



Education Quarterly Reviews

Demir, S. (2023). The Investigation of Turkish Teacher Candidates' Attitudes to Digital Reading and Time of Printed and Digital Reading. *Education Quarterly Reviews*, 6(1), 537-554.

ISSN 2621-5799

DOI: 10.31014/aior.1993.06.01.727

The online version of this article can be found at:
<https://www.asianinstituteofresearch.org/>

Published by:
The Asian Institute of Research

The *Education Quarterly Reviews* is an Open Access publication. It may be read, copied, and distributed free of charge according to the conditions of the Creative Commons Attribution 4.0 International license.

The Asian Institute of Research *Education Quarterly Reviews* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of education, linguistics, literature, educational theory, research, and methodologies, curriculum, elementary and secondary education, higher education, foreign language education, teaching and learning, teacher education, education of special groups, and other fields of study related to education. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Education Quarterly Reviews* aims to facilitate scholarly work on recent theoretical and practical aspects of education.



ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide



The Investigation of Turkish Teacher Candidates' Attitudes to Digital Reading and Time of Printed and Digital Reading

Selvi Demir¹

¹ Kilisli Muallim Rifat Faculty of Education, Kilis 7 Aralık Universtiy, Kilis, Turkey

Correspondence: Selvi Demir, Kilisli Muallim Rifat Faculty of Education, Kilis 7 Aralık Universtiy, Kilis, Turkey. Tel: +90348 8142662 Ext. 1797. E-mail: slv.demir@gmail.com

Abstract

In this study, the printed and digital reading times of Turkish teacher candidates, their digital reading characteristics, their digital reading preferences and their attitudes towards digital reading were revealed. In this study, print and digital reading times and attitudes towards digital reading were examined in terms of various variables (gender, grade level, reading preference, digital book reading status, digital text reading status without internet, digital library status, book reading habit and digital reading level). In the research, relational and single survey models, which are among the general survey models of quantitative research methods, were used together. The study group of the research consisted of 173 Turkish teacher candidates studying in the fall semester of the 2022-2023 academic year. As a result of the research, there is a positive difference between the daily printed resource reading time and the digital resource reading time of the Turkish teacher candidates; On the other hand, it was detected that there was a negative and low-level significant relationship between their attitudes towards digital reading. Besides, it was detected that there was a moderate positive relationship between the duration of digital resource reading and their attitudes towards digital reading and digital reading characteristics. In addition, it was detected that the daily printed resource reading time of Turkish teacher candidates differs according to their reading habits. However, it has been detected that daily digital resource reading time differs according to reading preferences, digital book reading, digital library status, reading habits and digital book reading levels. It was detected that the attitudes of teacher candidates towards digital reading differ according to their grade level, reading preference, digital book reading status, digital text reading status without internet, digital library status and digital reading levels.

Keywords: Printed Reading, Digital Reading, Attitude, Turkish Teacher Candidates

1. Introduction

1.1 Introduce the Problem

Reading, the most effective and oldest form of learning, which is an individual, mental and creative process, is an activity or state of interest for using free time, monitoring economic, cultural and technological developments, and learning new things (Aksaçoğlu, & Yılmaz, 2007). Reading is an action that provides new opportunities for an

individual to see and direct events and situations. This accumulation and productivity that an individual has achieved in his own life are revealed only as a result of sound reading (Şahenk Erkan, Balaban Dağal & Tezcan, 2015). It is very important for learning to be based on such solid foundations in terms of an individual's intellectual development (Gönen 2007). Reading, which is the most basic way to have knowledge of the past and to follow the world of the future, is evaluated as one of the four basic language skills (Arıcı, 2012). Bireyin bizatihi kendisini daha iyi ve doğru biçimde anlatmasına olanak tanıyan okuma, bireyde hayal gücünün, yeteneklerin, soyut düşüncelerin, yaratıcılığın, zihinsel ve psikomotor becerilerin gelişimine katkı sunmaktadır (Aksaçoğlu, & Yılmaz, 2007).

Reading has found an expansion area towards digital sources in addition to printed sources with the spread of technology in recent years. As a matter of fact, printed sources such as newspapers, magazines, books have also become readable in digital media as e-newspapers, e-magazines, e-books. Thanks to communication tools such as computer, tablet, mobile phone, electronic reading activity have taken its place in life quite widely. Devices such as computers, tablets, mobile phones lay out all the desired resources in front of individuals with great ease with a single button. Thus, newspapers, books, current publications, magazines, which are sometimes difficult to transport, are always ready to be read inside the digital device (Yurdakal & Susar Kırmızı, 2021). As a matter of fact, various digital tools surrounding the environment have changed the reading behavior of today's people; they have differentiated their reading habits and differentiated their reading needs (Odabaş, Odabaş & Binici, 2020). This differentiation has brought the concept of digital reading to the agenda. Concordantly, in a narrow sense, printed sources such as newspapers, magazines, books can be read digitally as e-newspapers, e-magazines, e-books; in a broad sense, any kind of reading done in a digital environment can be defined as digital reading. Since digital reading offers features such as moving images and sound, it affects more than one sense organ of individuals. From this point of view, it is very easy in the interpretation process. For this reason, digital reading is becoming more common day by day, especially among young people. Young people prefer to travel with a library in their pockets instead of getting lost among the printed books. While the books on the shelves are only accessible in the same environment, the pages in the digital environment are ready to be accessed at any time (Yurdakal & Susar Kırmızı, 2021). Lemken (1999) emphasizes that there are some differences between reading from digital tools and reading from printed materials in terms of technique, presentation and interaction. Başaran (2014) states that reading in digital environment increases the interaction of the reader with the text, makes it easier to read and understand what he is reading, and has some advantages such as intertextuality and affordability. In the study conducted by Dağtaş (2013), it is stated that there are many benefits such as getting rid of the responsibility of carrying books, avoiding paper waste, getting to a large number of sources quickly, arousing more curiosity about texts in digital media, and making these texts open to evaluation and interpretation. Güneş (2010) argues that digital reading has various benefits because it allows the reader in the digital environment to access information quickly, understand information, learn and transfer it quickly.

Digital reading has its advantages as well as disadvantages (Ceylan & Koç Çiçekli, 2020). One of the most well-known disadvantages is that the eyes get tired as a result of reading for a long time in a digital environment and related problems arise (Duran & Dolaylar Özkul, 2015). Again, in the reading process, the reading in the digital environment is interrupted due to various stimuli such as news, advertising, which are outside the content in the digital environment (Ercan & Ateş, 2015). Boz (2018) emphasizes that students do not want to read in a digital environment for various reasons, such as quick distraction on digital devices, harm to health by digital devices, it is quite difficult to mark certain places in a text, take notes, underline lines in a digital environment, they do not understand what they are reading from a digital device very well and they like to read from paper. Although there are some disadvantages of reading in a digital environment, it can be said that the popularity of reading in a digital environment in a broader sense will gradually increase as a requirement of our time.

1.2 Explore Importance of the Problem

As a requirement of our age, it can be said that the popularity of digital reading in a broader sense will increase gradually. As a matter of fact, in the study conducted by Akçaoğlu Saydim (2017), more than half of the teachers (58.5%) indicate that they prefer reading in a digital environment (Akt., Yurdakal & Susar Kırmızı, 2021). It has also been revealed in various studies that the attitudes of young people towards digital reading have increased

especially in recent years. For example, in the study conducted by Gençtürk (2022), although the reading rate of young people in the print media is higher than in the digital media, it is stated that especially men prefer digital reading; states that individuals' reading options include social media content, electronic communication tools, websites and blogs. Therefore, it can be said that digital reading has an important place in the lives of individuals. For this reason, it is thought that examining the digital reading levels and attitudes of Turkish teacher candidates (TTC) is very important for education.

