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Evaluation of Attitudes of Students Studying at State and Private Universities towards Distance Education

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Abstract

With compulsory distance education in Turkey during the pandemic, the positive and

negative effects of distance education have been investigated. In this study, the views of 256 students (162 males, 94 females) with a mean age of 21.5±3.457, studying in various departments in the primary field of sports sciences at state (n = 95) and foundation (n = 161) universities, on distance education and face-to-face education. It was taken with the Attitudes towards Distance Education Scale and compared statistically. In addition to frequency and distribution analysis, an Independent Sample T-Test was applied for statistical analysis, and the confidence interval was determined as 95% ($p < 0.05$). As a result of the research, it was seen that the students found face-to-face education more effective. It was noted that students who found face-to-face teaching more effective than other students agreed with the view that distance education is not engaging with a significant difference ($p < 0.05$). The same students also stated that they disagreed with the opinions that qualified results can be obtained from distance education applications. According to students ' opinions, this study provides educators with information about some of the missing points of distance education compared to face-to-face teaching. The minus points of distance education can be detailed with surveys to be made with more participants.

Keywords: Physical education, Distance education, COVID-19, Higher Education, Turkey

1. Introduction

Coronavirus (COVID-19), which emerged in Wuhan, China, is thought to be an epidemic disease affecting the upper respiratory tract (Al-Taweel et al., 2021; Liu et al., 2020; Moawad, 2020). With the statement made on February 11, 2020, the World Health Organization (WHO) announced that COVID-19 is an epidemic disease that can be transmitted through the air or direct contact in a short time in crowded environments (Lai et al., 2020). The direct transmission of COVID-19 through air and contact has caused thousands of people (Moawad, 2020) to get sick and die in a short time worldwide (Shahzad et al., 2021). The rapidly spreading COVID-19 has brought almost all states around the world to mandatory changes in sectors such as health, economy, and education. When we look at the education sector, nearly 120 countries have stopped face-to-face teaching, and the education process of many students has been directly affected by the epidemic (Shahzad et al., 2021). According to the statement made by the United Nations Educational, Scientific and Cultural Organization (UNESCO), it was emphasized that educational institutions were closed in 186 countries, and 74% of the total registered students were affected by COVID-19.

According to the statements made during the pandemic, maintaining social distance and wearing a mask is one of the most effective ways against the virus (Moawad, 2020). Schools and universities are among the environments where it is most difficult to maintain social distance. Upon the recommendations of the WHO, it has made it mandatory to close almost all schools and universities around the world during the fight against COVID-19. Martial law, quarantine, or travel bans implemented by states and local governments to maintain social distance also eliminate the face-to-face education opportunities of schools and universities. Upon experiencing similar education problems in all countries of the world, UNESCO asked countries to take necessary measures to reduce the harmful effects of closed schools and universities on society and students and announced that it would provide the support required

to ensure the continuity of education through distance education (Can, 2020). In Turkey, the Higher Education Council (YÖK) announced that schooling would be suspended at the beginning of the pandemic as of March 16. However, it has been reported that all Higher Education institutions in the country will switch to distance education due to the increasing course of the epidemic (YÖK, 2020).

