer, Siddiq, & Tondeur, 2019). In this process, since instructional technology changes almost every day, a close relationship is established between higher education institutions and the use of instructional technology (Moye, 2009). One of the crucial pieces of the distance education Picture is the teacher, who is also the adressee of various studies, is the teacher (Baysal & Ocak, 2020; Çakın & Akyavuz, 2020; İmamoğlu, 2020; Mulenga & Marbán, 2020; Orhan & Beyhan, 2020; Türker & Dündar; Yang, 2020; Yurtbakan & Akyıldız, 2020) , however there are limited number of studies on its equally important counterpart, the instructors. In the light of these data, education technologies research area is plenty established to take place as its independent object of study (Hrastinski & Keller, 2007), It is important to redirect the attitudes of lecturers towards a more positive outlook in light of the studies made towards distance education and the levels of technostress and acceptance of technology. By processing this information, The research sought answers to the following questions;

1. What is the degree of interest in terms of instructors' attitude towards technostress, technological acceptance and distance education?
2. Is there any crucial distinction between lecturers' attitudes towards technostress, technological acceptance and distance education by taking to gender variable into consideration?
3. Is there any noticable disparity between lecturers' outlook towards technostress, technological acceptance and distance education according to the branch of science in which they work?
4. Is there any significant difference between lecturers' attitudes towards technostress, technological acceptance and distance education according to the title variable?
5. Is there any significant difference between lecturers' attitudes towards technostress, technological acceptance and distance education in accordance of the different levels of professional seniority?
6. Is there any relationship between instructors' technostress, technological acceptance levels and their attitudes towards distance education?
7. Is there a connection between instructors' technostress and technological acceptance levels and their collective attitude towards distance education?

METHOD

Research model

The goal of this research paper was to dictate the relationships between the technostress and technology acceptance levels of lecturers and their attitudes towards distance education. Therefore, quantitative research methods and techniques were used in the study. This study was designed as a relational survey model. The relational survey model allows the association and degree of differentiation between variables to be examined without manipulating the relationships between variables (Bordens & Abbott, 2018; Fraenkel, Wallen, & Huyn, 2012).

Within the scope of the research, ethics committee permission was obtained with Fırat University Social and Human Sciences Scientific Research and Publication Ethics Committee evaluation decision date =18.05.2021, ethics evaluation document number = 45034.

Sample of the research

The sample of this research consists of 957 lecturers who use distance education method in their courses in universities located in the Eastern Anatolia Region of Turkey. Since the study was held during the Covid-19 pandemic process, maximum variation sampling, which is within the scope of non-random sampling methods, was used in the study. The aim of maximum variation sampling is to determine whether the situations that show differences have common aspects and to show the dimensions of the differences according to the results obtained (Yıldırım & Şimşek, 2016, p.70). The demographic features of the lecturers who participated in the study are given in Table 1.

Table 1. Demographic Characteristics of Participants

Demographic Variable	Variables	N	(%)
Gender	Female	370	38.66
	Male	587	61,34
Title	Prof. Dr.	159	16,61
	Assoc. Dr.	181	18,91
	Assist Assoc. Dr.	230	24,03
	Research Assistant	267	27,90
	Lecturer	120	12,55
Professional seniority	1-5 Years	136	14.21
	6-10 Years	334	34,90
	11-15 Years	179	18.70
	16-20 Years	130	13,58
	21 Years and over	178	18,61
Department of Science	Social Sciences (Faculty of Education, Faculty of Economics and Administrative Sciences, Faculty of Humanities and Social Sciences, Faculty of Theology, Faculty of Communication)	380	39,77
	Science	236	24,66
	Engineering Sciences	223	23,30
	Health Sciences (Faculty of Medicine, Faculty of Health Sciences, Faculty of Veterinary Medicine)	118	12,27
Total		957	100

When Table 1 is analyzed, it is seen that 370 (38.7%) of the 957 lecturers who participate in the research are females and 587 (61.3%) are males. The distribution of the lecturers according to their titles is as follows: Prof. Dr. 159 (16.6%), Assoc. Dr. 181 (18.9%), Assist. Assoc. Dr. 230 (24.0%), research assistant 267 (27.9%), lecturer 120 (12.6%). 136 (14.2%) of the lecturers have 1-5 years, 334 (34.9%) have 6-10 years, 179 (18.7%) have 11-15 years, 130 (13.6%) have 16-20 years, and 178 (18.6%) have 21 years or more of professional seniority. It was determined that 380 (39.8%) of the academic staff worked in social sciences, 236 (24.7%) in science, 223 (23.3%) in engineering sciences and 118 (12.2%) in health sciences.

Data collection

The research data were gathered via online forms and face-to-face. A personal information form including demographic information and three separate scale forms were used as instruments for data collection. In the study, "Attitude Scale towards Distance Education" developed by Ağır (2007), "Technostress Scale" adapted into Turkish by Ilgaz, Özgür, and Çuhadar (2016) and "Technology Acceptance Scale" (Ursavaş, Şahin, & Mcilroy, 2014) were used.

Attitude Scale Towards Distant Education: In the study, the scale developed by Ağır(2007) is specified in EK-1 which is used to determıne the attitudes of instructors. The Cronbach Alpha determiner of the scale is adjusted to 0.835. The scale is made up of 5 likert questionnaires that includes the advantages and the setbacks of distance education in a total of 21 clauses. For this study, the Cronbach Alpha determiner is calculated to be 0.77. According to the 0.878 coefficient of Kaiser Meyer-Olkin test and to achieve coherence in Bartlett's test; the confirmatory factory analysis(CFA) techniques has been implemented. The fact that the Barlett test coefficient being consistent in the study also indicates that the distribution of the studied environment is regular.

Technology Acceptance Scale: The scale developed by Ursavaş et al. (2014) was used to determine the technology acceptance levels of the instructors. The scale has an 11 subscale structure consisting of 34 items (Appendix-2). The lowest Cronbach's alpha coefficient was 0.798 for the factor of self-efficacy and the highest was 0.909 for the factor of perceived enjoyment. In this study, the Cronbach's Alpha coefficient of the factors in the scale was calculated as the lowest 0.715 for technological complexity and the highest 0.809 for attitude towards use. As a result, the scale is found to be met the requirements of validity and reliability upon the factor analysis research on the scale.

