



Online Learning Attitude and Communication Proficiency in Tourism Education: Insights from Emergency Distance Education

ABSTRACT

This study aims to explore tourism students' attitudes and communication proficiency toward online learning within emergency distance education. Empirical data was collected through an online survey of tourism students across ten universities in Türkiye reached by convenience sampling. The students perceived online learning as less effective than in-person education, while their attitudes towards online learning were significantly influenced by internet accessibility and communication proficiency. These findings underscore the pivotal role of communication proficiency, information and communication technologies, and internet access in facilitating effective online learning experiences. The study provides theoretical insights and has practical implications for tourism education during emergencies.

Keywords: Online learning, hospitality education, Covid-19 pandemic, crisis management

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INTRODUCTION

Online learning has become a prevalent method, especially as an alternative to traditional in-person education, as demonstrated during emergencies such as the Covid-19 pandemic (Li & Agyeiwaah, 2023; Qiu et al., 2021). The global closure of schools in response to Covid-19, coupled with the pandemic's prolonged duration, underscored the urgent need for solutions within the education system (Masalimova et al., 2022). As a result, a new educational approach emerged amidst these challenging times, defined as emergency distance education (EDE) (Toquero, 2020).

Reflecting the lack of time and opportunity to train teachers or arrange distance education methodically during the pandemic, EDE's main goal was not to rebuild a sustainable education ecosystem but to provide temporary access to learning and teaching support that can be easily set up and made available during an emergency or crisis (Bakhov et al., 2021). Accordingly, during the Covid-19 pandemic, higher education institutions accelerated the implementation of online EDE courses. For instance, after the first Covid-19 case in Türkiye was officially identified in March 2020, Turkish institutions transitioned to online learning during the Spring semester of the 2019-2020 academic year and maintained this mode of instruction throughout the 2020-2021 academic year. During the 2021-2022 academic year, hybrid education initiatives were more commonly incorporated into traditional face-to-face education. EDE faced substantial challenges during its swift adoption as an alternative educational system. Communication barriers, inadequate infrastructure, users' technological readiness, shifts in educational methodologies, and abrupt curriculum changes disrupted the education structure. Internet and information and communication technologies ICTs are essential elements of online learning (Goh & Sigala, 2020), given that EDE depends on effective online communication (Baker, 2021). This includes interactions between teachers and students, as well as among students.

Several studies have investigated online learning in tourism education during the COVID-19 pandemic (Choi et al., 2020, 2021; Li & Agyeiwaah, 2023; Shyju et al., 2021; Tavitiyaman et al., 2021). Expanding on this previous research into EDE, the present study explores students' attitudes towards online learning and communication proficiency. Although previous research has examined the effectiveness of EDE (e.g., Qiu et al., 2021; Patiar et al., 2021; Ritonga, 2022; Ye & Law, 2021), there is a lack of information in the literature about students' preparedness for online learning infrastructure and their communication proficiency in such an environment. The present study therefore aims to examine the impact on students' online learning attitudes in EDE of their experience with ICTs (duration), frequency of access to ICTs, frequency of internet access, and

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communication proficiency. This study focuses on tourism education, in which a significant rise in online learning is expected. Therefore, it is essential to analyse tourism students' attitudes on online education and identify ways to improve their experiences.

BACKGROUND AND PREVIOUS RESEARCH

Emergency Distance Education

The COVID-19 pandemic led to a significant shift to online learning in higher education, transforming student-teacher interactions and requiring adjustments in teaching methods (Masalimova et al., 2022). It also created new challenges, such as communication barriers, waning student engagement, and technology-related stress (Mahdy, 2020; Shim & Lee, 2020; Sobaih et al., 2020; Williamson et al., 2020). To address these issues, video-based online learning emerged as a preferred mode, facilitating interactive communication between educators and learners (Shim & Lee, 2020). However, challenges persisted in online teaching implementation during the pandemic, including communication barriers, student engagement decline, and difficulties in technology use, time management, and privacy concerns (Händel et al., 2020; Korkmaz & Toraman, 2020), while teachers' struggles in navigating the online learning environment contributed to student distress and anxiety (Kaplan-Rakowski, 2020). Therefore, there is an urgent need to explore EDE techniques to provide strategies and alternatives for all participants during unprecedented circumstances like the COVID-19 pandemic (Ananga, 2020).

Because the COVID-19 virus is transmitted by close contact (Chu et al., 2020), densely populated schools became significant hubs for its spread. Consequently, governments worldwide suspended in-person classes, affecting over 990 million students at various educational levels across 130 countries (UNESCO, 2020). In higher education, universities turned to online learning and distance education as an alternative to conventional teaching methods (Jiang et al., 2021), thus ushering in a new educational paradigm, EDE, defined as "*temporary transfer of face-to-face education to the technological environment in a crisis*" (Turkish Higher Education Quality Council, 2020), aimed at minimizing disruptions to the learning process (Sezgin, 2021).

Despite being categorized as online learning, EDE is characterized by its complexity and ambiguity. Unlike traditional online learning and distance education, EDE lacks the extensive planning and instructional design typically based on theoretical frameworks and models. That is, the rapid transition to EDE in response to a crisis (Adedoyin & Soykan, 2020), led to various planning, design, and development shortcomings during the pandemic. Given that EDE differs from traditional distance education (Adedoyin & Soykan, 2020; Karataş & Tuncer, 2020; Wang et al., 2020), it does not fully address all aspects of online learning, leading to limited technological qualified instructor capacity, inadequate access to ICTs and the internet, and a lack of sufficient digital transformation within universities. Accordingly, scholars (e.g., Adedoyin & Soykan, 2020; Altınay Özdemir, & Tombaş, 2024; Qiu et al., 2021) have proposed examining EDE within the framework of *emergency distance education platforms* to better understand its unique challenges and dynamics.

