



## Analysis on Digital Game Playing Attitudes Amongst University Students: A Research on Generation Z

Halil Orbay ÇOBANOĞLU<sup>†</sup>, Halil TÜRKTEMİZ<sup>2</sup>, Işık BAYRAKTAR<sup>1</sup>

<sup>1</sup>Alanya Alaaddin Keykubat University, Faculty of Sport Sciences, Alanya

<sup>2</sup>Alanya Alaaddin Keykubat University, Institution of Graduate Schools, Alanya

### Research Article

Received: 01/12/2022

Accepted: 16/01/2024

Published: 31/01/2024

### Abstract

The aim of this study is to investigate university students' attitudes who are called as Generation Z, on digital game playing. In this study, 109 female and 106 male students with a total of 215 students who are attending to various departments of Alanya Alaaddin Keykubat University, took place voluntarily. In the research, Digital Game Playing Attitude Scale (DGPBS) which was developed by Demir and Bozkurt (2019), was used. The data of the research was analysed using IBM SPSS 25 packaged software. To statistically analyse the data obtained from the participants, independent sample T-Test and one-way analysis of variance test are used. It is observed that there is a statically significant difference, according to the gender variable, by means of behavioural sub-dimension in students' digital plays. It is detected that there is a statically significant difference, in terms of students' cognitive sub-dimension digital plays causing from faculty difference. It is detected that there is a significant difference in students' digital plays by means of any sub-dimension causing from class variable. It is observed that there is significant difference in students' digital plays by means of cognitive sub-dimension according to the educational level variable of the mother. It is detected that there is significant difference in students' digital plays by means of cognitive sub-dimension according to the digital play times. As a result of the research students' digital play attitudes are affected accordingly to gender, faculty, class, digital play time and mother's educational level.

**Keywords:** Generation Z, Digital games, University student, Attitude.

## Üniversite Öğrencilerinin Dijital Oyun Oynama Tutumlarının İncelenmesi: Z Kuşağı Üzerine Bir Araştırma

### Öz

Bu çalışmanın amacı; Z kuşağı olarak adlandırılan üniversite öğrencilerinin dijital oyunlara yönelik tutumlarını incelemektir. Çalışmaya, Alanya Alaaddin Keykubat Üniversitesinin farklı bölümlerinde öğrenim gören 109 kadın ve 106 erkek öğrenci olmak üzere toplam 215 öğrenci gönüllü olarak katılmıştır. Araştırmada Demir ve Bozkurt (2019) tarafından geliştirilen Dijital Oyun Oynama Tutumu Ölçeği (DOOTÖ) kullanılmıştır. Araştırmanın verileri IBM SPSS 25 paket programı kullanılarak analiz edilmiştir. Katılımcılardan elde edilen verilerin istatistiksel analizlerinde bağımsız örneklem T-Testi ve Tek Yönlü Varyans Analizi testleri kullanılmıştır. Öğrencilerin davranışsal alt boyutu açısından dijital oyun oynama tutumları arasında cinsiyet değişkenine göre istatistiksel olarak anlamlı bir farklılık bulunmuştur. Öğrencilerin bilişsel alt boyutu açısından dijital oyun oynama tutumları arasında fakülte değişkenine göre istatistiksel olarak anlamlı bir farklılık saptanmıştır. Öğrencilerin bilişsel ve davranışsal alt boyutu açısından dijital oyun oynama tutumları arasında sınıf değişkenine göre istatistiksel olarak anlamlı bir farklılık bulunmuştur. Öğrencilerin bilişsel alt boyutu açısından dijital oyun oynama tutumları arasında anne eğitim düzeyi değişkenine göre istatistiksel olarak anlamlı bir farklılık bulunmuştur. Öğrencilerin davranışsal alt boyutu açısından dijital oyun oynama tutumları arasında dijital oyun oynama süresi değişkenine göre istatistiksel olarak anlamlı bir farklılık tespit edilmiştir. Öğrencilerin dijital oyun oynama tutumlarının cinsiyet, fakülte, sınıf, dijital oyun oynama süresi ve anne eğitim düzeyi değişkenlerine yönelik yapılan analiz sonuçları incelendiğinde, bu değişkenlerin dijital oyun oynama tutumları üzerinde etkili faktörler olduğu görülmektedir.