Technostress Scale: The instructors' Technostress levels has developed by Taraftar et al.(2007) and was translated to Turkish by Ilgaz et al.(2016). The reliability coefficent of Cronbach Alpha for Technostress Scale determined a number of 0.70 for techno-overload and techno-invasion while it determined a coefficient of 0.81 for techno-complexity and a coefficient of 0.90 for techno-ambiguity. The scale is found to be met the requirements of validity and reliability upon the factor analysis research on the scale. In this study, the total

coefficient of the Cronbach Alpha reliability determiner is calculated to be 0.83 for techno-stress. The factor analysis check for the scale has established the scale to be valid and reliable upon its results.

Data analysis

SPSS 22 and AMOS computer package programs were used to analyse the research data. With the data set consisting of 957 observations, normality analysis was performed and according to the result, it was decided to use parametric tests in the research. The skewness and kurtosis values, which are the normality parameters of the variables to be used in the research, are given in Table 2.

Table 2. Skewness and Kurtosis Coefficients of the Variables Used in the Study

Variable	X̄	Sd.	Skewness	S.E.	Kurtosis	S.E.
Technological Acceptance	3.3815	.32970	.231	.079	-.679	.158
Distance Education	3.4884	.37762	-.403	.079	.479	.158
Techno-Stress	3.0925	.42788	-.291	.079	.617	.158

Table 2 shows that the skewness and kurtosis coefficients of the variables are between .231 and -.679 for technology acceptance, between -.403 and .479 for distance education, and between -.291 and .617 for technostress. It was accepted that the data showed normal distribution since the skewness and kurtosis values of the data were between -2 and +2 (Kunnan, 1998; Karagöz, 2016). t-test and ANOVA were used to analyze between the variables.

the ANOVA of results, the Bonferroni test from the Post Hoc Tests group, which does not require "equal sample number", was performed to determine between which groups in the groups with significant differences (Miller, 1969; Kayri, 2009, p. 54). In order to determine the significance levels in the groups that were found to have significant differences, the eta-square (η2) correlation coefficient was calculated to calculate the effect sizes and evaluations were made according to the ranges of 0.01 = small effect; 0.06 = medium effect and 0.14 = large effect (Büyüköztürk, 2015). In the study, structural equation modelling (SEM) was used to explain the relationship between attitudes towards distance education, technostress and technological acceptance levels.

The sample of the research (lecturers) and the sample group (teachers) in which the scales used in the research were developed and applied are different. therefore, a pilot study was conducted to determine the level of correct understanding of the scales by the sample of this research. CFA was conducted for the measurement tools to be used with the data collected for this study. In order to conduct new confirmatory factor analyses for the scales, the sample of the research and the sample to be conducted should be different (Şen, 2017). Therefore, for the CFA of the technostress scale, technology acceptance scale and attitude towards distance education scale forms, this application was carried out on 202 academic staff working in two universities in the Eastern Anatolia Region of Turkey in the 2021-2022 academic year. With the application, it was checked whether the existing structures of the measurement tools, which were previously developed and psychometrically analysed, were confirmed in the new sample. As a result of the analyses, the scales to be used

in the research were found to have acceptable internal consistency levels (Cronbach's Alpha values were above 70%).

After the exploratory factor analysis of the scales used in the study, CFA was performed to test the fit of the factor structure formed after exploratory factor analysis of the scales used in the study regarding the relationship between the variables identified. The results showed that the fit indices had acceptable and good fit values (Sumer, 2000, Bayram, 2010).

The CFA tested the factor structures of the scales used (Initial CFA), and if deemed necessary, the final form of the model regarding the factor structures of the scales used was determined by defining covariances between the items deemed appropriate (Final CFA). The information showing the fit values obtained as a consequence of CFA is presented in Table 3.

Tablo 3. Confirmatory Factor Analysis Fit Indexes

	Model Fit Indexes								
Scales		**X^2**	**sd**	**X^2/sd**	**GFI**	**AGFI**	**NFI**	**CFI**	**RMSEA**	**SRMR**
	Acceptable			0/5	0,85/1,0	0,8/1,0	0,9/1,0	0,9/1,0	0,0/0,10	0,0/0,08
Fit Value Ranges	Good/Very Good			0/3	0,95/1,0	0,9/1,0	0,9/1,0	0,9/,0	0,0/0,05	0,0/0,05
	First DFA	4178,55	189	22,10	0.87	0.89	0.91	0.91	0.09	0.09
Attitude to Distance Education	Last DFA	569,12	132	4,31	0.90	0.91	0.95	0.93	0.07	0.06
	First DFA	967,14	89	10,86	0.89	0.90	0.92	0.90	0.09	0.07
Technology Acceptance	Last DFA	275	67	4,10	0.92	0.93	0.96	0.95	0.06	0.05
	First DFA	1782	162	11	0.86	0.89	0.90	0.92	0.08	0.08
Technostress	Last DFA	538	121	4,44	0.91	0.92	0.93	0.94	0.05	0.06

In the CFA conducted by creating an items-factor relationship in accordance with the scales' original structure, it was determined that all scales showed the same agreement with the initial factor structure and the scale items' factor loadings were not below 0.40.

FINDINGS

In this section, the results of the attitudes of the lecturers towards technostress, technological acceptance and distance education are presented.

Findings and comments related to the second sub-aim

The results of the t-test conducted to determine whether the instructors' attitudes towards technological acceptance, technostress and distance education differ significantly according to gender variable are given in Table 4.

Table 4. t-Test Results of Techno-Stress Levels of Instructors According to Gender Variables

Variables	**Gender**	**N**	**$\bar{X}$**	**Sd**	***t***	**p**	**η^2**
Technostress	Female	370	3.17	.49	4.544	.000*	0.022
	Male	587	3.04	.38			

p< 0.05*

When the Table 4 is examined, it is found that the average score of female lecturers' technostress levels was calculated as (X̄=3,17), while the average score of male lecturers was calculated as (X̄=3,04). The analysis revealed that this difference between the mean scores was statistically significant (t=4.544; p=.000, p<.05). According to this finding, there is a statistically significant difference between the technostress levels of the academic staff and their gender. As a consequence of the analysis, the effect value was calculated to be η2= 0.022. This value showed that there is a significant difference between the groups with a small effect value.

