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Reading Culture in the Digital World

Abstract. The purpose of this study is to explore and to identify the existing problems of modern reading and to suggest possible solutions. The study focuses on the role of different forms of reading in development and shaping of personality in the digital age. Radical and rapid technological developments in the world, especially after the 2000s, including devices such as computers, internet, smartphones, tablets, e-books and e-readers, have also changed the reading people behavior. Digital reading has started to become a popular type of reading in the digital world. Important issues such as popularity of digital reading he world, reading preference trends in printed and digital formats, reading preferences by age groups and how future developments in this regard need to be examined. This study defines and examines first the basic concepts of digital reading and also the advantages and disadvantages of digital reading. In addition some statistical data regarding printed and digital reading in various countries around the world were interpreted as well as the results of the research conducted in Turkey were evaluated in the study. It can be said that digital reading is becoming increasingly popular in the world in general, but not very quickly. All age groups still prefer printed formats primarily. It can be said that the preferred reading type may vary depending on the purpose of reading, and in general, digital reading is preferred choice for academic-scientific and educational reading. Printed reading is favored for leisure reading. At the end of the study, some predictions and suggestions were made regarding the future trends of digital reading. The main result shows that reading under the influence of the socio-cultural environment is changing all over the world. These transformational phenomena manifest themselves in both positive and negative senses. The author drew our attention to the fact that children and teenagers should develop both types of reading. The author noted that families, teachers, schools and libraries should play an important role in this case.

Keyword: Reading culture, digital reading, printed reading, leisure reading

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Б. Йылмаз Культура чтения в цифровом мире

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Аннотация. Цель статьи – выявить существующие проблемы современного чтения и предложить возможные их решения. Значимость исследования обусловлена важной ролью различных форм чтения в развитии и формировании личности в эпоху цифровых технологий. Радикальное и стремительное развитие информационных технологий в современном мире, особенно после 2000-х гг., значительно изменили читательское поведение людей, и цифровое чтение стало очень распространенным. Возникла необходимость изучения следующих вопросов: популярность цифрового чтения в мире; изменения тенденций в чтении печатных материалов и предпочтения в цифровом чтении; возрастные группы, предпочитающие тот или иной тип чтения; изменения тенденции в будущем. Автор дает определение основным понятиям цифрового чтения, а затем объясняет преимущества и недостатки цифрового чтения. В работе интерпретированы некоторые статистические данные, касающиеся печатного и цифрового чтения в различных странах мира и оценены результаты исследования, проведенного в Турции в 2022–2023 гг. Исходя из полученных данных можно сказать, что цифровое чтение становится все более популярным в мире в целом, но это происходит постепенно, так как все возрастные группы по-прежнему выбирают в первую очередь печатное чтение. Можно отметить, что предпочтительный тип чтения может варьироваться в зависимости от цели чтения, и цифровое чтение характерно для академического научного и образовательного чтения, а печатное – для досугового. Сделаны некоторые прогнозы и предложения относительно будущего цифрового чтения. Основной результат гласит, что чтение под влиянием социокультурной среды меняется во всем мире, и эти трансформации проявляются как в положительном, так и в отрицательном смысле. К преимуществам цифрового чтения автор относит: быстрый доступ ко многим книгам; удобство электронных устройств для чтения по сравнению с бумажными книгами; возможность регулировать шрифт и яркость экрана, делать пометки и изменения в тексте, читать при слабом освещении; ценовую доступность электронных книг. Среди недостатков цифрового чтения автор называет меньшую скорость чтения, дискомфорт для глаз, сложности с концентрацией внимания, непригодность для глубокого чтения. Важно, чтобы дети и подростки развивали умения, необходимые для обоих видов чтения, и в этом им должны помогать семья, учителя, школы и библиотеки.