**Anahtar Kelimeler:** Z Kuşağı, Dijital oyunlar, Üniversite öğrencileri, Tutum.

<sup>†</sup>Corresponding Author: Halil Orbay Çobanoğlu E-mail: [orbay.cobanoglu@alanya.edu.tr](mailto:orbay.cobanoglu@alanya.edu.tr)

## INTRODUCTION

When we look to the historical time course of the generation concept, it can be said that the written sources take us to ancient Rome or even to ancient Egypt (Adıgüzel et al., 2014). Children who are born in the same years, become the same generation's children. The word Generation is defined in the Turkish Language Society's (TLS) Philosophy Dictionary as; "group of people who are approximately born in the same years and shared same age's conditions, thereby shared close problems, destiny and have similar responsibilities", in the TLS's Sociology Dictionary as: "People who form twenty-five to thirty years of clusters, race, breed" (Çelebi, 2017). In time, societies' need to evaluate, and this cause people to enhance new habits and new behaviours. These emerging changes are described as "Generation" (Işık, 2019). Generations, "groups that are born at certain dates, during socialization, groups that are affected from common social, economic, politic facts and as they are responsible for similar liabilities, have similar values, beliefs expectations and behaviours" (Kon, 2017). Every generation has working habits, value judgment, realisation of life, weaknesses and strengths and different communication styles (Taş et al., 2017). These generations are named according to the dates they are born; 1965-1979 X Generation, 1980-1999 Y Generation and 2000-2021 Generation Z (Kon, 2017).

Generation Z is also called "Internet Generation" as they are born in an age that is completely under internet influence and they have serious skills over the internet (Eğitimperia, 2014). The other names for Generation Z are: "Millennials, Digital Natives, Net Generation, the Gamer Generation, Next Generation, N-generation, Cyber Kids, Homo Zappiens, Grasshopper Minn" (Yalçın and İzgi, 2014). As they are born in the technology age, it is easier for them to reach information. It is known that Generation Z kids have the ability to follow more than one task at the same time (Taş et al., 2017). Having started to receive education in earlier ages, Generation Z show faster intellectual improvement. Their memories do not depend on memorising. Their memories are more depending on impersonation, storification and imagination (Işık, 2019).

Generation Z is born in an era in which digital technologies and electronic devices developed and is a Generation who witnessed these developments and they are described as "technology curious" (tech-savvy) (Singh, 2014). Generation Z has a digital technology based life style, and because they live in a high technology communication era they have the capability to solve problems with the help of technology and highly interrelating generation (Erten, 2019). Amongst all the generations, Generation Z has the highest motor skill synchronisation of hand, eye and ear (Keleş, 2011). These advantages may provide several disadvantages, and cause attention, focusing and concentration difficulties (Altunbay and Bıçak, 2018).

In the Turkish Language Society's Turkish dictionary many different definitions of game take place. These definitions are: "Entertainment that develops talent and intelligence, has certain rules and provides quality time; In theatre or cinema, the style of the artist's role performing; all the moves that are done accompanied with music; zeybek dance, artifact, act, play which is designed to be performed on stage; all kinds of competition that are performed

to develop body and mind talents depending on the agility; talent, gamble which arouse amazement” (TDK, 2020). Schiller (1990) defined “human plays in where he/she is a complete human, and he/she is only a complete human in where the play is played.” While play is an all day long entertainment for kids during which they learn, express themselves and gain motoric and intellectual skills, for adults, game is a recreation and relaxing tool (Kılıç, 2020). Game is an occasion for children which develops in firstly psychomotor, emotional, social fields and also helps the children in language and intellectual developing, prepares him/her to life and teaches cooperation (Ayan and Memiş, 2012). Game, being a universal concept, is a learning act physically, psychologically and emotionally for people to prepare them to their lives (Sezgin, 2014).

Even though the history of game is as old as humanity, with help of archaeological diggings, it is discovered that the history of game and toy goes back to 5500-2750 B.C. and belongs to Cucuteni-Trypillian culture which dominated today’s Romania region. The wheeled bull-shaped toy which was found during the archaeological diggings has a big importance in showing us how advanced the toy culture was and shows the revolution of game culture (Vatandaş, 2020). The history of toy and the history of humanity are in parallel directions (Niemann, 1980). All toys have a cultural value. Toys carry the markings of the societies they were built in and are a mirror to the society geographically, culturally and economically (Vatandaş, 2020). The traditional games, which were defeated by the developing technology, changed in many ways because of this technology (Kılıç, 2020). As a result of changing game understanding, the games with physical activity leave their place to digital platforms and this makes the child physically passive and affects social intellectual way negatively (Hazar, 2018). In becoming modernized societies, as a result of developing and digital technology, the games become more digital (Yiğitoğlu, 2018). The computer games which developed in direct proportion to technological developments, became more attractive and this has raised the interest in games (Tural, 2005). As in the traditional games, it is known that digital games, regardless of their type, have an educational function, this function comes out from social, economic, cultural, ideologic and historical reasons (Binark et al., 2009).

