Investigation of the Relationship Between the Attitudes of Physical Education and Sports Teacher Candidates towards E-Learning in Sports and Academic Success in the Distance Education Process

Dr. Tugba MUTLU BOZKURT
Faculty Member, Bitlis Eren University, School of Physical Education and Sports, Bitlis / Turkey,
ORCID: 0000-0001-8663-2188

Dr. Ramazan ERDOGAN
Faculty Member, Bitlis Eren University, School of Physical Education and Sports, Bitlis / Turkey,
ORCID: 0000-0001-5337-942X
Corresponding author's: Ramazan Erdogan, e-mail: ramaznerdogan@hotmail.com

ABSTRACT
The aim of this research is to examine the relationship between the attitudes of university students receiving sports education towards e-learning in sports and academic success. The research group consisted of 227 (89 female, 138 male) volunteer students studying at the School of Physical Education and Sports of Bitlis Eren University with the hybrid (blended) learning method. As a data collection tool The "Personal Information Form" and the "Attitude Scale Towards E-Learning in Sports" form, which determines students' attitudes towards e-learning, were used. Analysis of the data was analyzed using SPSS statistical package program. Significance was accepted as $p<0.05$. It has been determined that 37.9% of the participants of the research group prefer e-learning, 32.6% face-to-face, and 29.5% prefer blended learning. While it was determined that the majority of the research group had good or very good e-learning success for theoretical courses, the majority of the participants were determined to have low and medium e-learning success for practical courses. In addition, it is seen that 52% of the participants prefer visual, 26.9% tactile and 21.1% auditory learning. It was determined that there was no statistically significant difference between the gender variable of the research group and the attitude scale towards e-learning in sports ($p>0.05$). While it was determined that there was a statistically significant difference between the students' preferred learning method, theoretical and practical courses, and the e-learning total score average in sports ($p<0.05$), the type of sports practiced, the perceived income level and type of learning and the type of learning in sports. It was determined that there was no statistically significant difference between the e-learning total score averages ($p>0.05$). In addition, according to the results of the correlation analysis; It has been determined that there is a statistically significant low level positive correlation between e-learning in sports and academic achievement. As a result; It has been seen that the hybrid teaching method applied in the distance education process has a positive effect on the academic achievement of the students.
Keywords: e-learning, student, academic success

INTRODUCTION
Along with the developments in technology, there are also developments in the field of education. It is seen that distance education, which is shown as an alternative to traditional education, has a complementary nature and shows very successful results. In this process, there has been a rapid transition from printed sources to electronic sources in teaching activities. Therefore, the e-learning process cannot be considered separately from the distance education process (Gulbahar, 2021).

As a result of technology and information age, the need to obtain more information and to produce information is increasing over time. In our age, the production of knowledge and its rapid and perfect dissemination are provided by education and technological components. In line with technological developments, the demand for education has increased and the e-learning system has become more widespread, increasing the reasons for preference (Bach et al, 2006).

The rapid spread and fatality of the New Coronavirus (COVID-19) disease, which started the distance education process, has affected the field of education as well as the social, health and economic areas of life. The increase in the size of the virus and the increase in its deadly danger made it necessary to take precautions in education, made it necessary for many teachers and students to take a break from higher education, and a transition from formal education to distance education was made (Zhang et al. 2020). During distance education with the novel Coronavirus (COVID-19) disease, changes in technology have also been reflected in the teaching materials of educators, increasing diversity and providing many new and creative ways to use the rapid changes that occur

effectively.

Changes and developments in technology have also been reflected in the field of physical education and sports and have created diversity for the application area with a narrow usage area (Mutlu Bozkurt, 2021). Thus, a new aspect and a new dimension have been added to the latest developments in sports games, with motion-sensitive video games in which sportive movements are included in physical activity activities, technological devices that monitor body movement or reaction, called active games or exergaming (Thompson, 2008). However, thanks to technology, access to information can be facilitated (National Association for Sport and Physical Education, 2007) and it has been tried to support the academic success of students with the e-learning environment in sports.