Table 5. t-Test Results of Technological Acceptance of Instructors According to Gender Variables

Variables	Gender	N	X̄	Sd	*t*	p	η²
Technological Acceptance	Female	370	3.39	.37	.855	.393	
	Male	587	3.37	.304			

p< 0.05*

When the technology acceptance levels of the lecturers in Table 5 were examined by gender variable, it was found that there was not a meaningful difference statistically. In addition, the average score of female lecturers was (X̄=3,39) and the average score of male lecturers was (X̄=3,37).

Table 6. t-Test Results of Distance Education of Instructors According to Gender Variables

Variables	Gender	N	X̄	sd	*t*	p	η²
Distance Education	Female	370	3.46	.40	-1.725	.085	
	Male	587	3.51	.36			

p< 0.05*

Table 6 shows that according to the gender variable, attitudes towards distance education do not show a statistically significant difference. The mean attitude score of female instructors towards distance education was calculated as (X̄=3,46), while the mean attitude score of male instructors was calculated as (X̄=3,50).

Findings and comments related to the third sub-aim

The tables related to the analyses made to determine whether there is a significant difference according to the branch of science in which the lecturers work are given below.

Table 7. ANOVA Test Results of Lecturers' Technostress Levels According to the Branch of Science Variable

Variables	Science Discipline	N	X̄	sd	F	p	η2	the difference
Technostress	Social Sciences	356	2.89	.43	60.334	0.000*	0.159	1 < 2
	Science	224	3.11	.34				1 < 3
	Engineering Sciences	224	3.26	.33				1 < 4
	Health Sciences	153	3.30	.45				2 < 3
	Total	957	3.09	.43				2 < 4

p< 0.05*

Table 7 shows the statistical data of the technostress levels of the lecturers according to the branch of science variable. The results of the analysis showed that there was a significant difference in total mean scores and the effect size was large (F=60.334; p=.000, p<.05; η2=0.159). It was found that there was a statistically significant difference among the academic staff working in the faculties of social and natural sciences, engineering and health sciences, and science and engineering and health sciences. Table 7 shows that the highest mean belongs

to academic staff working in faculties of health sciences ($\bar{X}$=3.30) and the lowest mean belongs to academic staff working in faculties of social sciences ($\bar{X}$=2.89).

Table 8. ANOVA Test Results of Lecturers' Technological Acceptance According to the Branch of ScienceVariable

Variables	Science Discipline	N	$\bar{X}$	sd	F	p	η2	the difference
Technological Acceptance	Social Sciences	356	3.51	.32	40.497	.000*	0.113	1 > 2 1 > 3 1 > 4 2 > 3 2 < 4 3 < 4
	Science	224	3.31	.30				
	Engineering Sciences	224	3.24	.29				
	Health Sciences	153	3.40	.33				
	Total	957	3.38	.33				

p< 0.05*

In accordance with Table 8, it is determined that the mean scores of the lecturers' technology acceptance levels show a statistically significant and medium effect level difference according to the branch of science variable (F=40.497; p=.000, p<.05; η2=0.113). It was found that the significant difference between the groups was between the academic staff working in the faculties of social sciences and natural sciences, engineering and health sciences; natural sciences and engineering and health sciences; engineering and health sciences and engineering and health sciences and at the medium effect level. Table 8 demonstrates that the average belongs to the academic staff working in faculties of social sciences ($\bar{X}$=3,51) and the average belongs to the academic staff working in faculties of engineering sciences ($\bar{X}$=3,24).

Table 9. ANOVA Test Results of Lecturers' Distance Education According to the Branch of Science Variable

Variables	Science Discipline	N	$\bar{X}$	sd	F	p	η2	the difference
Distance Education	Social Sciences	356	3.58	.38	15.587	0.000*	0.047	1 > 2 1 > 3 1 > 4 3 < 4
	Science	224	3.44	.37				
	Engineering Sciences	224	3.38	.34				
	Health Sciences	153	3.49	.39				
	Total	957	3.49	.38				

p< 0.05*

It was determined that there was a statistically significant and small effect level difference in the mean scores of instructors' attitudes towards distance education according to the branch of science variable (F=15.587; p=.000, p<.05; η2=0.047). It was determined that the significant difference between the groups was between the academic staff working in the faculties of social and science, engineering and health sciences, and engineering and health sciences. According to Table 9, the highest mean belongs to the academic staff working in the faculties of social sciences ($\bar{X}$=3.58) and the lowest mean belongs to the academic staff working in the faculties of engineering sciences ($\bar{X}$=3.38).

Findings and comments related to the fourth sub-aim

ANOVA test was performed according to the title variable of the lecturers. Tables related to the results of the analyses are given below.

Table 10. ANOVA Results of Instructors' Techno-Stress Levels According to Title Variables

Variable		N	X̄	sd	F	p	η2	the difference
Technostress	Prof.	159	3.09	.42	26.201	0.000*	0.11	1< 2
	Assoc. Dr.	181	3.25	.38				1 > 4
	Assist Assoc. Dr.	230	3.1	.45				1 < 5
	Research Assistant	267	2.91	.38				2 > 3
	Lecturer	120	3.27	.40				2 > 4.
	Total	957	3.09	.42				3 > 4 3 < 5 4 < 5

p< 0.05*

It shows that there is a statistically significant and medium effect level difference in the technostress levels of the academic staff according to the title variable (F=26.201; p=.000, p<.05; η2=0.11). Bonferroni test was performed to determine the source of the significant difference between the groups. Therefore, there is a significant difference between academic staff with the title of Prof. Dr. and Assoc. Dr. and research assistants and lecturers, and between academic staff with the title of Assoc. Dr. and Asst. Assoc. Dr. and research assistants; between the academic staff with the titles of Asst. Assoc. Dr. and research assistant, lecturer and research assistant and lecturer in the overall total of the technostress levels of the academic staff. The results of the analysis show that the highest mean belongs to Assoc. Prof. Dr. (X̄=3.40) and the lowest mean belongs to research assistants (X̄=3.11).