EDE in Tourism Education

Given that higher education in tourism aims to produce skilled professionals for the tourism industry (Phelan et al., 2009), its curriculum and teaching methods diverge from traditional approaches. Tourism education emphasizes both theoretical knowledge and practical experience on regional and global scales (Liburd & Edwards, 2018). However, the COVID-19 pandemic adversely impacted applied education fields (Ye & Law, 2021; Zhong et al., 2021), necessitating the transition to online tourism education due to severe restrictions (Agyeiwaah et al., 2022). Despite the challenges tourism education faced during the pandemic to (Ye & Law, 2021), it benefited from the rapid adoption of EDE as a solution (Adedoyin & Soykan, 2020; Altınay Özdemir, & Tombaş, 2024).

Research on EDE in tourism education has examined students' online experiences, perceptions, and satisfaction (Agyeiwaah et al., 2022; Arıcı & Karaçay, 2023; Chandra et al., 2022; Choi et al., 2020; Choi et al., 2021; Korkmaz et al., 2022; Köksalanlar & Çözeli, 2021; Munoz et al., 2021; Tavitiyaman et al., 2021). Numerous studies have examined EDE's efficacy (Qiu et al., 2021; Patiar et al., 2021; Ritonga, 2022; Ye & Law, 2021), tourism education's future (Xu et al., 2022), and teachers' experiences (Şanlıöz-Özgen, & Küçükaltan, 2023). Tavitiyaman et al. (2021) highlighted the rapid shift to distant education in tourism, while other studies noted the advantages of EDE for tourism programs during this period (Goh & Sigala, 2020; Lei & So, 2021). The integration of EDE activities outside the conventional structure has also influenced application-oriented tourism courses (Hsu, 2021), resulting in many issues, with a major challenge being the lack of actual skill acquisition (Agyeiwaah et al., 2022).

Academic institutions aim to transform students into tourism-savvy professionals (Prifti, 2022). However, the pandemic forced practical classroom education to be virtualized (Kaushal & Srivastava, 2020; Sharma, 2020), thereby reducing the benefits of in-person learning (Shyju et al., 2021). For example, although virtual tour platforms were used to deliver practice-based knowledge and improve learning (Patiar et al., 2021), internship training and industry-specific application courses were lacking (Qiu et al., 2021), which significantly affected practical training outcomes, the foundation of tourism education. As Kaushal and Srivastava (2020) note, Indian tourism students need applied learning, even though distance education helps them cope with the pandemic while Choi et al. (2020) argue that offline education is essential for tourism students to gain practical experience. However, the pandemic's shift from traditional to creative assessment methods may change practise training criteria (Qiu et al., 2021).

THEORETICAL PREDICTIONS

The Role of ICTs On Online Learning

Online learning is a form of education that uses ICTs to create learning experiences. It is crucial for successful deployment, especially with the internet and computers (Engelbrecht, 2005). However, there are issues with online learning, such as inadequate ICTs. For example, 826 million students worldwide lack a computer at home, while 43% lack home internet access (UNESCO, 2020). Türkiye, for example, ranks 70th out of 77 OECD countries for students' internet access. Therefore, addressing these issues is essential for successful online learning (OECD, 2021). ICTs, which includes technological devices and the internet, play a pivotal role in facilitating online learning and are a significant determinant of its effectiveness (Bolliger & Wasilik, 2009; Adedoyin & Soykan, 2020). However, the dependence on technical equipment for online learning, coupled with issues surrounding equipment provision and internet accessibility, poses a notable challenge for both students and educators within educational institutions. Specifically, inadequate equipment, limited internet access, and technical glitches can impede students' online learning experiences (Tashkandi & Al-Jabri, 2015).

The perceived ease of use and usefulness of online education technology are key predictors of learners' acceptance of online education (Yuen & Ma, 2008), a phenomenon that can be elucidated through the technology acceptance model (Davis, 1989) and its expanded models, which have been employed to research online learning. Furthermore, users' proficiency with, and duration of experience using ICTs and online educational tools also play crucial roles in determining online educational effectiveness. Digital competencies, encompassing users' technological skills, knowledge, and attitudes, are positively associated with their willingness to embrace technologies in educational settings (Yuen & Ma, 2008). The quality of students' learning experiences during online lessons are determined by their choice of technological device. Specifically, optimal online education occurs when students engage with lessons using a computer or a similar device equipped with a fast and reliable operating system, along with a large, high-resolution screen for optimal viewing (Adedoyin & Soykan, 2020). Previous studies have demonstrated that technology is a pivotal determinant of students' online learning experiences (Abbas, 2017; Ali et al., 2016).

The present study aims to test the following hypotheses:

- H_{1a}: Frequency of access to ICTs positively impacts student attitudes toward online learning.
- H_{1b}: Frequency of access to the internet positively impacts student attitudes toward online learning.
- H_{1c}: Length of experience with smartphones positively impacts student attitudes toward online learning.
- H_{1d}: Length of experience with computers positively impacts student attitudes toward online learning.

Effect of Communication Proficiency on Online Learning Attitudes

Effective communication and connection between students and teachers are key factors in online learning (Bolliger & Wasilik, 2009). Both instructor-student and student-student interactions significantly influence student learning outcomes and satisfaction levels (Swan, 2001). While educators received technical support during the transition to online learning during the COVID-19 pandemic, they have received less guidance on fostering effective communication in terms of encouraging language, accuracy, and timeliness (Verma & Gustafsson, 2020). Moreover, online communication presents distinct challenges compared to face-to-face interactions, which can draw on observable cues such as tone and body language (Altınay Özdemir & Tombaş, 2024; Baker, 2021).

Disruptions in internet connectivity during online lessons can hinder students' ability to communicate with their teachers, leading to stress when they miss lessons and subsequently reducing motivation (Munoz et al., 2021). Additionally, students lacking access to computers or tablets must rely on mobile phones with limited functionality for attending lessons, potentially resulting in reduced learning outcomes and feelings of

exclusion due to limitations in verbal and written communication with teachers (Choi et al., 2021). Moreover, if the device used does not facilitate access to lesson materials, learners may not fully benefit from the instructional content (Adedoyin & Soykan, 2020). The communication literature underscores that the most effective mode of communication is face-to-face interaction, followed by video, phone, and written texts (Koester, 2022). Given the significance of communication in online education as a determinant of learning outcomes, the following hypothesis is proposed:

H₂: Communication proficiency positively impacts student attitudes toward online learning.