It is used to explore the abilities of students such as the diversity of the learning environment with e-learning, the ability to learn appropriately (individual differences) and unlimited repetition opportunities, and the ability to enjoy healthy mental, physical and emotional activity. In line with this information, it is aimed to determine the effect on some variables by examining the relationship between the attitudes of university students who receive sports education towards e-learning in sports and their academic success.

METHOD
The research group consisted of 227 (89 female, 138 male) volunteer students with an average age of 23.25±4.24 who were educated in Bitlis Eren University School of Physical Education and Sports in the 2021-2022 academic year with the hybrid learning method. While the scale was preferred as the data collection tool, descriptive survey method was used to determine "Attitudes towards E-Learning in Sports and Academic Achievement Levels". The scale used in the research consists of two parts, in the first part the "Personal Information Form" containing the demographic information of the students, in the second part; The "Attitude Scale Towards E-Learning in Sports" developed by Mutlu Bozkurt and Tamer (2020) was used to determine the academic success of students with e-learning in sports.

"Attitude Scale Towards E-Learning in Sports"
Ranking and score limits of a five-point Likert-type questionnaire;
  Rating:
Strongly Disagree: 1.00–1.79,
Disagree: 1.80–2.59,
I'm Between Two: 2.60–3.39,
Agree: 3.40–4.19,
Strongly Agree: 4.20–5.00
Point limits:
0–29 Very inadequate,
30–49 Insufficient
50–69 Medium
70–89-Good
It was rated as "90–100 Very Good".

The validity and reliability study of the scale was carried out by the researchers, and the KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) value was determined as .937, Bartlett Test 2051,413 and (Cronbach Alpha) α= 0.92.

Analysis of Data
The data were analyzed using the SPSS statistical program. The demographic information of the research group, their attitudes towards e-learning in sports and their academic achievement levels are summarized as descriptive statistics with percentage, frequency, arithmetic mean and standard deviation statistics. After it was determined that the data showed normal distribution, Independent Samples t and One-Way ANOVA tests were applied for in-group comparisons. Correlation analysis was used to determine the direction of the relationship between the variables, and regression analysis was conducted to determine the effect of the attitude towards e-learning in sports on academic achievement. Significance was accepted as $p < 0.05$.

FINDINGS

Table 1. Demographic Information of the Research Group

		Frequency	Percent (%)
Gender	Female	89	39,2
	Male	138	60,8
Type of Sport Done	Team sports	76	33,5
	Individual sports	93	41
	Both of them	58	25,6
Perceived Income Level	Low	61	26,9
	Middle	108	47,6
	Good	58	25,6
Preferred Learning Method	e-learning	86	37,9
	Face to face	74	32,6
	Blended	67	29,5
E-learning for theoretical lessons	Low	46	20,3
	Middle	62	27,3
	Good	67	29,5
	Very good	52	22,9
E-learning for app builds	Low	108	47,6
	Middle	41	18,1
	Good	47	20,7
	Very good	31	13,7
Learning type	Tactile	61	26,9
	Image	118	52
	İşitsel	48	21,1

When Table 1 is examined, the research group; 39.2% were women, 60.8% were men, 41% were individual sports and 33.5% were team sports, 47.6% were moderate, 26.9% were low. and 25.6% of them have a good income level. It has been determined that 37.9% of the participants prefer e-learning, 32.6% face-to-face, and 29.5% prefer blended learning. While it was determined that the majority of the research group had good or very good e-learning success for theoretical courses, the majority of the participants were determined to have low and medium e-learning success for practical courses. In addition, it is seen that 52% of the participants prefer visual, 26.9% tactile and 21.1% auditory learning.

Table 2. T-Test Analysis of the Research Group by Gender Variable

		E-Learning in Sports		t	p
		$\overline{X}$	Ss		
Gender	Female	35,71	13,03	,378	0,70
	Male	35,04	12,79		

p<0,05

When Table 2 was evaluated, it was determined that there was no statistically significant difference between the gender variable of the research group and the attitude scale towards e-learning in sports (p>0.05).

