



## INVESTIGATION OF THE LEISURE ATTITUDES AND DIGITAL LITERACY LEVELS OF THE PHYSICAL EDUCATION AND SPORTS DEPARTMENT STUDENTS

“Beden Eğitimi ve Spor Bölümü Öğrencilerinin Boş Zaman Tutumları ve Dijital Okuryazarlık Düzeylerinin İncelenmesi”

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### ORIGINAL ARTICLE

#### History

Received: 10 March 2023

Accepted: 7 April 2023

Published: 30 April 2023

DOI: <http://dx.doi.org/10.29228/anatoliars.38>

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#### Acknowledgement

\*This study was presented verbally in the 4 th International Academic Sports Studies Congress, Trabzon, Türkiye. (7 – 9 October 2020/ Trabzon/Turkey)

#### Funding

This study received no specific financial support.

#### Competing Interests

The authors declare that they have no conflict of interests.

#### Transparency

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study was reported; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained.

#### Ethical

This study follows all ethical practices during writing.

#### Citation

Oztas, M., Ekinci, H.B., Malli, A.Y., & Akcan, İ.O. (2023). Investigation of the Leisure Attitudes and Digital Literacy Levels of the Physical Education and Sports Department Students, Anatolia Sport Research, 4(1): 25-33.

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### ABSTRACT

**Aim:** The purpose of this study is to determine the leisure time attitude and digital literacy levels of students studying in the physical education and sports department during and to reveal the relationship between leisure attitude and digital literacy.

**Material and Method:** In the research, survey method, one of the quantitative research models, was used. The research group consists of 350 randomly selected students studying in the field of physical education and sports. 347 students of who completed the personal information form and scales completely participated in the study. In order to determine the demographic characteristics of the students who are participating in the study the Personal information form; to determine their leisure attitude “Leisure Attitude Scale” and to determine the level of digital literacy “The Digital Literacy Scale” were used. In the comparisons of pairwise groups t test, in multi group comparisons One-Way ANOVA test and in the analysis of the data the descriptive statistical techniques were used. In addition, to determine the relationship between leisure attitudes and digital literacy levels, the multiple linear regression analysis was conducted with Pearson correlation analysis.

**Results:** According to the findings, a significant relationship was found between the digital literacy levels of the participants and the variables of Internet subscription and having a personal computer. On the other hand, it was found that there was a moderately positive relationship between the digital literacy levels of the participants and their cognitive, affective and behavioral leisure attitudes, and as a result of multiple linear regression analysis it was confirmed that the leisure attitude factor predicted the digital literacy level by 32%.

**Conclusions:** As a result, it has been understood that the leisure attitudes and digital literacy levels of the students studying in the physical education and sports department are high and differ according to various variables, and the leisure attitude is the predictor of the digital literacy level.

**Keywords:** Digital Literacy, Leisure Attitude, Physical Education,

### ÖZET

**Amaç:** Bu çalışmanın amacı, beden eğitimi ve spor bölümünde öğrenim gören öğrencilerin boş zaman tutumları ile dijital okuryazarlık düzeylerini belirlemek ve boş zaman tutumu ile dijital okuryazarlık arasındaki ilişkiyi ortaya koymaktır.

**Materyal ve Metod:** Araştırmada nicel araştırma modellerinden ilişkisel tarama yöntemi kullanılmıştır. Araştırma grubu beden eğitimi ve spor alanında rastgele seçilen 350 öğrenciden oluşmaktadır. Araştırmaya kişisel bilgi formu ve ölçeklerini eksiksiz dolduran 347 öğrenci katılmıştır. Çalışmaya katılan öğrencilerin demografik özelliklerini belirlemek için Kişisel bilgi formu; boş zaman tutumlarını belirlemek için “Boş Zaman Tutum Ölçeği” ve dijital okuryazarlık düzeyini belirlemek için “Dijital Okuryazarlık Ölçeği” kullanılmıştır. Veriler öncelikle normallik analizine tabi tutularak, tanımlayıcı istatistiksel teknikler, bağımsız iki grup karşılaştırmalarında t testi, çok gruplu karşılaştırmalarda Tek Yönlü ANOVA testi kullanılmıştır. Ayrıca boş zaman tutumları ile dijital okuryazarlık düzeyleri arasındaki ilişkiyi belirlemek için Pearson korelasyon analizi ile çoklu doğrusal regresyon analizi yapılmıştır.