Previous research has established that both ICTs and communication proficiency play pivotal roles in shaping attitudes towards online learning. The aim of the current study is to examine the attitudes of tourism students towards online learning during the Covid-19 pandemic. To achieve this aim, a conceptual model was constructed to explore how ICTs and communication proficiency affect online learning attitudes (see Figure 1). Furthermore, differences in communication proficiency and attitudes towards online learning are examined based on demographic factors and students' ICT backgrounds.

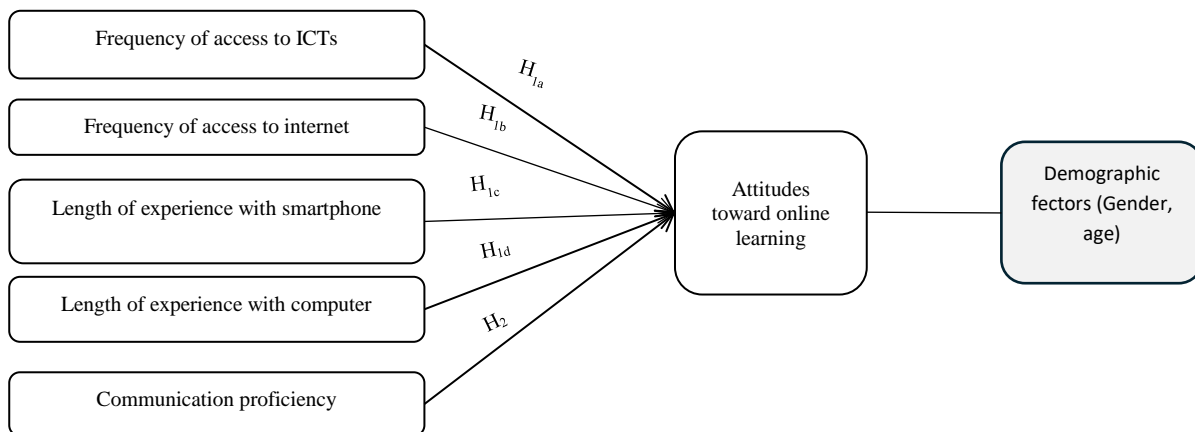


Figure 1: Conceptual model

METHODOLOGY

Measurement Instrument and Study Setting

This study examined student attitudes toward online learning, focusing on length of experience with ICTs, frequency of access to ICTs, and communication proficiency. The research was conducted on tourism students from various Turkish universities that adopted EDE due to the COVID-19 pandemic. Through convenience sampling, students were recruited from ten universities. In adherence with lockdown measures, the participating students completed a self-administered web-based survey using an online survey platform. The survey, conducted in Turkish, was available from May 2020 to February 2021, yielding responses from 418 students.

The online survey comprised four sections. The first was directed two demographic variables (gender and age). The second section had five questions about ICTs. Length of experience with ICTs was measured by two questions (for smartphone and computers), each offering five response options: ≤ 3 years, 4-7 years, 8-11 years, 12-15 years, and ≥ 16 years. Frequency of access to ICTs and the internet was assessed through two questions, each offering three response options: never, sometimes, always. The types of ICTs used by students were identified by a single question with three response options. The third section evaluated attitudes toward online learning using a scale adapted from Metin et al. (2017), supplemented by the inclusion of four additional items, thus forming a seven-item scale (Table 1). The fourth section assessed communication proficiency using a four-item scale based on prior studies (Adedoyin & Soykan, 2020; Choi et al., 2021; Tashkandi & Al-Jabri, 2015).

The content validity of each scale was evaluated by obtaining the opinions of five professors who are expert in tourism (Lawshe, 1975). The Content Validity Ratios (CVR) is a quantitative measurement of the degree of consensus among a panel of experts regarding the importance of an item. CVR values can range from -1 (perfect disagreement) to +1 (perfect agreement), with values above zero indicating that more than half of panel members agree that an item is essential. The content validity the five panellists' scores were 1.00 for the two scales, thereby meeting the recommended threshold value of 0.99 (Lawshe, 1975).

Table 1: Scale items

Items	Source
<i>Attitude toward online learning</i>	
Online learning is as important as physical classroom learning.	Metin et al. (2017)
Online learning is as productive as physical classroom learning.	Metin et al. (2017)
Online learning is interesting and enjoyable.	Metin et al. (2017)
I prefer to study with my friends*	Added by the author
For me, online learning is preferable to physical classroom learning.	Added by the author
I think that I am more successful in homework instead of exams in online learning. *	Added by the author
I want the courses to continue with online learning in the coming years.	Added by the author
<i>Communication proficiency</i>	
I can interact better with teachers through online learning.	Added by the author
I can interact better with administrative units through online learning.	Added by the author
I can interact better with technical support through online learning.	Added by the author
I can interact better with my friends through online learning.	Added by the author

*Excluded items

Pre-testing was carried out on 50 students. This analysis revealed the scale appropriateness for assessing online learning attitudes and communication proficiency. Scholars suggest various item-total correlation cut-off values for item deletion of 0.20 (Qin, 2006), 0.30 (Nurosis, 1994), or 0.40 (Hair et al., 1998). In the present study, two online learning items had correlations below .30, so they were removed from the scale. The five-item scale to measure attitude towards online learning was conducted last. The same reliability analysis was also applied to the communication proficiency scale. The details were provided in results.

Data Analysis

Data analysis involved the following statistical tests. Descriptive statistics were used to characterize the respondents, while reliability and validity analyses assessed scale appropriateness. One-way ANOVA and independent t-tests were applied to understand differences based on demographic and descriptive factors for attitudes toward online learning and communication proficiency. Simple and multiple regression analyses were used to test the study's hypothesis. These statistical methods allowed for a comprehensive analysis of the relationships between the variables, particularly understanding students' attitudes towards online learning and communication proficiency in EDE.

