

ATTITUDES TOWARDS DISTANCE EDUCATION SERVICES AMID COVID-19 PANDEMIC: A RESEARCH ON UNIVERSITY STUDENTS IN THE FIELD OF HEALTH

Alişan BALTACI

Yüksek İhtisas University, Vocational School of Health Services, Ankara, Turkey
ORCID:0000-0002-3280-405X

İnci MERCAN ANNAK

Gazi University, Faculty of Health Sciences, Ankara, Turkey
ORCID:0000-0002-1327-8875

Emine ÖNER KARAVELİ

Yüksek İhtisas University, Vocational School of Health Services, Ankara, Turkey
ORCID:0000-0002-3845-9082

T. Şahan SÖKMENSÜER

Yüksek İhtisas University, Vocational School of Health Services, Ankara, Turkey
ORCID:0000-0003-0833-1624

Hakan AKAYDIN

Yüksek İhtisas University, Vocational School of Health Services, Ankara, Turkey
ORCID:0000-0002-0109-389X

Seyran BALKAŞ DEMİR

Yüksek İhtisas University, Vocational School of Health Services, Ankara, Turkey
ORCID:0000-0002-9754-683X

Abstract

As a result of the COVID-19 pandemic, the distance education services that higher education institutions provide and their teaching methods are currently among the widely discussed topics. In this study, university students' attitudes towards distance education services are evaluated quantitatively with a population of 979 students studying in the health field. The findings show that older students have a higher positive attitude towards distance education services in graduate education. However, it is lower for the students who define their success level as a medium compared to other students.

Keywords: COVID-19, Service Delivery, Attitude, Distance Learning, Higher Education

Introduction

COVID-19 is a virus that emerged in Wuhan, China, in December 2019, affecting the whole world, and spreading rapidly (WHO, 2020). On 30 January 2020, this pandemic was declared as an "International Public Health Emergency of Concern" (WHO, 2020). The first case in

Turkey was recorded on 11 March 2020. That has since galloped to 201,098 people as of 1 July 2020 (Turkish Ministry of Health, 2020).

In line with the recommendations by the World Health Organization and Centres for Disease Prevention and Control to reduce the pace of the COVID-19 outbreak; countries worldwide had to take a series of outbreak response measures, including improved surveillance, administrative and environmental controls, increased hygiene measures with masks and social distance, work practices to reduce mobility, and the use of appropriate personal protective equipment aiming to limit and reduce the cases coming to countries from abroad and the risk of community transmission (CDC, 2020; WHO, 2020; Lie et al., 2020). Turkish Ministry of Interior also implemented several precautions such as restricting intercity travel, enforcing wearing masks, adherence to social distancing rules, lockdown, shutting down fitness centers, cinemas, and theatres (Deniz and Kiraz, 2020). In addition, higher Educational Institutions and the Ministry of National Education suspended face-to-face education and started carrying out education activities via online platforms (YÖK, 2020c; MEB, 2020).

As a result of the COVID-19 process, distance education services, which have suddenly become the primary agenda in education, like teaching and learning tools using modern technology in which educators and students virtually gained popularity. Such distance education channels enable students to learn and achieve their educational goals online (O'Lawrence, 2006; Ilmiyah, 2020).

Based on the principle that education is a fundamental human right (UN, 1948), many educational institutions have shown rapid responses and implemented emergency distance education practices worldwide to compensate for interruptions caused by the pandemic (Bozkurt, 2020). During the pandemic, the world, as in many countries, had to opt for distance education channels to replace traditional education methods (Chang and Satako, 2020).

Understanding the attitudes of students studying in the healthcare field towards distance education (which is the most used education method during this pandemic period) is also gaining importance, considering that healthcare professionals are the foremost in the fight to keep people alive. In this study, university students' attitudes towards distance education services introduced by the COVID-19 pandemic as an alternative to face-to-face education in higher education are examined. In this context, our study aims to make recommendations for future practices by evaluating the effects of distance learning practices in Turkey for educators who are shareholders in this regard and for the researchers interested in researching this subject and providing the overall intelligibility of the phenomenon.

DISTANCE LEARNING SERVICES

Education is a social process that includes a selected and controlled program in order to advance one's own development at the most appropriate level (Tezcan, 1985:4). According to another definition, education is a process in which the society transfers its accumulated knowledge, skills, and values from generation to generation, raises people's expectations of their social, economic, and cultural life, their awareness of their environment, and equips them with the necessary knowledge and skills to cope with the problems they face in their daily lives (Ngaka et al., 2012:110).

Service is also an economic activity that is not physical, basically not owned, but benefits its recipients (Kottler 1991; Cited by: Koç E. 2017: 18). However, on the other hand, educational services are a perishable and intangible form of service that is central to students' lives and requires enormous motivation and intellectual skills to achieve students' goals and is also consumed at the time it is produced (Gruber et al., 2010:107).

In educational theory, debates continue between classical objectivism theorists and advocates of constructivist learning and teaching theories (Vermunt 1998:150). Duffy and Jonassen (1992) state that learning is not a passive and externally directed process, but an active, constructive and self-directed process in which the student creates the basis of knowledge by interpreting learning experiences (Cited by: Vermunt 1988:151). From this point of view, when considered within the scope of constructivist education theory, distance education services can be evaluated as a non-passive and constructive education service where the student can actively develop their knowledge base.

Being simultaneously an individual and a social being, humans' need for knowledge is as crucial as biological and physiological needs, and the human desire to know is possible with the phenomenon of education (Söyler, 2008). Furthermore, in our rapidly changing world, sufficient human resources are needed to keep up with the advancing science and technology, and training of the necessary human resources can become possible with education. This situation brings education to the fore as the most crucial factor in determining the future of societies; hence the most emphasized and discussed issue (Sönmez, 2020).

In this context, advancements in technology in recent years have developed and changed the provision of education services; using distance education technologies and individualized learning platforms have started serving as an alternative education service provision, with the opportunity to educate more people, provide equal opportunities in education, and provide lifelong learning opportunities (Sad et al., 2014).

Although the concept of distance education service was seen as impossible in the past years, it has turned into an indispensable and easily applicable training tool with the advancement of the global communication network. Distance education that started with mail sending in 1728 has been used for more than 250 years in the form of correspondence or studying at home. However, there has been significant growth and development in distance education with the development and widespread use of technological tools (Beatty, 2002).