1.3 Describe Relevant Scholarship

In the field of undergraduate (Akbaba, 2017; Arı & Demir, 2013; Arslan, Çelik & Çelik, 2009; Batur, Gülveren & Bek, 2010; Bozpolat, 2010; Demir, 2015; Elkatmış, 2015; Özbay, Bağcı & Uyar, 2008; Yılmaz, Köse & Korkut, 2009), secondary education (Akkaya & Özdemir, 2013; Çeçen & Deniz, 2015) and the habits or attitudes of secondary school students (Balcı, 2009; Can, Deniz & Çeçen, 2016; Demir, 2009; Gönen, Öncü & Işıtan, 2004; Mete, 2012); As it is found that the factors affecting the habit of reading (Aksaçlıoğlu & Yılmaz, 2007; Biçer & Ercan, 2017; Sağlam, Suna & Çengelci, 2008; Uslu Üstten, 2014) are examined, the opinions of teachers (Dağtaş, 2013), teacher candidates (Elkatmış, 2018; Gömleksiz, Kan & Fidan, 2013; Kuru, 2018; Maden, 2012; Odabaş, Odabaş & Binici, 2020; Odabaş, Odabaş & Sevmez, 2018; Ulu & Zelzele, 2018), high school (Çelik, 2015; Maden & Maden, 2016), secondary school (Boz, 2018; Soyuçok & Mazman Akar, 2018) and primary school students (Macit & Demir, 2016) to study digital reading has been found. Moreover, the relationship between the metaphoric perceptions of the teacher candidates for digital reading (Azizoğlu & Okur, 2018) and reading tendencies and reading interests (Bulut & Karasakaloğlu, 2019), the effect of digital reading on reading comprehension (Aydemir İleri, Öztürk & Horzum, 2013; 2014; Batluralkız, 2018; Duran & Alevli, 2014; Ercan & Ateş, 2015; Kuru, Kaşkaya & Calp, 2017; Özen & Ertem, 2014; Tiryaki, & Karakuş, 2019) Dağtaş, 2013a) and the attitude towards Turkish lesson (Yaman & Dağtaş, 2013b) have various studies in which the effect is investigated. However, the daily printed and digital reading times of the TTC, digital reading features, digital reading preferences and attitudes towards digital reading are examined in relation to various variables (gender, grade level, reading preference, digital book reading status, digital text reading status without internet, digital library status, book reading habit and digital reading level). In this respect, it is thought that the current study will contribute to the relevant literature.

1.4 The Purpose of The Research

The aim of the current research is to reveal the daily printed and digital reading time of TTC and digital reading characteristics, digital reading preferences and attitudes towards digital reading, and various variables (gender, grade level, reading preference, digital book reading status, digital text reading status without internet, digital library status, book reading habit and digital reading level) of daily printed and digital reading times and digital reading times. Concordantly, the problem sentence of the research was created as follows: "What is the level of relationship between the daily printed and digital reading time of TTC and the attitudes towards digital reading, digital reading preferences and digital reading and gender, grade level, reading preference, digital book reading status, digital text reading status, digital library status, book reading habits and digital reading level variables make a statistically significant difference in their attitudes towards digital reading?"

2. Method

The general survey model was used in this research. The general scanning pattern is "the scanning arrangements made on the entire universe or a group, sample or sample to be taken from it in order to make a general judgment about the universe in a universe consisting of a large number of elements. Single or relational scans can be performed with general survey models. In most studies, arrangements are made that will allow both single and relational scans" (Karasar, 2011, p. 79). The screening pattern, which is one of the quantitative research processes, is defined as "the opinions of participants about a topic or event, or their interests, skills, abilities, attitudes, etc. research conducted on relatively larger samples, whose characteristics are usually detected, compared to other research, is called survey research pattern" (Büyüköztürk et al., 2016, p. 177).

2.1 Participant Characteristics

The participants of the research are 173 teacher candidates studying at Kilis 7 Aralık University during the fall semester of the 2022-2023 academic year. 74.6% (n=129) of the teacher candidates between the ages of 18-35 are women and 25.4% (n=44) are men. Some introductory information about the participants with an average age of 22.1 is presented in Table 1.

Table 1: Features of the participants

Gender	n	%
Female	129	74.6
Male	44	25.4
Grade level	n	%
1. grade	49	28.3
2. grade	38	22
3. grade	42	24.3
4. grade	44	25.4
Age	n	%
18-20 age	76	43.9
21-22 age	60	34.7
23-24 age	18	10.4
25 age and over	19	11

2.2 Data Collection Tools

The data collection tools of the research consist of the “Personal Information Form” created by the researcher and the “Attitude Scale towards Digital Reading for Teacher Candidates”, which was added to the literature by Yurdakal and Susar Kırmızı (2021).

2.2.1 Personal Information Form

The research group’s “gender, grade level, reading preference, digital book reading status, digital text reading status without internet, digital library status, book reading habit and digital reading level” were collected through the “Personal Information Form” created by the researcher.

2.2.2 Attitude Scale Towards Digital Reading for Teacher Candidates

One of the data collection tools of the research, the “Attitude Scale Towards Digital Reading for Teacher Candidates” is a measurement tool developed by Yurdakal and Susar Kırmızı (2021) in the five-point likert type. The scale, which has a Cronbach’s Alpha value of 0.956 and consists of 31 items, consists of two subscales. The first subscale explains 33.22% of the total variance; the second subscale explains 21.08%. The factor item load values of the items included in the first subscale range from 0.81 to 1-0,535; and the factor load values of the items included in the second Decalogue range from 0.791 to -0.476. The factor load values of the items included in the Decalogue scale range from 0.81 to 1-0,535. The total explained variance value of the two factors is 54.30%. After confirmatory factor analysis, “IFI value is 0.92; NFI is 0.89; NNFI is 0.92; IFI is 0.92; CFI is 0.92; RMSEA is 0.12 and X^2/sd value is 2.75” were found (Yurdakal and Susar Kırmızı, 2021).

2.3 Analysis of Data

In the research, along with the “Personal Information Form”, the “Attitude Scale for Teacher Candidates Towards Digital Reading” was applied to teacher candidates. The data obtained from the scale forms completed in an average time of 15 minutes were entered into the SPSS 21.00 statistical package program and the data were analysed through this program. In the analyses, firstly, normality tests of the data and appropriate statistical analyses were performed by taking into account the homogeneity of the variances. In the normality test performed

on the obtained data, all of the data did not show a normal distribution (Kolmogorov-Smirnov and Shapiro-Wilk significance value= $p < .05$) has been identified. Therefore, non-parametric tests were used in statistical analyses. TTC' daily printed and digital reading times and attitudes towards digital reading were analysed Decently for this reason while “spearman rank differences correlation analysis” test was used from non-parametric tests. When interpreting the correlation, it was evaluated that “the correlation coefficient between 0.70-1.00 as an absolute value, a high level of correlation between 0.70-0.30, and a low level of correlation between 0.30-0.00” (Büyükoztürk, 2014, p. 32). In addition, the daily printed and digital reading times of the TTC and their attitudes towards digital reading according to various variables (gender, grade level, reading preference, digital book reading status, digital text reading status, digital library status, book reading habits and digital reading level) The “Mann Whitney U Test”, which is known as the non-parametric equivalent of “independent samples for independent samples, and the “Kruskal Wallis H Test” which is equivalent of “one-way analysis of variance analysis (Anova)” were used. When determining the source of the differences, “Post Hoc Tamhane” was made. In addition, percentage, average, frequency and standard deviation values were calculated from basic statistics. $p < .05$ significance level was taken into consideration when evaluating the results obtained from the data.

3. Results

In the current research, first of all, the attitude levels of TTC towards digital reading were detected. Then, the daily printed and digital reading times of the TTC, digital reading characteristics, digital reading preferences and attitudes towards digital reading have been revealed in relation to and daily printed and digital reading times and digital reading attitudes towards various variables (gender, grade level, reading preference, digital book reading status, digital text reading status, digital library status, book reading habit and digital reading level). Firstly, some descriptive data related to daily printed and digital reading times of participants, digital reading characteristics, digital reading preferences and attitudes towards digital reading were analysed and the results obtained are in Table 2. Within the scope of the data in the Table 2, the average reading time of TTC in daily printed sources is 63.7 minutes, while the average reading time in daily digital sources is 103.1 minutes. Therefore, it can be said that prospective Turkish teachers devote more time to reading digital resources.