Digital games are the games played by large populations as an entertainment tool in which they can choose who to play with and, regardless of the outer world, has their own independent rules and contain entertainment material in digital platforms (Garris et al., 2002). Digital games are grouped as; online games (Gökçearsan and Durakoğlu, 2014) and multiplayer games or individual games (Köse, 2013). These games are available to the players in 5 categories. These are; “strategy games, racing games, sports games, simulation games and mission games” (Gökçearsan and Durakoğlu, 2014). Digital games that are played via desktop and laptop computers, game consoles, cellular phones, tablets, Playstation, Xbox, etc. are played extensively by people of all ages (Taylan et al., 2018). Especially having youth leading, the number of people who use mobile devices for game purpose is significantly high (Tarlakazan and Yavuz, 2018). These games are intensely preferred by children and youth and the time they spend to play increases day by day (Demirel et al., 2019). It is known that approximately 30 million people are playing digital games. This shows us the increase in interest to digital games (Can and Tekkurşun-Demir, 2020). The aim of this study is to

investigate university students' attitudes who are called as Generation Z, on digital game playing. In line with this purpose, answers to the following questions will be sought.

- Do university students' attitudes towards playing digital games differ according to gender variable?
- Do university students' attitudes towards playing digital games differ according to the faculty variable?
- Do university students' attitudes towards playing digital games differ according to age variable?
- Do university students' attitudes towards playing digital games differ according to the class variable?
- Do university students' attitudes towards playing digital games differ according to the variable of father's education level?
- Do university students' attitudes towards playing digital games differ according to the variable of mother's educational status?
- Do digital game playing attitudes of university students differ according to the variable of daily digital game playing time?

## MATERIALS AND METHODS

### Research Model

In this study, in order to research the attitude of the university students' attitude to digital game playing, "To picture a still ongoing fact or event from past to present as it is and for the case which is subject to study, the person or the object's being described as it exists" sweeping model is used (Karasar, 2005).

### Universe and Sample of the Research

The universe of this research is formed upon the university students who are born in and after the year 2000 which is accepted as the start of the Generation Z and are having their education inside Turkish borders. The sample of the research consists of 215 students who attend to various branches of Alanya Alaaddin Keykubat University.

### Data Collecting Tool

**Digital Game Playing Attitude Scale (DGPBS):** The scale which was developed by Demir and Bozkurt (2019) consists of 18 items in total which go under 3 sub-dimensions: Cognitive (5 items), Affective (5 items) and Behavioural (8 items). The scale is graded from "I Totally Disagree" (1) to "I Totally Agree" (5) which is prepared using 5-point Likert scale. The Cronbach's Alpha internal reliability index is calculated as .82. In this study the internal reliability index is calculated as .61.

Criterion values for reliability index according to Kılıç (2016);

When  $.00 < \alpha < .40$  "Not reliable",

When  $.41 < \alpha < .60$  "Low reliability",

When  $.61 < \alpha < .80$  "Intermediate reliability"

When  $.81 < \alpha < 1.00$  "Highly reliable"

In the light of these values, recent research is observed to have intermediate reliability.

### Research Ethics

It was unanimously decided that Alanya Alaaddin Keykubat University Social Sciences and Humanities Scientific Research Ethics Committee is ethically appropriate as per the decision of 01/17 dated 20.02.2023.

### Analyse of Data

The data of the research was analysed using IBM SPSS 25 packaged software. To determine whether the data distribution is normal or not, skewness and kurtosis values are observed. As the skewness and kurtosis values are between the limits (-1.5 and +1.5) which was stated by Tabachnick and Fidell (2015) data is observed to have normal distribution. Since the data were normally distributed, independent sample t test and one-way ANOVA test were used as parametric tests. The significance level of the tests was tested with  $p < .05$ .

## RESULTS

The demographic distribution of the data obtained in the study is as in Table 1.

**Table 1.** Demographical features of the students who took place in the research

Factor	Variable	N	%
<b>Gender</b>	Woman	109	50.7
	Man	106	49.3
<b>Faculty</b>	Sports Sciences	50	23.3
	Health Sciences	33	15.3
	Educational Sciences	44	20.5
	Social Human and Admin. Sciences	39	18.1
	Engineering and Architect Sciences	49	22.8
<b>Age</b>	18 and below	38	17.7
	19 age	61	28.4
	20 and above	116	53.9
<b>Class</b>	1 <sup>st</sup> Class	80	37.2
	2 <sup>nd</sup> Class	57	26.5
	3 <sup>rd</sup> Class	52	24.2
	4 <sup>th</sup> Class	26	12.1
<b>Father's Education Level</b>	Primary – Secondary School	90	41.9
	High School	72	33.4
	Graduate - Postgraduate	53	24.7
<b>Mother's Education Level</b>	Primary – Secondary School	111	51.6
	High School	53	24.7
	Graduate - Postgraduate	51	23.7
<b>Daily Digital Game Playing Time</b>	30-60 Min.	108	50.2
	61-90 Min.	44	20.5
	91-120 Min.	35	16.3
	121 Min. and above	28	13.0