There are also studies stating that distance education is one of the primary conduits of educational service delivery and that the traditional system is faced with the threat of new technology (Robyler, 1999). It is also known that the system has developed in most education levels such as primary education, high school, and university (İşman, 2008).

Distance education services are carried out by two different methods today. These are synchronous and asynchronous models. In the asynchronous model, previously produced course materials are sent and or delivered to the students in one way. On the other hand, the synchronous method is a model in which instant interaction, guidance, and counseling occurs between students and the instructor, and the questions asked could be answered instantly (Demir, 2014).

While planning distance education services, course objectives should be clearly determined, and appropriate models should be designed and created. In addition, preparing technological infrastructures for the education model should support education (Demir, 2014:205).

Despite the structural strengths that distance education services demonstrate, there are some weaknesses observed. These strengths and weaknesses are given in Table-1.

Table 1. Strengths and Weaknesses of Distance Learning (Cited by: O'Lawrence, 2005; Steen, 2008; Kupczynski et al., 2008; Ratliff, 2009; Monk, 2010; Midkiff and DaSilva, 2011; Demir, 2014; Kaya, 2002; Fedynich, 2013; Özköse et al., 2014; Oliveria et al., 2018)

Strengths

- Flexibility
- Ability to train very crowded groups simultaneously
- Standardization in the education service provided
- Lowering costs
- Individual and independent learning opportunity
- Student centricity
- Recording the given trainings and being able to use them in the future
- Opportunity to be individualized
- Being independent from the concept of

Weaknesses

- Lack of face-to-face relationship
- Failure to socialize
- Students who do not have the ability to learn alone may have difficulties
- Being insufficient in practical lessons
- Inadequacy in developing skills and attitudes
- Problems may arise in ensuring exam security in online exams
- Difficulties in communicating with the educator in classes with high participation
- Dependence on technological infrastructure

- time and space
- Quick feedback
- Participating in lectures and discussions through different channels
- The ability of timid students to attend the lesson easily
- Students who are not competent to use technology may have difficulties
- Loss of student's interest in the lesson due to problems arising from the technological infrastructure
- Students who are used to face-to-face education cannot overcome these habits

As suggestions to reduce the problems experienced due to structural weaknesses in distance education services, suggestions such as eliminating the infrastructure problems experienced in distance education, implementing other internet-based additional applications, implementing activities such as homework and projects instead of exams, activating accelerated repetition programs are proposed (Kürtüncü and Kurt, 2020).

Distance education is becoming an increasingly common and popular option as an innovative learning channel due to the rapid growth of the student population preferring this education option due to wars, international disputes, natural disasters, and pandemics such as COVID-19 (Bozkurt and Sharma, 2020). As such, it is stated that the rapid development of technology will help to understand which methods work and to overcome the problems by learning more through research and course development techniques together with closely examining the problems faced by students and lecturers in distance education (Galusha, 1998).

The role of an instructor is crucial in both remote and face-to-face environments. Therefore, one of the most fundamental ways considered to compensate for the aspects of distance learning that is open to development is to increase the knowledge, skills, and experience of distance learning instructors in evaluating students' work, motivating them, and guiding their learning process (Rostislav, 2018).

Various models and theories have been developed that examine individuals' behaviors of accepting and using technology based on their attitudes and intentions towards using technology (Menzi et al., 2012). Therefore, it is necessary to refer to the "Technology Acceptance Model" (TAM) developed by Davis in 1989 in order to be capable of assessing a wide range of users' behaviors in distance education and of providing a theoretical explanation of the determinants of computer acceptance (Figure 1). In this way, researchers can define why a system is unacceptable and assist with corrective measures. This model's components, which are essential in terms of its theoretical and experimental contributions to information technologies, are attitude, intention, perceived usefulness, and perceived ease of use. Behavior is shaped due to the effects of these components (Turan and Haşit, 2014; Menzi et al., 2012).

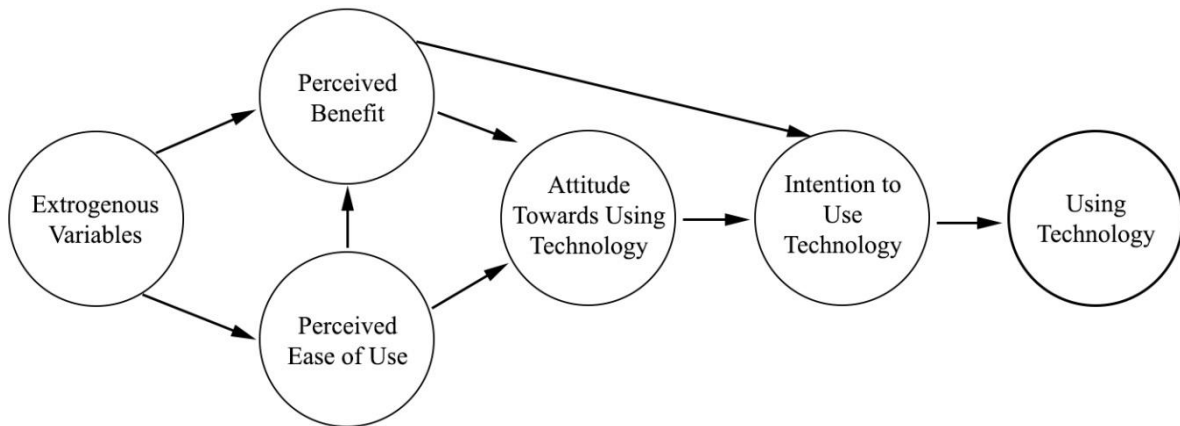


Figure 1 Technology Acceptance Model, Source: Davis, 1989, Cited by: Baltacı and Akaydın, 2020.

Perceived benefit, as one of the model's components, is the benefits that individuals will provide themselves in performing tasks and solving problems while using any technology. The perceived benefit can be defined as the level of belief that a person will benefit from using a particular product (King and He, 2006). Davis (1989) concluded that perceived benefit strongly affects the intention to use (Özer et al., 2010). The perceived ease of use, which is learning a particular technology without much effort, has a direct and consequential effect on attitude and perceived usefulness (Davis, 1989). On the other hand, the intention is an indication of the individual's demands and efforts to develop behavior. Thus, intention is the primary determinant of a person's behavior (Yılmaz and Tümtürk, 2015). An intention, which plays a vital role in individuals forming a particular behavior, is influenced by attitude (Özer et al., 2010).