Table 2: Some descriptive data related to print and digital reading time and digital reading feature, digital reading preference and attitude towards digital reading

Daily Reading time and attitude	\bar{X}	Median	Mode	ss	Variance	Skewness	Kurtosis	Ranj
Printed source reading time (min)	63.7	60	60	49.8	2486.8	2.730	14.361	410
Digital source reading time (min)	103.1	75	120	87.4	7641.2	1.388	1.450	375
Digital reading feature	80.2	80	78	10.6	112.4	-1.751	7.383	71
Digital reading preference	29.3	29	27	5.1	25.1	.914	1.706	31
Attitude towards digital reading	109.5	109	108	11.8	140.5	-.481	2.193	80

3.1 Attitude Towards Digital Reading

The “Attitude Scale towards Digital Reading” developed for participants consists of 31 statements in five-point likert type. Therefore, the highest score from this scale is 155 and the lowest score is 31. Concordantly, participants' attitudes towards digital reading are low (31-72), middle (73-113) and high (114-155), and the analysis results are in Table 3. Within the scope of the data in the Table 3, 1.2% of the prospective teachers participating in the study have low, 65.3% middle and 33.5% have a positive attitude towards high digital reading. The average of participants' attitudes towards digital reading is =109.5. This finding shows that the attitudes of pre-service teachers towards digital reading are at an intermediate level.

Table 3: The level of attitude towards digital reading

Attitude Level	n	%
Low (31-72)	2	1.2
Middle (73-113)	113	65.3
High (114-155)	58	33.5
Total	173	100

In the current research, in addition to the attitudes of TTC towards digital reading, their attitudes were analysed according to “digital reading characteristics” and “digital reading preferences”, which are sub-dimensions of the “Attitude Scale towards Digital Reading”. Concordantly, the “digital reading characteristics” sub-dimension consists of 20 expressions. Therefore, the highest score from this scale is 100 and the lowest score is 20. Concordantly, participants’ attitudes towards digital reading are low (20-46), middle (47-73) and high (74-100), and the analysis results are in Table 4. Within the scope of the data in the Table 4, it is seen that none of the participants participating in the study had a low level of attitude towards digital reading, 16.2% of them had a positive attitude towards digital reading at an intermediate level and 83.8% at a high level. The average attitude of prospective teachers towards digital reading characteristics is =80.2. This finding shows that the attitudes of pre-service teachers towards digital reading features are positive at a high level.

Table 4: The level of attitude towards digital reading features

Level of Attitude	n	%
Low (20-46)	---	---
Middle (47-73)	28	16.2
High (74-100)	145	83.8
Total	173	100

The attitudes of TTC towards “digital reading preferences” were also examined. The “digital reading preferences” sub-dimension, which is one of the sub-dimensions of the “Attitude Scale towards Digital Reading”, consists of 11 expressions. Therefore, the highest score from this scale is 55 and the lowest score is 11. Concordantly, the attitude levels of participants towards speech were considered in three groups as low (11-25), medium (26-40) and high (41-55) and the analysis results are in Table 5. Within the scope of the data in the Table 5, it is seen that 23.7% of the prospective teachers participating in the study have low and 1.7% of 74.6% have a high level of digital reading preference. The average attitude of prospective teachers towards digital reading preference is =29.3. This finding shows that the attitudes of prospective teachers towards digital reading preferences are at an intermediate level.

Table 5: The level of attitude towards digital reading preference

Level of Attitude	n	%
Low (11-25)	41	23.7
Middle (26-40)	129	74.6
High (41-55)	3	1.7
Total	173	100

3.2 The Relationship Between Printed and Digital Reading Time and Digital Reading Ability, Digital Reading Preference and Attitude Towards Digital Reading

In the current study, the relationship between TTC’ daily printed and digital reading time and digital reading feature, digital reading preference and attitudes towards digital reading was examined. The findings obtained are presented in Table 6.

Table 6: Correlation analysis results of sperman sequence differences related to printed and digital reading time and digital reading ability, digital reading preference and attitudes towards digital reading

Daily reading time and attitude		1	2	3	4	5
1- Printed source reading time (min)	Correlation coefficient	1				
	p	---				
2- Digital source reading time (min)	Correlation coefficient	.246	1			
	p	.001	---			
3- Digital reading feature	Correlation coefficient	-.135	.333	1		
	p	.076	.000	---		
4- Digital reading preference	Correlation coefficient	-.144	.111	.136	1	
	p	.059	.145	.075	---	
5- Attitude towards digital reading	Correlation coefficient	-.188	.324	.886	.531	1
	p	.013	.000	.000	.000	---

n=173, p<.05

In the analyses, a negatively low level of significant relationship was found between the daily printed source reading time and the attitude towards digital reading between the digital source reading time. There was no significant relationship between printed resource reading time and digital reading feature and digital reading preference, which is one of the sub-dimensions of the digital reading. It was found that there was a statistically significant relationship between the digital resource reading time and the attitude towards digital reading, and this relationship was positively moderate. However, there was no significant relationship between digital reading time and digital reading preference. A significant relationship was detected between the attitudes of TTC towards digital reading and digital reading feature between the high level and digital reading preference, while a significant relationship was not detected between digital reading feature and digital reading preference (Table 6).

3.3 Difference of Printed and Digital Reading Time and Attitude Towards Digital Reading According to Gender

In the research, "Mann Whitney U Test" was applied to detect whether there is a significant difference between daily printed and digital reading time and attitude towards digital reading by gender and the analysis results are in Table 7.

Table 7: Attitudes towards digital reading with daily printed and digital reading time according to gender

Daily reading time and attitude	Gender	n	Row avr.	Sequence	z	p
Printed source reading time (min)	Female	129	85.56	11037	-1.474	.140
	Male	44	91.23	4014		
Digital source reading time (min)	Female	129	83.74	10802.5	-1.217	.223
	Male	44	96.56	4248.5		
Attitude towards digital reading	Female	129	84.29	10874	-	-
	Male	44	94.93	4177		

n=173, p<.05

Table 7 shows that the TTC had daily printed (U=2652.0, p<.05) and digital (U=2417.5, p<.05) resource reading time and attitudes towards digital reading (U=2489.0, p<.05) it was detected that it did not show a statistically significant difference by gender.

3.4 The Difference Between the Printed and Digital Reading Time and the Attitude Towards Digital Reading by the Grade Level

In the research, “Kruskal Wallis H” was applied to detect whether there is a significant difference between daily printed and digital reading time and attitude towards digital reading by grade level and the analysis results are in Table 8.

Table 8: Attitudes towards digital reading with daily printed and digital reading time by grade level

Daily reading time and attitude	Grade level	n	Row avr.	sd	X^2	p	Significant difference
Printed source reading time (min)	1. (A)	49	94.37				
	2. (B)	38	95.5	3	4.450	.217	---
	3. (C)	42	79.15				
	4. (D)	44	78.94				
Digital source reading time (min)	1. (A)	49	72.64				
	2. (B)	38	90.51	3	5.795	.122	---
	3. (C)	42	93.05				
	4. (D)	44	94.18				
Attitude towards digital reading	1. (A)	49	65.34				
	2. (B)	38	95.88	3	13.574	.004	A-D
	3. (C)	42	90.6				
	4. (D)	44	100.02				

n=173; p<.05

As indicated in Table 8, the TTC' printed ($X^2 = 4.450$; $p > .05$) and digital ($X^2 = 5.795$; $p > .05$) the reading time of the source did not show a significant difference by the grade level, but their attitudes towards digital reading ($X^2 = 13.574$; $p < .05$) it has been detected that it shows a difference according to. The “Post Hoc Tamhane” test was applied to detect which groups the difference was between. According to the attitude towards digital reading, a significant difference was found in favor of fourth grades only between first grades and fourth grades.

3.5 The Difference between Printed and Digital Reading Time and Attitude towards Digital Reading By Reading Preferences

TTC were asked a question about “which of the printed and digital sources they prefer to read more” in the research, and the “Mann Whitney U Test” was applied to detect whether there is a significant difference between the daily printed and digital reading time and attitude towards digital reading by reading preference, and the analysis results are in Table 9. The “Mann Whitney U Test” was applied to detect whether there is a significant difference between the daily printed and digital reading time and the attitude towards digital reading.