**Bulgular:** Katılımcıların dijital okuryazarlık düzeyleri ile internet aboneliği ve kişisel bilgisayara sahip olma değişkenleri arasında anlamlı fark bulunmuştur. Öte yandan, katılımcıların dijital okuryazarlık düzeyleri ile bilişsel, duyuşsal ve davranışsal boş zaman tutumları arasında orta düzeyde olumlu bir ilişki olduğu tespit edilmiş ve çoklu doğrusal regresyon analizi sonucunda boş zaman tutum faktörü dijital okuryazarlık seviyesinin % 32’ sini yordadığı görülmüştür.

**Sonuç:** Sonuç olarak, beden eğitimi ve spor bölümünde okuyan öğrencilerin boş zaman tutumlarının ve dijital okuryazarlık düzeylerinin yüksek olduğu ve çeşitli değişkenlere göre farklılık gösterdiği ve boş zaman tutumunun dijital okuryazarlık düzeyinin yordayıcısı olduğu anlaşılmıştır.

**Anahtar Kelimeler:** Beden Eğitimi, Boş Zaman Tutumu, Dijital Okuryazarlık

## INTRODUCTION

According to the Chaos Theory, an event that may occur anywhere in the world can become the trigger of a different event. Accordingly, negative situations may come off as a result of the event of being affected by each other. As stated in Chaos Theory, a butterfly flapping its wings in Asia may cause a storm all over the world (Lorenz, 1972). In this context, the new type of corona virus disease (COVID-19) emerged in Wuhan, China at the end of December 2019 and has progressed to become a storm. With this progress, the authorities in Wuhan took unprecedented steps on January 23, 2020 to minimize the risk of disease transmission, took measures such as curfews in cities in different regions (Chahrour et al., 2020; Xiang et al., 2020). With the passage of time, the increase in global anxiety and the number of cases has emerged as a scenario that is likely to affect not only China but also other countries, as well as their health, socio-cultural, political, sportive, economic and the whole world in many dimensions that we cannot foresee yet. One of the most important scenarios we come across is undoubtedly in the field of education, and this has taken the perspective of education to a different dimension and forced it to seek new solutions (Bozkurt and Sharma, 2020). According to the latest data of the United Nations, the education of 770 million individuals who have been educated around the world has been interrupted due to the reasons caused by the epidemic and has been negatively affected by many events such as school closures (Zhong, 2020).

Due to this epidemic, in order to eliminate the unjust treatment, continuing education through distance education has been initiated. Contrary to what is known, the way of distance education is not a very new method, but Composition Lessons were given by letter in 1728 in the world (Arat and Bakan, 2020). In Turkey learning with letter technics has begun in 1953 (Türkyaybir, 2020). It started to spread with the opening of Anadolu University (Arat and Bakan, 2020, Kırık, 2014). With the increasement of the internet speed and the advancement of technology, the development of mobile devices has increased the possibility of providing digital education with different devices. Currently, in many countries of the world, education is offered to students in digital media and digital contents (Bothwell and Mckie, 2020; Lau, Yang and Dasgupta, 2020; Winter, 2020).

Unlike face-to-face learning in formal education, digital education is expressed as being done in a digital environment in terms of content and functioning. It is implemented in an electronic environment by writing, with audio and video, and online with computers, tablets and mobile devices (Url-1). In addition, it is thought that the developments in the digital environment also affect the level of digital literacy. It is thought that more effective usage of social media, students attending to their classes in digital environment, shopping in digital environment, and commercial activities can also affect the digital literacy level of the individual. These rapidly spreading technological developments also affect the learning environment. It is stated that the digital literacy levels of students studying in the digital environment should also adapt to these technological developments (Murray, 2013; Techataweewan and Prasertsin, 2018).