RESULTS

Respondent Profile

The survey was distributed among 550 tourism students across ten Turkish universities, with 418 students voluntarily participating. All completed questionnaires met the criteria for inclusion in the data analysis. The demographic profile of the respondents (Table 2) reveals that slightly over half were male, with the majority falling in the age range of 19 to 24 years. Nearly all students reported regular access to ICTs and the Internet. The ICT tools most frequently used for online learning were laptops/notebooks and smartphones. Approximately half of the students had been using smartphones for 4-7 years, while about a third had been using computers for 4-11 years.

Table 2: Respondents' profile (n = 418)

Variable	n (418)	%	Variable	n (418)	%
Gender			Types of ICTs		
Female	190	45.5	Smartphone	189	45.2
Male	228	54.5	Tablet	8	1.9
Age			Laptop/Notebook	221	52.9
18	24	5.3	Length of experience with smartphone		
19-24	336	80.4	≤ 3 years	59	14.1
25-30	32	7.7	4-7 years	207	49.5
31-36	14	3.3	8-11 years	107	25.6
≥37	12	2.9	12-15 years	31	7.4
			≥16 years	14	3.3
Department			Length of experience with computer *		
Tourism Management	38	9.1	≤ 3 years	59	14.1
Hotel Management	185	44.4	4-7 years	69	16.5
Tourism and Travel Services	130	31.2	8-11 years	89	21.3
Recreation Management	7	1.6	12-15 years	59	14.1
Tourism/Tourist Guidance	28	6.7	≥ 16 years	33	7.9
Gastronomy and Culinary Arts	28	6.7			
University			Frequency of access to ICT		
Akdeniz University, Antalya	51	12.2	Never	5	1.2
Çanakkale Onsekiz Mart University	6	1.3	Sometimes	166	39.7
Harran University, Şanlıurfa	8	1.9	Always	247	59.1
Istanbul Arel University	99	23.6	Frequency of access to the internet		
Karabük University	38	9.0	Never	9	2.2
Kırklareli University	16	3.8	Sometimes	205	49.0
Mersin University	22	5.2	Always	204	48.8
Muğla Sıtkı Koçman University	148	35.4			
Selcuk University, Konya	6	1.4			
Zonguldak Bülent Ecevit University	16	3.8			

*109 students (26%) did not use a computer.

Reliability and Validity

The reliability of both scales was assessed using Cronbach's Alpha (Table 3). All item-total correlations exceeded .30 (Ebel, 1965; Erkuş, 2021: 146) (see Table 3), ranging from 0.63 to 0.78 for online learning attitude and 0.69 to 0.89 for communication proficiency. The consistency values surpassed 0.80 for both scales (0.88 for online learning attitude and 0.92 for communication proficiency), indicating the requisite internal consistency (DeVellis, 2012). Additionally, examining Cronbach's alpha values after deleting specific items revealed that all items made significant contributions to the study's acceptable internal consistency (Altınay Özdemir et al., 2023:14).

Table 3: Reliability analysis results

Scale Items	Mean	SD	Corrected Item-Total Correlations	Cronbach's Alpha Values if Item Deleted	Cronbach α Values
<i>Attitude toward online learning</i>	2.62	1.08			0.888
Online learning is as important as physical classroom learning.	3.07	1.47	0.639	0.862	
Online learning is as productive as physical classroom learning.	2.29	1.33	0.787	0.837	
Online learning is interesting and enjoyable.	2.51	1.34	0.782	0.838	
For me, online learning is preferable to physical classroom learning.	2.19	1.40	0.745	0.843	
I want the courses to continue with online learning in the coming years.	2.19	1.45	0.665	0.858	
<i>Communication proficiency</i>	2.42	1.12			0.920
I can interact better with teachers through online learning.	2.50	1.28	0.831	0.891	
I can interact better with administrative units through online learning.	2.36	1.21	0.890	0.871	
I can interact better with technical support through online learning.	2.40	1.21	0.859	0.882	
I can interact better with my friends through online learning.	2.41	1.28	0.692	0.938	

M: Means; SD: Standard Deviations

Exploratory factor analysis (EFA) was conducted using principal component analysis (see Table 4). The results showed that all variable component loadings exceeded 0.50, thereby indicating robust identification of

all components. Each scale manifested as one-dimensional. Specifically, attitudes toward online learning accounted for 62.47% of the total variance, while communication proficiency explained 81.0%.

Table 4: Exploratory factor analysis results

Factors	Factor loading	Eigenvalue**	% VE**	α ***
<i>Attitude toward online learning</i>		3.748	62.467	0.888
Online learning is as productive as physical classroom learning.	0.873			
Online learning is interesting and enjoyable.	0.868			
For me, online learning is preferable to physical classroom learning.	0.840			
I want the courses to continue with online learning in the coming years.	0.780			
Online learning is as important as physical classroom learning.	0.751			
<i>Communication proficiency</i>		3.243	81.086	0.920
I can interact better with teachers through online learning.	0.946			
I can interact better with administrative units through online learning.	0.929			
I can interact better with technical support through online learning.	0.910			
I can interact better with my friends through online learning.	0.811			

Extraction method: principal component analysis

*Items measured on a 5-point Likert-type scale

** Extraction sums of squared loadings (eigenvalue, % VE = % of variance explained)

*** α = Cronbach's alpha

Descriptive Results

As Table 5 shows, the students had conflicting attitudes toward online learning during the Covid-19 pandemic. Just under half (45.2%) agreed or strongly agreed that online learning is as important as physical classrooms, but only a minority (20.8%) felt that online learning is as productive as physical classrooms. Although just over half the students disagreed that online learning is interesting and enjoyable (53.6%), about two-thirds felt that online learning is preferable to physical classrooms (67.5%). A majority did not want courses to continue online in the future (63.0%). The mean score for attitude toward online learning was 2.62.