Ключевые слова: культура чтения, цифровое чтение, чтение печатных текстов, досуговое чтение

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Introduction

Reading culture consists of *reading preparation, basic literacy, functional literacy, reading habit and critical/deep reading steps/stages*. Reading culture can be defined as “the set of individual and social perceptions, attitudes, values, habits, characteristics, skills and behaviors related to the act of reading that has become a part of the lifestyle”. Reading culture refers to the level and quality of individuals’ and societies’ relationships with the act of reading. Reading habit, which is an important stage of reading culture, is the

individual’s ability to perform the act of reading, which is seen as a necessity, continuously, regularly, critically and with pleasure. Reading culture is a behavior that changes depending on individual and social factors and has historical, cultural, sociological, psychological and technological dimensions. In other words, perceptions, attitudes, behaviors and habits regarding reading culture, reading type, reading materials, reasons for reading, reading environments and similar elements of reading culture change depending on social, cultural and technological developments.

In this study, first the basic concepts of digital reading are defined, and then the advantages and disadvantages of digital reading are explained. Besides, some statistical data regarding printed and digital reading in various countries around the world were interpreted and the results of the research conducted in Turkey were evaluated in the study.

Digital Reading: Theoretical Framework

Rapid and radical technological developments in today's world, especially in the 2000s, have caused changes in the reading culture and created the concept of "digital reading". Digital reading is the act of reading through digital tools. The most distinctive feature that distinguishes digital reading from traditional reading is that the reading action is made on the screen. The reading tool that affects action has had versatile effects on human behavior over time and caused changes in reading behavior. Many factors such as text reading method, sensitivity to the text, reading time, scanning-finding method of what is read/to be read, orientation, content diversity and selectivity are the differences between digital and traditional reading actions. For digital reading, names such as 'screen reading', 'on-screen reading', 'electronic reading', 'e-reading' and 'hyper-reading' can be used (Liu, 2012, pp. 701–702; Odabaş, 2017, p. 284; Farinosi, Lim and Roll, 2016).

Texts presented on digital devices are no longer simple texts as they used to be. The number of components in digital texts has increased and become richer. Hence, the definition of reading has changed and differences have begun to occur in reading needs and strategies. Success in reading digital texts has become dependent on recognizing and applying the processes of analyzing, synthesizing, integrating, and interpreting the text with its components and rich objects (Odabaş, Odabaş and Sevmez, 2018, p. 141). In the digital reading process, characteristics such as the reader's education level, experiences, synthesis ability, language skills, and mastery of the subject can directly affect the quality of the reading act (PISA 2018 Reading literacy framework, 2019, pp. 11–12). Therefore, digital readers need to have new skills to meet the requirements of digital reading. Conventional reading comprehension strategies are not sufficient for digital reading environments. In the era we live in, every reader must have reading proficiency enriched with skills appropriate to the nature of digital reading environments (Odabaş, Odabaş and Sevmez, 2018, pp. 143–144).

Despite some advantages, technical problems frequently experienced in digital publishing annoy readers, cause them to lose time, and even cause them to stop reading. Some problems that readers do not know and/or do not need to know, such as network connection problems, browser problems,

plug-in deficiencies, screen-image incompatibilities, unwanted ads, cookies, and pop-ups, are among the problems that change and complicate the reading culture of this period. Digital natives generally have better digital reading skills than digital immigrants. In order for digital immigrants to be able to read on the screen for long periods of time, they need to develop their comprehension and synthesis skills while reading on the screen and increase their reading concentration to higher levels in these environments. These skills can be acquired through experimentation and will therefore take some time. Today's readers need to develop synthesis skills in order to verify the knowledge and information they obtain via the Internet, to detect inconsistencies and find the correct one, and/or to obtain correct results. In other words, it has become mandatory for them to have digital literacy skills. Because digital reading is a new type of reading (Amiama-Espailat, 2017; Baron, 2015; Odabaş, Odabaş and Sevmez, 2018, pp. 144–147).