Attitude, which has an essential place in learning, is a phenomenon acquired by learning, guides individuals' behaviors, and can cause bias in the decision-making process (Kenar and Balcı, 2013). The attitude associated with the sensory components affects learning in virtual environments where distance education is implemented. Students' attitudes towards distance education services are an essential aspect that determines the effectiveness of distance education and is directly related to the student's success in courses (Arslan and Bircan, 2019). Individuals' negative attitudes towards distance education may be due to the negativities in executing a poorly planned distance education system (Rasheed, 2007). Such negativities could result from technical failures experienced in online environments, defective materials used in the educational environment, sensory inadequacies of students, and students having difficulty communicating in case of any negativity (Fidan, 2016). Therefore, it should not be

forgotten that sensory factors such as attitude, self-efficacy, motivation, and anxiety would affect many factors, especially students' desire and interest in the course, and this will affect students' performance and ultimately their academic success (Kenar and Balcı, 2013). Considering these situations, it becomes necessary to uncover students' attitudes in the distance education system (Arslan and Bircan, 2019).

When the studies on distance education services are examined, students' attitudes are generally found to be positive or the same when compared to classical education. At the same time, it is stated that more positive results are obtained in distance education models when the success of students, teacher-student interactions, and participation in classes are examined in comparison to traditional education (Shutte, 1997; Elliot et al., 1999; Johnson et al., 2000; Tucker, 2000; Burns et al., 2001; Cooper, 2001; Sweeney and Ingram, 2001; Cathy et al., 2001; Frith and Kee, 2003; Hussain, 2003; Lindberg, 2004; Hannay and Newvine, 2006; Gujjar et al., 2007; Al-Fahad, 2009; Işık et al., 2010; Birişçi, 2013; Sanga, 2013; Öztaş and Kılıç, 2017).

Although the results of the studies show that distance education is not a good alternative for younger students who are generally studying on campus, who do not work actively and full-time (Hannay and Lewvine, 2006); however, it is considered that it would be appropriate to do more studies to increase the reliability of the information obtained on this subject. Therefore, it would be helpful to conduct a study to investigate social interaction in distance education lessons and understand whether students feel part of a community or alone during lessons (Tucker, 2001).

Within this context, although students prefer traditional classroom education, it was observed that they performed significantly better in questions related to the material presented in distance education. It is considered that students with less academic skills can benefit from self-learning and internet resources to improve in lessons that require accurate remembering of information (Marling, 2008). Students who have age factors and work more than thirty hours a week prefer distance education models more because of their time constraints and providing the necessary flexibility based on learning at their own pace, and traditional methods will be preferred in other groups (Stewart, 2010).

COVID-19 PANDEMIC AND DISTANCE EDUCATION SERVICES

In addition to the measures taken, the COVID-19 pandemic has led to changes in the educational lives of students in many countries (Bao, 2020; Sahu, 2020; UNESCO, 2020). According to UNESCO data, as of 17 April 2020, this affected a total of 1,724,657,870

students from pre-school to higher education, and these students represent 91.3% of the students worldwide (UNESCO, 2020).

The Higher Education Council in Turkey suspended education at universities for three weeks as of 16 March 2020 (YÖK, 2020a). Besides, as of 23 March 2020, the "YÖK Courses Platform" has been opened to students in all universities within the distance education framework (YÖK, 2020b). Further, as of 26.03.2020, it was announced that in accordance with the decision of the Executive Board of Higher Education, "Education in 2019-2020 Spring term will be continued only with distance education, open education and digital education opportunities and face-to-face education will be discontinued" (YÖK, 2020c).

Additionally, due to the increase in the number of cases and the possible risks that may arise from face-to-face education, it was decided on 11.05.2020 that "the final exams and other exams of this academic year will not be held face-to-face at universities, and alternative methods such as homework, projects, etc." (YÖK, 2020d). According to the one-month due diligence report of distance education in universities during the pandemic period conducted by YÖK; 64% of universities (n= 189) switched to the distance education system on 23 March 2020, 21.6% of them (n = 41) switched on 30 March 2020 and 13.2% of them (n = 25) switched on 6 April 2020. This report also concluded that most of the universities (99.2%) opened their theoretical courses via the distance education system (YÖK, 2020e). These decisions show that there is a rapid transition from face-to-face education to distance education in universities.

Distance education is not just an education model applied during the pandemic process. Its widespread use of technologies such as video conferencing, interactive and simultaneous audio, image and data transfer, the increase in the number of students in need of education, lack of time, and the need for lifelong learning in this century enable students to opt for distance education (İşman, 2003; O'Lawrence, 2006; Birişçi, 2013; Gunter et al., 2020).

In this context, if the Executive Board decides Higher Education to continue the distance education course system, it can be expected that students and lecturers will not approach this new system with skepticism. They should have overcome the initial adaptation period caused by the sudden transition to the distance education system. They will adapt to this new system, and the communication obstacle with the lecturers will fade with time (Buluk ve Eşitti, 2020). It was also stated that considering the following five facilitating lecturer activities for both the educational institution and the lecturers would make the process more efficient. These are:

1. Understanding the online process - understanding how to encourage group work, engage the user through online discussions, new ideas and experiments, and quizzes.

2. Technical skills - creating messages and conference opportunities to facilitate student interaction by monitoring the student.
3. Online communication skills - ability to communicate effectively with students using empathy, concise language, and deliver clear messages that encourage academic dialogue and personalize the online experience.
4. Content expertise – Instructor's command of the topic, readiness for questions, encouragement to ask questions, comment / ask questions that encourage lively discussion with reliable topic knowledge and experiences to share.
5. Personal traits - adapting to different teaching situations and demonstrations, making an effort to create a genuine excitement about online learning and keep it relevant (Muirhead, 2004).

Although distance education methods have been in use for a long time, it was the first time that they had to be used so intensely and widely. Undoubtedly, with the effect of developing and widespread technology, the readiness levels of students and instructors also play an essential role in this. Therefore, it has critical importance to reveal the role of the attitude component in understanding students' presence, their intention to use distance education methods, and their perspectives towards the system.

METHOD

The Aim and the scope of the Research

The literature review shows that a limited number of studies were found to explore students' attitudes towards distance education during the COVID-19 pandemic. This study is a descriptive study conducted to examine university students' attitudes towards distance education services during the COVID-19 pandemic.