Table 5: Descriptive statistics of scale items

Indicators	Frequency (%)					Mean score	
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	M	SD
<i>Attitude toward online learning</i>						2.624	1.088
Online learning is as important as physical classroom learning.	22.7	14.4	17.7	23.2	22.0	3.074	1.471
Online learning is as productive as physical classroom learning.	38.5	23.9	16.7	11.0	9.8	2.296	1.338
Online learning is interesting and enjoyable.	30.6	23.0	21.5	13.9	11.0	2.516	1.343
For me, online learning is preferable to physical classroom learning.	46.2	21.3	12.2	7.9	12.4	2.191	1.409
I want the courses to continue with online learning in the coming years.	48.6	18.4	12.2	6.7	14.1	2.193	1.453
<i>Communication proficiency</i>						2.422	1.123
I can interact better with teachers through online learning.	28.5	25.1	22.5	15.1	8.9	2.507	1.286
I can interact better with administrative units through online learning.	30.9	25.4	27.3	9.1	7.4	2.368	1.216
I can interact better with technical support through online learning.	29.2	25.6	28.9	8.1	8.1	2.404	1.216
I can interact better with my friends through online learning.	31.6	25.6	21.3	13.2	8.4	2.411	1.281

Regarding online communication proficiency, just over half the students said that online learning did not enable them to interact better with their teachers, administrative units, technical support, or friends.

Analytical Results

ANOVA and T-Test

Independent t-tests and one-way ANOVA tests were used to determine and identify any significant differences based on the demographic and descriptive factors. The independent samples t-test results showed no significant difference between male and female students in attitudes towards online learning ($t=-0.411$, $p>.05$). However, there was a significant gender disparity in communication proficiency ($t=-2.027$, $p<.05$), with male students demonstrating higher communication proficiency than female students. Both attitudes towards online learning and communication proficiency scores significantly varied by age ($F=3.696$, $p<.01$ and $F=2.565$, $p<.01$, respectively). The LSD post-hoc tests showed that students between the ages of 25-30 had a significantly more positive attitude towards online learning than those aged 18-24, while students aged 25-30 had higher mean communication proficiency than those aged 18-24.

As shown in Table 6, there were significant differences in mean scores for online learning attitude, dependent on the type of ICTs used ($p<.01$), frequency of access to ICTs and the internet ($p<.01$), and duration of experience with smartphones ($p<.01$). Students who used laptops or notebooks had significantly more positive attitudes towards online learning than those using smartphones ($F=12.102$, $p<.01$). Likewise, students with more frequent access to ICTs and the internet had significantly more favorable attitudes towards online learning than those who reported less frequent access ($F=14.401$, $p<.01$; $F=33.815$, $p<.01$, respectively). Regarding prior ICT experience, students who had used smartphones for 8-11 years had more favourable attitudes towards online learning than those who had only done so for 0-7 years ($F=5.409$, $p<.01$). Finally, prior experience with computers had no significant effect on attitudes towards online learning ($p>.05$).

Table 6: Between-group differences in attitude toward online learning and communication proficiency

Item	Level	n	Online learning attitude					Communication proficiency					
			M	SD	F	p	Dif.*	M	SD	F	p	Dif.*	
Type of ICTs													
	Smartphone	189	2.35	1.00				2.31	1.07				
	Tablet	8	3.45	1.26	12.102	.000	1<3	2.87	1.36	1.930	.146	-	
	Laptop/ Notebook	221	2.81	1.10				2.49	1.14				
Frequency of access to ICTs	Never	5	2.40	1.70				2.50	1.87				
	Sometimes	166	2.28	1.01	14.401	.000	2<3	2.16	1.07	7.460	.001	2<3	
	Always	247	2.85	1.06				2.59	1.11				
Frequency of access to the internet	Never	9	2.05	1.51				2.00	1.52				
	Sometimes	205	2.23	0.92	33.815	.000	2<3	2.19	1.01	10.656	.000	2<3	
	Always	204	3.04	1.07				2.67	1.15				
Length of experience with smartphone	< 3 years	59	2.31	1.05				2.14	1.13				
	4-7 years	207	2.50	0.97	5.409	.000	1,2<3	2.34	1.02	2.795	.026	1,2<3	
	8-11 years	107	2.89	1.21				2.65	1.17				
	12-15 years	31	2.73	1.06				2.52	1.24				
	> 16 years	14	3.35	1.17				2.80	1.47				
Length of experience with computer	< 3 years	59	2.50	.88				2.27	1.03				
	4-7 years	69	2.71	1.19				2.46	1.14				
	8-11 years	89	2.82	1.12	2.327	.066	-	2.48	1.10	1.632	.166	-	
	12-15 years	59	3.02	.96				2.79	1.10				
	> 16 years	33	3.04	1.19				2.56	1.31				

* LSD post-hoc tests were used to test the multiple comparisons.

Mean communication proficiency scores also varied significantly based on frequency of access to ICTs ($p<.01$), frequency of internet access ($p<.01$), and prior smartphone experience ($p<.01$). Students with frequent access to ICTs and the internet reported greater communication proficiency than those with only occasional access ($F=7.460$, $p<.01$; $F=10.656$, $p<.01$, respectively). Students who had used smartphones for 8-11 years reported greater communication proficiency than those who had used them for 0-7 years ($F=2.795$, $p<.05$). However, the computer the type of ICTs used and length of experience with computers had no significant effect on mean communication proficiency scores ($p>.05$).

The Pearson correlation scores indicated that all variables were positively correlated with both communication proficiency and attitude toward online learning (Table 7). That is, students who reported higher levels of communication proficiency also had more favorable attitudes towards online learning ($r=0.696$, $p<.01$). Likewise, students who used ICTs and the internet more frequently had more favorable online learning

attitudes ($r=.247, p<.01; r=.366, p<.01$, respectively) and higher reported communication proficiency ($r=.173, p<.01; r=.218, p<.01$, respectively). Students with longer prior experience with smartphones or computers had more favorable online learning attitudes ($r=.202, p<.01; r=.169, p<.01$, respectively) and reported communication proficiency ($r=.145, p<.01; r=.117, p<.05$, respectively).