Digital reading has become an increasingly common type of reading for all age groups and reading purposes. It is now used in all types of reading, such as scientific-academic reading, educational reading, news reading, and leisure reading. According to the results of a study conducted by the Pew Research Center in 2016, it was understood that only one-fifth of the American public obtains news from printed newspapers. In the research conducted by the same organization on 4971 people and in the report prepared in 2017 under the name 'News Use Across Social Media Platforms 2017', it was found that the rate of those who follow daily news on television decreased by 7% in one year; On the other hand, it is observed that the rate of those who obtain news via the internet increased by 5% in 2017 compared to the previous year (Gottfried and Shearer, 2017).

Much research is being done on this subject around the world. While some studies reach similar results, some studies may obtain different results on the same subject. In a research conducted with Australian students based on PISA 2009 data, students' digital reading rates were to be revealed. Accordingly, the highest digital reading rate among OECD countries belongs to Australia (Thomson, Bortolli, and Buckley, 2013). A similar study by Binkley, and et. al (PISA 2018 Reading literacy framework, 2019) attracted attention. The research conducted by Maden and Maden (2016), it was aimed to reveal the attitudes of students attending secondary education institutions towards digital reading and to determine the reasons for the use of digital devices. According to the research findings, although the participants generally had a positive attitude toward digital reading, it was observed that they used digital tools more for social media and gaming purposes. It has also been suggested that technological developments make digital reading more advantageous day by day (Liu, 2012). According to the results of the research

conducted by Oluwaseyi and Oluwatise (2013), it was observed that students preferred online applications more for academic reading. In the study conducted by Azizoğlu and Okur (2018), prospective teachers' metaphorical perceptions regarding digital reading were investigated. According to the results of the research, participants may have both positive and negative perceptions about digital reading. The results obtained did not show high rates for any of them. The results of the research conducted on the frequency of preference for digital reading among university students who can be defined as "digital natives" in Turkey show that students still prefer printed media. The reasons why students prefer printed media are mostly related to reading comprehension (Kazancı, 2018, p. 70). Kumara and Sampath's (2018) research on this subject also reveals the impact of information and communication technology on reading habits. The study conducted by UNESCO (2014) provides an overview of the digital reading situation in developing countries.

It can be said that digital reading is used more especially in reading processes for scientific, academic, educational, and news purposes, while printed reading is still dominant in leisure reading. In the reading history of humanity, the transition from papyrus to parchment and from parchment to paper took thousands of years. The transition from paper to screen will also take a long time. However, this transition period will not be as long as in other reading materials in history but will take place within a few decades.

Advantages and Disadvantages of Digital Reading

Digital reading has caused some changes in reading culture in general. Digital reading leads to changes such as the development of mental skills and a different perspective on information (Güneş, 2016). The presentation and storage conditions/capacity of digital reading texts have improved. The speed and ease of access to information have increased significantly and reached a global level. Screen readings have facilitated and expanded the possibilities of producing, transforming, and sharing information. This also improved language skills and mental capacity (Güneş, 2016; Işık, 2013; Çıvgın, 2020). 21st-century people spend less time on deep and concentrated reading. On the other hand, digital reading behavior occurs in the form of spending more time on scanning and skimming, recognizing keywords, one-time reading, non-linear reading, and selective reading tasks and processes (Liu, 2012, p. 86; Liu and Huang, 2016, p. 236).

The act of reading has also changed physically. The horizontal progression of the eye in print reading has turned into a vertical feature in digital reading. This change has increased both the eye's movement and its ability to adapt to the intense light it encounters

(Güneş, 2016). Digital reading has enabled people to move more, especially due to the use of mice and fingers. The use of versatile attention has developed in digital reading. Digital reading exposes the reader to rich stimuli by incorporating light, sound, and visuals. This has led to a high level of attention development (Çıvgın, 2020).

Unlike printed texts, screen texts require skills suitable for reading serially and in short intervals. Therefore, digital reading contributes to individuals' ability to work intensively in short periods of time (Bélisle, 2011). When reading printed materials, it is possible to master the entire material because the general structure of the content and visual elements are perceived together. Reading digital materials has also become different in this respect. A high level of attention is required to ensure comprehension in digital reading. For people who develop these skills, digital reading can be made in high quality. People who are uncomfortable because they cannot master the entire text may have difficulty in digital reading (Azizoğlu and Okur, 2018, p. 8).

