A STUDY ON READING PRINTED BOOKS OR E-BOOKS: REASONS FOR STUDENT-TEACHERS PREFERENCES

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ABSTRACT
This study tried to determine the preferences of student-teachers on reading printed books or e-books and the reasons for these preferences. Reading printed books and e-books preferences of students are discussed in terms of gender and department variables. 258 student-teachers who are studying in Computer Education and Instructional Technologies (CEIT), Music Education (ME), Preschool Education (PE), Primary School Education (PSE), Social Sciences Education (SSE) and Turkish Language Education (TLE) departments participated in the research voluntarily. The students were asked five survey questions. To evaluate the data percentage, mean, standard deviation and chi-square test were used. According to the answers given to the questions prepared by the researcher, only 20.9% of the students currently read e-books. The rate of e-books reading students is higher in CEIT and Social Sciences Education divisions than the other divisions. In another finding of the study, male students read e-books more than female students. The reading rate of students who prefer reading e-books to printed books is 96.5%, if the hardware and software requirements are met. This choice is analyzed in terms of divisions; CEIT students prefer reading e-books to printed books less than the students of other divisions. Same choice is analyzed in terms of gender; the rate of preferring to read e-books in female students is higher than male students. The reasons for students preferring to read printed books to e-books are: 25.6% "to protect my eye health" and 25.2% "I like holding the book in my hands" are the most given answers. These two responses were given mostly by the students of Primary School Education division. Also, the rate of students who prefer printed books and give "to protect my eye health" as a reason is higher in CEIT division than other departments. "I understand better when I read the book in my hand" preference reason is higher in CEIT students with a rate of 5.5% than students in other departments. The response of "I do not have the technology to read e-books" is 1.6% and "I understand better when I read the book in my hand" response rate is 1.2%. In a further finding of the study, the preference reason "I like holding the book in my hands" as expressed by female students is 30.1%. This rate is 14.6% in male students.
Keywords: E-books, Student-teachers, Reading book, Printed books.

INTRODUCTION
The development of the internet has led to the adding of a lot of concepts starting with "e-" to our lives. E-mail, e-shopping, e-banking, e-commerce, e-government, e-signatures and e-learning are leading concepts among them. E-books with growing reader/user population are a book format that most of us have heard and used a lot lately because of their long-standing history and the widespread use of information technologies.

With different definitions in the various sources, the e-book definition pertinent to this study is that of an electronic format digitizing one or more printed books or a content completely produced in electronic environment that can be displayed, accessed, published on a desktop computer, on any hand-held device with screen or in any custom-designed electronics. They will of necessity include a book reader hardware and rich text features software (adding bookends, text marking, note taking, etc.) to allow for the same functions performed during traditional reading (Önder, 2010).

E-books can be read with numerous devices and tools. Such as Iriver eBook Reader, Oblio E-Book Plus, Kindle, ReederLITE, reedPAD2, eInk as well as desktops, tablet computers, iPhones and iPads, Blackberry's, mobile phones, and navigation devices. Some portable music players and Nintendo DS gaming consoles, can also be used to read e-books (URL 1). In fact, it could be said that the increase in the number and types of hardware and software required to read e-books is indicative of the rise in the number of e-books' readers and e-books released by the publishing industry. In a study conducted to determine the rate of e-books reading, according to the responses of 307 people; 22% stated that they read e-books, 77% stated that they do not (Gürcan, 2010). The users of İdefix Library application service that started in 2010, which allows people to read e-books in tablets increased 4 times to 150,000 people, compared to 2009. The number of e-book devices with e-ink screen technology such as Kindle has reached 40,000 (URL 1). In 2011, the number of e-books published in Turkey was 1314, in 2012 this figure increased to 2928 (Kocatürk, 2013). According to TÜİK (2013a) data, the highest increase in published ISBN-encoded content in 2012 was in e-books with 152.4%. It appears that the development and proliferation of technology will continue to facilitate an increase in the number of e-book readers.

