



Exploring Indonesian EFL Learners' Digital Reading Habits

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Abstract

Reading has long been one of the most crucial skills individuals should master to function effectively in society. Since the revolutionary penetration of information and communication technology (ICT) into almost all aspects of human life has transformed reading from paper-based to screen-based, facilitating students to cultivate digital reading should be one of the educational priorities. This study aims at exploring the digital reading habits of students majoring in English as a foreign language (EFL) in Indonesian context. Employing a mixed-methods design, quantitative and qualitative data were collected using an online questionnaire including close-ended and open-ended questions from 79 students of the English Language Education Study Program of Universitas Kristen Indonesia, Jakarta. The results show that a majority of the participants prefer to read in English in digital reading mode due to several reasons. Their most favorable tool for reading is smartphones. Additionally, a majority of them prefer to read at home as far as they have good access to the internet. Finally, based on the analysis of the motivational and de-motivational factors of reading, the participants' preference towards digital reading has a stronger motivational foundation than print reading.

Keywords: digital reading, EFL, paper-based reading, reading habits

Introduction

World history has shown the crucial importance of reading. In any literate society, reading is essentially the main means of communication, language acquisition, and information search. It is also the key to personal development and an indispensable means to participate effectively and fully in the workplace and society (Jerrim & Moss, 2019). In an educational context, reading is the major portal to success for it is the most effective means to satisfy one's thirst for knowledge about the world (Thums et al., 2020). No wonder why it is called the heartbeat of

education (Florence et al., 2017). By reading various types of sources like books, magazines, articles, and newspapers, etc., students can cultivate their critical thinking skills, acquire new vocabulary, improve their grammatical skills, develop new and different perspectives, enhance their writing skills, understand themselves and the world, and assess and anticipate upcoming situations and events.

In line with human civilization evolution, the definition of reading keeps on changing. It is redefined anytime new reading media or purposes emerge. The meaning of reading when clay tablets, barks, stones, or papyrus were the media changed as soon as paper replaced them. In the 20th century, reading was generally defined as a process of decoding and interpreting visual information from printed texts (Baron, 2017). Today, such a definition is no longer valid resulting from the information and communication technology (ICT) revolutionary penetration into most sectors of human life that has progressively turned reading from paper-based to screen-based (Davidovitch et al., 2016). To effectively comprehend digital texts, additional and unique skills, and strategies are necessary (Leu et al., 2017; Li, 2020). Unlike print texts that are typically linear, digital texts are usually multimodal. It blends or embeds written symbols (language), images, audio, videos, and other media elements.

Although some of the reading materials are now still available in print format, the ease to write, edit, store, and disseminate information through the digital environment has facilitated people to write so massively (Brandt, 2015) that the world has been taken over by the digital edge and information is now just at the fingertip (Rosmani et al., 2020). Additionally, digital environments also provide ease of information storage and editing, search capability, intertextuality, ability to change dimensions, portability, low costs, and text-reader interaction (Sackstein et al., 2015) which encourage individuals' preference for digital reading to keep on increasing. Liu (2005) accentuated that digital reading has become a more favorable option, particularly among the Z-generation (born between 1995 and 2012). Today's students prefer digital reading to study because they think digital environments enable them to search materials in a short and easy-to-learn format so that they can process them quickly (Verma & Malviya, 2014).

Due to its crucial contribution to students' success in learning, cultivating reading habits, including in a digital environment, is unavoidable. Yet, since the nature of reading has changed, today's students need to promote reading habits

that can meet the opportunities and challenges provided by digital environments. Some issues in students' reading habits due to the proliferation of digital tools used have been raised. Florence et al. (2017) found that many students substitute deep reading with chatting or being absorbed in the more fascinating activities on social media. Coiro (2021) reported that students are not motivated to read due to their lack of effective reading comprehension skills or because the reading materials are disengaging. Students also tend to frequently skim and skip across pages due to their lack of cognitive engagement with the reading materials (Johnston & Ferguson, 2020). Another issue concerns the decrease in students' information literacy skills (Böckle et al., 2020) as they tend to believe in the information they get before critically assessing it.