Digital reading can cause changes in three different skills of the mind: structuring information, adapting to new information, and producing information. Since reading on paper is organized and systematic, it is easier to structure the information. Digital reading allows the development of these three skills. In screen readings, information exchange progresses very quickly and interaction is also provided. For this reason, the individual must adapt to the information in digital readings. Thanks to interactive reading, the person produces new information by focusing on both the text and the interaction. From this perspective, it can be said that digital reading supports the development of cognitive skills (Güneş, 2016).

Both digital reading and print reading have advantages and disadvantages. Some of these advantages and disadvantages, which vary depending on reading and age groups, will decrease or increase in the future. As of the current period, the advantages of digital reading over printed reading are as follows:

- While it has been claimed that reading on digital material is 25% slower than on printed material and that the reason for this is that the information perceived in pieces in screen readings reduces the speed of understanding, it has been reported in later studies that this difference decreased to 6%. This difference between the data shows that individuals are increasingly adapting to digital reading and their mental skills are improving (Çıvgın, 2020; Akkaya and Özdemir, 2013).

- In order for digital reading to become more widespread, publishers aim to design digital reading materials in paper format on the basis of visual-mental reading criteria, thus facilitating the transition from paper to screen reading and ensuring their enjoyment. Thanks to digital reading opportunities, it will become

increasingly easier to reach especially children and young people.

- Digital reading devices offer readers many more possibilities than a printed book. While reading in this environment, components such as audio, video, graphics, and address hyperlinks add richness and diversity to the subject being read (Tveit and Mangen, 2014, p. 180).

- Wide access and transportation opportunities are available for digital reading materials such as e-books or audiobooks. New personal libraries can be established with digital materials that can be accessed free of charge or by subscription. This library can be carried in a pocket or bag.

- The ability to add notes on digital books, adjust the font size and screen color, and quickly access information from the internet about any subject mentioned in the sources we read, and interactive learning/reading opportunities are wider (Shimray, Keerti and Ramaiah, 2015; Öztürk and Can, 2013; Liu, 2005; Grant, 2004).

- With digital reading texts, interpersonal interaction occurs faster and easier, and writer-reader communication can be established more easily and effectively (Neşeli, 2019).

- Quick note-taking and copy-paste operations on digital text are positive features that increase reading quality and strengthen reading (Güneş, 2010).

- While there are those who state that digital reading technology and resources are more expensive, there are also those who claim that it is cheaper and see this as an advantage. According to Semerci (2002) and Yılmaz (2004), the cost of digital reading materials, consisting of production, storage, and sharing processes, is lower than printed materials.

In short, the advantages of digital reading are access to many books in a very short time; eReaders are more convenient than paper boxing; the ability to adjust font and screen brightness according to one's preference; making marks and changes in the text; enriching the text with visual stimuli; Being able to read without the need for light and e-books are cheaper than printed books.

However, digital reading also has its disadvantages. They can be listed as follows:

- The smart reading devices we have to use for digital reading increase costs. The fact that technology is changing rapidly and is generally expensive can make digital reading costly. Repair costs arising from frequent breakdowns of digital devices create additional costs for digital reading through options such as model upgrades or hardware additions (Karadağ and Yurdakal, 2016).

- The fact that the reader can only see the text as much as can fit on the screen, the reading speed from the screen is slower than that of printed materials, and the horizontal progress of the screen pages, as they move downwards, causes more eye fatigue (Güneş, 2010).

- For digital reading, it is necessary to have reading tools such as computers, mobile devices, mobile phones, and tablets, and it is necessary to have the knowledge and skills to use technology; Issues such as being difficult to read from the screen, health problems caused by digital reading related to organs such as the eyes, neck, waist and back, decreasing the level of reading comprehension, technology addiction and information security are considered as some other disadvantages (Turgut, 2018; Duran and Ertuğrul, 2012).