It is observed that 49.3% of the students who participated in the research according to the “gender” variable are men (n=106) and 50.7% are women. According to the “faculty” variable, the highest participation amongst the students consists of Sports Sciences Students by 23.3%. It is seen that the lowest participation to the research came from students of Health Sciences Faculty by 15.3%. When “age” variable is studied, students at age 20 and above has the highest participation (53.9%) while the students under 18 years of age has the lowest (17.7%) participation rate. When “class” variable is studied, 37.2% (n=80) of the students who participate in the research are attending to 1<sup>st</sup> class, 26.5% (n=57) 2<sup>nd</sup> class, 24.2% (n=52) 3<sup>rd</sup> class and 12.1% (n=26) 4<sup>th</sup> class. When “father’s education level” variable is studied it is observed that 41.9% (n=90) of the students’ fathers graduated from primary or secondary school, 33.4% (n=71) high school and 24.7% (n=53) graduate or postgraduate. It is seen that 51.6% (n=111) of the students’ mothers are graduated from primary or secondary school, 24.7% (n=53) high school and 23.7% (n=51) graduate or postgraduate. When “daily digital game playing” times of the students’ is observed the highest percentage 50.2% (n=108) belongs to the group who plays 30-60 min. daily and the lowest is with 13% (n=28) 121 min. daily.

**Table 2.** T-Test results based on students’ digital game playing attitude according to gender variable

	<b>Gender</b>	<b>N</b>	<b><math>\bar{X}</math></b>	<b>SD</b>	<b>f</b>	<b>p</b>
<b>Behavioural Sub-Dimension</b>	Man	106	2.9175	.806	-5.696	.00*
	Woman	109	3.5080	.712	-5.686	

p<.05

In terms of students’ behavioural sub-dimension, it is found out that there is statistically significant difference based on gender variable of digital game playing attitude (p=.00).

**Table 3.** ANOVA analyse results based on students’ digital game playing attitude according to faculty variable

	<b>Faculty</b>	<b>N</b>	<b><math>\bar{X}</math></b>	<b>SD</b>	<b>f</b>	<b>p</b>
<b>Cognitive Sub-Dimension</b>	Sports Sciences	50	2.8160	.57689	6.408	.00*
	Health Sciences	33	2.9697	.53179		
	Educational Sciences	44	3.3682	.63677		
	Engineering and Architect. Sci.	49	2.9265	.60648		
	Social Human and Admin. Sci.	39	3.1333	.46415		

p<.05

In terms of students’ cognitive sub-dimension, it is found out that there is statistically significant difference based on faculty variable of digital game playing attitude (p=.00). In order to observe between which groups there is a statistically significant difference in the cognitive sub-dimension, Bonferroni (Kayri, 2009), one of the post-hoc tests, was used due to the homogeneous distribution of the data and the unequal sample size.

**Table 4.** The Post-Hoc test results based on the students’ digital game playing attitude according to faculty variable

		<b>Dependent Variable</b>		<b>Average Difference</b>	<b>Standard Error</b>	<b>P</b>
<b>Cognitive Sub-Dimension</b>	Bonferroni	Sports Sciences		.55218	.11817	.00*
		Health Sciences		.39848	.13165	.02*
		Engineering and Architect. Sci.		.44165	.11874	.00*
		Educational Sciences				

p<.05

Based on the Bonferroni test results, amongst “Educational Sciences”, “Sports Sciences”, “Health Sciences” and “Engineering and Architectural Sciences”, the difference was on behalf of “Educational Sciences”. According to this result, it is observed that, faculty of educational students’ attitude to digital games are more.

In terms of students’ any sub-dimensions, statistically, there is no significant difference was observed based on age variable of digital game playing attitude (p= .97>.05 for cognitive sub-dimension, p= .47>.05 for affective sub-dimension, p= .88>.05 for behavioural sub-dimension).

**Table 5.** ANOVA analyse results based on the students’ digital game playing attitude according to class variable

	Class	N	$\bar{X}$	SD	f	p
<b>Cognitive Sub-Dimension</b>	1 <sup>st</sup> Class	80	2.9550	.54654	6.6630	.00*
	2 <sup>nd</sup> Class	57	2.9263	.57772		
	3 <sup>rd</sup> Class	52	3.0500	.59128		
	4 <sup>th</sup> Class	26	3.4923	.64058		
<b>Behavioural Sub-Dimension</b>	1 <sup>st</sup> Class	80	3.3328	.80297	5.863	.00*
	2 <sup>nd</sup> Class	57	3.4342	.81665		
	3 <sup>rd</sup> Class	52	3.0240	.72931		
	4 <sup>th</sup> Class	26	2.7692	.78716		

p<.05

In terms of students’ cognitive and behavioural sub-dimension, it is found out that there is statistically significant difference based on class variable of digital game playing attitude (p=.00 and p=.00). To observe amongst which groups there is cognitive and behavioural low dimension difference, being data’s homogenous distribution, Bonferroni from post-hoc tests is used.