Distance education is seen as one of the most popular learning environments of the information age (Şimşek, İskenderoğlu, & İskenderoğlu, 2010). When the definitions of distance education are examined in general, it has an important place in addressing the learning and teacher activities equally to a broad audience, covering the activities performed by the individual at their own learning pace, regardless of time and place. In its simplest definition, distance education is defined as a process in which there is a physical distance between the trainer and the receiver (Şimşek, İskenderoğlu, & İskenderoğlu, 2010). The distance education system (Erkut, 2020), which first entered education life with the "learning by letter" method in the 1840s, makes it possible for people worldwide to receive education with the development of technology today. In terms of this feature, it is seen that distance education, whose popularity has increased even more in this period, has an important place in terms of the continuity of education during the Pandemic process (Bataineh et al., 2021). Due to the social distance requirement and quarantines caused by the COVID-19 virus, distance education has spread rapidly in all education levels, including universities (Roldan & Reina, 2021). Considering the measures taken, only the transition from traditional education to distance education can ensure the continuity of the education process in a partially or entirely isolated manner during the pandemic process (Bojović et al., 2020). Countries with developed digital infrastructure realize the transition from traditional face-to-face education to distance education much faster. For example, the top 25 universities in the United States (USA) reported that they stopped face-to-face education and switched to distance education as soon as possible (Murphy, 2020). On the other hand, in countries such as Pakistan, which do not have sufficient digital infrastructure and lack access to fast and reliable internet connections, with the emergence of the COVID-19 pandemic, either no transition to distance education has been made, or students in limited groups have been able to benefit from distance education (Adnan & Anwar, 2020).

When the results obtained in the study conducted by Yağan (2021) to determine the attitudes of university students towards distance education are examined, it has been reported that the most important disadvantages of distance education are technical problems, problems in internet access, and visual and sound problems arising from the infrastructure of schools (Yağan, 2021). As a result of the research conducted by Can (2020), it is seen that the students in distance education have obtained results that support the problems they experience with internet access (Can, 2020). The research states that the students primarily benefit from written materials and course presentations in distance education due to the lack of or limited internet access. Still, the participation in virtual classroom participation and video applications where one can interact with the teacher is relatively low. Aktaş et al. (2020) examined the attitudes of sports science students towards distance education during the COVID-19 epidemic period (Aktaş et al., 2020). When the data obtained by the researchers

from 593 students at different universities were examined, the majority of the students (n = 140, 23.5% preferred, n = 453, 76.5% did not) stated that they would not have preferred distance education if it were not for the compulsory isolation days, and reported that their attitudes were low.

When the general courses of university departments that provide education such as physical education, sports sciences (Aktaş et al., 2020), fine arts, and health sciences (Medical education, etc.) are examined, it is seen that practice courses are intense. Even though the theoretical background of the students' techniques studying in these departments is severe, the application courses of the same intensity are very high, making the transition of these departments to distance education extremely difficult. It is a matter of curiosity how sports science students accustomed to face-to-face courses such as football, basketball, athletics, and swimming in the field of sports sciences take this and similar techniques through distance education only through theoretical and videos. The COVID-19 pandemic has affected the whole world in a short time, and countries have taken measures such as isolation and social distance as a precaution. Universities have negatively impacted the attitudes of students towards distance education due to the inclusion of universities in the distance education process without adequate planning for the departments above is considered. This study aims to examine the attitudes of students studying in sports sciences towards distance education, which is compulsory during the COVID-19 period. Thus, in the education of sports science students, it is aimed to illuminate the deficiencies and aspects of distance education methods that need to be developed.

2. Method

2.1 Working Group

256 Physical Education and Sports School students are included in the study. Demographic data about the participants are presented in Table 1 (Table 1). The study scale was sent to more than 500 students, of which 258 answered the scale. Since 2 students gave incomplete answers to the questions, the scales were not evaluated, and the study continued with the answers provided by 256 students.

Table 1. Demographical data of participants

	Count
N	256
Age	21.5±3.457
Gender	
Male	162
Female	94
University Type	
State University	95
Private University	161
Department	
Coaching Education	150
Management	67
Teaching	38
Recreation	1
Class	
First Class	113
Second Class	52
Third Class	52
Fourth Class and Above	39
Branch Type of Sports	
Team Sports	139
Individual Sports	117