- Focus times in digital reading are shorter than in print reading. Disadvantages of digital reading are that it takes more time due to the use of technology, creates problems focusing on reading, and is difficult to do deep reading (Odabaş, Odabaş and Sevmez, 2018; Shimray, Keerti and Ramaiah, 2015; Karadağ and Yurdakal, 2016).

Briefly, the disadvantages of digital reading are slower reading than print boxing; more tired and uncomfortable for the eyes; concentration more difficult than printed boxing; and not suitable for deep reading. Surface reading based on scanning and review can be done; e-book reading devices renewal, corruption, etc. more expensive and an emotional connection cannot be established with the e-book.

As can be seen in the studies mentioned above, it can be said that the most important differences between screen reading and printed media reading are concentrated in reading speed, focusing on what is read, reading comprehension, remembering, reading success, and deep-surface reading. In addition, it is understood that leisure/pleasure reading is preferred to be done in printed media, while academic reading is preferred to be done in a digital environment. The reason and purpose of reading also affect the choice of two media. It is seen that both reading environments have advantages and disadvantages compared to each other, and readers generally perform both types of reading together. However, there are studies that reach different results even on the same points between these two types of reading. Although digital media creates new ways of reading, it is understood that more comparison and research are needed for the texts read, the formats of these texts, and the devices used. Therefore, it can be said that the issue is not yet mature enough to make definitive judgments (Öztürk, 2023).

The future of digital reading will largely be determined by the innovations brought by technology and the level of adaptation of societies to technological change. Hints of this can be seen today. While adaptation to technology is faster and easier in some societies, some societies show a slow change in this regard. However, technology is a universal human achievement and affects all societies. For this reason, societies will sooner or later transition to digital reading and possibly new types of reading.

Digital Reading Culture in the World

In this section, current trends and changes in both print and digital reading in the world will be evaluated based on literature data. As can be seen from the data below, both printed and digital reading may vary depending on continents and countries.

In one of the most current studies conducted worldwide (<https://thgmwriters.com/blog/global-book-reading-statistics-2022-2023-complete-survey>), 945 readers living in 56 countries were asked “what genre of books they read in 2022 and what” “They plan to read in 2023” was asked and the results were shared in the publication titled *Global Book Reading Statistics for 2022 and 2023*.

According to the latest book reading statistics in this survey:

- 27% said they read over 20 books in 2022, whereas 32% said they read one to five books. Just 18% said they read six to 10 books, and 19% read 11 to 20 books in 2022. 64% of readers plan to read more books in 2023 than they did in 2022. Just 3% plan to read fewer books. These results are fairly similar across all regions. The three top genres people around the world plan to read in 2023 are history (39%), mystery (35%) and biography/memoir (34%). Other well-read genres are fantasy, science fiction, and self-help.

Top reasons for buying/reading paper books:

- Preference for a physical copy (82%)
- Easier to read (51%)
- For a collection (43%)
- Like to feel or smell (40%)
- To share with others (24%)
- To gift to others (20%)

- There are roughly equal numbers of readers 25-34, 35-44, 45-54 and 55-64. 56% of respondents were women, 42% were men, and 1% identified as other. This is consistent with other research that shows girls and women around the world read more books.

- The one format they read the most in 2022. **57% of people read the paper (print books)** most – 41% paperback and 16% hardcover. **32% of readers chose eBooks** – 20% Kindle and 12% other eBooks. Another 8% listened to audiobooks and 3% chose “other” (which might include comic books, brail, or some other format). Americans are less interested in paper and somewhat more interested in all other formats (<https://thgmwriters.com/blog/global-book-reading-statistics-2022-2023-complete-survey-data/#:~:text=Survey%20says%3A%20according%20to%20the,to%2020%20books%20in%202022>).