Table 9: Attitudes towards digital reading with daily printed and digital reading time by reading preferences

Daily reading time and attitude	Reading preferences	n	Row avr.	Sequence	z	p
Printed source reading time (min)	Printed source	132	84.17	11110.5	-1.353	.176
	Digital source	41	96.11	3940.5		
Digital source reading time (min)	Printed source	132	71.31	9413.5	-7.433	.000
	Digital source	41	137.5	5637.5		
Attitude towards digital reading	Printed source	132	75.35	9946	-5.495	.000
	Digital source	41	124.51	5105		

n=173, p<.05

When Table 9 was examined, it was detected that the daily printed source reading times of TTC did not show a statistically significant difference according to their source reading preferences ($U = 2332.5$, $p > .05$). However, the

daily digital resource reading time of TTC ($U=635.5$, $p<.05$) and their attitudes towards digital reading ($U=1168.0$, $p<.05$) shows a statistically significant difference by the source reading preferences. When the rank averages are taken into account, it has been detected that this difference is in favor of those who read digital sources.

3.6 The Difference Between the Printed and Digital Reading Time and the Attitude Towards Digital Reading By the Digital Book Reading Situation

TTC was asked a question about “whether they read books decently in digital environment” and the “Mann Whitney U Test” was applied to detect whether there is a significant difference between the daily printed and digital reading time and attitude towards digital reading by the digital book reading situation and the analysis results are in Table 10.

Table 10: For digital reading with daily printed and digital reading time by the digital book reading situation

Daily reading time and attitude	Reading digital books	n	Row avr.	Sequence	z	p
Printed source reading time (min)	Yes.	67	87.87	5887.5	-1.185	.853
	No.	106	86.45	9163.5		
Digital source reading time (min)	Yes.	67	105.13	7043.5	-3.806	.000
	No.	106	75.54	8007.5		
Attitude towards digital reading	Yes.	67	110.01	7370.5	-4.807	.000
	No.	106	72.46	7680.5		

$n=173$, $p<.05$

TTC' daily reading time of printed sources, as given in Table 10, did not show a statistically significant difference compared to the digital book reading status ($U=9163.5$, $p>.05$). However, the daily digital reading time of the participants ($U=8007.5$, $p<.05$) and their attitudes towards digital reading ($U=7680.5$, $p<.05$) it was detected that it showed a statistically significant difference by the digital book reading situation. When the rank averages are taken into consideration, it has been detected that this difference is in favor of those who read digital books.

3.7 The Difference between the Printed and Digital Reading Time and the Attitude towards Digital Reading By the Digital Text Reading Situation Without Internet

TTC were asked “whether there are electronic texts they can read in the digital environment even if there is no internet” in the research, and the “Mann Whitney U Test” was applied to detect whether there is a significant difference between the daily printed and digital reading time and attitude towards digital reading by the digital text reading situation without internet, and the analysis results are in Table 11.

Table 11: Attitudes towards digital reading with daily print and digital reading time by the digital reading situation without Internet

Daily reading time and attitude	Digital text reading without internet	n	Row avr.	Sequence	z	p
Printed source reading time (min)	Yes.	72	87.08	6269.5	-.017	.986
	No.	101	86.95	8781.5		
Digital source reading time (min)	Yes.	72	93.74	6749.5	-1.504	.133
	No.	101	82.19	8301.5		
Attitude towards digital reading	Yes.	72	108.15	7787	-4.694	.000
	No.	101	71.92	7264		

$n=173$, $p<.05$

As given in Table 11, TTC did not make a statistically significant difference by the digital text reading status without internet reading time ($U = 3630.5$, $p>.05$) and digital ($U = 3150.5$, $p>.05$). However, it has been detected that the attitudes of the participants towards digital reading ($U = 2113.0$, $p <.05$) showed a statistically significant difference by the reading status of digital text without internet. Considering the average sequence, it was detected that this difference is in favor of those with digital text without internet in digital environment.

3.8 The Difference Between Printed and Digital Reading Time and Attitude Towards Digital Reading By The Digital Library Situation

TTC were asked “Do they have a library in digital environment” in the research and the “Mann Whitney U Test” was applied to detect whether there is a significant difference between daily print and digital reading time and attitude towards digital reading by the digital library status and the analysis results are in Table 12.

Table 12: Attitudes towards digital reading with daily print and digital reading time by the digital library status

Daily reading time and attitude	Digital library status	n	Row avr.	Sequence	z	p
Printed source reading time (min)	Yes.	41	88.72	3637.5	-.255	.798
	No.	132	86.47	11413.5		
Digital source reading time (min)	Yes.	41	100.66	4127	-2.01	.044
	No.	132	82.76	10924		
Attitude towards digital reading	Yes.	41	112.57	4615.5	-3.746	.000
	No.	132	79.06	10435.5		

n=173, p<.05

As given in Table 12, it was detected that the daily printed resource reading times of participants did not show a statistically significant difference compared to the digital library status ($U=2635.5$, $p>.05$). However, the daily digital reading time of participants ($U=2146.0$, $p<.05$) and their attitudes towards digital reading ($U=1657.5$, $p<.05$) it was detected that it showed a statistically significant difference by the digital library status. According to the rank averages, it has been detected that this difference is in favor of those with a digital library.

3.9 The Difference between Printed and Digital Reading Time and Attitude towards Digital Reading By Reading Habit

TTC were asked about their “reading habits in general” in the study and “Kruskal Wallis H” was applied to detect whether there is a significant difference between daily printed and digital reading time and attitude towards digital reading by book reading habit and the analysis results are in Table 13.

Table 13: Attitudes towards digital reading with daily printed and digital reading time by reading habit

Daily reading time and attitude	Book reading habit	n	Row avr.	sd	X^2	p	Significant difference
Printed source reading time (min)	Low level (A)	23	68.96				A-C
	Middle level (B)	125	83.86	2	14.263	.001	B-C
	High level (C)	25	119.28				
Digital source reading time (min)	Low level (A)	23	67.98				A-C
	Middle level (B)	125	84.83	2	11.686	.003	B-C
	High level (C)	25	115.34				
Attitude towards digital reading	Low level (A)	23	83.89				
	Middle level (B)	125	86.63	2	.318	.853	---
	High level (C)	25	91.72				

n=173; p<.05

As it is reached in Table 13, the attitudes of the TTC for digital reading ($X^2 = .318$; $p > .05$) did not show a statistically significant difference according to the reading habit but printed ($X^2 = 14.263$; $p < .05$) and digital ($X^2 = 11.686$; $p < .05$) It has been detected that it shows a significant difference by the source reading time. The “Post Hoc Tamhane” test was applied to detect which groups the difference was between. Concordantly, it has been detected that the difference by the reading time of both printed and digital resources is between those with high-

level reading habits and those with intermediate and decile reading habits and is in favor of prospective teachers with high-level reading habits.

3.10 The Difference between the Printed and Digital Reading Time and the Attitude towards Digital Reading By the Digital Reading Level

In the research, the TTC were asked about their “proficiency in reading in digital environments”. “Kruskal Wallis H” was applied to detect whether there is a significant difference between daily printed and digital reading time and attitude towards digital reading by digital reading level and the analysis results are in Table 14.

Table 14: Attitudes towards digital reading with daily printed and digital reading time by digital reading level

Daily reading time and attitude	Digital reading level	n	Row avr.	sd	X ²	p	Significant difference
Printed source reading time (min)	Very low level (A)	24	97.1				
	Low level (B)	45	79.3	3	2.312	.510	---
	Middle level (C)	79	86.88				
	High level (D)	25	91.54				
Digital source reading time (min)	Very low level (A)	24	67.27				
	Low level (B)	45	72.54	3	15.412	.001	A-D
	Middle level (C)	79	93.08				B-D
	High level (D)	25	112.74				
Attitude towards digital reading	Very low level (A)	24	40.08				A-C
	Low level (B)	45	69	3	47.156	.000	A-D
	Middle level (C)	79	98.94				B-C
	High level (D)	25	126.72				B-D; C-D

n=173; p<.05

As given in Table 14, it was detected that the daily printed source reading times of participants did not show a statistically significant difference compared to the digital reading level ($X^2 = 2.312$; $p > .05$). However, the daily digital resource reading time of participants ($X^2 = 15.412$; $p < .05$) and their attitudes towards digital reading ($X^2 = 47.156$; $p < .05$) it was found that it showed a statistically significant difference by the digital reading level. The “Post Hoc Tamhane” test was applied to detect which groups the difference was between. According to the analyses conducted, it was found that the difference in the context of digital resource reading time was only between very weak and weak and pre-service teachers with high-level digital reading, and in favor of those with high-level digital reading. In addition, in the context of attitudes towards digital reading, it has been found that the difference between those who are very weak and weak and those who have an intermediate and high level of digital reading is in favor of those who have an upper and intermediate level of digital reading. At the same time, a significant difference was found between the attitudes of the TTC with medium and high -level digital readings towards digital reading, and this difference was found to be in favor of those who have senior digital readings.