Table 11. ANOVA Results of Instructors' Technological Acceptance According to Title Variables

Variable		N	X̄	sd	F	p	η2	the difference
Technological Acceptance	Prof.	159	3.31	.32	20.037	0.000*	0.077	1 < 3
	Assoc. Dr.	181	3.26	.32				1 < 4
	Assist Assoc. Dr.	230	3.40	.35				2 < 3
	Research Assistant	267	3.51	.29				2 < 4
	Lecturer	120	3.33	.33				3 < 4
	Total	957	3.38	.33				3 < 5 4 > 5

p< 0.05*

The statistical data of technological acceptance levels according to the title variable are given in Table 11. According to these data, it was determined that there was a statistically significant and medium effect level difference in the technological acceptance levels of the academic staff (F=20.037; p=.000, p<.05; η2=0.077). Bonferroni test was performed to determine the source of the significant difference between the groups. Accordingly, it was determined that there was a significant difference between Prof. Dr. and Asst. Assoc. Dr. and research assistant; Assoc. Dr. and Asst. Assoc. Dr. and research assistant; Asst. Assoc. Dr. and research assistant and lecturer; research assistant and lecturer in the technological acceptance levels of academic staff. The results of the analysis showed that the highest mean belonged to research assistant (X̄=3.51) and the lowest mean belonged to academic staff with the title of Assoc. Prof. Dr. (X̄=3.26).

Table 12. ANOVA Results of Instructors' Distance Education According to Title Variables.

Variable		N	X̄	sd	F	p	η2	the difference
Distance Education	Prof.	159	3.39	.30				1 < 3
	Assoc. Dr.	181	3.35	.39				1 < 4
	Assist Assoc. Dr.	230	3.55	.37				2 < 3
	Research Assistant	267	3.67	.34	38.053	0.000*	0.138	2 < 4
	Lecturer	120	3.30	.35				3 < 4
	Total	957	3.49	.38				3 > 5
								4 > 5

p< 0.05*

According to the statistical data of the title variable of lecturers' attitudes towards distance education, it was determined that there was a statistically significant and large effect level difference in total mean scores (F=38.053; p=.000, p<.05; η2=0.138). It was determined that there was a significant difference between Prof. Dr. and Asst. Assoc. Dr. and research assistant; Assoc. Dr. and Asst. Assoc. Dr. and research assistant; Asst. Assoc. Dr. and research assistant and lecturer; research assistant and lecturer. The highest mean belongs to research assistants (X̄=3.67) and the lowest mean belongs to lecturers (X̄=3.30).

Table 13. ANOVA Results of Instructors' Techno-Stress Levels According to Professional Seniority Variable

Variable		N	X̄	sd	F	p	η2	the difference
Technostress	1-5 Years	136	2.93	.45				1 < 2
	6-10 Years	334	3.05	.41				1 < 3
	11-15 Years	176	3.09	.44				1 < 4
	16-20 Years	130	3.20	.43	11.405	.000*	0.045	1 < 5
	21 Years and over	178	3.20	.36				2 < 4
				.42				2 < 5
	Total	957	3.09					3 < 4
								3 < 5

p< 0.05*

Table 13 shows the analysis of the technostress levels of the lecturers according to the professional seniority variable. Results of the analysis, the technostress level mean scores of the lecturers according to the professional seniority variable were calculated as (X̄=2.93) for 1-5 years, (X̄=2.93) for 6-10 years, (X̄=3.05) for 11-15 years, (X̄=3.05) for 16-20 years, (X̄=3.09) for 16-20 years, (X̄=3.20) for 21 years and above (X̄=3.20). ANOVA test was conducted to determine whether there was a difference between the average points. As a result of the analysis, it was found that there was a difference between the mean scores at a statistically significant and small effect level (F=11.405; p=.000, p<.05; η2=0.045). According to the Bonferroni test conducted to determine the source of the significant difference between the groups, it was found that there was a significant difference between 1-5 years and 6-10 years, 11-15 years, 16-20 years and 21 years and above professional seniority; between 6-10 years and 16-20 years and 21 years and above professional seniority; between 11-15 years and 16-20 years and 21 years and above professional seniority. The highest average belongs to trainers with 16-20 years (X̄=3,20) and 21 years and above (X̄=3,20) of professional seniority, and the lowest average belongs to trainers with 1-5 years (X̄=2,93) of professional seniority.

Table 14. ANOVA Results of Instructors' Technology Acceptance According to Professional Seniority Variable

Variable		N	X̄	sd	F	p	η2	the difference
Technology Acceptance	1-5 Years	136	3.51	.33				1 > 2
	6-10 Years	334	3.41	.31				1 > 3
	11-15 Years	176	3.40	.34				1 > 4
	16-20 Years	130	3.34	.38	14.670	0.000*	0.058	1 > 5
	21 Years and over	178	3.24	.27				2 > 4
			3.38	.33				2 > 5
	Total	957						3 > 5
								4 > 5

p< 0.05*

Table 14 shows the analysis of trainers' technological acceptance levels according to the professional seniority variable. According to the analysis results, the total mean points of technological acceptance levels were calculated as (X̄=3,51) for 1-5 years, (X̄=3,41) for 6-10 years, (X̄=3,41) for 11-15 years, (X̄=3,41) for 16-20 years, (X̄=3,40) for 16-20 years, (X̄=3,34) for 16-20 years and (X̄=3,24) for 21 years and above. As a result of the ANOVA test conducted to determine the significant difference between the mean scores, there is a significant difference between the mean scores at the medium effect level (F=14.670; p=.000, p<.05; η2=0.058). The significant difference between the groups was found to be between 1-5 years and 6-10 years, 11-15 years, 16-20 years and 21 years and above; 6-10 years and 16-20 years and 21 years and above; 11-15 years and 21 years and above; 16-20 years and 21 years and above. The highest average belongs to academic staff with 1-5 years of professional seniority (X̄=3,51), and the lowest average belongs to academic staff with 21 years and more of professional seniority (X̄=3,24).