Table 3. Analysis of Variance by Demographic Information of the Research Group

Variable		E-Learning in Sports		F	Sig
		$\overline{X}$	Ss		
Type of Sport Done	Team sports	33,39	14,04	1,478	0,23
	Individual sports	36,29	12,94		
	Both of them	36,79	11,08		
Perceived Income Level	Low	35,29	15,27	2,402	0,09
	Middle	33,90	11,73		
	Good	38,48	11,99		
Preferred Learning Method	E-learning	35,03	13,50	4,560	0,01*
	Face to face	32,64	12,03		
	Blended	39,07	12,41		
E-Learning for Theoretical Courses	Low	26,84	12,08	16,634	0,00*
	Middle	32,35	10,09		
	Good	40,34	10,09		
	Very good	40,44	14,89		
E-Learning for Application Courses	Low	31,19	11,48	8,697	0,00*
	Middle	38,17	10,80		
	Good	41,00	13,14		
	Very good	38,25	15,32		
Learning Type	Tactile	34,22	12,82	,837	0,43
	Image	35,27	13,55		
	Auditory	37,41	11,37		

p<0,05

When Table 3 is evaluated, it is determined that there is a statistically significant difference between the preferred learning method of the research group, e-learning success for theoretical and practical courses and the total score average of e-learning in sports (p<0.05). It was determined that there was no statistically significant difference between learning type and e-learning in sports total score average (p>0.05).

Table 4. Pearson Correlation Analysis between Research Group's Attitudes towards E-Learning in Sports and Academic Achievement

		Academic success
In sports e-learning	**r**	,137*
	p	0,03
	N	227

p<0,05*

When Table 4 is evaluated, according to the results of the correlation analysis; It was determined that there was a low level of statistically significant relationship in the positive direction. These results can be interpreted that as individuals' attitudes towards e-learning in sports increase, their academic achievement levels will also increase. r = .137, p<0.05.

Table 5. Regression Analysis for the Prediction of Attitudes and Academic Achievement Levels towards E-Learning in Sports

Independent Variable	Dependent Variable	B	Std. Error	β	t	p	R	R^2	F	*P*
In sports e-learning	**Academic success**	3,202	,183	,137	17,480	0,00	,137	,019	4,325	*0,01*

When Table 5 is examined, when the results of the regression analysis are examined, it has been determined that the attitude score towards e-learning in sports significantly predicts the level of academic achievement. However, it is seen that the e-learning attitude score in sports explains 2% of the variance (R=137; R2=.019).

CONCLUSIONS

In this study, it is aimed to examine the relationship between the attitudes of physical education and sports teacher candidates towards e-learning in sports and academic success in the distance education process. In the 2021-2022 academic year, 227 (89 female, 138 male) students with an average age of 23.25±4.24, who were educated with the hybrid learning method in Bitlis Eren University School of Physical Education and Sports, type of sport, perceived income. level, preferred teaching method, academic success level in theoretical and applied courses and learning type variables.

As a result of the first analysis and research, it is understood that the academic success of the students in the distance education process does not differ significantly according to age groups, gender, perceived income status and the type of sports (individual and team sports). Similar to this study, Jost, Rude-Parkins and Githens (2012) and Kor et al. (2016) stated in their study that gender and age variables had no effect on academic achievement. Despite this, Amro, Mundy and Kupczynski (2015), Dayıoglu and Turut-Asik (2004); Clavier (2013) and Kupczynski, et al. (2014) found that female students are more successful than male students in higher education. In addition, in the study conducted by Tosun (2016), it was concluded that academic success increases with increasing age. In another study, it was determined that the gender variable had a significant effect on the attitude scores towards distance education (Yenilmez, Balbag, & Turgut, 2017).