Reading e-books comes with a lot of advantages for users compared to reading printed books. For example; using less paper, e-books take up less space and are easy to carry, searching and note-taking is much easier, the font size can be changed as desired, purchasing is much faster and easier, preservation and protection is simple. E-books can be printed and published in a variety of file formats (HTML, PDF, LIT, PDB, etc.) (Day, 2001; Snowhill, 2001; McFall, 2005; Yıldırım et al, 2011). According to Rukancı and Anameriç (2003); e-books, depending on the technology, can provide enough interaction as between a teacher and a student. It can appeal to students with different learning styles and they can adjust their own reading and learning speed. In addition, it is clear that because of its visual and audio elements, e-books could facilitate learning and teaching, make it more enjoyable and optimise the permanence of learning. This is why the Ministry of Education in Turkey has given great importance to the design and use of e-books within the FATİH Project. In this context, tablet computers were distributed to students in pilot schools. By the time the project is completed all the students and teachers will have had the opportunity to use e-books. For this reason, having knowledge and experience in the use of e-books for student-teachers, who are training to become teachers, is important. The study thus looked for answers to such issues as whether student-teachers read e-books; the relationship of this situation between the different divisions in which they are studying and the role gender plays; reasons and preferences for reading or for not reading e-books or printed books, and whether the preferences change in line with gender and their subject specialism.

METHOD
Model of the Study
This study was conducted using screening technique which is a descriptive research model.

Study Group
The sampling group of the study is 258 students attending Trakya University Faculty of Education, studying in Computer Education and Instructional Technologies (CEIT), Division of Music Education (ME), Division of Preschool Education (PE), Division of Primary School Education (PSE), Division of Social Sciences Education (SSE) and Turkish Language Education (TLE) departments. The students participated in the study voluntarily. Distribution of participating students by gender and the division in which they are studying are presented in [Table 1].

Table 1: Frequency distribution of students by gender and department

	Groups	Frequency (n)	Percentage (%)
	Female	176	68.2
Gender	Male	82	31.8
	Total	**258**	100
	C.E.I.T.	55	21.3
	P.E.	45	17.4
	M.E.	21	8.2
Department	T.L.E.	27	10.5
	P.S.E.	97	37.6
	S.S.E.	13	5.0
	Total	**258**	100

Data Collection Tools
To collect research data, a form consisting of five questions prepared by the researcher was used. The questions of the form, are: 1. Your Gender? 2. Your Division? 3. Do you read e-books? 4. If your answer is No, what are the reasons you prefer reading printed books to e-books? (Can select more than one option.), 5. If hardware and software requirements are met for reading e-books, which format of the same book do you prefer to read, printed format or electronic format?

Analysis of Data
Data acquired in research were analysed using SPSS 17.0 software program. To evaluate the data, descriptive statistical methods (Number, Percentage, Mean, Standard Deviation) were used. To compare the quantitative data with the relationship between two groups, chi-square test was used.

FINDINGS
According to the responses of student-teachers to the questions in the data collection tool, the following conclusions are reached:

Do you read e-books? 79.1% of the students answered "No", 20.9% "Yes". More than half of the students don't read e-books. Acquired data presented in [Table 2].

Table 2: Frequency distribution: Students' reading e-books status

	Groups	Frequency (n)	Percentage (%)
	Yes	54	20.9
Do you read e-books?	**No**	**204**	**79.1**
	Total	258	100

What are the reasons for not reading e-books? (Can select more than one option) based on the responses given by student-teachers; "Printed books cost less" reason is the most marked reason with 98.8%. "To protect my eye health" and "I like holding the book in my hands" reasons are other two reasons most chosen. The most important factor students prefer printed books is the cost. The frequency distribution of the students' responses to this question is presented in [Table 3].

Table 3: Frequency distribution: reasons students are not reading e-books

	Groups	Frequency (n)	Percentage (%)
	I like holding the book in my hands	65	25.2
	To protect my eye health	66	25.6
	Because it is portable and easier to read	40	15.5
	More realistic	4	1.6
	I get more pleasure	42	16.3
What are the reasons you prefer reading printed books to e-books?	I like the smell of the book	8	3.1
	I understand better when I read the book in my hands	3	1.2
	I do not have the technology to read e-books	4	1.6
	Printed books are more cost-effective	**255**	**98.8**
	To support authors of printed books	10	3.9

I get distracted when reading e-books	4	1.6
Cannot give up the habit of reading printed books	5	1.9
No reason	43	16.7

If hardware and software requirements are met for reading e-books, do you prefer to read the printed format or the electronic format of the same book? Almost all the students (96.5%) responded with electronic book. The preferred format for reading is e-book, for the students. Students' responses to this question are presented in [Table 4].