**Table 6.** The Post-Hoc test results based on the students’ digital game playing attitude according to class variable

		Dependent Variable	Average Difference	Standard Error	P
<b>Cognitive Sub-Dimension</b>	Bonferroni	1 <sup>st</sup> Class	.53731	.13038	.00*
		4 <sup>th</sup> Class	.56599	.13667	.00*
		3 <sup>rd</sup> Class	.44231	.13872	.01*

p<.05

Based on the Bonferroni test results, amongst “1<sup>st</sup> class”, “2<sup>nd</sup> class”, “3<sup>rd</sup> class” and “4<sup>th</sup> class”, the difference at cognitive sub-dimension was on behalf of “4<sup>th</sup> class”. At the behavioural sub-dimension, it is observed that, amongst “1<sup>st</sup> class” and “4<sup>th</sup> class” the difference was on behalf of “1<sup>st</sup> class” and amongst “2<sup>nd</sup> class”, “3<sup>rd</sup> class” and “4<sup>th</sup> class” the difference was on behalf of “2<sup>nd</sup> class”.

In terms of students’ any sub-dimensions, statistically, there is no significant difference was observed based on father’s education level variable of digital game playing attitude (p=.11>.05 for cognitive sub-dimension, p= .65>.05 for affective sub-dimension, p= .19>.05 for behavioural sub-dimension).

**Table 7.** ANOVA analyse results based on the students’ digital game playing attitude according to mother’s education level

	Mother’s Education Level	N	$\bar{X}$	SS	t	p
<b>Cognitive Sub-Dimension</b>	Primary – Secondary School	111	2.9207	.57352	4.757	.01*
	High School	53	3.1057	.64044		
	Graduate – Postgraduate	51	3.2118	.56909		

p<.05

In terms of students’ cognitive sub-dimension, it is found out that there is statistically significant difference based on mother’s education level variable of digital game playing attitude (p=.01). To observe amongst which groups there is cognitive sub-dimension difference, bonferroni from post-hoc tests is used.



**Table 8.** The Post-Hoc test results based on the students’ digital game playing attitude according to mother’s education level variable

		<b>Dependent Variable</b>		<b>Average Difference</b>	<b>Standard Error</b>	<b>p</b>
<b>Cognitive Sub-Dimension</b>	Bonferroni	Graduate-Postgraduate	Primary and Secondary School	.29104	.09651	.01*

p<.05

Based on the Bonferroni test results, amongst “primary-secondary school”, and “graduate-postgraduate”, the difference at cognitive sub-dimension was on behalf of “graduate-postgraduate”. According to this result, it is observed that, mother’s education level is effective on students’ attitude to digital games.

**Table 9.** ANOVA analyse results based on the students’ daily digital game playing attitude according to digital game playing time

		<b>Daily Digital Game Playing Time</b>	<b>N</b>	<b><math>\bar{X}</math></b>	<b>SS</b>	<b>t</b>	<b>p</b>
<b>Behavioural Sub-Dimension</b>		30-60 min.	108	3.5718	.69128	17.655	.00*
		61-90 min.	44	2.9801	.77663		
		91-120 min.	35	2.7893	.71792		
		121 min. and above	28	2.7545	.83367		

p<.05

In terms of students’ behavioural sub-dimension, it is found out that there is statistically significant difference based on daily digital game playing time variable of digital game playing attitude. To observe amongst which groups there is behavioural sub-dimension difference, Bonferroni from post-hoc tests is used.

**Table 10.** The Post-Hoc test results based on the students’ digital game playing attitude according to daily digital game playing time variable

		<b>Dependent Variable</b>		<b>Average Difference</b>	<b>S.E.</b>	<b>p</b>
<b>Cognitive Sub-Dimension</b>	Bonferroni	30-60 min.	61-90 min.	,59165	,13109	,000*
		30-60 min.	91-120 min.	,78247	,14256	,000*
		30-60 min.	121 min. and above	,81729	,15544	,000*

p<.05

Based on the Bonferroni test results, amongst “30-60 min.”, “61-90 min”, “91-120 min.” and “121 min. and above” the difference at cognitive sub-dimension was on behalf of “30-60 min.”

## DISCUSSION AND CONCLUSION

Individuals that are born on and after year two thousand are named Generation Z. The most significant speciality differing Generation Z from others is that they are born in digital era. While the internet network, which developed and spread with digital era, has adverse effect on traditional games, it made a positive effect over the games that are played on the platforms. Interbedded with the technology, Generation Z prefers digital games instead of traditional games (Eğitimpedia, 2014). In this study, it was aimed to determine the digital game playing attitude of Generation Z.