During the pandemic process, it is thought that various precautions such as cancellation of sports organizations all over the world, cancellation of the social activities such as cafes, cinemas and theaters, and the isolation process affect the leisure attitudes of physical education and sports department students as well as all individuals. Research shows us that physical activity has a positive effect on the psychology of individuals (Seçer and Çakmak Yıldızhan, 2020). For this reason, students of the physical education and sports departments, who frequently engage in physical activities due to their departments, had to spend time at home during the pandemic process. Because of this situation lack of physical activity caused them to have some psychological problems (Kim and Su, 2020). In addition, the digitalization of sports, such as electronic education, has become a curiosity. The e-sports federation, which is established in 2018, has become widespread during the pandemic process and accelerated the digitalization process of sports (Türkmen and Özşarı, 2020). In addition, the organization of Taekwondo, Poomse European and World championships can be shown as an example of the digitalization of sports (Url-2).

Based on the studies, it is obvious that the pandemic process negatively affects life and changes the routine of individuals. Both education, sports and other sectors are negatively affected by this process. As people continue their lives, it is thought that some concepts emerge more and gain

importance. Digital life is becoming more important and digital literacy is increasing at this rate. People are more interacting with digital life by spending their free time at their homes.

Based on this information, the purpose of the study; is to investigate the leisure attitudes and digital literacy levels of students who are studying in physical education and sports departments during the Covid 19 pandemic process.

## MATERIAL AND METHOD

This research was conducted with the ethics committee approval of Erzincan Binali Yıldırım University “Human Research Ethics Committee” (Decision number: 2020.06.06 / 12).

### Research Model

This research was conducted by survey method, one of the quantitative research models. This method is a research model that aims to determine the level and / or the differentiation between two or more variables (Karasar, 2020).

### Research Group

*Table 1. Demographic Characteristics of the Participants*

Variable	Group	n	%
Gender	Female	131	37.8
	Male	216	62.2
Having a Personal Computer	Yes	206	59.4
	No	141	40.6
Internet Subscription Status	Yes	237	68.3
	No	110	31.7
Department	Physical Education and Sports Teaching	233	67.1
	Sports Management	86	24.8
	Coaching	28	8.1
Grade	1	95	27.4
	2	78	22.5
	3	99	28.5
	4	75	21.6
<b>Total</b>		<b>347</b>	<b>100</b>

The research group was formed with a total of 350 participants from randomly selected schools studying in the physical education and sports departments of universities in the spring semester of the 2019-2020 academic year. Simple random sampling method; is a sampling method in which the participants are completely randomized from the main mass and the probability of choosing each unit in the universe is equal (Tuna, 2016). 347 students who completely completed the personal information form and scales participated into the study. 37.8% of these participants are female, 62.2% are male, 59.4% have their own computer, 40.6% do not have their own computer, 68.3% are internet subscribers, 31.7% do not have internet subscription, 67.1% are physical education and sports teaching, 24.8% sports management, 8.1% coaching department students and 27.4% of them are 1st grade, 22.5% of them are 2nd grade, 28.5% of them are 3rd grade and 21.6% of them are 4th grade students.

### Data Collection Tools

Personal Information Form: The information form which was created in order to learn the personal information of the students participating in the study was used. In the form, the participants

were asked about their personal information, their departments, classes, gender, having a personal computer, and being an internet subscriber.

**Leisure Attitude Scale:** In order to determine the participants attitudes towards leisure time, the Leisure Attitude Scale (LAS) which was developed by Raghep and Beard (1982) and adapted into Turkish by Akgül and Gürbüz (2011) was used. The scale consists of 36 items and it is prepared in 5-point Likert type and its Likert options are ranked and scored as “1 = Strongly Disagree”, “2 = Disagree”, “3 = Neutral”, “4 = Agree”, “5 = Strongly Agree”.