Population and Sample

The population of the study consists of 3,353,456 university students conforming to these criteria in Turkey, according to YÖK 2019-2020 statistics (YÖK, 2020f). Since students studying in the field of health are a subset of the total number of students, the sample size that may be sufficient to describe the population may also include the subset. For this reason, the calculation was made on the total number. According to the calculations, it was decided that data should be collected from a sample of at least 385 people at a confidence interval of 5% (Hair, 2010). 979 students who agreed to participate in the research were taken into the research sample by convenience sampling method.

Hypotheses of the Research

Based on the literature reviewed, the following hypotheses were formed:

- H₁: Students' attitudes towards distance education services show a statistically significant difference according to their education level.
- H₂: Students' attitudes towards distance education services differ statistically significantly according to their ages.
- H₃: Students' attitudes towards distance education services differ statistically significantly according to their academic success.
- H₄: Students' attitudes towards distance education services show a statistically significant difference according to their gender.
- H₅: Students' attitudes towards distance education services differ statistically significantly according to whether they have received distance education services before.
- H₆: Students' attitudes towards distance education services differ statistically significantly depending on whether they have sufficient technological devices.
- H₇: Students' attitudes towards distance education services differ statistically significantly depending on whether they have sufficient internet infrastructure.
- H₈: Students' attitudes towards distance education services show a statistically significant difference according to whether they have problems in accessing distance education services or not.
- H₉: Students' attitudes towards distance education services differ statistically significantly depending on whether they are worried about the COVID-19 pandemic or not.
- H₁₀: Students' attitudes towards distance education services differ statistically significantly depending on whether they are willing to study during the COVID-19 pandemic.

Data Collection Tools

The data of the study were collected using the “Online Learning Attitude Scale” developed by Usta et al. (2016), the demographic variables section added to the data collection form by the researchers, and other questions determined based on the literature. The questionnaire consists of 13 multiple-choice questions that include the socio-demographic characteristics of the participants.

Usta et al., in 2016, to measure university students' attitudes towards online learning, developed the "Online Learning Attitude Scale". This scale is in 5-point Likert type and consists of 20 items and four dimensions. Scale sub-dimensions are named "General Acceptance, Individual Awareness, Usefulness and Application Effectiveness", respectively. The total explained variance rate of the scale is 63,821%. The internal consistency coefficient of the whole scale was found to be 0.90, showing that this scale is reliable. The minimum score obtained from the scale is "20" and the maximum score is "100". As the score obtained from the scale increases, the students' positive attitudes towards online learning also increase (Usta et al., 2016).

Research Application and Ethical Aspect

The research obtained ethics committee approval from the Ethics Committee of Yüksek İhtisas University (No: 2020/08/01) on 21.08.2020. In the survey application of the research, the participants were informed about the research and its purpose, and approval was obtained stating that they wanted to participate in the study. The data collection form was delivered to the participants as an online questionnaire between 01 September 2020 and 27 October 2020 by the researchers, and the questionnaire was applied. As a result, 979 students participated in the study voluntarily.

Evaluation of the Data

The data obtained were transferred to the computer with the SPSS 22.0 package program and analyzed. The results of the research were evaluated by frequency, Anova analysis, and t-test. In evaluating the findings, the expression value ranges by Hair (2010), and Nakip (2006) were taken as the basis.

Research Limitations

The limitations of the study include the students' indifference to academic studies during the administration of the survey form, the application of online surveys, the use of convenience sampling method, and the fact that the research was not funded by any person or institution.

FINDINGS

71.7% (n=702) of the students participating in the study are women and 28.3% (n=277) are men. 54.1% (n = 530) of these students are in the age range of 18-20, and 6.6% (n = 65) are in the age range of 27 and over. 55.0% of the participants (n = 538) consist of students studying

at associate degree level. 51.2% of the students (n = 501) evaluated themselves as academically successful. In addition, it was found that 92.0% (n = 901) of the students voluntarily chose the program / department they studied (Table 2).

Table 2. Distribution of students according to their socio-demographic characteristics

Demographic Characteristics		n	%
Gender	Woman	702	71,7
	Man	277	28,3
Age	Between 18-20	530	54,1
	Between 21-23	317	32,4
	Between 24-26	67	6,8
	27 and above	65	6,6
Educational Level	Associate Degree	538	55,0
	Bachelor's Degree	349	35,6
	Post-Graduate	92	9,4
Class	1	509	52,0
	2	266	27,2
	3	85	8,7
	4	88	9,0
	5	25	2,6
	6	6	,6
Course Success	Unsuccessful	7	,7
	Average	344	35,1
	Successful	501	51,2
	Very Successful	127	13,0
Income	Income less than expense	155	15,8
	Income equivalent to expense	625	63,8
	Income more than expense	199	20,3
The status of voluntarily choosing the program/department he/she studied	Yes	901	92,0
	No	78	8,0
Total		979	100,0

60.8% (n = 595) of the students participating in the study have not received distance education before; 89.1% (n = 872) have the technology required for distance education, while 87.9% (n = 861) have internet infrastructure. While 31.3% (n = 306) of the participants had problems in accessing distance education, 68.7% (n = 673) stated that they did not have any problems (Table 3).

Table 3. Information provided by students about distance education and the COVID-19 pandemic

Statements		n	%
I had distance education before	Yes	384	39,2
	No	595	60,8
I have the technological devices (computer, tablet etc.) required for distance education	Yes	872	89,1
	No	107	10,9
I have the internet infrastructure required for distance education	Yes	861	87,9
	No	118	12,1
I am having trouble accessing distance education	Yes	306	31,3
	No	673	68,7
COVID-19 pandemic worries me	Yes	787	80,4
	No	192	19,6
I have a desire to study during the COVID-19 pandemic	Yes	380	38,8
	No	599	61,2
Total		979	100,0

When observing the attitudes of age groups towards online learning in Table 4, it is realized that the average attitude towards distance education increases in all sub-dimensions as the age increases. According to the One-Way ANOVA analysis conducted to determine whether the dimensions of attitude towards online learning differ by age, it was found to be statistically significant ($p < 0.05$) at a 95% confidence interval (Nakip, 2006).