Table 4: Frequency distribution of printed books/e-books reading preferences of students, if hardware and software requirements are met

	Groups	Frequency (n)	Percentage (%)
If hardware and software requirements are met to read e-books, do you prefer to read the same book in printed format or electronic format?	**E-book**	**249**	**96.5**
	Printed Book	9	3.5
	Total	258	100

Between the status of reading e-books and the divisions student-teachers study is found significant relationship (X2=15.446; p=0.009<0.05). The question; *Do you read e-books?* 36.4% of CEIT students answered "Yes" and 63.6% "No"; 15.6% of PE students said "Yes", 84.4% of PE students said "No"; 100% of ME students said "No"; 18.5% of TLE students said "Yes", 81.5% of TLE students said "No"; 18.6% of PSE students said "Yes", 81.4% of PSE students said "No"; 30.8% of SSE students answered "Yes", 69.2% of SSE students said "No" [Table 5]. The rate of the students reading e-books in CEIT and PSE divisions is higher than the other divisions.

Table 5: Chi-square test; the relationship between the status of reading e-books and divisions of students

Status of reading e-books	Division														X^2/p
	CEIT		PE		ME		TLE		PSE		SSE		Total		
	n	%	n	%	n	%	n	%	N	%	n	%	n	%	
Yes	20	%36.4	7	%15.6	0	%0.0	5	%18.5	18	%18.6	4	%30.8	54	%20.9	X^2=15.446 p=0.009
No	35	%63.6	38	%84.4	21	%100	22	%81.5	79	%81.4	9	%69.2	204	%79.1	
Total	55	%100	45	%100	21	%100	27	%100	97	%100	13	%100	258	%100	

Between the status of reading e-books and genders of student-teachers is found a significant relationship (X^2=12.687; p=0.000<0.05). 14.8% of female students read e-books, 34.1% of male students read e-books [Table 6]. The rate of male students reading e-books is higher than female students.

Table 6: Chi-square test; the relationship between the status of reading e-books and genders of students

Status of reading e-books	Gender						X^2/p
	Female		Male		Total		
	n	%	n	%	n	%	
Yes	26	**%14.8**	28	**%34.1**	54	%20.9	X^2=12.687 p=0.000
No	150	%85.2	54	%65.9	204	%79.1	

Total	176	%100	82	%100	258	%100	

Between the preference of e-books or printed books and meeting the software and hardware requirements of student-teachers to read e-books there is a significant relationship (X^2=26.338; p=0.000<0.05). 85.5% of CEIT students, 100% of PE students, 100% of ME students, 96.3% of TLE students, 100% of PSE students, 100% of SSE students preferred e-books [Table 7]. Accordingly, the division with the lowest rate of preferring e-books is CEIT.

Table 7: Chi-square test; relationship between preferring printed books/e-books when software and hardware requirements of students are met and their divisions

Preference	Division													X^2/p
	CEIT		PE		ME		TLE		PSE		SSE		TOTAL	
	n	%	n	%		%	n	%	N	%	n	%	n	%	
E-books	47	%85.5	45	%100	21	%100	26	%96.3	97	%100	13	%100	249	%96.5	X^2=26.338 p=0.000
Printed books	8	%14.5	0	%0	0	%0	1	%3.7	0	%0	0	%0	9	%3.5	
Total	55	%100	45	%100	21	%100	27	%100	97	%100	13	%100	258	%100	

The relationship between reading e-books or printed books preference when software and hardware requirements of student-teachers are met for e-books and the students' genders is significant (X^2=20.015; p=0.000<0.05). 100% of female students, 89% of male students stated that they would prefer e-books instead of printed books when the software and hardware requirements to read e-books are met [Table 8]. All the female students preferred e-books, presence of slight preference for printed books by male students is observed.