Each scale which are defined as ‘Cognitive’, ‘Affective’ and ‘Behavioral’ dimensions, consists of 12 items and 3 sub-dimensions. In the adaptation of the scale into Turkish, Cronbachs Alpha reliability coefficients was calculated as 0.97 for the whole scale, 0.81 for the cognitive dimension, 0.92 for the Affective dimension and 0.91 for the Behavioral dimension. In this study, the scale was calculated as 0.97 for the whole, 0.94 for the cognitive dimension, 0.95 for the Affective dimension, and 0.92 for the Behavioral dimension.

**Digital Literacy Scale:** In order to determine the digital literacy levels of the participants, the Digital Literacy Scale which is developed by Ng (2012) and adapted to Turkish by Üstündağ, et al. (2017) was used. This one-factor measuring tool consists of 10 items and a Likert-type 5-point scale was used (1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree). The Cronbach Alpha value for the reliability of the scale was calculated as 0.86 by Üstündağ et al. (2017). In this study it was calculated as 0.91.

### Statistical Analysis

In this study, in order to describe the demographic characteristics of the participants and their distribution to the groups, descriptive analyzes were made. Then, by determining the distribution characteristics and reviewing the suitability of parametric tests, independent sample t test was used in the comparison of two independent groups, ANOVA, Pearson correlation analysis and multiple linear regression analysis were used to determine the relationship between variables. The results obtained are shown in Table 2.

**Table 2.** Average, Standard Deviation, Minimum, Maximum, Skewness and Kurtosis Values of Scale Scores

Factor	N	Min	Max.	$\bar{X}$	SD	Skewness	Kurtosis
Cognitive Attitude	347	12	60	48.3	.532	-1.47	2.66
Affective Attitude	347	12	60	47.4	.548	-1.21	1.76
Behavioral Attitude	347	12	60	43.4	.524	-.783	.868
Digital literacy total	347	10	50	35.7	.457	-.719	.605

Descriptive statistics of the scale scores of the participants are given in Table 2. Kurtosis and skewness values of the scales were found to be within the range of -3, +3 (Kalaycı, 2018). It states that the data has a normal distribution. However, by examining the normal distribution graphs of each score type, it was concluded that the normal distribution was achieved, and it was understood that it was appropriate to perform parametric tests for the data.

## RESULTS

**Table 3.** Comparison of Leisure Attitude and Digital Literacy Levels According to Participants' Departments

Factor	Group	n	$\bar{X}$	SD	F	p
Cognitive Attitude	a	223	48.1	9.92	2.93	.054
	b	86	49.9	8.93		
	c	28	44.8	11.9		
Affective Attitude	a	223	47.3	9.91	2.32.	.100
	b	86	43.5	9.66		
	c	28	40.8	13.4		
Behavioral Attitude	a	223	43.7	9.35	1.13	.324
	b	86	43.5	10.0		
	c	28	40.8	12.1		
Digital literacy total	a	223	35.8	8.19	.170	.844
	b	86	35.3	8.84		
	c	28	36.1	10.2		

p<.05 \* a = Physical Education and Sports Teaching, b = Sports Management, c = Coaching

In Table 3, the leisure attitudes and digital literacy levels of the participants according to their departments were compared. As a result of the analysis, there was no significant difference in cognitive attitude (F = 2.93, p> 0.05), affective attitude (F = 1.13, p> 0.05), behavioral attitude (F = 1.13, p> 0.05) and digital literacy levels (F = .170, p> 0.05).