According to the results of the research, a statistically significant difference was found in the behavioural sub-dimension according to the gender variable. At behavioural sub-dimension it is observed that female students have more digital game playing attitude than the male students. The reason for female students' higher digital game playing attitude may be that female students' will to create themselves a virtual world. It can be said that, the reason for the male students' low digital game playing attitudes, they do not go into enough physical activity at the games they are playing digitally, so they prefer games which include more physical activity such as football, basketball and athletics. In the studies they made, Bozkurt et al. (2019) determined that male students have more digital game playing attitude than female students. In his study, Balıkçı (2018) stated that male students would like to socialize more than the female students and they want to prove themselves not to their friends but to people in the virtual world they created.

When the averages of the students' answers to the digital game playing attitude scale are examined, there is a statistically significant difference in favor of the students of the faculty of educational sciences in the cognitive sub-dimension according to the faculty variable. It can be told that the educational sciences faculty students' digital game playing attitude is related to the social environment they are in. On the contrary, Bozkurt et al. (2019) determined that there is no difference amongst the students who are attending to the same faculty but attend to different departments, because of their conflicting schedules and classes.

When the averages of the students' responses to the digital game playing attitude scale were compared according to the age variable, no statistically significant difference was observed in any sub-dimension. As a reason for digital game playing attitudes' not changing, it can be shown that the digital games attract people of all ages and they are accepted as entertainment and recreation tools. In the study made with 250 female participant whose ages vary from 18 to 35, Marshall and Foran (2008) could not find any significant difference in females' game preferences.

In the students' digital game playing attitude scale's class variable analysis, at cognitive and behavioural sub-dimension, there is a statistically significant difference. According to the data gathered, at cognitive sub-dimension, it is found out that 2<sup>nd</sup> class students' digital game playing attitude is higher. During university life, it can be said that 2<sup>nd</sup> class students are more interbedded with digital games. At behavioural sub-dimension, it is observed that 4<sup>th</sup> class students' digital game playing attitude is higher. It can be said that digital game playing attitude increases as the students' education level rises. In the study they made, Bozkurt et al. (2019),

could not observe any statistically significant difference on digital game playing attitude as the students who attend to university, even though they were in different classes and different ages, they belong to the same generation.

There is no statistically significant difference observed according to the students' digital game playing attitude scale's father's education level variable. It can be said that father's education level does not affect students' digital game playing attitude. Contrarily to our study, in the study he made, Erten (2019) found out that students' digital game playing attitude increases as the father's education level is higher.

When the averages of the students' responses to the digital game playing attitude scale were examined, a statistically significant difference was found in the cognitive sub-dimension according to the mother's education level variable. It can be said that as the students' mother's education level is higher, students' digital game playing attitude increases. This finding of the study overlaps with the study Erten (2019) completed. Erten (2019) stated that mothers think when children uses digital technology, they benefit from it and gain knowledge and competence.

When the averages of the students' answers to the digital game playing attitude scale were examined, no statistically significant difference was observed in the cognitive and affective sub-dimensions according to the variable of digital game playing time, while a statistically significant difference was observed in the behavioural sub-dimension. It is observed that students' digital game playing time varies between 30-60 min. Contrarily to this study, Bozkurt et al. (2019) stated that when digital game playing time increases the digital game playing attitude raises. Bayrakdar et al. (2020) stated according to the study they made with e-sporters, they lack physical activity and have obesity problems due to long hours of training and competitions.

As a result, amongst the students' who took participated in the study, there is a statistically significant difference at gender, faculty, class, mother's education level and digital game playing time. At the present time, rapidly increasing population and along with it, urbanization, caused children's and youth's playgrounds decrease. Youth's new playgrounds evolved from public gardens to indoor areas because of the narrowing and decreasing areas of public gardens and playgrounds. The vanishing playgrounds and developing technology caused digital games rise. It would appear that; internet and digital technologies will take place in lives of today's people and future generations increasingly. Digital games may become indispensable for the new generations. In this study, being born in this digital age, Generation Z's attitude to playing digital games and it is believed that the results can be a guide to the studies about new digital games.

**Conflict of Interest:** There is no personal or financial conflict of interest within the scope of the study.

**Researchers' Statement of Contribution Rate:** Research Design HT, IB; Statistical Analysis HOC; Manuscript Preparation HT, IB; Data Collection was carried out by HT, HOC.