Secondly, as a result of the analysis and research, it has been determined that there is a significant difference between the students' attitudes towards e-learning in sports during the distance education process and the preferred learning method variable of their academic success. It is seen that students who prefer the blended (hybrid) learning method are more successful. The fact that students can choose the learning method according to the course content in the distance education process affects their academic success positively. As a result of what Solak and Cakır (2014) did, it was concluded that the students who received education with distance learning were more successful than the students who received face-to-face education, but this success was not at a significant level. In his study, Cetin (2018) examined the attitudes of maritime high school students towards e-learning and it was determined that there was a significant difference between the learning method and the attitude towards e-learning. Contrary to the research findings, as a learning method, the highest score was stated as e-learning method, and the lowest score was stated as blended education method. Similar results were obtained in studies parallel to this study by Haznedar and Baran (2012) and Aga, İngec and Sahingoz (2014), Simsek, İskenderoğlu and İskenderoglu (2010).

Finally, as a result of the analysis and research, the e-learning success levels of the students in the theoretical and applied courses in the distance education process were found to be statistically significant. In the distance education process, e-learning and academic success levels in sports were found to be very good for both course content. In other words, it can be said that the academic success of the students in the theoretical and practical courses in the e-learning environment is high. In the distance education process, Siron, Wibowo & Narmatya (2020) investigated the effect of the psychological effects of the pandemic on students' e-Learning attitudes in Indonesia, and it is stated that the ease of using e-learning and theoretically increasing the student's experience as well as their success. Unlike the results of the research, no significance was found in the comparisons of Faisal et al. (2020) on education, engineering, health, technology faculties and Wang & Zhao (2020) on art and other faculty students (p>,05). When evaluating these results, it is thought that the strengths or weaknesses of the e-learning systems used by the students in the distance education process, the distribution in the number of theoretical or applied courses in their curriculum may be effective and create different results.

As a conclusion; According to the results of the correlation analysis between the attitudes towards e-learning in sports and academic achievement levels; It was determined that there was a low level of statistically significant relationship in the positive direction. These results can be interpreted that as individuals' attitudes towards e-learning in sports increase, their academic achievement levels will also increase. As a result of the study conducted by Etlioglu and Tekin (2020), it was determined that there is a significant relationship between students' attitudes towards e-learning and academic success, and this result supports the research findings. Mohamed and Waheed (2011) stated that when the components of attitudes as cognitive, emotional and behavioral information are positive, there is a significant increase in students' performance and academic success in the learning process. Tekinarslan (2008) reached similar results in his study with 804 students and stated that the higher the grade point average, the higher their attitudes towards e-learning. Mutlu Bozkurt (2021) found a significant difference between the attitudes towards e-learning in sports and academic success of students studying at the faculty of sports sciences, and it is stated that there is a strong relationship between students' attitudes and academic success.

REFERENCES

Ağa, S., İngeç, Ş. K. & Şahingöz, M. (2014). Meslek lisesi öğrencilerinin e-öğrenmeye yönelik tutumlarının farklı değişkenlerden açısından incelenmesi. Research in Education and Teaching, 3(4), 2146-9499.

Amro, H. J., Mundy, M. A. & Kupczynski, L. (2015). The effects of age and gender on student achievement in face-to face and online college algebra classes. Research in Higher Education Journal, 27, 1-22.

Bach, S., Haynes, P., & Smith, J. L. (2006). Online learning and teaching in higher education. McGraw-Hill Education (UK).

Clavier, C. W., 2013. Academic Performance of First-Year Students at a College of Pharmacy in East Tennessee: Models for Prediction, Tennessee: Copyright ProQuest, UMI Dissertations Publishing.

Çetin, U. (2018). Denizcilik lisesi öğrencilerinin e-öğrenmeye yönelik tutumlarının farklı değişkenler açısından incelenmesi. Yüksek Lisans Tezi, Bahçeşehir Üniversitesi Eğitim Bilimleri Enstitüsü, İstanbul

Dayıoğlu, M. & Türüt-Aşık, S., 2004. Gender Differences in Academic Performance in a Large Public University in Turkey. Economic Research Center, pp. 1-35.