**Table 4.** Comparison of Leisure Attitude and Digital Literacy Levels According to Participants' Classes

Factor	Group	n	$\bar{X}$	SD	F	p
Cognitive Attitude	1st Grade	95	48.6	10.5	2.12	.097
	2nd Grade	78	49.1	7.67		
	3rd Grade	99	49.9	10.0		
	4th Grade	75	45.7	10.8		
Affective Attitude	1st Grade	95	48.0	10.3	.896	.443
	2nd Grade	78	48.3	8.96		
	3rd Grade	99	47.3	10.3		
	4th Grade	75	45.8	10.9		
Behavioral Attitude	1st Grade	95	43.8	10.0	.321	.810
	2nd Grade	78	44.0	8.81		
	3rd Grade	99	43.4	10.1		
	4th Grade	75	42.6	9.92		
Digital literacy total	1st Grade	95	36.2	8.37	.642	.589
	2nd Grade	78	34.6	8.24		
	3rd Grade	99	35.7	9.10		
	4th Grade	75	36.2	8.22		

p<.05 \*

Table 4 compares the leisure attitudes and digital literacy levels of the participants according to their classes. As a result of the analysis no significant difference was found in cognitive attitude (F = 2.12, p>.05), affective attitude (F =.896, p>.05), behavioral attitude (F =.321, p>.05) and digital literacy levels (F =.642, p>.05).



**Table 5. Comparison of Leisure Attitudes and Digital Literacy Levels of Participants by Gender**

Factor	Group	n	$\bar{X}$	SD	t	p
Cognitive Attitude	Male	216	48.37	9.71	.185	.853
	Female	131	48.17	10.2		
Affective Attitude	Male	216	47.67	9.87	.509	.611
	Female	131	47.09	10.7		
Behavioral Attitude	Male	216	43.65	9.41	.391	.696
	Female	131	43.22	10.3		
Digital literacy total	Male	216	35.66	8.48	-.232	.817
	Female	131	35.88	8.60		

p<.05 \*

According to Table 5, when the leisure attitudes and digital literacy levels of the participants are compared according to their gender, no significant difference was found in cognitive attitude (t =.185, p>.05), affective attitude (t =.509, p>.05), behavioral attitude (t =.391, p>.05) and digital literacy levels (t = -.232, p>.05).

**Table 6. Comparison of the Leisure Attitudes and Digital Literacy Levels of Participants According to Having a Personal Computer**

Factor	Group	n	$\bar{X}$	SD	t	p
Cognitive Attitude	Yes	206	48.88	9.93	1.32	.188
	No	141	47.45	9.86		
Affective Attitude	Yes	206	47.98	10.4	1.15	.250
	No	141	46.69	9.83		
Behavioral Attitude	Yes	206	44.23	10.0	1.71	.088
	No	141	42.41	9.33		
Digital literacy total	Yes	206	37.38	8.78	4.44	0.000*
	No	141	33.35	7.52		

p<.05 \*

In Table 6, the leisure attitudes and digital literacy levels of the participants according to their personal computer status were examined. As a result of the analysis, the digital literacy levels of the participants who have their own computers ( $\bar{X}$  : 37.38) was found to be statistically significantly higher (t = 4.44, p <.05) than for those who do not have their own computer ( $\bar{X}$  : 33.35). On the other hand; in cognitive attitude (t = 1.32, p>.05), affective attitude (t = 1.15, p>.05) and behavioral attitude (t = 1.71, p>.05) no significant difference was found.

**Table 7. Comparison of Leisure Attitude and Digital Literacy Levels of Participants According to Being an Internet Subscriber**

Factor	Group	n	$\bar{X}$	SD	t	p
Cognitive Attitude	Yes	237	49.1	10.1	2.26	.188
	No	110	46.5	9.08		
Affective Attitude	Yes	237	48.4	10.3	2.55	.250
	No	110	45.4	9.65		
Behavioral Attitude	Yes	237	44.2	9.94	2.11	.088
	No	110	41.8	9.22		
Digital literacy total	Yes	237	37.0	8.61	4.26	0.000*
	No	110	32.9	7.63		

p<.05 \*

In Table 7, the leisure time attitudes, and digital literacy levels of the participants were analyzed according to their internet subscription status. As a result of the analysis, the digital literacy levels of the participants with internet subscription ( $\bar{X}$ =37.0) was found to be statistically higher (t = 4.26, p

<.05) than those without internet subscription ( $\bar{X}=32.9$ ). On the other hand, no significant difference was found in cognitive attitude ( $t = 2.26, p>.05$ ), affective attitude ( $t = 2.55, p>.05$ ) and behavioral attitudes ( $t = 2.11, p>.05$ ).