2.2 Working Design

The participants' evaluations on distance education and face-to-face education were presented to the students by modifying the Attitude Scale Towards Distance Education (Ağır, 2007), which consists of 21 questions in a questionnaire. The answers received were compared statistically. The Attitude Scale towards Distance Education is a scale whose validity and various researchers have shown reliability. The answers to the survey questions were analyzed according to demographic data. Participants expressed their opinions by choosing one of the answers to the questions: "I strongly disagree (1), I do not agree (2), I am undecided (3), I agree (4), I completely agree (5)". The answers given were converted into points (1-5), and the average opinion was determined for each question. The answers are

given to 14 questions about distance education being more effective, and 7 questions about it being ineffective were evaluated separately, and the overall result was calculated mathematically. In the evaluation of the answers given, the average of the participation scores of all students in the statement in the questionnaire was taken, and this average value was indexed to a number value between 1-5 according to the mathematical rounding method (for example; 2.87 = 3 (Neutral); 2.39 = 2 (Disagree), etc.) the general opinion of the students against the statement was determined.

The research hypothesis examines whether sports science students find distance education (H0) or face-to-face education (H1) more effective. Further examination in the study, "Face-to-face education is more useful than distance education," was determined as the most critical statement in the survey. The participation rates of the students who gave the information "I agree and above (> 4)" were compared statistically compared to the students who gave less (< 4) points.

In addition, it was analyzed whether there was a significant difference between the answers given by the participants who were below and above the average age of the participant group (21.5).

2.3 Statistical Analysis

Frequency and distribution analyzes of the participants were made. The answers given by those above and below the average age of the participant group were compared with the Independent Sample T-Test. In addition, the responses provided by the students who found face-to-face education more effective and other students to all other questions were also analyzed using the Independent Sample T-Test. The confidence interval was 95% ($p < 0.05$) for statistical studies, and the IBM Statistics 25 program was used for analysis.

3. Results

When the opinions of the 256 students who answered the scale are examined as a whole, the mean score of agreeing with the statements that distance education is a practical education method is 2.87 (I am undecided). The mean score of agreeing with the ideas that distance education is ineffective or that face-to-face education is more compelling is 3.59 (I agree) was found as. The average scores given to all questions and the answers according to the average are presented in Table 2 (Table 2).

Table 2. Questions expressing that distance education is effective and is ineffective/face-to-face is effective and average answers of students. In the evaluation of the answers given, the average of the participation scores of all students in the statement in the questionnaire was taken, and this average value was indexed to a number value between 1-5 according to the mathematical rounding method (for example; 2.87 = 3 (Neutral); 2.39 = 2 (Disagree), etc.) the general opinion of the students against the statement was determined

Question	Points (n = 256)	σ	Average Answer
Questions expressing that distance education is effective			
The success processes of individuals can follow more easily with distance education.	2.39	1.242	Disagree
The absence of time and place restrictions in distance education ensures the continuity of education.	3.04	1.405	Neutral
Distance education provides flexibility to repeat as many times as desired.	3.57	1.303	Agree
Distance education provides effective learning through audio, visual designs, and technology.	3.00	1.333	Neutral
Distance education provides equality of opportunity.	2.59	1.287	Neutral
Getting the results of measurement and evaluation immediately in distance education increases student motivation.	3.22	1.284	Agree
In distance education, access to information is fast due to the sharing of knowledge on the internet.	3.61	1.153	Agree
Learning with distance education is more enjoyable than learning with face-to-face education.	2.48	1.444	Disagree
Learning with distance education is more effective than learning face-to-face.	2.27	1.322	Disagree
Distance education provides quality results.	2.69	1.245	Neutral
Distance education develops self-evaluation skills.	2.91	1.209	Neutral
Distance education has enormous power.	2.69	1.300	Neutral
Distance education is effective in solving many problems that arise in face-to-face education practices.	2.75	1.218	Neutral
With distance education, everyone can have education at their level.	2.93	1.312	Neutral
Average Answer	2.87	1.290	Neutral
Questions expressing that distance education is ineffective/face-to-face is effective.			
Face-to-face education is more beneficial than distance education.	4.13	1.137	Agree
In distance education, controlling the education environment does not occur healthily.	3.68	1.143	Agree
Distance learning is anti-social.	3.46	1.177	Agree
Distance education is not attractive.	3.28	1.374	Agree
Face-to-face interaction is necessary for education to take place in the best way possible.	4.00	1.177	Agree
The results of distance education applications are not effective.	3.28	1.224	Agree
Distance education applications do not healthily take place in our country.	3.32	1.374	Agree
Average Answer	3.59	1.229	Agree

Note. σ = Standard deviation.