Table 4. Comparison of age groups with sub-dimensions of attitude towards online learning scale

Sub Dimensions of Attitude Scale	Age	n	Avg.	S	St. error	95% Confidence Interval		Min.	Max.	p
						Lower Limit	Upper Limit			
General Acceptance	Between 18-20	530	2,5852	,87276	,03791	2,5107	2,6596	1,00	5,00	,000
	Between 21-23	317	2,7409	,86644	,04866	2,6451	2,8366	1,00	4,86	
	Between 24-26	67	2,7569	,92883	,11347	2,5304	2,9835	1,14	5,00	
	27 and above	65	3,0396	,92772	,11507	2,8097	3,2694	1,00	4,57	
	Total	979	2,6775	,88554	,02830	2,6220	2,7331	1,00	5,00	
Individual Awareness	Between 18-20	530	2,1846	1,14811	,04987	2,0866	2,2826	1,00	5,00	,001
	Between 21-23	317	2,3980	1,22859	,06900	2,2622	2,5338	1,00	5,00	
	Between	67	2,4478	1,19455	,14594	2,1564	2,7391	1,00	5,00	

	24-26									
	27 and above	65	2,7308	1,12912	,14005	2,4510	3,0106	1,00	5,00	
	Total	979	2,3080	1,18512	,03788	2,2336	2,3823	1,00	5,00	
Usefulness	Between 18-20	530	2,7962	1,25978	,05472	2,6887	2,9037	1,00	5,00	,002
	Between 21-23	317	2,9274	1,28471	,07216	2,7855	3,0694	1,00	5,00	
	Between 24-26	67	3,0746	1,38148	,16877	2,7377	3,4116	1,00	5,00	
	27 and above	65	3,4000	1,30197	,16149	3,0774	3,7226	1,00	5,00	
	Total	979	2,8979	1,28694	,04113	2,8171	2,9786	1,00	5,00	
Application Effectiveness	Between 18-20	530	2,9726	1,00116	,04349	2,8872	3,0581	1,00	5,00	,024
	Between 21-23	317	3,1215	1,05122	,05904	3,0053	3,2376	1,00	5,00	
	Between 24-26	67	2,8694	1,07340	,13114	2,6076	3,1312	1,00	5,00	
	27 and above	65	3,2731	1,02862	,12758	3,0182	3,5280	1,00	5,00	
	Total	979	3,0337	1,02780	,03285	2,9692	3,0982	1,00	5,00	

The education level of the students participating in the study and their attitude towards distance education were found to be statistically significant ($p = 0.048$). Considering the online learning attitude scale score of the students, it is 54,185 out of 100 at the associate degree level, 51,606 at the undergraduate level, and 55,967 at the postgraduate level.

When the attitudes of the education level towards online learning are evaluated, it is noteworthy that the average of the scale sub-dimensions of the students studying at the undergraduate level is lower than the students studying at the associate and master's level. It can be observed from the table that the average of undergraduate students for the general admission sub-dimension is statistically lower than the associate and master's degree students significantly, and for the individual awareness sub-dimension, the average of the answers given by the undergraduate students is statistically lower than the associate degree students significantly ($p < 0.05$) (Table 5). According to the One-Way ANOVA analysis, which was made to determine whether the sub-dimensions of attitude towards online learning differ according to the education level, only the general acceptance and individual awareness sub-dimensions were found to be statistically significant ($p < 0.05$), and the mean of these two dimensions was accepted within the range with 95% (Table 5).

Table 5. Comparison of education level with sub-dimensions of attitude towards online learning scale

Sub Dimensions of Attitude Scale	Educational Level	n	Avg.	St. Deviation	St. Error	95% Confidence Interval		Min.	Max.	p
						Lower Limit	Upper Limit			
General Acceptance	Associate Degree	538	2,7347	,93619	,04036	2,6554	2,8140	1,00	5,00	,000
	Bachelor's Degree	349	2,5383	,79908	,04277	2,4541	2,6224	1,00	5,00	
	Post-Graduate	92	2,8711	,82598	,08611	2,7001	3,0422	1,00	4,57	
	Total	979	2,6775	,88554	,02830	2,6220	2,7331	1,00	5,00	
Individual Awareness	Associate Degree	538	2,3857	1,21461	,05237	2,2828	2,4886	1,00	5,00	,021
	Bachelor's Degree	349	2,1667	1,14198	,06113	2,0464	2,2869	1,00	5,00	
	Post-Graduate	92	2,3895	1,13262	,11808	2,1549	2,6241	1,00	5,00	
	Total	979	2,3080	1,18512	,03788	2,2336	2,3823	1,00	5,00	
Usefulness	-	-	-	-	-	-	-	-	-	,185
Application Effectiveness	-	-	-	-	-	-	-	-	-	,673

In Table 6, sub-dimensions of the academic achievement levels of the students' attitude towards online learning scale are compared. It is seen that the students who stated that they have moderate academic achievement have a lower attitude for the usefulness sub-dimension than the students who stated at the other success level. This result was considered statistically significant ($p < 0.05$).

Table 6. Comparison of success level with sub-dimensions of attitude towards online learning scale

Sub Dimensions of Attitude Scale	Success Level	n	Avg.	St. Deviation	St. Error	%95 Confidence Level		Min.	Max.	p
						Lower Limit	Upper Limit			
General Acceptance	-	-	-	-	-	-	-	-	-	,557
Individual Awareness	-	-	-	-	-	-	-	-	-	,188
Usefulness	Unsuccessful	7	3,2381	1,62975	,61599	1,7308	4,7454	1,00	5,00	,047
	Average	344	2,7684	1,24734	,06725	2,6361	2,9007	1,00	5,00	
	Successful	501	2,9261	1,30422	,05827	2,8117	3,0406	1,00	5,00	
	Very Successful	127	3,1181	1,28038	,11362	2,8933	3,3430	1,00	5,00	
	Total	979	2,8979	1,28694	,04113	2,8171	2,9786	1,00	5,00	
Application Effectiveness	-	-	-	-	-	-	-	-	-	,341

According to the results of the applied t-tests, the attitude towards distance education services does not show a significant difference according to gender (Table 7).

Table 7. Gender and attitude towards distance education services

Attitude Towards Distant Education	Sig.	Sig. (2 tailed)	Average		Significant Difference	State
			Yes	No		
Gender	0,540	0,290	2,651	2,721	None	-

The findings as a result of the t-tests applied over the answers given by the participants for the questions asked in the form of Yes-No questions regarding distance education and the pandemic process is shared in Table 8.