**Table 8.** *The Relationship between the Leisure Attitudes of the Participants and Digital Literacy*

Factor	Digital Literacy
Cognitive Attitude	0.567**
Affective Attitude	0.529**
Behavioral Attitude	0.457**

As a result of the Pearson correlation analysis which is conducted to determine whether there is a significant relationship between the participants’ leisure attitudes and digital literacy scores, it is determined that there is a moderate (Kalaycı, 2018). positive linear relationship between digital literacy levels and cognitive, affective and behavioral leisure attitudes ( $r =.567, r = .529, r = .457, p <.05$ ).

**Table 9.** *Multiple Linear Regression Analysis Results Between Leisure Attitude and Digital Literacy Scale Scores*

Digital Literacy	B	SE (B)	$\beta$	t	p	R <sup>2</sup>	Durbin-Watson
Cognitive Attitude	.374	.077	.436	4.84	.000	0.324	2.04
Affective Attitude	.442	.038	.529	11.5	.000		
Behavioral Attitude	.398	.042	.457	9.54	.000		

In Table 9, multiple linear regression analysis was conducted to determine whether the leisure attitudes of the participants were predictors in digital literacy levels. When we look at the beta coefficient value, t value and significance level of the independent variable; it is seen that leisure attitude has a statistically significant effect on digital literacy level ( $p <.05$ ). According to this result, it is seen that leisure attitude explains 32% of the change in digital literacy level.  $R^2 = .324, p <.05$ ).

## DISCUSSION AND CONCLUSION

When the findings obtained as a result of the research were examined, it was seen that the leisure attitudes and digital literacy levels of the participants were above average. This situation can be interpreted as students studying in physical education and sports departments benefit from their free time and have the skills they should have in digital environments. However, it was found that the leisure attitudes and digital literacy levels of the participants did not differ significantly according to their departments, classes and gender. Similar to this study, Kozan and Bulut Öztekin (2019) found in their study that the digital literacy level of preservice teachers of Computer and Instructional Technologies (CEIT) did not differ significantly according to their gender. Similarly, in a different study that students’ attitudes towards leisure activities were examined, it was found that students attitudes towards leisure activities in affective, cognitive and behavioral dimensions did not differ according to their gender (Bakay, 2018). However, in a study conducted by Erol et al. (2018) and Balcı (2003), it was observed that the leisure attitude did not differ significantly according to the class variable. These studies also support our research.

A significant difference was found between the ownership of a personal computer and the digital literacy level of the participants. Owning a personal computer is an effective variable on digital literacy level. According to researches, owning a personal computer increases the level of digital literacy. As a matter of fact, in their study of evaluating the digital literacy levels of pre-service

teachers, Özerbaş and Kuralbayeva (2018) found that the digital literacy score averages of pre-service teachers who had a personal computer were higher than those who did not have a personal computer.

It was found that there is a moderate positive relationship between the digital literacy levels of the participants and their cognitive, affective and behavioral leisure attitudes. In addition, it was determined that the leisure time attitude factor predicts the digital literacy level by 32%.

With the developing technology in the 21st century, the age of digital transformation has begun. Today, the use of 5G in phones is often on the agenda. Internet usage is getting more widespread and it is even thought that the internet has become an indispensable need for humanity.

It has a place in all areas of our lives, from shopping to social accounts, from books to music programs, and even to online education after the covid-19 outbreak. Recently, even online museum visits have been in a great demand. Today, athletes continue some training practices with social media and distance education. Under these circumstances, digital literacy is considered to have an important place. In addition, due to all these situations, it is thought that the leisure attitude influences digital literacy.

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