"Face-to-face education is more useful than distance education." It was determined that the students highly agreed with this statement with an average of 4.13 points. It was determined that there was a significant difference in 12 questions between the answers given to the other questions by 201 students who gave their opinions with the options I agree or totally agree (> 4) compared to 55 students who gave less points (< 4), and these differences are presented in Table 3 (Table 3).

Table 3. "Face-to-face education is more useful than distance education." It was determined that the students highly agreed with this statement with an average of 4.13 points. It was determined that there was a significant difference in 12 questions between the answers given to the other questions by 201 students who gave their opinions with the options I agree or totally agree (> 4) compared to 55 students who gave less points (< 4)

Question	Points	N	Points	σ	$\sigma\bar{x}$	p
The absence of time and place restrictions in distance education ensures the continuity of education.	≥ 4	201	2.75	1.348	0.095	0.001 ***
	< 4	55	4.09	1.076	0.145	
Distance education provides flexibility to repeat as many times as desired.	≥ 4	201	3.32	1.299	0.092	0.001 ***
	< 4	55	4.47	0.836	0.113	
Distance education provides effective learning through audio, visual designs, and technology.	≥ 4	201	2.72	1.274	0.090	0.001 ***
	< 4	55	4.02	1.009	0.136	
In distance education, controlling the education environment does not occur healthily.	≥ 4	201	4.02	0.902	0.064	0.012 *
	< 4	55	2.44	1.067	0.144	
Distance education provides equality of opportunity.	≥ 4	201	2.41	1.278	0.090	0.003 **
	< 4	55	3.22	1.117	0.151	
In distance education, access to information is fast due to the sharing of knowledge on the internet.	≥ 4	201	3.46	1.140	0.080	0.026 *
	< 4	55	4.16	1.032	0.139	
Distance education is not attractive.	≥ 4	201	3.65	1.232	0.087	0.001 ***
	< 4	55	1.93	0.959	0.129	
Distance education provides quality results.	≥ 4	201	2.40	1.141	0.080	0.036 *
	< 4	55	3.75	1.022	0.138	
Face-to-face interaction is necessary for education to take place in the best way possible.	≥ 4	201	4.32	0.943	0.067	0.049 *
	< 4	55	2.84	1.214	0.164	
Distance education develops self-evaluation skills.	≥ 4	201	2.67	1.163	0.082	0.002 **
	< 4	55	3.78	0.956	0.129	
Distance education applications do not healthily take place in our country.	≥ 4	201	3.65	1.265	0.089	0.004 **
	< 4	55	2.11	1.048	0.141	
With distance education, everyone can have education at their level.	≥ 4	201	2.67	1.270	0.090	0.001 ***
	< 4	55	3.89	0.975	0.131	

Note. N = Count; σ = Standard deviation; $\sigma\bar{x}$ = Standard error; *p < 0.05; **p < 0.01; ***p < 0.001.

As a result of the analysis made according to the average age (21.5), the participants whose age is younger than the average stated that “Distance education provides the flexibility to repeat as much as desired.” while they were undecided (3.48±1.365) against the expression, it was determined that the older ones agreed more with the term (3.72±1.171) ($p = 0.003058$). Students whose age is younger than the average “Access to information is fast because their knowledge in distance education is shared on the internet.” The mean of participation in the statement (3.74±1.001) was found to be significantly higher than those with larger ones (3.54±1.224) ($p = 0.003040$).