4. Discussion

In the current research, the daily print and digital reading times and digital reading characteristics, digital reading preferences and attitudes of TTC towards digital reading have been revealed relativistically; daily print and digital reading times and attitudes towards digital reading have been examined in terms of various variables such as “gender, grade level, reading preference, digital book reading status, digital text reading status without internet, digital library status, book reading habit and digital reading level”.

It has been detected that the attitudes of TTC towards digital reading are at an intermediate level, their attitudes towards digital reading features, which are one of the lower dimensions of the attitude towards digital reading

scale, are high and their attitudes towards digital reading preferences are at an intermediate level. Although the attitudes of prospective Turkish teachers towards reading are at an intermediate level, they are based on printed sources (63.7 min.) of the reading time allocated to digital resources (103.1 min.) it was found to be less than the reading time they allocated. Gençtürk (2022), on the other hand, emphasizes in his study that the reading rates of young people in printed media are higher than in digital media. When the literature was examined, it was found that the digital reading self-efficacy perceptions of teacher candidates were at a high level (Gömleksiz, Kan & Fidan, 2013; Sarıkaya, 2019; Ulu & Zelzele, 2018) or sufficient (Elkatmış, 2018), as well as moderate level (Bulut & Karasakaloğlu, 2019; Ceylan & Koç Çiçekli, 2020) or insufficient (Esmer, 2013). In the Maden and Maden (2016) study, it is emphasized that the digital reading self-efficacy perceptions of secondary school students are moderate; in the Boz (2018) study, a significant majority of secondary school students do not prefer to read in a digital environment, and Macit and Demir (2016) study shows that about half of primary school students' digital reading skills are partially adequate.

There is a positive relationship between the daily printed and digital resource reading times of TTC; On the other hand, a negative and low-level significant relationship was found between attitudes towards digital reading. In other words, it can be said that as the daily printed resource reading time of teacher candidates increases, there is an increase in digital resource reading time, but it causes a decrease by creating a negative effect on their attitudes towards digital reading. TTC' digital resource reading time and attitudes towards digital reading and digital reading characteristics were found to have a decently positive relationship between the positive and moderate level. Concordantly, it can be said that as the amount of time teacher candidates devote to digital reading increases, their attitudes towards digital reading also increase; again, there has been an increase in their attitudes towards digital reading features, which are one of the sub-dimensions of the attitude scale towards digital reading. However, no significant relationship was found between the digital reading time of TTC and their digital reading preferences, which is one of the sub-dimensions of the attitude scale towards digital reading.

It can be said that the attitudes of TTC towards digital reading with daily printed and digital resource reading times do not show a difference according to gender; the gender factor does not affect their attitudes towards digital reading with daily printed and digital resource reading time. As a matter of fact, a study conducted by Ceylan and Koç Çiçekli (2020) shows that the digital reading self-efficacy perceptions of TTC are not affected by the gender factor; similarly, Başaran's (2014) study emphasizes that gender does not have a significant effect on the speed of reading text in a digital environment, understanding the text and attitude towards the text. However, in the study conducted by Sarıkaya (2019), it was concluded that the digital literacy levels of female students are better than the digital literacy levels of male students. Again, there are various studies in the literature in which the self-efficacy perceptions of digital reading of female teacher candidates (Tiryaki & Karakuş, 2019; Ulu & Zelzele, 2018) and their interests are better (Bulut & Karasakaloğlu, 2019). Moreover, similar results can be said for students studying at different levels of education. For example, it is one of the results obtained in the literature that women students are more successful in digital reading compared to male students at the elementary school (Macit & Demir, 2016) and middle school (Ercan & Ateş, 2015; Duran & Alevli, 2014) level. In contrast to these studies, there are also various studies in the literature in which male students are more successful in digital reading or have a higher self-efficacy perception (Esmer, 2013; Maden & Maden, 2016; Soyuçok & Mazman Akar, 2018).

It can be said that the daily printed and digital resource reading times of TTC do not show a difference according to the classroom level; the classroom level is not a factor affecting the daily printed and digital resource reading time. However, it has been detected that the attitudes of TTC towards digital reading show a difference according to the class level and this difference is in favor of the upper classes. Therefore, in this research, it can be said that the grade level is not effective on the reading time of TTC in print and digital sources; but it is effective on their attitudes towards digital reading. There are also studies in the literature that show that individuals' digital literacy levels are affected by the classroom variable, such as studies that are not affected by the classroom variable (Özërbaş & Kuralbayeva, 2018; Sarıkaya, 2019) (Göldağ & Kanat (2018). In the study conducted by Ceylan and Koç Çiçekli (2020), it was detected that the digital reading self-efficacy perceptions of prospective Turkish teachers were affected by the classroom variable.

It has been detected that the daily printed resource reading times of TTC do not show any difference according to their resource reading preferences; however, their digital resource reading times differ according to their attitudes towards digital reading source reading preferences. In other words, it can be said that the reading preferences of prospective Turkish teachers make a decisive difference on digital resource reading times, attitudes towards digital reading, and this difference is in favor of digital resource readers compared to those who read printed resources.

It was found that a significant majority of TTC (76.3%) prefer to read printed sources. Considering the reasons why printed sources are preferred more than digital sources in general, various reasons such as rapid distraction on digital devices; harm to health of digital devices; difficulty marking certain places of a text, taking notes, underlining lines in a digital environment; not understanding the text read from a digital device very well and liking to read printed sources more (Boz, 2018) constitute the limiting aspects of reading in a digital environment. However, although for these reasons, teacher candidates prefer to read printed sources, in the current research it has been detected that the time TTC devote to reading digital sources is more than to reading printed sources. As a matter of fact, the average daily printed resource reading time of TTC is 63.7 minutes, while the time they devote to daily digital resource reading time is 103.1 minutes. Concordantly, the digital resource reading time of TTC who prefer to read digital books rather than printed sources and devote more time can be evaluated as a result of which their attitudes towards digital reading are expected to be more positive. As a matter of fact, findings supporting this conclusion have been reached in the current study.

It was detected that the daily printed resource reading times of TTC did not show any difference compared to their digital book reading situations; however, their digital resource reading times and their attitudes towards digital reading differed according to their digital book reading situations. In other words, it can be said that the digital book reading status of TTC makes a decisive difference on digital resource reading time, attitudes towards digital reading, and this difference is in favor of those who read digital books compared to those who do not read digital books. In the research, it was found that a significant majority of TTC (61.3%) do not prefer to read books in a digital environment; very few prefer (38.7%). However, as stated earlier, it was stated that the time TTC devote to daily digital resource reading time is more than the time they devote to reading printed resources. Concordantly, the digital resource reading time of TTC who read digital books can be evaluated as a result of which it is expected that their attitudes towards digital reading will also be more positive. The findings obtained in the current study also support this situation.

It has been detected that the daily printed and digital resource reading times of TTC do not differ according to the digital text reading situation without the Internet; however, the attitudes of teacher candidates towards digital reading differ according to the digital text reading situation without the Internet, and this difference is in favor of those who read text without the Internet. In this research, 41.6% of TTC read any text in a digital environment without the Internet, while 58.4% do not read any text in a digital environment. When the literature was examined, there were no studies in which teacher candidates' daily print and digital resource reading times and attitudes towards digital reading were examined according to the digital text reading situation without internet. However, a study conducted by Sarıkaya (2019) found a significant difference in the total score and technical sub-dimension score according to the daily internet usage time variable in the digital literacy status of prospective Turkish teachers. TTC with a daily internet usage time of less than 1 hour had a digital literacy level of 63.58, those between 1-2 hours had a digital literacy level of 61.50 and those with more than 2 hours had a digital literacy difference of 65.88. Concordantly, it can be said that the duration of Internet use and the non-Internet text reading situations of TTC both have a positive impact on their digital literacy levels and attitudes towards digital reading.