Table 7: Pearson correlations

	M	SD	(1)	(2)	(3)	(4)	(5)	(6)
Online learning attitude (1)	2.62	1.08	1	.696**	.247**	.366**	.202**	.169**
Communication proficiency (2)	2.42	1.12		1	.173**	.218**	.145**	.117*
Frequency of access to ICTs (3)	2.57	.51			1	.591**	.244**	.178**
Frequency of access to the internet (4)	2.46	.54				1	.248**	.205**
Length of experience with smartphone (5)	2.36	.93					1	.376**
Length of experience with computers (6)	2.79	1.25						1

**Correlation significant at 0.01 level (2-tailed)

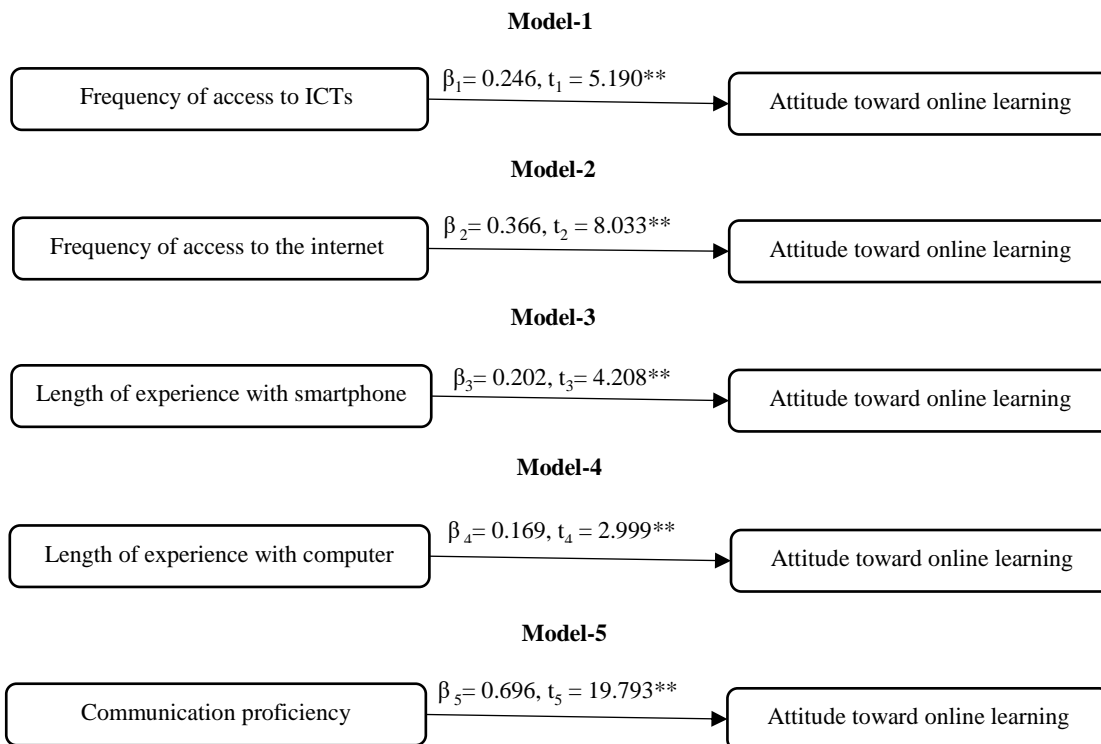
*Correlation significant at 0.05 level (2-tailed)

M: Means; SD: Standard Deviations

Simple regression results

Simple linear regression was preferred to estimate the correlation between online learning attitudes and the other variables. Five models were tested to investigate the correlations between attitudes towards online learning, frequency of access to ICTs and the internet, duration of experience with smartphones and computers, and communication proficiency.

All the models were statistically significant ($F_1=26.940; F_2=64.526; F_3=17.711; F_4=8.992; F_5=391.777; p <.01$) thereby indicating that each model contributed to explaining attitudes towards online learning. The prediction scores for attitudes towards online learning were as follows: 48.5% for communication proficiency, 13.5% for internet access frequency, 6.1% for ICT access frequency, 4.1% for smartphone experience duration, and 2.5% for computer experience duration. Thus, proficiency in communication was the strongest predictor of attitudes towards online learning.



Note: * $p <.05$; ** $p <.01$.

Figure 2: Simple regression model

As shown in Figure 2, all factors significantly predicted online learning attitudes. The results supported hypotheses 1a, 1b, 1c, 1d, and 2. Table 8 summarizes the regression analysis results.

Table 8: Simple regression model: Predictors of attitudes towards online learning

	Unstandardized Coefficients		Standardized Coefficients		Sig.	R	F	Decision
	B	Std. Error	B	t		R2	p	
(Constant)	1.287	.263		4.902	.000	.247	26.940	H _{1a} supported
Frequency of access to ICTs	.518	.100	.247	5.190	.000	.061	.000	
(Constant)	.805	.232		3.474	.001	.366	64.526	H _{1b} supported
Frequency of access to the internet	.737	.092	.366	8.033	.000	.134	.000	
(Constant)	2.065	.143		14.468	.000	.202	17.711	H _{1c} supported
Length of experience with smartphone	.237	.056	.202	4.208	.000	.041	.000	
(Constant)	2.391	.150		15.964	.000	.169	8.992	H _{1d} supported
Length of experience with computer	.146	.049	.169	2.999	.003	.025	.000	
(Constant)	.989	.091		10.859	.000	.696	391.777	H ₂ supported
Communication proficiency	.675	.034	.696	19.793	.000	.485	.000	

a. Dependent Variable: Attitude toward online learning

Note: *p<0.05; **p<0.01

Multiple regression results

A multiple linear regression analysis was performed to identify the factors influencing students' attitudes towards online learning more precisely. The model was statistically significant ($F=67.20$, $p=0.00$). The Durbin-Watson statistic was 1.8, falling within the accepted range of 1.5 to 2.5 (Nerlove & Wallis, 1966), while the multicollinearity assessment showed that the tolerance was above 0.2 (Senaviratna & A Cooray, 2019), VIF was below 10 (Salkind, 2006), and the condition index was under 30 (Paulson, 2006).