4. Discussion

When the answers given by the sports science students to the scale were analyzed, it was observed that they found face-to-face education more effective, and the H1 hypothesis was correct. It was determined that the students mostly disagreed or were undecided about the statements that distance education was more effective, and they collectively agreed with the reports that distance education was ineffective (Table 2). Notably, the participation score for the statement that distance education is more effective than face-to-face education is the lowest (2.27), strengthening the conclusion that sports science students do not find distance education effective enough. According to the answers given, the reasons for the ineffectiveness of distance education include 1) that individuals’ success processes cannot be followed more easily with distance education than face-to-face education, 2) equality of opportunity cannot be provided in distance education, 3) distance education is not more enjoyable than face-to-face education, 4) it is not possible to obtain qualified results from distance education. 5) distance education cannot develop self-skills, 6) distance education does not have great power, 7) distance education will not solve the problems that arise in formal education practices, and 8) not everyone can receive education at their level in distance education. Similarly, when the problems experienced in distance education are investigated, it is seen that the countries do not have sufficient internet infrastructure, and accordingly, students have access problems (Adnan & Anwar, 2020; Can, 2020). However, image and sound problems arising from the infrastructure of schools reduce the success of distance education (Yağan, 2021). In a more extensive study, Bilgiç and Tüzün (2020) gathered the problems experienced in distance education under nine main headings (Bilgiç & Tuzun, 2020). Our research shows that the problems encountered by sports science students regarding distance education are mostly related to technical problems and communication problems. Similarly, in a study conducted in Morocco, most professors and students who answered the questionnaire did not find distance education interesting, stated that they would prefer face-to-face education, and it was revealed that the most needed issue in distance education is technical support (El Firdoussi et al., 2020). Similarly, internet problems were identified as the biggest problem in Ukraine (Nenko, Kybalna, & Snisarenko, 2020) and Jordan (Bataineh et al., 2021).

Considering the solutions to the technical problems, which are the biggest problems of both students and trainers in distance education, explaining the system in which the training will be given to the trainers and students in detail before the start of the movement can eliminate the lack of information about the system. In addition, it may be beneficial to conduct

comprehensive and simulated trial training before the start of the training season to predict the errors that may arise from the system and detect unforeseen mistakes. In this way, system-related problems that instructors and students may experience can be determined and corrected in advance. Beyond this, universities must choose the internet system they will use for distance education by researching the techniques that will give the best performance following the infrastructure of the country. For example, before the start of distance education in Ukraine, while students believed that digital media and communication technologies would not be sufficient and efficient for distance education, at the end of the distance education during the quarantine period, 60% of the students were completely satisfied, and 33% stated that they were satisfied at a sufficient level (Nenko, Kybalna, & Snisarenko, 2020). The fact that 93% of the students are satisfied shows that distance education can result in the necessary corrections. In the same research, it has been determined that Google Classroom, e-mail, and Viber are primarily used as the education environment, the daily duration of distance education is mostly between 2-4 hours, e-books are mainly utilized on distance education, and the instructors prepare for lessons between 2-6 hours. In Serbia, the most satisfactory distance education environments were determined as Google Classroom, Google Meet, and Zoom, while the most inefficient ones were determined as Viber and WhatsApp (Krstić & Radulović, 2021).

While distance education creates various difficulties for students in all fields as they have not encountered this level before, it may have become more challenging and tedious for sports science students who have more practical courses such as football and basketball. It is not satisfactory for sports science students to see these lessons via remote videos on a football or basketball field in a university environment. Similar to our research, Aktaş et al. (2020) conveyed that sports science students think that social life has come to an end temporarily with the restriction brought by the pandemic (Aktaş et al., 2020). At the same time, in parallel with our research, most students stated that they would prefer face-to-face education if there were no quarantine period (Aktaş et al., 2020). It has been determined that students studying computer engineering and industrial technology engineering also find face-to-face education more productive. Still, the attitudes of those who have experience in distance education in the past are different (Şimşek, İskenderoğlu, & İskenderoğlu, 2010). In Iraq, the attitudes of dentistry students towards distance education, which is another department where practical courses are more and more important, were examined, and it was noted that less than 50% of the participants were satisfied with distance education (Al-Taweel et al., 2021).