Table 15. ANOVA Results of Instructors' Distance Education According to Professional Seniority Variable

Variable		N	X̄	sd	F	P	η2	the difference
Distance Education	1-5 Years	136	3.63	.30				1 > 2
	6-10 Years	334	3.53	.39				1 > 3
	11-15 Years	176	3.53	.37				1 > 4
	16-20 Years	130	3.36	.34	15.299	0.000*	0.06	1 > 5
	21 Years and over	178	3.36	.35				2 > 4
			3.49	.38				2 > 5
	Total	957						3 > 4
								3 > 5

p< 0.05*

Table 15 shows the analyses of instructors' attitudes towards distance education according to professional seniority variable. As a result of the analysis, it was found that there was a statistically significant and medium effect level difference in the mean scores (F=15.299; p=.000, p<.05; η2=0.06). According to the result of the Bonferroni test conducted to determine the source of the significant difference between the groups, it was determined that the attitudes of the instructors towards distance education were between 1-5 years and 6-10 years, 11-15 years, 16-20 years and 21 years and above; 6-10 years and 16-20 years and 21 years and above; 11-15 years and 16-20 years and 21 years and above. The highest mean belongs to the academic staff with 1-5 years of professional seniority (X̄=3.63) and the lowest mean belongs to the academic staff with 21 years and above (X̄=3.36).

Findings and comments related to the sixth sub-problem

The relationships between instructors' technostress, technological acceptance levels and their attitudes towards distance education were analysed by Pearson Correlation Analysis and the results are presented in Table 16.

Table 16. Pearson Correlation Analysis Results Regarding the Investigation of the Relationship Between Instructors' Technostress, Technological Acceptance Levels and Attitudes Towards Distance Education

Variables	Distance Education	Techno-Stress	Technological Acceptance
Distance Education	1		
Techno-Stress	-594	1	
Technological Acceptance	.528	-.503	1

p< 0.05*

In Table 16, there is a relationship between distance education and technostress at a negative and moderate level (r= -.594; p<.01). As a consequence, there is also a negative and moderate relationship between distance education and technostress (r= -.503; p<.01).

Findings and comments related to the seventh sub-problem

Multiple Regression Analysis was conducted for the prediction of instructors' technological acceptance and technostress levels of their attitudes towards distance education. The results are presented in Table 17.

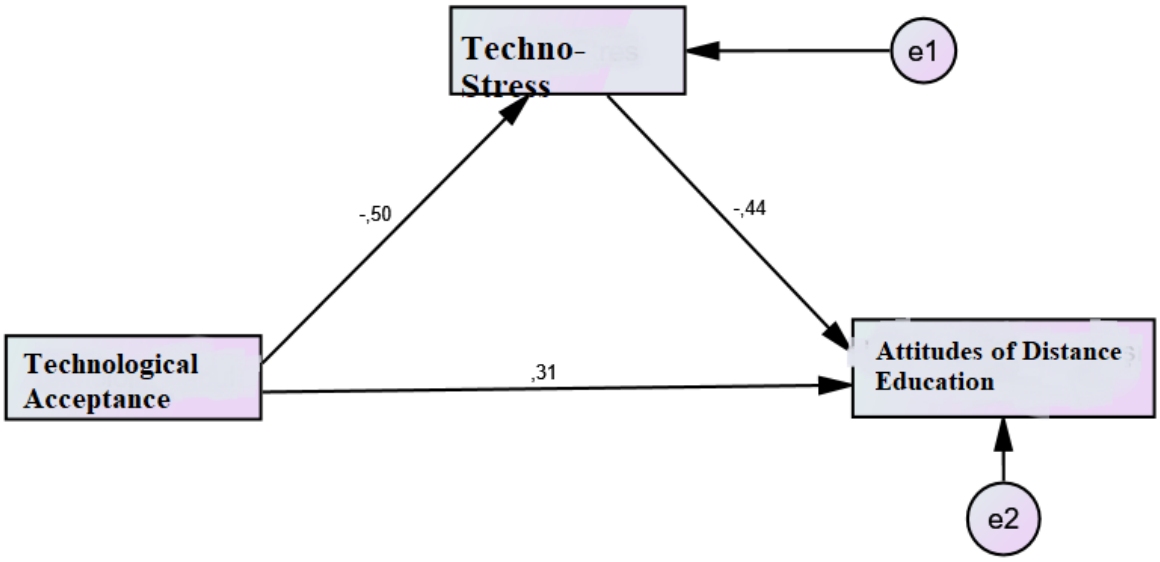
Table 17. Multiple Linear Regression Analysis Results on the Prediction of Instructors' Technological Acceptance, Techno-Stress and Attitudes towards Distance Education

Predicted Variable	**Predictor Variable**	**B**	**Standard Error**	**B**	**T**	**P**
Distance Education	Constant	3.500	.164		21.343	.000
	Technological Acceptance	.351	.033	.307	10.775	.000
	Techno-Stress	-.388	.025	-.440	-15.437	.000

$R=.650$ $R^2=.423$ $F_{(2-953)}= 349.431$ $p=0.000$

To determine the extent to which instructors' technological acceptance and techno-stress levels predict their attitudes towards distance education, multiple regression analysis was applied. This analysis revealed that a significant relationship existed between the variables. These variables together explain 42% of the attitude towards distance education (R=.650, R2=.423, F=349.431, p=000, p<.01).

In order to determine the best fit model for the variables within the scope of this study, various paths were drawn. Analyses were carried out by taking into account the previously determined criteria for the drawn path trials and their analyses. As a result, the appropriate path model is shown in Figure 1.



X^2: 8,418, sd=3, X^2 /sd =2,806, p=000, N=957

Figure 1. Developed and Tested Path Analysis Model

The model developed based on the literature was tested using path analysis, which is one of SEM. The relationships between the explanatory and predictor variables in the model were analysed using the maximum likelihood technique of SEM. Accordingly, Table 18 shows the fit index values of the path analysis model of the research.