Etlioğlu, M., & Tekin, M. (2020). Elektronik öğrenmede öğrenci tutum ve akademik başarı arasındaki ilişkide öğrenci merak ve kaygısının aracılık rolü. Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, (43), 34-48.

Faisal, R. A., Jobe, M. C., Ahmed, O., and Sharker, T. (2020) Mental Health Status, Anxiety and Depression Levels of Bangladeshi University Students During the COVID-19 Pandemic. International Journal of Mental Health and Addiction, DOI : https://doi.org/10.1007/s11469- 020-00458-y

Gülbahar, Y. (2021). E-öğrenme. Pegem Akademi Yayıncılık. 6. Baskı, Ankara.

Haznedar, Ö. & Baran, B. (2012). Eğitim fakültesi öğrencileri için e-öğrenmeye yönelik genel bir tutum ölçeği geliştirme çalışması. Eğitim Teknolojisi Kuram ve Uygulama, 2(2), 42-59.

Jost, B., Rude-Parkins, C., & Githens, P. R. (2012). Academic performance, age, gender, and ethnicity in online courses delivered by two-year colleges. Community College Journal of Research and Practice, 36(9), 656-669.

Kör, H., Erbay, H., Demir, E., & Akmeşe, Ö. F. (2016). A study on the factors affecting the academic performance of distance education students and formal students. Hitit University Journal of Social Sciences Institute, 9(2), 1029-1050.

Kupczynski, L., Brown, M., Holland, G. & Uriegas, B., 2014. The Relationship between Gender and Academic Success Online. Journal of Educators Online, 11(1), pp. 1-14.

Mutlu Bozkurt, T. (2021). Spor bilimleri fakültesinde eğitim alan öğrencilerin sporda e-öğrenmeye yönelik tutumları, akademik erteleme davranışları ve duygusal zeka özelliğinin incelenmesi. Doktora Tezi, Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü, Ankara.

National Association for Sport and Physical Education (2007). Initial guidelines for online physical education: A

position paper from the National Association for Sport and Physical Education. Reston, VA: Author.

Sıron, Y., Wıbowo, A., Narmadıtya, B. S. (2020). Factors Affecting the Adaption of E-Learning in Indonesia : Lesson from COVID-19. Journal of Technology and Science Education. 2020 – 10 (2) p.282-295. DOI : https://doi.org/10.3926/jotse.1025

Solak, E., & Cakir, R. (2014). Face to face or e-learning in Turkish EFL context. Turkish Online Journal of Distance Education, 15(3), 37-49.

Şimşek, A., İskenderoğlu, T. & İskenderoğlu, M. (2010). Investigating preservice computer teachers' attitudes towards distance education. Procedia Social and Behavioral Sciences, 9, 324-328.

Tekinarslan, E. (2008). Attitudes of Turkish distance learners toward internet-based learning: an investigation depending on demographical characteristics. Turkish Online Journal of Distance Education-TOJDE, 9(1), 67-84.

Thompson, K. (2008). Word watch. Popular Science, 272(1), 2.

Tosun, M. (2016). Açık öğretim öğrencilerinin akademik başarı düzeylerinin karşılaştırılması [Comparison of open education students' academic achievement levels] (Yayımlanmamış yüksek lisans tezi). İstanbul Üniversitesi, Fen Bilimleri Enstitüsü, İstanbul.

Wang, C. ve Zhao, H. (2020). The Impact of COVID-19 on Anxiety in Chinese University Students. Frontiers in Psychology. DOI : https://doi.org/10.3389/fpsyg.2020.01168.

Yenilmez, K., Balbağ, M. Z., &Turgut, M. (2017). Öğretmen adaylarının uzaktan eğitime yönelik tutumlarının bazı değişkenler açısından incelenmesi [Investigation of prospective teachers' perceptions on distance education with respect to certain variables]. Erzincan Üniversitesi Eğitim Fakültesi Dergisi, 19(2), 91-107. DOI: 10.17556/erziefd.305902.

Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 outbreak..