In our study, sports science students stated that face-to-face education is more beneficial than distance education with a high participation rate (4.13). Similarly, there is a high level of agreement with the statement that face-to-face education is necessary for the best education (4.00). Among the reasons why students find face-to-face education more effective, 1) the educational environment cannot be controlled healthily in distance education, 2) learning with distance education reduces socialization compared to face-to-face education, 3) distance education is not engaging, 4) the results of distance education applications are not effective, and 5) that distance education cannot be implemented effectively in our country (Table 2). In addition, it has been shown that perceptions and prejudices against distance education affect

students' online learning readiness (Wei & Chou, 2020). This indicates that students' prejudices against distance education reduce the benefit and enthusiasm from education. The students can be made to love distance education by warming them to distance education by doing various activities before the education period starts. It can also be beneficial for instructors to make lessons more engaging. However, a study conducted in Slovakia found that trainers experienced a decrease in morale and emotionality during the pandemic period, and their positive emotions decreased. In the study, it was noted that distance education is closely related to emotions and personality, and the willingness of trainers towards distance education decreased (Mikušková & Verešová, 2020). This shows that the emotional pressures experienced by the pandemic period affect both sides (student and instructor) in distance education. Further reduces the efficiency of distance education.

In our study, it was observed that the participants (n = 201) who gave a score of 4 or more to the statement that face-to-face education is more beneficial than distance education also agreed with a high rate (4.13) that face-to-face interaction is required for the instruction to be carried out in the best possible way (Table 3). These students think that although there are no time and place restrictions in distance education, this situation will not ensure the continuity of education. However, it is seen that students who state that face-to-face teaching is more effective agree with the statements that distance education provides the flexibility to repeat as much as desired (3.32) and that access to information will be faster due to the sharing of their knowledge on the internet in distance education (3.46). This situation reveals some advantages of distance education. It is understood that students like the freedom to repeat the lessons as much as they want, and they want to reach information quickly. Significantly younger participants see freedom of repetition and rapid access to information as essential advantages.

Bilgiç and Tüzün (2020) point out that essential targets were set during the design phase of distance education programs, and the pieces of training were started with great enthusiasm (Bilgiç & Tuzun, 2020). Still, the result was not successful at the desired level. At the same time, it is emphasized that it should be considered very carefully when preparing distance education programs (Bilgiç & Tuzun, 2020). These results show that to increase the effectiveness of distance education, 1) instructors should prepare for the lessons in detail, 2) the daily course durations should not be too long, 3) the web education system should be chosen with the highest efficiency, 4) electronic resources and books should be used. When these are applied, it is seen that distance education can give more successful results.

This study, which analyzes the attitudes of sports science students studying in Turkey towards distance education, revealed that students are not satisfied enough with distance education, that distance education cannot be effective, and they will prefer face-to-face teaching. Studies conducted in different countries yield similar results, showing that distance education systems should be developed. There is a need for research and development in this field to carry out distance education more healthily and increase students' perception and motivation if similar quarantine-like situations are experienced in the future, as is the case of the coronavirus pandemic and long-term quarantine periods. Especially in the departments where applied courses such as sports sciences are in the majority, students and trainers can enjoy the

distance lessons more by using the opportunities of technology. The tasks can be more efficient by using advanced technologies such as virtual gyms, games, augmented reality, artificial intelligence, and virtual glasses. Countries must develop infrastructure for a more prominent, faster, and more efficient use of the internet, which has become the essential communication tool of our time.

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