Table 8: Chi-square test; relationship between students' genders and reading printed books/e-books preference when software and hardware requirements of students are met to read e-books

Preference	Gender						X^2/p
	Female		Male		Gender		
	n	%	n	%	n	%	
E-books	176	**%100**	73	**%89**	249	%96.5	
Printed books	0	%0	9	%11	9	%3.5	X^2=20.015 p=0.000
Total	176	%100	82	%100	258	%100	

CONCLUSION AND DISCUSSION

The findings reveal that a large part of student-teachers do not read e-books. Also Woody et al. (2010) reports that even though students have the opportunity to access technology anytime and anywhere they want, there is still a preference for reading printed books. According to Kakırman Yıldız (2012); three generations describe the digital process; digital immigrants, digital hybrids and digital natives. Digital immigrants were born before 1970, digital hybrids were born in 1970-1999 and digital natives were born after 1999. The student-teachers who are the sampling of this study were born in 1990-1994 so the students are digital hybrids. Digital hybrids, try to take advantages of technological facilities but they are not as competent as the digital natives. The paper is much closer and intimate to them. As Duran (2013) quoted the research findings of Jamali et al. (2009), Noordhidawati and Gibb (2008) that because of the reasons of technological deficiencies and not having sufficient knowledge and skills to read e-books, students are not expressing positive attitude and opinion towards reading e-books. In a survey done by the Pew Internet, even though individuals aged 16 and over in Turkey usage rate of e-books has increased from 16% to 23% and a decline in the rate of reading and using printed books (URL 3), it is normal that the sampling of this study is focused on printed books in relation to the digital generations.

In another finding of the study, the student-teachers have indicated that the main reason they do not read e-books is that printed books cost less than e-books. In Turkey, taxes are the biggest obstacle to e-books. VAT (Value Added Tax) is 8% on printed books and 18% for e-books (URL 3; Şahin, 2013). The result is that e-books are costlier than printed books. Also, having the hardware and software required to read e-books warrants additional expenditure. Considering all these factors and the fact that the target audience is still students, who have other educational expenses, it is not difficult to understand the rationale underpinning this result.

The second reason marked by the students for not reading e-books is to protect the wellness of their eye. This finding is consistent with the finding of Duran (2013)'s study conducted with 254 students of the Faculty of Education at Uşak University. In Duran (2013)'s study, the students stated that the most serious distress is eye strain and back pain in spite of many positive sides of reading through the screen. Güneş (2009) in his work called "Efficiency in Screen Reading" indicates that reading on the screen has some difficulties than reading from paper. Screen pages move from top to bottom or bottom to top. The eyes of reader read the lines from left to right horizontally. The eyes vacillate between these two opposing moves during reading, often losing or having difficulty finding the line during reading. In addition, eye movements going back to check for information is difficult in screen reading. In paper reading, eyes go back moving to top lines or paragraphs to check information, from time to time. This process is very difficult in screen reading. Because most of the time, the places to check do not appear on the screen. Therefore to read the information, it is necessary to shift the text to find the related place. This situation limits the movements of the eye and the ease of reading. In short, reading from screen, burdens the reader's eyes. Preferring printed books for the sake of their eyes' health is an indicator that the students who formed the sampling of this study are also conscious technology users.

Other two options most marked as the reasons for not reading e-books are "I like holding the book in my hands" and "I get more pleasure". Abdullah and Gibb (2008) in their research were of the view that when the readers are given the right to choose, they prefer printed version of a book to its electronic version and expressed this situation as the habit of reading from paper (Öngöz, 2011). It can be said that because the student-teachers are digital hybrids, the habit of reading from paper is predominant.

Almost all of the students stated that they would prefer to read e-books instead of printed books when hardware and software needs to read e-books are met. In the students' responses to the previous question, the highest choice was printed books are more cost-effective than e-books. Therefore, reading e-books for student-teachers is costly and cost is an important factor in their preferences.