Table 8. Attitude towards the pandemic process, technical facilities, and distance education services

Attitude Towards Distant Education	Sig.	Sig. (2 tailed)	Average		Significant Difference	State
			Yes	No		
Whether he/she chose the department he/she studies willingly or not	0,349	0,638	2,675	2,623	None	-
Whether or not to receive distance education before	0,447	0,775	2,660	2,678	None	-
Whether or not to have the technological devices required for distance education	0,385	0,043	2,692	2,498	Exists	The attitudes of those who have technological devices for access to distance education are more positive than those who do not.
Whether or not to have the necessary internet infrastructure for distance education	0,758	0,001	2,707	2,401	Exists	The attitudes of those who have sufficient Internet infrastructure to access distance education are more positive than those who do not.
Whether or not to have problems in accessing distance education	0,049	0,000	2,466	2,764	Exists	Those who do not have problems in accessing distance education have more positive attitudes than those who have problems.
Whether or not to be worried about the COVID-19 process	0,014	0,011	2,712	2,502	Exists	The attitudes of those concerned about the COVID-19 process are more positive than those who do not.
Whether or not to have a desire to study during the COVID-19 process	0,001	0,000	2,933	2,504	Exists	Those who have a desire to study in the COVID-19 process have more positive attitudes towards distance education than those who do not have.

DISCUSSION AND CONCLUSIONS

The COVID-19 pandemic has affected education and training activities globally, and distance education in universities has become a mandatory alternative. Therefore, examining the students' attitudes towards distance education in the face of this sudden change will contribute to the improvement and development of this process. Additionally, determining students' attitudes towards distance education activities will ease adaptation to this process. Within the

scope of this study, the attitudes of university students studying in the field of health towards distance education activities during the COVID-19 pandemic were examined.

The online learning attitude of the students participating in the study varies according to the level of education they are enrolled in, whether associate, undergraduate, and graduate education. The attitude level of students studying at the undergraduate level was found to be lower than those studying in associate and postgraduate programs comparatively. In the study, which examined the intention of distance education students to use virtual classroom environments and their attitudes towards distance education, it is stated that the acceptance level of the students in the health associate degree program is high (Çakır and Arslan, 2020). However, it is thought that the reason for the differentiation of the attitude towards distance education at the associate, undergraduate, and graduate levels will give a more remarkable result with future studies.

According to the gender variable included in the study findings, students' attitude towards distance education services does not show a statistically significant difference between genders?. There are studies in the literature confirming this result (Yıldız, 2016; Arslan and Korkmaz, 2019; Çakır and Arslan, 2020).

It has been observed that students who have sufficient internet infrastructure and sufficient technological devices regarding the distance education process have a more positive attitude. In the study, in which the perspective of university students towards distance education was examined, students stated negative opinions about distance education due to their lack of technical and technological infrastructure (Doğan and Tatık, 2015). In a qualitative study examining students' perspectives within the scope of distance education during the COVID-19 pandemic process, it is stated that students' access to the Internet and limited availability of sufficient technological devices reduces the effectiveness of distance education (Ekiz, 2020). In accord with the results of this research, in the study examining the problems faced by the students of the nursing department during the distance education process, it is noted that students experience problems during the course follow-up due to the limited internet access and access to technological devices (Kürtünci and Kurt, 2020:71). Within the scope of the measures taken against the COVID-19 pandemic, free internet support was provided to university students by assisting them with "6 GB as a Support for Distance Education" (YÖK, 2020g). In this context, it will be beneficial for students to be informed by the instructors about this service provided as a support for educational activities and expand such services within the framework of the right to education, which is a fundamental right. In

addition, universities' providing technological equipment to students within the framework of their current resources will positively affect students' attitudes.

The COVID-19 pandemic process increases general anxiety and the anxiety of students studying in healthcare. Studies have explained the psychological effects of the pandemic process on students, such as anxiety, fear, and angst regarding future jobs (Wang et al., 2020) and limitation of interpersonal communication due to social distancing in place (Xiao, 2020; Kmietowicz et al., 2020).

In the study, it was found that students who have a desire to study during the COVID-19 pandemic show a more positive attitude towards distance education services compared to students who do not have this desire. Accordingly, it is recommended to follow up with students and increase the level of attitude towards distance education services with the support of academic staff by communicating with students periodically.

Based on the Technology Acceptance Model (Davis, 1989) and research findings, the following suggestions can be made in order to improve student attitudes towards distance education services in practice:

- It should be accurately conveyed to students that they have gained important information that they will benefit from in their careers and the flexibility of time and place that cannot be provided in the traditional method thanks to the distance education service they will receive,
- The distance education service models and systems to be built should be designed to be user-friendly, and if there are any deficiencies in the infrastructure regarding access to the system, these deficiencies should be eliminated,
- Continuous feedback should be obtained from students regarding the ease of use and benefit they perceive from distance education services, and necessary updates should be made accordingly.

The quantity and quality of studies on this subject will undoubtedly increase in the upcoming period. Therefore, it is recommended that such research should focus on the problems faced by students regarding distance education activities and increasing the effectiveness of distance education activities, with the idea that students will be more involved in distance education activities in parallel with the increase in technological development.