Table 9: Multiple regression model: Predictors of attitudes towards online learning

	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Decision
	B	Std. Error	B	t			
(Constant)	-0.013	0.267			-.050	.960	
H _{1a} Frequency of access to ICTs	.121	.113	.056		1.071	.285	unsupported
H _{1b} Frequency of access to the internet	.263	.111	.123		2.362	.019	supported
H _{1c} Length of experience with smartphone	.043	.051	.036		.830	.407	unsupported
H _{1d} Length of experience with computer	.037	.038	.043		.984	.326	unsupported
H ₂ Communication proficiency	.639	.039	.663		16.435	.000	supported

$R=0.725$, $R^2=0.526$

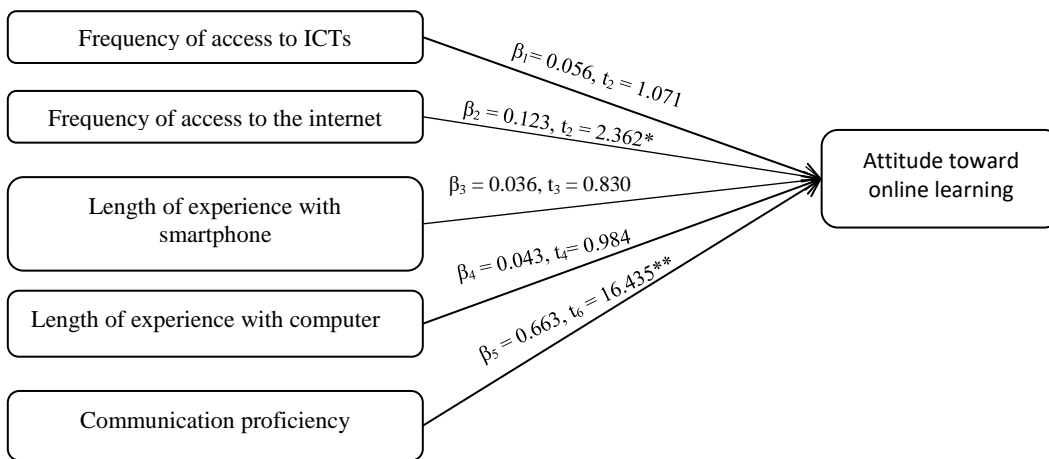
$F=67.204$, $p=0.00$

$DW=1.804$

a. Dependent Variable: Attitudes towards online learning

Note: *p<0.05; **p<0.01

Entry method: All variables in a block were entered in a single step.



Note: * $p < 0.05$; ** $p < 0.01$.

Figure 3: Multiple regression model

The multiple regression analysis showed that five variables explained 52.6% of the variance in attitude towards online learning ($F=67.204$, $p < .01$) while the remaining 47.4% can be attributed to variables not considered in this study. The main predictors of student attitudes towards online learning were internet access and communication proficiency. The standardised regression coefficients for frequency of access to the internet ($\beta_2 = .123$, $t_2 = 2.362$, $p < .05$) and communication proficiency ($\beta_5 = .663$, $t_5 = 16.435$, $p < .01$) showed that they both significantly impacted attitude towards online learning (Figure 3). The regression coefficients for frequency of access to ICTs, length of experience with smartphones, and length of experience with computers indicated that these variables had no significant impact on attitude towards online learning ($p > .05$). Thus, the multiple regression results confirmed hypotheses 1b and 2, but not hypotheses 1a, 1c, and 1d. Table 9 summarizes the regression analysis results.

Comparisons of models

The regression analyses varied in their processes. In the simple regression analysis, each independent variable was analysed individually, with all models producing statistically significant results. In the multiple regression model, adding communication proficiency reduced the impact on online learning attitudes of all variables except internet access frequency. Communication proficiency was identified as a key predictor of online learning attitude in both the simple and multiple regression models, suggesting that students with higher communication proficiency tend to have more favourable attitudes towards online learning. In addition, having more frequent access to the internet was also associated with more positive attitudes towards online learning.

DISCUSSION

This study examined tourism student attitudes toward online learning during the COVID-19 pandemic, focusing on their use of ICTs and proficiency in online communication. After universities worldwide were forced to close their physical campuses to curb the spread of the virus, educational policymakers swiftly pivoted to alternative modes of instruction (Mushtaque et al., 2021), notably integrating online learning as a pivotal component in EDE (Zhu & Liu, 2020). Subsequently, empirical research into students' attitudes towards online learning during the pandemic was conducted in various countries, including India, Jordan, Malaysia, Pakistan, Serbia, Saudi Arabia, Türkiye, and the USA (e.g., Aguilera-Hermida, 2020; Almekhlafy, 2020; Bojovic et al., 2020; Chakraborty et al., 2021; Herguner et al., 2020; Mishra et al., 2020; Muflih et al., 2020; Mushtaque et al., 2021; Sim et al., 2021; Unger & Meiran, 2020). The present study added to this body of knowledge by examining the online learning attitudes of Turkish students.

The study indicates that the students prefer traditional classroom settings over online learning, in line with previous research (Aguilera-Hermida, 2020; Bojovic et al., 2020) because they view technology as a luxury rather than a necessity in education, especially during the transition to EDE (Iqbal et al., 2022). Notably, the tourism students investigated in the present study displayed a lack of engagement with and enjoyment of online learning, with a majority expressing a preference for in-person education in the future, again in line with previous findings (Aguilera-Hermida, 2020; Tichavskiy et al., 2015).

Communication proficiency emerged as a crucial variable, explaining a significant proportion of the variance in student attitudes toward online learning in the present study. Effective use of educational technologies

hinges on high-quality interaction, a factor underscored by both researchers' observations and students' experiences (Tashkandi & Al-Jabri, 2015). Insufficient interaction with instructors, administrative staff, technical support, and peers impairs the online learning experience, resulting in perceived deficiencies in communication proficiency (Iqbal et al., 2022; Muilenburg & Berge, 2005).

The regression models identified communication proficiency and frequency of internet access as primary predictors of student attitudes toward online learning, aligning with the critical role of internet access in fostering productive online learning environments (Almusharraf & Khahro, 2020). Moreover, the present findings underscore the impacts of specific devices on attitudes toward online learning, with laptops or notebooks being favored over smartphones. As previously found, this tends to be due to factors like typing difficulties and screen size limitations (Mahfouz & Salam, 2021). As in previous studies (Almusharraf & Khahro, 2020; Tashkandi & Al-Jabri, 2015), more frequent access to ICTs and the internet was correlated with more positive attitudes toward online learning and greater communication proficiency, likewise for longer prior experience with smartphones (Luo et al., 2017; Mahfouz & Salam, 2021). Conversely, a lack of experience with ICTs emerged as a significant barrier to online learning attitudes, aligning with previous findings (Muflih et al., 2020), emphasizing the importance of ICT skills training for effective online education adoption. Thus, the present study corroborates previous research, demonstrating the statistically significant impact of ICT experience (with smartphones and computers) on student attitudes toward online learning. Another key factor influencing the tourism students' attitudes towards online learning was limited internet bandwidth, echoing the observations of Tashkandi and Al-Jabri (2015).