It has been detected that the daily printed resource reading times of TTC do not show a difference according to the digital library status; however, the digital resource reading times differ according to the digital reading attitudes and the digital library status, and this difference is in favor of those who have a digital library. When the literature was examined, there were no studies in which the daily printed and digital resource reading times and attitudes towards digital reading of teacher candidates were examined according to the digital library status. Although the results of the literature studies could not be compared with the findings of the current research in this respect, it has been found that the number of books students have in the literature has a significant effect on their oral self-efficacy perceptions (Demir & Börekcü, 2021). It can be predicted that digital libraries, which contain many books,

can have an impact on individuals' daily reading time of printed and digital resources and their attitudes towards digital reading. As a matter of fact, it can be said that the digital libraries owned by prospective Turkish teachers create a significant difference on their reading time of digital resources and their attitudes towards digital reading.

TTC' attitudes towards digital reading did not show any difference according to reading habits; however, it was detected that they showed a difference according to the daily reading time of printed and digital sources, and the difference in question was between those with high-level reading habits and those with moderate and decile reading habits. When the literature is examined, the reading habit in general is divided into three categories: high-level reader (reader who reads 2 books or more books per month), medium-level reader (reader who reads 1 book per month) and low-level reader (reader who reads 1 book or fewer books in 2 months) (Akt., Aksaçoğlu, & Yılmaz, 2007). In this research, it was detected that 13.3% of TTC are in the category of poor level reader, 72.3% are intermediate level reader and 14.4% are in the category of high-level reader. When the literature is examined, it is known that the habit of reading books has many important contributions for individuals. For example, the habit of reading books directly contributes to mental development; allows him to use his native language correctly and adequately; directly helps to enrich his vocabulary; contributes to the development of a healthy and strong personality; helps strengthen communication skills; increases educational and educational success (Aksaçoğlu, & Yılmaz, 2007). However, in this research, it has been detected that the attitudes of TTC towards digital reading do not show any difference according to the habit of reading books. Despite this, in this research, it can be said that the daily printed and digital resource reading time differs according to book reading habits, and the daily printed and digital resource reading time of high-level readers is more positive compared to low-level readers.

It has been found that the daily printed resource reading times of prospective Turkish teachers do not show a statistically significant difference compared to the digital reading level; however, the attitudes of prospective teachers towards digital reading with daily digital resource reading times show a difference according to the digital reading level. Concordantly, it can be said that as the digital reading levels of teacher candidates increase, their attitudes towards digital reading also increase with daily digital resource reading times in general. In this research, it was found that 13.9% of prospective Turkish teachers have very poor, 26% have poor, 45.7% have intermediate and 14.4% have high-level digital reading level. As it can be seen, almost half of the TTC consider themselves to be at an intermediate level in digital reading. Similar results have been found in studies in the literature (Bulut & Karasakaloğlu, 2019; Ceylan & Koç Çiçekli, 2020). However, when the literature was examined, there were no studies in which teacher candidates' daily reading time of printed and digital resources and their attitudes towards digital reading were examined according to the digital library status. In addition to the current study, it is proposed to conduct similar studies with different sample groups.

References

- Akbaba, R. S. (2017). Türkçe öğretmeni adaylarının okuma alışkanlıkları ve okumaya yönelik tutumları [Reading habits of the Turkish teacher candidates and eligibility for reading]. *Turkish Studies- International Periodical for the Languages, Literature and History of Turkish or Turkic*, 12(18), 35-52, doi: 10.7827/TurkishStudies.12215
- Akkaya, N., & Özdemir, S. (2013). Ortaöğretim öğrencilerinin okumaya yönelik tutumlarının incelenmesi (İzmir-Buca örneği) [An investigation of high school students' attitudes towards reading (İzmir-Buca sample)]. *Bartın Üniversitesi Eğitim Fakültesi Dergisi [Bartın University Journal of Faculty of Education]*, 2(1), 75-96.
- Aksaçoğlu, A. G., & Yılmaz, B. (2007). Öğrencilerin televizyon izlemeleri ve bilgisayar kullanmalarının okuma alışkanlıkları üzerine etkisi [Impactsof watching television and computer usingon students' reading habits]. *Türk Kütüphaneciliği [Turkish Librarianship]*, 21(1), 3-28.
- Arı, E., & Demir, M. K. (2013). İlköğretim bölümü öğretmen adaylarının kitap okuma alışkanlıklarının değerlendirilmesi [Assessing reading habits of student teachers' at department of elementary education]. *Ana Dili Eğitimi Dergisi [Journal of Mother Tongue Education ADED – JOMTE]*, 1(1), 116-128. doi: 10.16916/aded.16025
- Arıcı, A. F. (2012). *Okuma eğitimi [Reading education]*. Ankara: Pegem Akademi.

- Arslan, Y., Çelik, Z., & Çelik, E. (2009). Üniversite öğrencilerinin okuma alışkanlığına yönelik tutumlarının belirlenmesi [Determination of university students' attitudes toward reading habit]. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi [Pamukkale University Faculty of Education Journal]*, 26(26), 113-124.
- Aydemir İleri, Z., Öztürk, E., & Horzum, M. B. (2013). Ekrandan okumanın 5. sınıf öğrencilerinin bilgilendirici ve öyküleyici metin türünde okuduğunu anlama düzeylerine etkisi [The effect of screen reading on 5th grade students' reading comprehension levels in informative and narrative text type]. *Kuram ve Uygulamada Eğitim Bilimleri [Educational Sciences in Theory and Practice]*, (13), 2263-2276.
- Azizoğlu, İ. A., & Okur, A. (2018). Türkçe öğretmeni adaylarının ekrandan okumaya yönelik metaforik algıları [Metaforic perspectives from Turkish teacher candidates for reading from screen]. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi [Journal of Mehmet Akif Ersoy University Faculty of Education]*, (46), 1-21. doi: 10.21764/mauefd.334140
- Balcı, A. (2009). *İlköğretim 8. sınıf öğrencilerinin okuma alışkanlık ve ilgileri üzerine bir araştırma [A research on elementary 8th grade students' reading habits and interests]*. (Doctoral Thesis). Retrieved from the National Thesis Center of the Council of Higher Education. (Thesis No. 228411)
- Başaran, M. (2014). 4. sınıf seviyesinde ekrandan ve kâğıttan okumanın okuduğunu anlama, okuma hızı ve metne karşı geliştirilen tutum üzerindeki etkisi [Effect of reading on screen and paper on elementary school 4th grade students' reading comprehension reading speed and their attitudes]. *Uşak Üniversitesi Sosyal Bilimler Dergisi [Uşak University Journal of Social Sciences]*, 7(2), 248- 268.
- Batluralkız, Ç. (2018). *Basılı ve dijital ortamlarda ortaokul öğrencilerinin okuduğunu anlama becerilerinin karşılaştırılması [Comparing the reading comprehension skills of primary school students in print vs digital setting]*. (Master's thesis). Retrieved from the National Thesis Center of the Council of Higher Education. (Thesis No. 533987)
- Batur, Z., Gülveren, H., & Bek, H. (2010). Öğretmen adaylarının okuma alışkanlıkları üzerine bir araştırma: Uşak eğitim fakültesi örneği [A study about preservice teachers reading habits: Sampling of usak education faculty]. *Uşak Üniversitesi Sosyal Bilimler Dergisi [Uşak University Journal of Social Sciences]*, 3(1), 32-49.
- Biçer, A., & Ercan, Z. G. (2017). Okul öncesi öğretmen adaylarının okuma alışkanlığına etkileyen faktörlerin incelenmesi (Trakya Üniversitesi örneği) [Determining of factors affecting the reading habits of preschool teacher candidates (a trakya university sample)]. *Trakya Üniversitesi Eğitim Fakültesi Dergisi*, 7(1), 42-55.
- Boz, S. M. (2018). *Öğrencilerin dijital okuma kültürü [Students' digital reading culture]*. Ankara: Eğitim Teknolojileri Geliştirme ve Projeler Daire Başkanlığı. http://yegitek.meb.gov.tr/meb_iys_dosyalar/2018_11/06102914_serpil.pdf
- Bozpolat, E. (2010). Öğretmen adaylarının okuma alışkanlığına ilişkin tutumlarının değerlendirilmesi (Cumhuriyet Üniversitesi Eğitim Fakültesi Örneği) [Evaluation of teacher candidates' attitudes towards reading habits (Cumhuriyet University Faculty of Education Example)]. *Zeitschrift für die Welt der Türken-Journal of World of Turks*, 2(1), 411-428.
- Bulut, B., & Karasakaloğlu, N. (2019). Öğretmen adaylarının dijital okuma eğilimleri ile okuma ilgileri arasındaki ilişki [The relationship between pre-service teachers' digital reading tendencies and reading interests]. E., Babaoğlu Çelik, E., Kırıl and A., Çilek (Eds.), *Eğitim Araştırmaları-2019 [Educational Research-2019]* (pp. 136- 147). Ankara: Eyuder Yayınları.
- Büyüköztürk, Ş. (2014). *Sosyal bilimler için veri analizi el kitabı [Manual of data analysis for social sciences]*. Ankara: Pegem
- Büyüköztürk, Ş., Kılıç-Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2016). *Bilimsel araştırma yöntemleri [Scientific research methods]*. Ankara: Pegem Akademi.
- Can, A., Deniz, E. & Çeçen, M. A. (2016). Ortaokul öğrencilerinin okuma tutumları [Reading attitudes of middle school students]. *Turkish Studies- International Periodical for the Languages, Literature and History of Turkish or Turkic*, 11(3), 645-660. doi: 10.7827/TurkishStudies.9311
- Çeçen, M. A., & Deniz, E. (2015). Lise öğrencilerinin okumaya yönelik tutumları: Diyarbakır ili örneği [high school students' attitudes towards reading: The case of Diyarbakır]. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi [Mustafa Kemal University Journal of Social Sciences Institute]*, 12(30), 193-212.
- Çelik, T. (2015). Öğrencilerin e-kitap okuma tutumlarının incelenmesi [Investigation of student's e-book reading attitudes]. *Turkish Studies- International Periodical for the Languages, Literature and History of Turkish or Turkic*, 10(3), 271-284. doi: 10.7827/TurkishStudies.7803
- Ceylan, B., & Koç Çiçekli G. (2020). Türkçe öğretmeni adaylarının ekran okuma öz yeterlik algılarının incelenmesi [Investigating screen reading self-efficacy perceptions of Turkish teacher candidates]. *Eğitim Felsefesi ve Sosyolojisi Dergisi [Journal of Educational Philosophy and Sociology]*, 1(1), 1-18. doi: 10.29329/jeps.2020.284.1
- Dağtaş, A. (2013). Öğretmenlerin basılı sayfa ve ekrandan okuma tercihleri ile eğitimde elektronik metin kullanımına yönelik görüşleri [On-printed page and screen reading preferences of teachers' with their views on the use of electronic text in education]. *Turkish Studies- International Periodical for the Languages, Literature and History of Turkish or Turkic*, 8(3), 137-161. doi: 10.7827/TurkishStudies.4390