## Information on Ethics Committee Permission

**Board Name:** Alanya Alaaddin Keykubat University Social Sciences and Humanities Scientific Research Ethics Committee

**Date:** 20.02.2023

**Issue/Decision Number:** 01/17

## REFERENCES

- Adıgüzel, O., Batur, H. Z., & Ekşili, N. (2014). Kuşakların değişen yüzü ve y kuşağı ile ortaya çıkan yeni çalışma tarzı: Mobil yakalılar. *Süleyman Demirel Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 1(19), 165–182.
- Altunbay, M., & Bıçak, N. (2018). Türk eğitimi derslerinde "Z kuşağı bireylerine uygun teknoloji tabanlı uygulamaların kullanımı. *Journal of World of Turks*, 10(1), 127–142.
- Ayan, S., & Memiş, U.A. (2012). Erken çocukluk döneminde oyun. *Selçuk Üniversitesi Beden Eğitimi ve Spor Bilim Dergisi*, 14(2), 143–149.
- Balıkçı, R. (2018). *Çocuklarda ve ergenlerde çevrimiçi oyun bağımlılığı ve agresif davranışlar arasındaki ilişkinin incelenmesi*. Yüksek lisans tezi. Fatih Sultan Mehmet Vakıf Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul.
- Bayraktar, A., Yıldız, Y., & Bayraktar, I. (2020). Do e-athletes move? A Study on physical activity level and body composition in elite e-sports. *Physical Education of Students*, 24(5), 259–264. <https://doi.org/10.15561/20755279.2020.0501>
- Binark, M., Bayraktutan S. G., & Fidaner, B. I. (2009). *Dijital oyun rehberi: Oyun tasarımı, türler ve oyuncu*. Kalkedon Yayınları.
- Bozkurt, T. M., Dursun, M., & Arı, Ç. (2019). Examination of attitudes of students of sports sciences towards digital game play: Spor bilimleri fakültesi öğrencilerinin dijital oyun oynamaya yönelik tutumların incelenmesi. *Journal of Human Sciences*, 16(4), 1217-1227. <https://doi.org/10.14687/jhs.v17i1.5896>
- Can, H. C., & Tekkurşun-Demir, G. (2020). Sporcuların ve e-spor oyuncularının dijital oyun bağımlılığı ve dijital oyun bağımlılığına ilişkin farkındalık düzeyleri. *Gaziantep Üniversitesi Spor Bilimleri Dergisi*, 5(4), 364–384. <https://doi.org/10.31680/gaunjs.770600>
- Çelebi, H. (2017). Derlem dilbilimi uygulamaları: kuşaklararası dayanışma ölçeği hazırlama. *Dil ve Edebiyat Dergisi*, 14(2), 61-83.
- Demir, G. T., & Bozkurt, T. M. (2019). Dijital oyun oynama tutumu ölçeği (DOOTÖ): Geçerlik ve güvenilirlik çalışması. *Sportif Bakış: Spor ve Eğitim Bilimleri Dergisi*, 6(1), 1-18. <http://dx.doi.org/10.33468/sbsebd.79>
- Demirel, H. G., Cicioğlu, H. İ., & Tekkurşun-Demir, G. (2019). Lise öğrencilerinin dijital oyun oynama motivasyon düzeylerinin incelenmesi. *Beden Eğitimi ve Spor Bilimleri Dergisi*, 21(3), 128–137.
- Eğitimpedia. (2014). X, Y, Z Kuşakları. Retrieved from: <https://www.egitimpedia.com/x-y-z-kusaklari> December 21, 2020,
- Erten, P. (2019). Z kuşağının dijital teknolojiye yönelik tutumları. *Gümüşhane Üniversitesi Sosyal Bilimler Enstitüsü Elektronik Dergisi*, 10(1), 190–202.
- Garris, R., Ahlers, R., & Driskell, J. E. (2002). Games, motivation, and learning: A Research and practice model. *Simulation and Gaming*, 33(4), 441-467. <https://doi.org/10.1177/1046878102238607>
- Gökçearsan, Ş., & Durakoğlu, A. (2014). Ortaokul öğrencilerinin bilgisayar oyunu bağımlılık düzeylerinin çeşitli değişkenlere göre incelenmesi. *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, 23, 419–435.
- Hazar, Z. (2018). *Çağın vebası dijital oyun bağımlılığı ve başa çıkma yöntemleri*. Gazi Kitabevi.
- Işık, S. (2019). *Dijital çağda kuşaklararası farklılıklar ve z kuşağı: Dijital yerliler ve dijital göçmenlerin teknoloji kullanım özelliklerine yönelik bir araştırma*. Yüksek lisans tezi, Ege Üniversitesi, Sosyal Bilimler Enstitüsü, İzmir, Türkiye.