Table 18. Fit Values of the Path Analysis Model Developed and Tested for Hypothesis 4

	X^2	sd	Ki-kare/sd	CFI	GFI	AGFI	NFI	RMSEA	SRMR
Model Fit Values	8,418	3	2,806	,96	,97	,96	,96	,05	,03

Table 19. Fit İndex values of the path analysis model developed and tested for problem 4

Quality of Fit Index	Model Value	Benchmark Value (Karagöz, 2016)	Compliance with the Acceptable Value
X^2 /sd	2,806	1 to 5	Acceptable fit
CFI	,96	CFI≥ 0.95	Acceptable fit
AGFI	,97	AGFI ≥ .85	Good Fit
NFI	,96	NFI ≥ .95	Good Fit
RMSEA	,05	RMSEA≤ 0.08	Acceptable fit
SRMR	,03	SRMR ≤ 0.08	Good Fit

Analyzing Table 19, it is seen that the model tested is at an acceptable fit level (Karagöz, 2016). Statistically, all paths in the model were found to be statistically significant. The total, direct and indirect effects between the variables in the model are presented in Table 20.

Table 20. Effects between variables in the model

Effects	Technological Acceptance	Technostress	Attitude towards Distance Education
Total Effect			
Technological Acceptance	0		
Technostress	- 0,50	0	
Attitude towards Distance Education	0,43	- 0,44	0
Direct Effect			
Technological Acceptance	0		
Technostress	- 0,50	0	
Attitude towards Distance Education	0,31	- 0,44	0
Indirect Effect			
Technological Acceptance	0		
Technostress	0	0	
Attitude towards Distance Education	0,12	0	0

In Table 20, the effects of the developed and tested model in Figure 1 are presented. In the model, technological acceptance predicts technostress (β= -0,50, t= -7,317, p<0,001) directly and negatively. Technological acceptance predicts attitude towards distance education (β= 0,31, t= 4,190, p<0,001) directly and positively. In other words, lecturers' perceptions of technological acceptance significantly predicted their perceptions of technostress in a negative way. In addition, instructors' perceptions of technological acceptance significantly predicted their perceptions of attitudes towards distance education in a positive way. As seen in the path analysis, technostress directly and negatively predicts attitude towards distance education (β= -0,44, t= -6,401, p<0,001). This result shows that academic staff's technostress perceptions significantly predict their attitudes towards distance education in a negative way. In path analysis, technological acceptance predicts attitude towards distance education (β= 0,12, t= 5,834, p<0,001) indirectly and positively. Considering the model structure, there is no indirect effect between other variables. Therefore, technological acceptance predicts attitude towards distance education (β= 0,43, t= 3,876, p<0,001) both indirectly and directly.

CONCLUSION AND DISCUSSION

In this section, the results and discussion obtained from the research conducted to determine the relationship between instructors' technostress and technology acceptance levels and their attitudes towards distance education are presented.

According to the findings obtained in the study, it was concluded that there is an important relationship between the technostress levels of the lecturers and their gender and that women have more technostress than men. Similarly, in the study conducted by Li and Wang (2020) with lecturers, it is seen that gender has an effect on the observed technostress level and women are more affected by the negative effects of technology compared to men. The effect of gender on technostress was also revealed in studies conducted with student communities (Wang et al., 2020) and pre-service teachers (Karamustafaoğlu, Çakır, & Topuz, 2011). In addition, studies concluding that gender is one of the most influential variables on technostress are included in the literature (Ayyagari, 2007; Ayyagari & Purvis, 2011; Çoklar & Şahin, 2011; Efilti & Çoklar, 2019; Huffman, Whetten, & Huffman, 2013; Margetić et al, 2022; Ragu-Nathan et al, 2008; Syvanen, Makiniemi, Syrja, Heikkila-Tammi, & Viteli, 2016; Tarafdar et al, 2011; Thomée et al, 2012).

In the study by Broos (2005), it was determined that males used computers for a longer period of time. As a result, it was determined that men had less computer anxiety than females. The research conducted by Liaw (2002) showed that men had more positive perceptions of computer and Web technologies than women (Liaw, 2002). In addition, since men are more interested in technology, their technology usage skills are higher than women (Karamustafaoğlu et al., 2011). The lower technostress levels of men can be explained by their higher interest in technology.

In the literature, there are studies in which there is no relationship between technostress and gender (Akgün, 2019; Çalışkan, 2022; Çoklar, Efilti, Şahin, & Akçay, 2016; Gökaslan, 2022 ve Krishnan, 2017).

When the technology acceptance levels of the lecturers were examined according to the gender variable, it was found that there was no significant difference between female and male lecturers in total.

When the studies conducted to determine the level of technology acceptance in the literature are examined, it is seen that there are similar results. In Korucu's (2017) study examining the technology acceptance and use of teachers, no difference was found according to gender. Similarly, in the study of Elçiçek and Bahçeci (2015, p.28) on mobile learning of vocational college students, in the study of Solak (2012, p.65) and in the study of Bağlıbel et al. (2010, p.339-340) on managers, it was determined that there was no significant relationship between technology acceptance and gender.

When the attitudes of lecturers towards distance education according to gender variable were analysed, it was found that there was no statistically significant difference between the attitudes of female lecturers towards distance education.

In the study conducted by Ağır (2007) to determine the attitudes of teachers towards distance education, no relationship was found between gender and attitude towards distance education. Similarly, there are research results in the literature that there is no significant relationship between gender and attitudes towards distance education (Ateş & Altun, 2008; Barış, 2015; Birişçi, 2013; Çandarlı & Yüksel, 2012; Gündüz, 2013; Karaoğlu, 2008; Kışla, 2005; Şimşek, İskenderoğlu, & İskenderoğlu, 2010; Tırnovalı, 2012; Ülkü, 2018; Yalman & Kutluca, 2013; Yıldız, 2016).

Contrary to this study, there are also studies with the results that gender is in a relationship with distance education (Aktürk et al., 2020; Boz, 2019; Horzum, Albayrak, & Ayvaz, 2012; Gündüz, 2013).