- Demir, S. & Börekçi, M. (2021). Ortaokul öğrencilerinin sözlü anlatım öz yeterlik algılarına çeşitli değişkenlerin etkisi [The effect of various variables on the perception of verbal lecture self-efficacy of secondary school students]. *Ana Dili Eğitimi Dergisi [Journal of Mother Tongue Education]*, 9(1), 94-110.
- Demir, S. (2015). Üniversite öğrencilerinin okuma tutum ve alışkanlıkları üzerine bir değerlendirme [An evaluation in reading skills and habitudes of undergraduate students]. *Uluslararası Türkçe Edebiyat Kültür Eğitim (TEKE) Dergisi [International Journal of Turkish Literature, Culture and Education (TEKE)]*, 4(4), 1657-1671. doi: 10.7884/teke.531
- Demir, T. (2009). İlköğretim II. kademe öğretmen adaylarının okuma alışkanlıkları üzerine bir araştırma (Gazi Üniversitesi örneği) [A survey on reading habits of prospective teachers for elementary school's second grade (case of Gazi University)]. *Turkish Studies- International Periodical for the Languages, Literature and History of Turkish or Turkic*, 4(3), 717-745. doi: 10.7827/TurkishStudies.703
- Duran, E., & Alevli, O. (2014). Ekrandan okumanın sekizinci sınıf öğrencilerinde anlamaya etkisi [The effect of reading on screen on comprehension of eight grade students]. *Okuma Yazma Eğitimi Araştırmaları [Research in Reading & Writing Instruction]*, 2(1), 1-11.
- Duran, E., & Dolaylar Özkul, İ. (2015). Ekran okuryazarlığının gelişimi ve geleceğine yönelik tahminler [The development of screen literacy and predictions for the future]. *Uşak Üniversitesi Sosyal Bilimler Dergisi [Uşak University Journal of Social Sciences]*, 8(4), 281-296.
- Elkatmış, M. (2015). Sınıf öğretmeni adaylarının okuma ilgi ve alışkanlıkları [Pre-service classroom teachers' reading interests and habits]. *Kastamonu Eğitim Dergisi [Kastamonu Journal of Education]*, 23(3), 1223-1240.
- Elkatmış, M. (2018). Sınıf öğretmenlerinin ekran okumaya yönelik görüşleri [Classroom teacher's opinions for screen reading]. *Kırıkkale Üniversitesi Sosyal Bilimler Dergisi (KÜSBD) [Kırıkkale University Journal of Social Sciences (KÜSBD)]*, 8 (1), 203-222.
- Ercan, A. N., & Ateş, M. (2015). Ekrandan okuma ile kâğıttan okumanın anlama düzeyi açısından karşılaştırılması [The comparison of reading from paper and screen in terms of comprehension levels]. *Turkish Studies- International Periodical for the Languages, Literature and History of Turkish or Turkic*, 10(7), 395-406. doi: 10.7827/TurkishStudies.8032
- Esmer, B. (2013). *Sınıf öğretmeni adaylarının elektronik ortamlarda okuma becerilerinin değerlendirilmesi [Evaluation online reading comprehension skills of elementary preservice teachers]*. (Master's thesis). Retrieved from the National Thesis Center of the Council of Higher Education. (Thesis No. 333523)
- Gençtürk, G. (2022). *Dijital ortamın gençlerin okuma alışkanlıklarına etkisi: İstanbul'da durum [The effect of digital environment on reading habits of young people: A sample of Istanbul]*. (Master's thesis). Retrieved from the National Thesis Center of the Council of Higher Education. (Thesis No. 709158)
- Göldağ, B., & Kanat, S. (2018). Güzel sanatlar eğitimi alan öğrencilerin dijital okuryazarlık durumları [Digital literacy status of the students who studied fine arts education]. *Jass Studies-The Journal of Academic Social Science Studies*, (70), 77-92.
- Gömlüksiz, M. N., Kan, A. Ü., & Fidan, E. K. (2013). Öğretmen adaylarının ekran okuma özyeterlik düzeylerine ilişkin görüşleri [Prospective teachers' perceptions of screen reading self-efficacy]. *Erzincan Üniversitesi Eğitim Fakültesi Dergisi [Journal of Erzincan University Faculty of Education]*, 15(2), 138-159.
- Gönen, M. (2007). *Öğretim boyunca okuma alışkanlığı, okuma kültürü ve okullarda uygulama sorunları toplantısı [Reading habit during teaching, reading culture and application problems in schools]*. Ankara: MEB Yayınları.
- Gönen, M., Öncü, Ç. E., & Işıtan, S. (2004). İlköğretim 5. 6. ve 7. sınıf öğrencilerinin okuma alışkanlıklarının incelenmesi [Examination of reading habits of primary education 5th, 6th and 7th grade students]. *Milli Eğitim Dergisi [National education journal]*, 32(164), 7-34.
- Güneş, F. (2010). Öğrencilerde ekran okuma ve ekranik düşünme [Thinking based on screen and screen reading of students]. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi [Journal of Mustafa Kemal University Institute of Social Sciences]*, 7(14), 1-20.
- Karasar, N. (2011). *Bilimsel araştırma yöntemi [Scientific research method]*. Ankara: Nobel Akademik Yayıncılık.
- Kuru, O. (2018). Sınıf öğretmenliği 3. sınıf öğrencilerinin kâğıttan ve ekrandan okuma becerilerinin çeşitli değişkenler açısından incelenmesi [Examining the skills of 3rd grade class teachers department students on reading from paper and from the screen in terms of several variables]. *İnönü Üniversitesi Eğitim Fakültesi Dergisi [Inönü University Journal of the Faculty of Education]*, 19(2), 36-52. doi: 10.17679/inuefd.323135
- Kuru, O., Kaşkaya, A., & Calp, Ş., (2017). İlkokul 4. sınıf öğrencilerinin kâğıttan ve ekrandan okuduğunu anlama becerilerinin sınanması; Öğretmen ve öğrenci görüşleri [Comparison of the reading skills of 4th grade primary school students from the paper and from the screen, the viewpoints of teachers and students]. *Sosyal Bilimler Dergisi [Journal of Social Sciences]*, 7(13), 70-84.
- Lemken, B. (1999). *E-Book the missing link between paper and screen*. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.46.5481&rep=rep1&type=pdf>