Segmental distribution of e-books reading students, CEIT and PSE students are the most e-book reading students. The high rate of e-books reading of CEIT students than other departments' students is because the students of CEIT division are more interested in the internet and information technologies, inside and outside of class than the students of other divisions. That both CEIT and PSE divisions' students have a higher rate of e-book reading than other divisions' students can be connected to the program they study or the areas they have special interest in and their ability to find more e-books for their specialism compared to other students.

According to another finding obtained in research, the rate of male students reading e-books is higher than female students. Duran (2013) in his study conducted with the student from the Faculty of Education at Uşak University, e-book reading dimensions of benefit, love and habit, determined a higher rate in male students than female students. Whereas, in recent years, in many studies which analyzed the habit of reading printed books and the attitudes in terms of gender variable, the rate was higher in female students (Demir, 2009; Aslantürk and Saracaloğlu, 2010; Bozpolat, 2010). This situation shows males are more interested in technology and internet and they spend more time and have the ability to use them than females. According to TÜİK (2013b) Information Society Statistics year 2012 values, the computer using rate of males between the ages of 16-74 is 59% and 38.5% in females; the rate of using internet in males is 58% and 37% in females. However, the female students' rate is higher than male students when software and hardware requirements are met preferring e-books to printed books which may be connected to female students needing these requirements more than the male students.

Most of the student-teachers from CEIT division prefer reading printed books to e-books even though hardware and software requirements are met. Because CEIT department students have to do many tasks and projects on computers they may feel weary of the screen, and desire to read printed books.

In Turkey today 150 thousand people have the technology to read e-books and approximately 300 thousands e-books are sold yearly. This rate is 4 percent in 1000 of total book market. However, this rate is around 13% in the United States (URL 4). The absence of the right to broadcast digitally the existing books in inventory, hesitation due to piracy and illegal copying of publications in virtual environment and small number of employees with knowledge and experience of e-book typography are undermining e-book publishing in Turkey. Furthermore, high tax rate in e-books has negative impact on e-publishing (Şahin, 2013). Despite these factors, 350 publishers operate e-publishing in Turkey. For example Arkadaş Yayınları has offered for sale more than 310 thousand books in more than 50 languages from the internet (URL 5). The number of e-books in İdefix is 6002 (URL 6). As well as publishing houses some institutions and organizations have made significant efforts on e-book publishing. For example, The Ministry of Education has continued the preparation of e-books and z-

books within the FATİH Project. TÜBİTAK called for the scope of Digital Content Open Course Resources Support Program for university students in March 2013. With this project, an e-book pool will be developed to provide both equality of opportunity and increased quality in undergraduate education for undergraduate students to exploit (URL 7).

As a result, e-books are nowadays an important part of the education system and the publishing industry. When the student-teachers who will be directly involved in the FATİH Project graduate, e-book literacy, at least readership will be an important factor. In Turkey, the legal framework should be made to increase the rate of e-books reading, education programs should be provided for the publishing industry. In addition, regular activities, mainly for teachers or anyone who wants to gain knowledge and skills on how to use e-books should be organized. These activities could be in the universities within the scope of relevant course curriculum or in the form of courses over the internet supported by visual materials. The ongoing lecture notes can be prepared in e-book format in distance education programs in many universities in Turkey, which can contribute to students gaining knowledge and experience in this regard. Standardization efforts on this subject should be accelerated. In addition, in the Department of Computer Education and Instructional Technology, with lessons such as E-Book Design and Development, employees that the market requires, could be trained.

In the context of expanding this research, suggestions listed below should be considered by researchers and practitioners interested in the areas of this study:
1. This study can be expanded by including all sections of the Faculty of Education.
2. This study can be done by including all university students.
3. E-book reading habit of the students can be assessed, by considering the following variables;
    a. Whether they have e-book reader and e-book reading software,
    b. Presence or absence of their own computers,
    c. E-books type they read,
    d. Whether they have the financial capability to buy e-books,
    e. Whether they buy licensed or pirated e-books,
    f. If they have information about e-books copyright law,
    g. If there is e-books reader in their family.
4. The attitudes and opinions of the teaching staff on reading e-books can be explored.
5. In line with requests and needs, co-operation between institutions on e-books designs and typography can be improved.

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