REFERENCES

1. Arslan F, Korkmaz Ö 2019. İlahiyat lisans tamamlama uzaktan eğitim öğrencilerinin etkileşim kaygıları ve uzaktan eğitime dönük tutumlar. Ahmet Keleşoğlu Eğitim Fakültesi Dergisi, 1(1): 12-25.
2. Arslan R & Bircan H 2019. Cumhuriyet Üniversitesi'nde uzaktan eğitimde sunulan derslere yönelik tutum ölçeğinin geliştirilmesi. Cumhuriyet Üniversitesi İktisadi ve İdari Bilimler Dergisi, 20(2), 409-427.
3. Baltacı A & Akaydın H 2020. COVID-19 pandemi sürecinin tüketicilerin gıda ürünlerini satın alma davranışları üzerindeki etkisi: Bir literatür taraması. Yüksek İhtisas Üniversitesi Sağlık Bilimleri Dergisi, (1): 57-64.
4. Bao, W 2020. COVID-19 and online teaching in highereducation: A case study of Peking University. Human Behavior and Emerging Technologies, 2(2), 113-115.
5. Birişçi S 2013. Video konferans tabanlı uzaktan eğitime ilişkin öğrenci tutumları ve görüşleri. Journal of Instructional Technologies & Teacher Education, 2(1).
6. Bozkurt A. 2020. Koronavirüs (COVID-19) pandemi süreci ve pandemi sonrası dünyada eğitime yönelik değerlendirmeler: Yeni normal ve yeni eğitim paradigması. Açıköğretim Uygulamaları ve Araştırmaları Dergisi, 6(3): 112-142
7. Bozkurt A & Sharma RC 2020. Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. Asian Journal of Distance Education. 15(1), 1-6.
8. Buluk B & Eşitti B 2020. Koronavirüs (COVID-19) sürecinde uzaktan eğitimin turizm lisans öğrencileri tarafından değerlendirilmesi. Journal of Awareness, , 5(3): 2020.
9. Çakır R. & Arslan F 2020. Uzaktan eğitim öğrencilerinin eş zamanlı sanal sınıf ortamlarını kullanım niyetleri ile uzaktan eğitime ilişkin tutumlarının incelenmesi. Uluslararası Türk Eğitim Bilimleri Dergisi, 8(15): 114-133.
10. Davis FD 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 319-340.
11. Demir E 2014. Uzaktan eğitime genel bir bakış. Dumlupınar Üniversitesi Sosyal Bilimler Dergisi Sayı 39, 203-212
12. Deniz PÖ & Kiraz EDE 2020. COVID-19 pandemi sürecinde şehir sağlığı çalışmaları. Journal of Biotechnology and Strategic Health Research, 4, 147-151.
13. Doğan S & Tatık RŞ 2015. Evaluation of distance education program in Marmara University According to the views of students. Route Educational and Social Science Journal, 2(1): 247-261.
14. Di Domenico L, Pullano G, Coletti P, Hens N, & Colizza, V 2020. Expected impact of school closure and telework to mitigate COVID-19 epidemic in France. <http://www.epicx-lab.com/covid-19.html>, Accessed: 10 May 2021
15. Ekiz AM 2020. Beden eğitimi ve spor yükseköğretim öğrencilerinin karantina dönemindeki uzaktan eğitim ile ilgili görüşleri (Nitel bir araştırma). Spor ve Rekreasyon Araştırmaları Dergisi, 2(1): 1-13.
16. Fedynich LV 2013. Teaching beyond the classroom walls: The pros and cons of cyberlearning. Journal of Instructional Pedagogies, 13: 1-7.
17. Fidan M 2016. Uzaktan eğitim öğrencilerinin uzaktan eğitime yönelik tutumları ve epistemolojik inançları. Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 31(3): 536-550.
18. Galusha JM 1998. Barriers to learning in distance education. U.S. Department of Education ERIC. Number: ED416377 Record Type: RIE
19. Gruber T, Fuß S, Voss R & Zikuda MG 2010. Examining student satisfaction with higher education services: Using a new measurement tool. International Journal of Public Sector Management, 23(2): 105-123
20. Gunter A, Raghuram P, Breines MR & Prinsloo, P 2020. Distance education as socio-material assemblage: Place, distribution, and aggregation. Population. Space and Place, 26(3), 2320.
21. Hannay M, & Newvine T 2006. Perceptions of distance learning: A comparison of online and traditional learning. MERLOT Journal of Online Learning and Teaching, 2(1): 1-11.
22. İlmiyah S. & Setiawan AR 2020. Students' worksheet for distance learning based on scientific literacy in the topic coronavirus disease 2019 (COVID-19). <https://thesiscommons.org/fpg4j/>, Accessed: 11 March 2021.
23. İşman A 2008. Uzaktan eğitim (4. Baskı) (s.2-3). Ankara: Pegem Akademi Yayıncılık.
24. Kenar İ & Balcı M 2013. Öğrencilerin derslerde teknoloji ürünü kullanımına yönelik tutumu: Bir ölçek geliştirme çalışması. Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 10(22): 249-262.
25. King WR & He J 2006. A meta-analysis of the technology acceptance model. Information & Management, 43(6), 740-755.
26. Kmietowicz Z. 2020. Rules on isolation rooms for suspected COVID-19 cases in GP Surgeries To Be Relaxed, The Bmj. 368 :m707 doi:10.1136/bmj.m707.
27. Kupczynski L, Brown SM & Davis R 2008. The impact of instructor and student interaction in internet-based courses. Journal of Instruction Delivery Systems, 22(1), http://www.itdl.org/Journal/Jan_08/article01.htm.
28. Kürtüncü M & Kurt A 2020. COVID-19 pandemisi döneminde hemşirelik öğrencilerinin uzaktan eğitim konusunda yaşadıkları sorunlar. Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi, 7(5): 66-77.
29. Lie SA, Wong SW & Wong LT 2020. practical considerations for performing regional anesthesia: Lessons learned from the COVID-19 pandemic. Canadian Journal of Anesthesia, 67: 885-892. <https://doi.org/10.1007/s12630-020-01637-0>
30. Malherbe R 2004. The constitutional framework for pursuing equal opportunities in education. Perspectives in Education, 22(1): 9-28.
31. Maring J, Costello E & Plack MM 2008. Student outcomes in a pathophysiology course based on mode of delivery: Distance versus traditional classroom learning. Journal of Physical Therapy Education, 22(1): 24-32.
32. Menzi N, Neziş Ö & ÇALIŞKAN E 2012. Mobil teknolojilerin eğitim amaçlı kullanımına yönelik akademisyen görüşlerinin teknoloji kabul modeli çerçevesinde incelenmesi. Ege Eğitim Dergisi, 13(1): 39-55.
33. Monk L 2010. The human touch. In J. W. Noll (Ed.), Taking sides: Clashing views on educational issues: 326 – 332.
34. Muirhead B 2004. Encouraging interaction in online classes. International Journal of Instructional Technology and Distance Learning, 1(6): 45-50.
35. Nakip M 2006. Pazarlama araştırmaları: Teknikler ve (SPSS Destekli) uygulamalar. Second Edition. Seçkin Yayınevi: Ankara.
36. Ngaka W, Openjuru G & Mazur RE 2012. Exploring formal and non-formal education practices for integrated and diverse learning environments in Uganda. The International Journal of Diversity in Organizations, Communities and Nations. 11(6): 109-121.
37. O'Lawrence H 2006. The influences of distance learning on adult learners. Techniques: Connecting Education and Careers, 81(5): 47-49.
38. Özer G, Özcan M & Aktaş S 2010. Muhasebecilerin bilgi teknolojisi kullanımının teknoloji kabul modeli (TKM) ile incelenmesi. Journal of Yasar University, 5(19): 3278-3293.
39. Rasheed F 2007. Factors impeding implementation of web-based distance learning. AACE Journal, 15(3): 315-338.