- Karasar, N. (2005). *Bilimsel araştırma yöntemi*. Nobel Akademik Yayıncılık.
- Kayri, M. (2009). Araştırmalarda gruplar arası farkın belirlenmesine yönelik çoklu karşılaştırma (post-hoc) teknikleri. *Journal of Social Science*, 55, 22.
- Keleş, H. N. (2011). Y Kuşağı Çalışanlarının motivasyon profillerinin belirlenmesine yönelik bir araştırma. *Organizasyon ve Yönetim Bilimleri Dergisi*, 3(2), 129–139.
- Kılıç, M. A. (2020). *15-18 yaş arası okul sporlarına katılan öğrencilerin dijital oyun bağımlılığı ile sosyal ve duygusal yalnızlık düzeylerinin incelenmesi*. Yüksek lisans tezi. Kırıkkale Üniversitesi, Sağlık Bilimleri Enstitüsü, Kırıkkale, Türkiye.
- Kılıç, S. (2016). Cronbach'ın Alfa Güvenilirlik Katsayısı. *Journal of Mood Disorders*, 6(1), 47–48. <https://doi.org/10.5455/jmood.20160307122823>
- Kon, B. (2017). Kuşakları anlamak ve yönetmek. Retrieved from: <http://www.humanica.com.tr/kusaklari-anlamak-yonetmek> December 10, 2020.
- Köse, Z. (2013). *Grubu ergenlerinin bilgisayar oyunlarının oynama alışkanlıklarının ve sosyalleşme durumlarının araştırılması*. Yüksek lisans tezi. Afyon Kocatepe Üniversitesi, Sosyal Bilimler Enstitüsü, Afyon, Türkiye.
- Marshall, A. & Foran, J. (2008). Australian female gamers video game preferences. *Paper presented at the Australian & New Zealand Marketing Academy Conference*, December 1-3.
- Niemann, H. (1980). Oyunağın gelişim tarihi. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 24(01), 55-61 [https://doi.org/10.1501/egifak\\_0000000730](https://doi.org/10.1501/egifak_0000000730)
- Schiller, F. (1990). *İnsanın estetik eğitimi üzerine bir dizi mektup*. Milli Eğitim Basımevi.
- Sezgin, S. (2014). İnsan ve oyun: Oyunların dünü, bugünü, yarını. *VIII International Congress of Educational Research*. Çanakkale, 5-8 Mayıs.
- Singh, A. (2014). Challenges and issues of generation Z. *IOSR Journal of Business and Management*, 16(7), 59-63. <https://doi.org/10.9790/487x-16715963>
- Tabachnick, B.G., & Fidell, L.S. (2015). *Çok değişkenli istatistiklerin kullanımı*. Nobel Yayıncılık.
- Tarлакazan, E., & Yavuz, E. (2018). Üniversite öğrencilerinin mobil oyun profili ve oynama alışkanlıkları. *Artvin Çoruh Üniversitesi Uluslararası Sosyal Bilimler Dergisi*, 4(2), 149–163. <https://doi.org/10.22466/acusbd.431711>
- Taş, H. Y., Demirdöğmez, M., & Küçükoğlu, M. (2017). Geleceğimiz olan z kuşağının çalışma hayatına muhtemel etkileri. *OPUS Uluslararası Toplum Araştırmaları Dergisi*, 7(13), 1031-1048. <https://doi.org/10.26466/opus.370345>
- Taylan, H., Topal, M., & Ayas, T. (2018). Sakarya'daki lise öğrencilerinin dijital oyun oynama eğilimlerinin incelenmesi. *Online Journal of Technology Addiction & Cyberbullying*, 5(1), 53-68.
- TDK. (2020). Oyun. Retrieved from: <https://sozluk.gov.tr/> December 10, 2020.
- Tural, H. (2005). *İlköğretim matematik öğretiminde oyun ve etkinliklerle öğretimin erişimi ve tutuma etkisi*. Yüksek lisans tezi. Dokuz Eylül Üniversitesi, Eğitim Bilimleri Enstitüsü, İzmir, Türkiye.
- Vatandaş, S. (2020). Oyun ve oyuncak: Teknolojik ve toplumsal dönüşüm sürecinde oyun ve oyunağın anlamsal ve işlevsel değişimi. *Süleyman Demirel Üniversitesi Vizyoner Dergisi*, 11(28), 913–930. <https://doi.org/10.21076/vizyoner.674699>
- Yalçın, İ. A., & İzgi, Ü. (2014). Levels of providing the oecd new millennium learner criteria of the prospective teachers studying in primary school teaching undergraduate program. *Procedia - Social and Behavioral Sciences*, 116, 1258–1262. <https://doi.org/10.1016/j.sbspro.2014.01.379>
- Yiğitoğlu, V. (2018). *Oyun değer-dijital oyunlar ve kullanıcılar üzerine bir inceleme: To the moon örneği*. Doktora tezi. Maltepe Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul, Türkiye.



Except where otherwise noted, this paper is licensed under a Creative Commons Attribution 4.0 International license.