It was concluded that there was a statistically major difference between the technostress levels of the lecturers and the branch of science variable. It was concluded that the highest technostress level of the lecturers belonged to those working in the faculties of health sciences and the lowest in the faculties of social sciences.

Al-Balas, Al-Balas, Jaber, Obeidat, Al-Balas, Aborajooh, and Al-Balas (2020) determined that disciplines that require theoretical and practical applied education, such as medicine and engineering, suffer more from the transition to distance education, and therefore students and instructors have lower satisfaction. In addition,

Mishra et al. (2020) found that it is difficult to teach applied subjects online in courses where laboratories are needed, and technical problems are experienced due to the complexity of these courses (Andrews & Wilding, 2004). The high technostress levels of the instructors in health sciences can be explained by the high number of applied courses.

It was established that there was a significant relationship between the technology acceptance levels of the lecturers according to the branch of science variable. It was concluded that the highest average belonged to the lecturers working in the faculties of social sciences and the lowest average belonged to the lecturers working in the faculties of engineering sciences.

In the studies in the literature, it has been observed that branch and field of study significantly affect the level of technology acceptance (Çalışkan, 2022; Menzi, Çalışkan, & Çetin, 2012; Şahin & Namlı, 2019). Akgün (2019) stated that those who specialise in science and/or applied fields are much more interested in hardware devices in their studies and therefore are in closer contact with technology. In addition, in the study conducted by Barış and Çankaya (2016), it is seen that academicians stated that theoretical or verbal-based courses can be given through distance education, but courses that require interaction and practice cannot be given through distance education. This study was conducted in the time period when the Covid-19 pandemic and its effects were seen. In this period, distance education applications were initiated in all universities compulsorily (YÖK, 2020). In this process, it was determined that the most intensive transition to applications was provided in the field of "social sciences" (YÖK, 2020), (Al-Balas et al., 2020), and that academic staff working in disciplines requiring applied education suffered more from the rapid transition to distance education. For this reason, it can be said that social sciences and engineering sciences have such a result in technology acceptance.

It was concluded that there was a statistically major difference in the attitudes of lecturers towards distance education according to the branch of science variable. It was established that the attitude of the lecturers towards distance education was high in the faculty of social sciences and low in the faculty of engineering sciences. Similar to this study, a crucial relationship was determined between departments and distance education (Ugras, Altunbas, Ay, & Cil, 2012; Gündüz, 2013; Yılmaz & Güven, 2015; Yıldız, 2016). In the study conducted by Aras (2019) with academic staff, it was observed that they stated that distance education will provide benefits in theoretical courses and disadvantages will arise in applied courses. In Barış and Çankaya's (2016) study, the weakness of distance education was determined as the inability to practice. Özköse, Arı, and Çakır (2013) stated in their study that the courses given by distance education negatively affect the interaction between student-content-lecturer interaction and should be limited to theory only. Similarly, it was concluded that distance education is not suitable for applied and interactive courses (Barış & Çankaya, 2016; Özköse et al., 2013).

According to the results of these studies, it is seen that distance education is more suitable for theoretical courses than applied courses. As a result of this study, the fact that lecturers in social sciences have more positive attitudes towards distance education is in line with the studies in the literature.

It was found that there was a statistically crucial difference between the technostress levels of lecturers and the title variable. According to this result, it can be said that lecturers are more affected by technostress and research assistants are less affected. Similarly, in the studies conducted by Ayyagari and Purvis (2011) and Gökaslan (2022) with academicians, it was found that technostress levels varied according to titles. The lower technostress levels of research assistants in the research findings may be due to the lack of course load.

It was found that there was a statistically major difference in the mean scores of the instructors' technological acceptance levels according to the title variable. It was concluded that the technology acceptance levels of Asst. Assoc. Prof. Dr. were high, while those of lecturers with the title of Assoc. Prof. Dr. were low.

In the study conducted by Agarwal and Prasad (1999), it was emphasised that there is a positive relationship between the level of education and the idea of ease of use of technology. Similarly, Yermeydan Uğur (2017) stated that self-efficacy levels towards technological tools vary according to academic fields and titles, and the reason for this change is; anxiety, attitude and intention levels. In addition, in the study conducted by Telli and Altun (2020), it was emphasised that some educators who provide education in digital environment are deficient in technology, programme usage and presentation techniques and that they should improve themselves in this field. In the literature, there are studies indicating that instructor-related problems may negatively affect the technology integration process (Ashrafzadeh & Sayadian, 2015; Bingimlas, 2009; Buabeng-Andoh, 2012; Ertmer & Ottenbreit-Leftwich, 2010; Kyei-Blankson et al, 2009; Özüdoğru & Çakır, 2014).

It was found that there was a major difference between the attitudes of the lecturers towards distance education according to their titles. It was concluded that the attitudes of research assistants towards distance education were high and lecturers were low.

Similarly, different research results show that there are differences between the attitudes of lecturers towards distance education according to their titles (Aras, 2019; Gök, 2011). Townley (1997) found that lecturers are satisfied with teaching in distance education, but they need more time, technical competence and support to develop and present the course in distance education applications (Ellis, 2000; Orr, (2008).

The fact that research assistants do not have the burden of attending active classes may cause the lecturers in that group to have a more positive perspective on distance education. In the study conducted by Bozkurt (2020), it was concluded that experiencing difficulties in the distance education system was due to the lack of digital skills. In this context, it is thought that the differentiation of attitudes towards distance education in title groups may also be related to their digital skills.

It was found that there was a major difference in the technostress levels of the lecturers according to the professional seniority variable. It was concluded that lecturers with a professional seniority of 16-20 years and 21 years or more experienced higher levels of technostress, while lecturers with a professional seniority of 1-5 years experienced lower levels of technostress.