Overall, my results confirm the significance of the frequency of access to ICTs and the Internet in shaping attitudes toward online learning. Thus, the study sheds light on the multifaceted dynamics shaping student attitudes toward online learning, emphasizing the pivotal role of communication proficiency, internet access, and ICT usage in influencing attitudes and experiences in online learning.

CONCLUSION

The Covid-19 pandemic exerted immense pressure on educational institutions to seek alternatives to traditional face-to-face instruction. While online learning had been previously used, EDE made its widespread adoption imperative across all educational fields. Due to the COVID-19 pandemic, students enrolled in face-to-face programs were forced to experience fully online learning through EDE, thereby gaining experience in both modes. The present study therefore assessed the attitudes of tourism students towards online learning during the EDE through a survey conducted at ten state universities in Türkiye. The findings revealed that while students acknowledged the importance of online learning, they did not prefer it, primarily due to communication challenges. Although it provided a crucial alternative to in-person classes during the pandemic, EDE posed challenges for students with limited internet access, infrequent ICT access, and little prior experience, resulting in more negative attitudes toward online education. These experiences can be explained in terms of EDE's unplanned infrastructure. The study thus makes an important theoretical contribution and has practical implications for implementing EDE in tourism education.

Theoretical Contributions

This study addressed a crucial gap in the emerging field of EDE by investigating tourism students' attitudes toward online learning and their predictors. Through a structured framework, the research uncovered various factors that influence students' attitudes towards online education. The key findings are that frequency of access to ICTs and the internet, prior experience with ICTs, and communication proficiency all significantly impact students' attitudes toward online learning. Notably, communication proficiency and internet access frequency were the primary determinants of online learning effectiveness. These findings align with prior research highlighting the detrimental effects of insufficient interaction and communication on online learning experiences (Sit et al., 2005; Tashkandi & Al-Jabri, 2015; Iqbal et al., 2022).

The findings also confirm the positive correlation between frequent access to ICTs, particularly the internet, and students' favourable attitudes toward online learning. That is, internet access is critical for facilitating meaningful engagement in online education. The findings also shed light on an often-overlooked aspect of EDE. While ICTs encompass various technologies, including internet-enabled devices, not all users have equal internet access due to constraints like limited data packages. That is, access to the internet is a more fundamental factor than access to ICTs. For example, the students living in rural regions may have ICTs, but lack internet access (Mushtaque et al., 2021). The present study confirmed this.

In summary, this research contributes significantly to the understanding of the factors influencing students' attitudes toward online learning in EDE. By highlighting the crucial role of internet access and communication

proficiency, it provides valuable insights for policymakers and educators striving to optimize online learning experiences during emergencies such as the Covid-19 pandemic.

Practical Implications

The study's findings have significant practical implications for institutions and educators engaged in EDE. Firstly, they demonstrate the opportunity presented by EDE to enhance institutions' distance education infrastructures. Despite the challenges encountered, EDE has improved students' access to ICTs and their adaptation to online learning processes. Secondly, given the nature of social sciences, it is expected that tourism students' attitudes toward online learning are influenced by communication difficulties (e.g., Karadağ & Yücel, 2020). Thus, there is a pressing need to design online learning platforms within tourism education that actively encourage student participation in the communication process, ultimately enhancing learning outcomes. Thirdly, considering that students access online courses through various ICT tools, it is imperative to design online learning platforms tailored to different devices, particularly smartphones, given their widespread use among students. This approach will ensure effective learning experiences across diverse technological landscapes. Lastly, the study highlights the disparities in students' access to ICTs and the Internet, with some students lacking access to computers and facing challenges in accessing the Internet consistently. While students may have access to ICTs, unequal internet access is a critical issue that cannot be overlooked. This underscores the importance of institutions addressing such disparities to ensure equitable access to online education opportunities.

Overall, the study's findings underscore the need for institutions to adapt and improve their approaches to online learning, particularly in emergency situations that require EDE. By addressing communication barriers, tailoring platforms to diverse ICTs tools, and ensuring equitable access to online resources, universities can enhance the efficacy and inclusivity of online learning experiences during emergencies.

LIMITATIONS AND FUTURE RESEARCH

The study acknowledges several limitations and suggests directions for future research. Firstly, the focus on EDE excludes students from universities with established distance education programs in their regular curriculum. Hence, the findings are specific to the transition from face-to-face to distance education prompted by the Covid-19 pandemic. Comparisons with previous studies examining pre-pandemic distance education may not be applicable. Secondly, the study's population of tourism students in Türkiye may limit the generalizability of its findings to students in other disciplines and countries. Attitudes toward EDE are likely to vary across different academic fields and cultural contexts. Thirdly, the reliance on online surveys restricted the study's reach to students with internet access, potentially biasing the sample. Excluding students without internet access from participating may have reduced the representativeness of the findings. Fourthly, only a limited set of predictor variables were explored; thereby, other determinants of student attitudes toward online learning may have been overlooked.

Future research could expand the scope of the present study to investigate additional factors influencing attitudes toward EDE, given that previous studies have identified numerous barriers that may vary across countries and contexts. Besides they can explore the impact of advanced technological tools like ChatGBT on distance education and student attitudes (Göktaş, 2023). Future researchers could address the limitations by comparing results across different countries and disciplines to comprehensively understand EDE experiences. Additionally, exploring the attitudes and experiences of tourism academics regarding EDE could provide valuable insights into broader trends and patterns in online learning during crises. Investigating EDE experiences across diverse contexts and crises can enrich our understanding of effective educational practices in times of disruption.

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