- Macit, İ., & Demir M. K. (2016). Dördüncü sınıf öğrencilerinin ekran okuma becerilerinin değerlendirilmesi [Evaluation of screen reading skills of 4th grade elementary students]. *Turkish Studies- International Periodical for the Languages, Literature and History of Turkish or Turkic*, 11(3), 1647-1664. doi: 10.7827/TurkishStudies.9228
- Maden, S. (2012). Ekran okuma türleri ve Türkçe öğretmen adaylarının ekran okumaya yönelik görüşleri [Screen reading types and opinions of prospective teacher of turkish language towards screen reading]. *Dil ve Edebiyat Eğitimi Dergisi [Journal of Language and Literature Education]*, 1(3), 1-16.
- Maden, S., & Maden, A. (2016). Ortaöğretim öğrencilerinin ekran okumaya yönelik tutumları [The attitudes of secondary school students towards screen reading]. *Uluslararası Türkçe Edebiyat Kültür Eğitim (TEKE) Dergisi [International Journal of Turkish Literature, Culture and Education (TEKE)]*, 5(3), 1305-1319.
- Mete, G. (2012). İlköğretim 8. sınıf öğrencilerinin okuma alışkanlığı üzerine bir araştırma (Malatya ili örneği) [A research on elementary 8th grade students' reading habits (Malatya sample)]. *Dil ve Edebiyat Eğitimi Dergisi [Journal of Language and Literature Education]*, 1(1), 43-66.
- Odabaş, H., Odabaş Z. Y., & Sevmez, H. (2018). Üniversite öğrencilerinde dijital / e-kitap okuma kültürü: Selçuk Üniversitesi örneği [Digital / e-book reading culture in university students: Selçuk University sample]. *DTCF Dergisi [Journal DTCF]*, 58(1), 139-171. doi: 10.33171/dtcfjournal.2018.58.1.8
- Odabaş, H., Odabaş, Z. Y., & Binici, K. (2020). Dijital bilgi kaynakları ve ortamlarının üniversite öğrencilerinin okuma davranışlarına etkileri [The effects of digital information sources and media on the reading behavior of university students]. *Milli Eğitim Dergisi [National education journal]*, 49(227), 89-116.
- Özbay, M., Bağcı, H., & Uyar, Y. (2008). Türkçe öğretmen adaylarının okuma alışkanlığına yönelik tutumlarının çeşitli değişkenlere göre değerlendirilmesi [Evaluation of the preservice Turkish teachers' attitudes towards reading habit according to some variables]. *İnönü Üniversitesi Eğitim Fakültesi Dergisi [Inönü University Journal of the Faculty of Education]*, 9(15), 117-136.
- Özen, M., & Ertem, İ. S. (2014). Metinleri ekrandan okumanın anlam kurma üzerine etkisi [The effect of screen reading of texts on meaning making]. *The Journal of Academic Social Science Studies*, (24), 319-350. doi: 10.9761/JASSS2161
- Özerbaş, M. A. & Kuralbayeva, A. (2018). Türkiye ve Kazakistan öğretmen adaylarının dijital okuryazarlık düzeylerinin incelenmesi [A review of digital literacy levels of future primary-school and secondary-school teachers in Turkey and Kazakhstan]. *MSKU Eğitim Fakültesi Dergisi [MSKU Journal of Education]*, (5), 16-25.
- Sağlam, M., Suna, Ç., & Çengelci, T. (2008). Öğretmen adaylarının okuma alışkanlıklarını etkileyen etmenlere ilişkin görüş ve önerileri [Opinions and suggestions of pre-service teachers on the factors affecting their reading habits]. *Milli Eğitim Dergisi [National education journal]*, 37(178), 8-23.
- Sarıkaya, B. (2019). Türkçe öğretmen adaylarının dijital okuryazarlık durumlarının çeşitli değişkenler açısından değerlendirilmesi [Evaluation of digital literacy status of prospective turkish teachers in terms of various variables]. *Uluslararası Sosyal Araştırmalar Dergisi [The Journal of International Social Research]*, 12(62), 1098-1107. doi: 10.17719/jisr.2019.3122
- Soyuçok, M., & Mazman Akar, S. C. (2018). Ortaokul öğrencilerinin ekran okumaya karşı tutumlarının bazı değişkenler açısından incelenmesi [Investigation of the attitudes of secondary school students on screen reading by some variables]. *Türkiye Eğitim Dergisi [Turkish Journal of Education]*, 3(2), 17-30. doi: 11.11111/ted.xx
- Şahenk Erkan, S. S., Balaban Dağal, A., & Tezcan, Ö. (2015). Öğretmen adaylarının yazılı ve dijital okuma alışkanlıklarının değerlendirilmesi [Evaluation of teacher candidates' printed media and digital reading habits]. *Uluslararası Eğitim Bilimleri Dergisi [The Journal of International Education Science]*, 2(2), 122-134.
- Tiryaki, E. N., & Karakuş, O. (2019). Türkçe öğretmen adaylarının dijital uygulama ile okuduğunu anlama becerisinin incelenmesi [Investigation of the skilling skills of Turkish teacher candidates reading by digital practice]. *İleri Eğitim Çalışmaları Dergisi [Journal of Advanced Education Studies]*, 1(1), 1-11.
- Ulu, H., & Zelzele, E. B. (2018). Öğretmen adaylarının ekran okuma öz yeterlik algılarının incelenmesi [Investigation of screen reading perceptions selfefficacy pre-service teachers]. *Uluslararası Türkçe Edebiyat Kültür Eğitim (TEKE) Dergisi [International Journal of Turkish Literature, Culture and Education (TEKE)]*, 7(4), 2608-2628.
- Uslu Üstten, A. (2014). 8. sınıf öğrencilerinin televizyon izleme sürelerinin okuma alışkanlıkları üzerine etkisi [Impacts of time spent in watching television on 8th grade students' reading habits]. *Turkish Studies- International Periodical for the Languages, Literature and History of Turkish or Turkic*, 9(3), 1511-1521. doi: 10.7827/TurkishStudies.6260
- Yaman, H., & Dağtaş, A. (2013a). Ekrandan okumanın okumaya yönelik tutuma etkisi [Impact of screen reading towards attitudes of reading]. *Eğitimde Kuram ve Uygulama [Journal of Theory and Practice in Education]*, 9(4), 314-333.

- Yaman, H., & Dağtaş, A. (2013b). Ekrandan okumanın Türkçe dersine yönelik tutuma etkisi [Impact of screen-reading towards attitudes of Turkish lesson]. *The Journal of Academic Social Science Studies*, 6(7), 1233-1250. doi : 10.9761/JASSS1803
- Yılmaz, B., Köse, E., & Korkut, Ş. (2009). Hacettepe üniversitesi ve Bilkent üniversitesi öğrencilerinin okuma alışkanlıkları üzerine bir araştırma [A research on reading habits of Hacettepe university and Bilkent university students]. *Türk Kütüphaneciliği [Turkish Librarianship]*, 23(1), 22-51.
- Yurdakal, İ. B., & Susar Kırmızı, F. (2021). Öğretmen adayları için dijital okumaya yönelik tutum ölçeği (DOTÖ): Geçerlik ve güvenilirlik çalışması [Attitude scale towards digital reading (DRAS) for preservice teachers: Validity and reliability study]. *Buca Eğitim Fakültesi Dergisi [The Journal of Buca Faculty of Education]*, (51), 137-159. doi: 10.53444/deubefd.788603