Seniority has a major effect on technostress (Abilleira et al., Akgün, 2019; 2021; Ayyagari, 2007; Karadeniz & Zabcı, 2020; Krishnan, 2017; Tams, Thatcher, & Grover, 2018; Voakes, Beam, & Ogan, 2003). Similarly, in studies in the literature, Jena and Mahanti (2014) found that academics with high seniority feel more stress than academics with low seniority, and technostress increases with age (Çoklar & Şahin, 2011; Gökaslan, 2022; Jena & Mahanti, 2014; Marchiori, Mainardes, & Rodrigues, 2018; Ragu- Nathan et al, 2008; Syvanen et al, 2016; Tams et al, 2018; Tsertsidis et al, 2019; Voakes et al, 2003), educators with higher seniority have more negative attitudes towards the usage of new technologies and perceive themselves to be less competent. Orlando (2014) found that more senior teachers, who take years to establish their teaching practices, have a negative approach to changing their practices compared to other teachers. It is thought that lecturers' ability to use ICT effectively (Luchman & González-Morales, 2013), differentiation of readiness levels in the use of ICT technologies (Kamalodeen, 2020) and the fact that new technologies create a feeling of inadequacy related to the existing skills of lecturers (Akgün, 2019) may be effective in the difference in technostress levels according to seniority.

It was found that there was an important difference between the technological acceptance levels of the lecturers in terms of professional seniority variable. It was concluded that the technology acceptance of the instructors with 1-5 years of professional seniority was high, while the technology acceptance of the instructors with 21 years or more of professional seniority was low. Having experience in higher education has a impactful effect on the basic components of the technology acceptance model (Taylor & Todd, 1995). Similar to the study, Akgün (2019) determined that the technology acceptance of lecturers changed in favour of lower seniority lecturers. Similar to the finding of the study, the finding that there is a crucial relationship between professional seniority and technology acceptance is also found in many studies (Aktürk & Delen, 2020; Avcu & Gökdaş, 2012; Bağlıbel et al, 2010; Morris & Venkatesh, 2000; Hu, Clarck, & Ma, 2003; Porter & Donthu, 2006; Teo, 2011; Yermeydan Uğur, 2017). As the teaching time of instructors in distance education increases, their perceptions towards planning education and training decrease (Gök, 2011). In addition, technological developments have become more widespread as we approach the present day. For this reason, young educators have met with technology at an earlier age. This situation has made them more willing to use technology in their lessons (Koca, 2006).

It was found that there was a statistically important difference between the attitudes of the lecturers towards distance education and the professional seniority variable. It was concluded that those with a professional seniority of 1-5 years had a more positive attitude, while those with a professional seniority of 21 years or more had a more negative attitude towards distance education.

Studies in the literature show that there is an important relationship between professional seniority and distance education. In parallel with the study conducted in some studies, the level of attitude towards distance education decreases as the professional seniority increases (Ağır, 2007; Akgül, 2021; Ateş & Altun, 2008; Birişçi, 2013; Gök, 2011; Horzum et al, 2012; Kışla, 2005; Şimşek et al, 2010; Yermeydan Uğur, 2017; Yıldız, 2016). The infrastructure of countries and the quality of internet streaming have played a crucial role in the overall

distance education experience (Al-Balas et al., 2020). In addition, trust in information sources, institutional and interpersonal communication affect the quality of distance education and instructor attitudes (Marek, Chew, & Wu, 2021; Unger & Meiran, 2020).

The other finding of the study is that there is a relationship between instructors' attitudes towards distance education, technological acceptance and techno-stress levels. It was determined that there was a significant positive relationship between distance education and technological acceptance level at a moderate level, while there was a negative relationship between distance education and techno-stress at a moderate level.It was determined that there was a medium level negative relationship between technological acceptance and techno-stress. It was concluded that techno-stress and technological acceptance levels explained 42% of the attitude towards distance education. The order of importance of the predictor variables on the level of attitude towards distance education was determined as technological acceptance and techno-stress level. With reference to the significance tests of the regression coefficients, it was found that the predictor variables technological acceptance and techno-stress were crucial predictors of the attitude towards distance education. In the literature, there are studies parallel to the results of the study. The study by Özer et al. (2019) shows that technology acceptance has a positive and important effect on the attitude towards the use of distance education model statistically. This result coincides with the research findings of Davis (1989), Mathieson (1991), Moon and Kim (2001), Chau and Hu (2002), Shih (2004), Özer and Yılmaz (2010). Similarly, Davis (1989), Mathieson (1991), Moon and Kim Similarly, studies in the literature have revealed that anxiety towards technology use, i.e. technostress, has a negative effect on individuals' acceptance of technology and that technostress has a negative relationship with technology acceptance (Dorukbaşı, 2022; Hardy, 1999; Igbaria & Parasuraman, 1989; Joo et al, 2016; Venkatesh, 2000; Yahşi & Hopcan, 2021).

RECOMMENDATIONS

- In order to eliminate the technostress experienced by the lecturers, it is necessary to know exactly the causes of it. Researches examining the situations that cause technostress can be conducted.
- In order to eliminate the technostress experienced by lecturers and to increase their acceptance of technology, specialised trainings on distance education applications can be given.
- Studies can be carried out within the institutions to increase co-operation on distance education in universities.
- The curriculum contents of the courses to be given as distance education can be arranged in accordance with online education.
- Instructors are trained to give face-to-face education. Instructors who teach distance education courses should be given preliminary training on the use and access to course materials, learning management system and support services that they will use in the planning, implementation and evaluation stages of the course.
- Successful distance education applications do not only depend on the effort and expertise of the instructors. Many structures that affect the course and each other are interrelated. These stakeholders also affect the

technostress and technological acceptance levels of instructors. The attitudes of instructors can be evaluated together with these stakeholders.

- Increasing the technology training of lecturers in institutions, giving them the opportunity to practice before starting teaching, and guiding them to choose the right technology will facilitate their adaptation to the distance education process.
- The research can be compared with the data obtained when the exceptional circumstances caused by the COVID-19 disappear, and the stability of the results can be verified.

ETHICAL TEXT

In this article, journal writing rules, publication principles, research and publication ethics rules, journal ethics rules have been followed. The responsibility for any violations that may arise regarding the article belongs to the author. Within the scope of the research, ethics committee permission was obtained with Fırat University Social and Human Sciences Scientific Research and Publication Ethics Committee evaluation decision date =18.05.2021, ethics evaluation document number = 45034.

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