40. Ratliff V 2009. Are college students prepared for a technology-rich learning environment?. MERLOT Journal of Online Learning and Teaching, 5(4): 698-702
41. Rostislav F 2018. Problems of distance education, Department. ICTE Journal, 7(1): 14-23.
42. Sad SN, Göktaş Ö & Bayrak I 2014. A comparison of student views on web-based and face-to-face higher education. Turkish Online Journal of Distance Education-TOJDE, 15(2): 209-226.
43. Sahu P 2020. Closure of universities due to coronavirus disease 2019 (COVID-19): Impact on education and mental health of students and academic staff. Cureus, 2019(4): 4-9.
44. Schmetzke A 2001. Online distance education- "anytime, anywhere" but not for everyone. Information Technology and Disabilities, 7(2), 1-23.
45. Sönmez V 2019. Eğitim Bilimine Giriş. 15th Edition. Ankara: Anı Yayıncılık.
46. Söylü İ 2008. Eğitim hizmetleri bağlamında vakıf üniversitelerinin finansal ve vergisel sorunları. Maliye Dergisi, 154: 52-76.
47. Steen HL 2008. Effective e-learning design. MERLOT Journal of Online Learning and Teaching, 4(4): 526-532.
48. Stewart C, Bachman C & Johnson R 2010. Student characteristics and motivation orientation of online and traditional degree program student. MERLOT Journal of Online Learning and Teaching, 6(2): 367-379.
49. Tezcan M 1985. Eğitim Sosyolojisi. Ankara Üniversitesi Eğitim Bilimleri Fakültesi Yayınları No:150.
50. Tucker S 2001. Distance education: better, worse, or as good as traditional education?, Online Journal of Distance Learning Administration, 4(4). <https://www.westga.edu/~distance/ojdla/winter44/tucker44.html>. Accessed: 21 May 2021.
51. Turan B & Haşit G 2014. Teknoloji kabul modeli ve sınıf öğretmenleri üzerinde bir uygulama. Alanya İşletme Fakültesi Dergisi, 6(1): 109-119.
52. Vermun JD 1998. The regulation of constructive learning processes, British Journal of Educational Psychology, 68: 149-171.
53. Wang C, Horby PW, Hayden FG & Gao GF 2020. A novel coronavirus outbreak of global health concern, The Lancet, 395(10223): 470-473.
54. Xiao C. 2020. A novel approach of consultation on 2019 novel coronavirus (COVID-19)-related psychological and mental problems: Structured letter therapy. Psychiatry Investing, 17: 175-176.
55. Yıldız S 2016. Pedagojik formasyon eğitimi alan öğrencilerin uzaktan eğitime yönelik tutumları. Bolu Abant İzzet Baysal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 16(1): 301-329.
56. Yılmaz C 2015. İnternet üzerinden alışveriş niyetini etkileyen faktörlerin genişletilmiş teknoloji kabul modeli kullanarak incelenmesi ve bir model önerisi. Yönetim ve Ekonomi Dergisi, 22(2): 355-384.
57. Center for Disease Control and Prevention 2020. Coronavirus disease 2019. <https://www.cdc.gov/coronavirus/2019-ncov/index.html>. Accessed: 14 November 2020.
58. Chang GC & Satako Y 2020. How are countries addressing the COVID-19 challenges in education? A snapshot of policy measures. <https://www.gecv.ac.in/uploads/ssip/UNESCO%20snap%20shot%20for%20maintaining%20education.pdf>. Accessed: 15 November 2020.
59. MEB 2020. Bakan Selçuk, 23 Mart'ta Başlayacak Uzaktan Eğitime İlişkin Detayları Anlattı. <http://www.meb.gov.tr/bakan-selcuk-23-martta-baslayacak-uzaktan-egitime-iliskin-detaylari-anlattı/haber/20554/tr>. Accessed: 22 October 2020.
60. Sağlık Bakanlığı 2020. Türkiye'deki Güncel Durum, Türkiye Günlük Koronavirüs Tablosu. <https://COVID19.saglik.gov.tr/>. Accessed: 01 July 2020
61. UNESCO 2020. COVID-19 Educational disruption and response. <https://en.unesco.org/COVID19/educationresponse>. Accessed: 01 July 2020
62. United Nations General Assembly 1948. Universal Declaration of Human Rights. <https://www.un.org/en/universaldeclaration-human-rights/index.html>. Accessed: 11 November 2020.
63. World Health Organization 2020. Rolling updates on coronavirusdisease (COVID-19). <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>. Accessed: 19 June 2020.
64. YÖK 2020a. Koronavirüs (COVID-19) Bilgilendirme Notu: 1, 13.03.2020. <https://COVID19.yok.gov.tr/alinan-kararlar>. Accessed: 01 July 2020.
65. YÖK 2020b. "Yök Dersleri Platformu" Öğrencilerin Erişimine Açıldı, 23.03.2020. <https://COVID19.yok.gov.tr/alinan-kararlar>. Accessed: 01 July 2020.
66. YÖK 2020c. - Basın Açıklaması - Yükseköğretim Kurulu Başkanı Prof. Dr. M. A. Yekta Saraç, 26.03.2020. <https://COVID19.yok.gov.tr/alinan-kararlar>. Accessed: 01 July 2020.
67. YÖK 2020d. YÖK'ten Üniversitelerdeki Sınavların Yüz Yüze Gerçekleştirilmeyeceğine İlişkin Karar, 11.05.2020. <https://COVID19.yok.gov.tr/alinan-kararlar>. Accessed: 01 July 2020.
68. YÖK 2020e. YÖK'ten, Salgın Sürecinde Üniversitelerdeki Uzaktan Eğitimin Bir Aylık Durum Tespiti, 03.05.2020. <https://www.yok.gov.tr/Sayfalar/Haberler/2020/uzaktan-egitime-yonelik-degerlendirme.aspx?fbclid=IwAR2KzZwUqjE6InsGV1Ocbt28pWDimPhI6arTMYEbVss2YtjuMUOs7WBrNM>. Accessed: 01 July 2020.
69. YÖK 2020f. 2019-2020 Öğretim Yılı Yükseköğretim İstatistikleri. <https://istatistik.yok.gov.tr/>. Accessed: 02 July 2020.
- YÖK 2020g. Üniversite Öğrencilerine Ücretsiz 6 Gb'lık "Uzaktan Eğitime Destek" Kotası. <https://www.yok.gov.tr/Sayfalar/Haberler/2020/ogrencilere-egitime-destek-kotasi.aspx>. Accessed: 14 October 2020.