According to a study conducted in the United States in 2021 on print and digital reading, 71% of younger people prefer a paper book over an e-book (<https://myvision.org/guides/americas-reading-habits/>). Other results obtained in the same research are as follows:

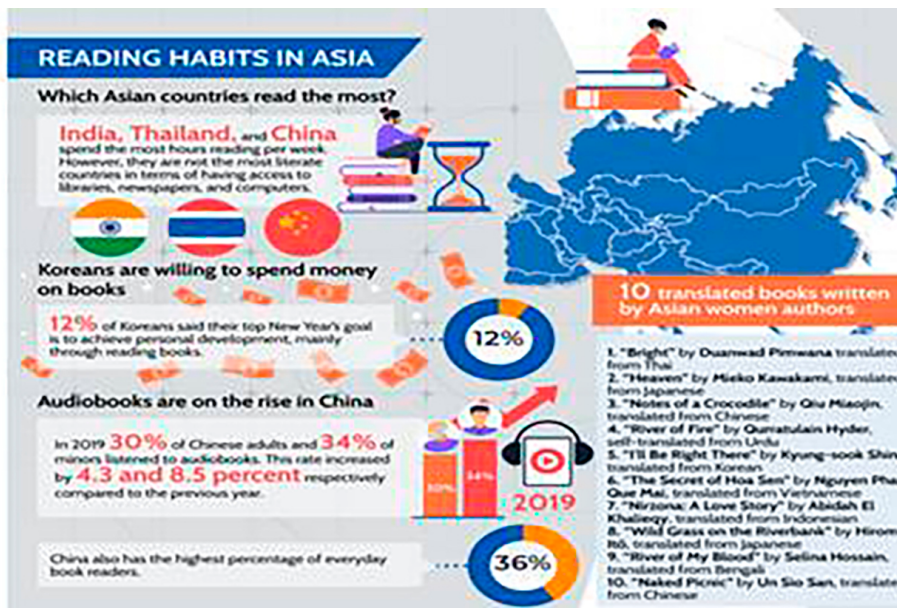
In another study called *World Reading Habits 2021*, the data obtained for the countries of the European and Asian continents are shown in Chart 1 and Chart 2 below.

Top reasons for buying/reading e-books:

- Convenience (81%)
- Cheaper cost (56%)
- Takes up less space (49%)
- Easier to read than paper books (41%)
- Can make font sizes bigger (26%)
- Environmentally friendly (14%)



Graph 1. Reading habits in Europe



Graph 2. Reading habits in Asia

(Source: <https://geediting.com/world-reading-habits-in-2021-infographic/>)

Some highlights of the Researches World Reading Habits in 2021 are:

- People in India, Thailand and China spend the most hours reading books per week.
- The romance genre is the most popular among US readers.
- Of all the generations, millennials read the most books.
- Finland, Poland, and Estonia are Europe's bookworms.
- Audiobooks are growing in popularity in China.
- The pandemic led to a decrease in literacy rates in developing countries.

(<https://geediting.com/world-reading-habits-in-2021-infographic/>)

What does the research say on print or digital reading for Russia? Table 1 provides data on this subject.

Research results for Russia provide interesting data in favor of digital reading. According to the survey results, 35 percent of Russians from 18 to 30 years old preferred to read printed books and 30% preferred digital books. Among adults aged 31 to 45 years, nearly one third of respondents stated they preferred digital versions of books as of May 2020. Digital reading rates are 29% for the 46-60 age group and 20% for the over 60 age group. According to the data obtained, the preference for digital reading decreases as age increases.

The last research whose data will be presented is about Turkey. This research was conducted by Öztürk

Do you read books in print or digital more often?

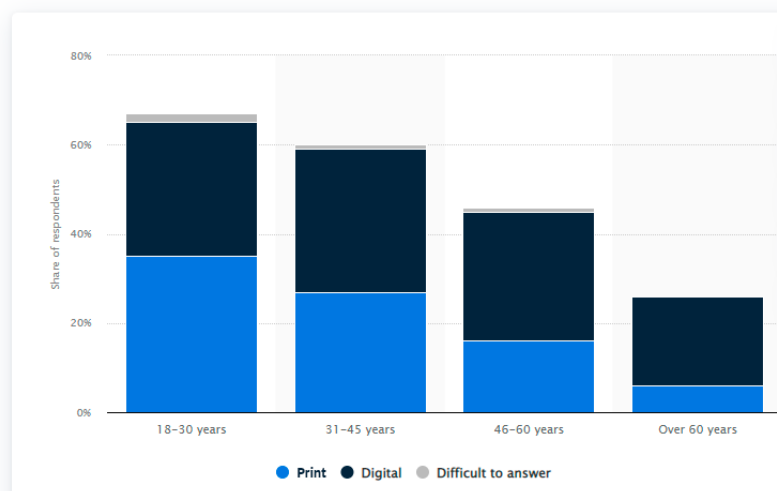


Table 1. Print or digital reading in Russia

(Source: <https://www.statista.com/statistics/1121810/digital-book-reading-habits-of-russians-by-age/>)

(2023) in Ankara (Turkey) in 2022 as a graduate study. The data was obtained through a questionnaire applied to 294 students (16–17 years old) studying in the last year of 7 high schools in Ankara. 57.8% of the students are female and 42.2% are male.

Table 2, Table 3 contains some data obtained in the research.

Table 2. Reading types of students

Type of reading habit	%
Reading e-books	9,5
Reading paper books	47,3
Reading e-books and paper books	35,4
None	7,8
Total	100,0

Table 3. Reasons to choose e-books and printed books

Reasons to choose	e-book	printed
	%	%
I can read anywhere	55,8	36,7
It is easier to carry	54,8	37,1
It reads faster	52,7	39,8
It's easier to read	46,3	46,3
It's less tiring	33,7	58,8
It's more fun	33	59,5
I understand better	22,1	70,4
I'm more used to	16,3	76,2

Based on the data obtained in this research conducted in Turkey, the following conclusions were reached:

- Students read both types of books, but they prefer printed books. Digital book reading trends are on the rise.
- They prefer printed books because they are more familiar, easier to understand, and are less tiring.
- Students prefer e-books because they can be read anywhere, they are easier to carry and they can read more quickly.
- The biggest difference between these two types of reading is in favor of printed reading and getting used to reading better.

- They read mostly e-books, blogs, and podcasts digitally.
- Students mostly prefer to read e-books for free on the Internet. The purchase rate is very low. The support of schools and libraries in this regard is very insufficient.
- Only the education level of the parents affects the type of reading habits. Gender, family income, and parental occupation are not effective in this regard.

Results and Recommendations

The research shows that individuals who began to adapt more and more digital reading saw their mental skills improved; it is not yet correct to argue that despite the increase in the time devoted to digital reading, there is a decrease in printed book reading or a decrease in print book sales; more and more people are dedicating their time to digital reading but people still prefer print reading because they believe it is more informative and less distracting; and the acceptance of digital media is stronger among young people, but the preference for printed books is still strong for all ages. In general, it can be said that the trend towards digital reading is increasing in the world, but this type of reading has not yet replaced printed reading.

The points we want to draw attention to in this study and the suggestions are as follows:

- Creating national policies for the future trends of children's and youth's reading habits will be the most comprehensive solution approach in print and digital readings.
 - The most important point is to gain the reading habit in childhood. In this period, the child who has not acquired the reading habit can have a strong reading habit, neither in print nor digitally.
 - Both types of reading should be tried to be developed and used together. Parents, schools, and libraries should support children and young people to do both types of reading together. They should not be forced to choose one type of reading.
 - Children and teenagers should be taught how to perform both types of reading effectively. Families, teachers, schools, and libraries should play a very important role in this regard. However, in order to play these roles, they must also be conscious of it. For this, guides should be prepared for them and training programs should be organized.
 - Children and young people have the most difficulty in obtaining reading materials in both print and digital reading. Schools and public libraries should support this and provide free and quality printed and e-books.
- More comprehensive comparative scientific research and studies should be conducted between countries on digital reading habits. Because digital reading will be a more popular issue that concerns all countries in the future.

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