In compliance with these problems, the present study aimed at exploring Indonesian EFL students' digital reading habits. Various studies have been conducted on the influences of digital environments on students' reading habits. Maden (2018) explored the digital reading habits of 140 pre-service Turkish language teachers and reported that psychological factors related to reading (interest, motivation, anxiety, etc.) sometimes influence the digital reading process. The participants mostly used digital media daily to obtain information, for entertainment, and for chatting. It also revealed that Internet access through a smartphone, and owning a social media account and a web page effectively facilitate digital reading habits. Okolo and Iwighrehweta (2020) investigated the reading habits of 200 Nigerian university students. They reported that 40% of the respondents read only for examination or completing assignments and prefer to read digitally when the materials are not voluminous. About 55% of them read for 2-4 hours, 25% read for less than an hour, 20% read for 4-6 hours and none of the students read more than 6 hours per day. Around 35% of them were moderate readers (read 1-4 books per month) whereas only 7.5% of them were categorized as heavy readers (read up to 8-12 books per month).

Another study by Hejase et al. (2020) compared the reading habits of 130 Lebanese and 130 French graduates and undergraduates. Findings indicated that in the past year around one-fifth of the Lebanese did not read any book, but in the same period only 2.3 % of the French students read no print book. Moreover, only 60 % of the Lebanese read e-books in the same period while only 83% of the French respondents did it. Furthermore, the majority of both Lebanese and French

respondents spent most of their spare time surfing the internet, on social media, or playing online games which decreased their reading habits. Likewise, Huang et al. (2016) compared the reading habits of 1,265 U.S. and 2,076 Chilean students. The results showed that every week U.S. students spend an average of 4.94 hours on college reading while the Chilean spend 13.17 hours. The U.S. students spend 4.17 hours on extracurricular reading while the Chilean students spend 3.07. On Facebook, U.S. students spend 16.40 hours while Chilean 14.00 hours. The researchers also reported that the most popular type of material for respondents in both countries was online reading materials, followed by magazines newspapers, comic books, top-selling novels, and minor academic books.

These studies have highlighted the influences of digital environments on the reading habits and attitudes of university students from various academic majors in various countries. However, no study has been conducted on the digital reading habits of students majoring specifically in English as a foreign language (EFL) in Indonesian context. The present study attempts to fill in the gap by exploring EFL students' reading habits in terms of preferred language, format, primary purposes of reading, source to get reading material, frequency of reading, and place for reading during school hours and while at home. Additionally, this study also identifies the motivating and de-motivating factors in both print and digital reading. The results will provide a better understanding of the phenomenon and may help educators to facilitate students to cultivate good reading habits among students majoring in EFL. The findings could also contribute towards a school library services improvement or a plan to revise educational policies.

To address these objectives, this study will answer the following research questions: 1) How are Indonesian EFL students reading habits in terms of preferred language, format, primary purposes, source, frequency, and place for reading during school hours and while at home? 2) What are the motivating and de-motivating factors in both print and digital reading?

Research Methodology

Research Design

This study employed a mixed methods design, which integrates the components of qualitative and quantitative research approaches for broadening and strengthening a study's conclusions (Schoonenboom & Johnson, 2017). Since it integrates the philosophical frameworks of both qualitative and quantitative

research approaches a mixed methods design use provides a logical ground, methodological elasticity and a comprehensive understanding of smaller cases (Dawadi et al., 2021). In this study, both quantitative and qualitative data collection and analysis are combined to gain a more comprehensive insight into the participants' digital reading habits.

In terms of research strategy, this research is an exploratory case study, i.e. a research strategy employed to obtain an empirically based understanding of the structure, context, and dynamic of a phenomenon of interest (Chopard & Przybylski, 2021). It is conducted to generate greater insights into the digital reading habits of Indonesian EFL students at an English Language Education Study Program in Jakarta.

Research Participants

The population in this study was the whole students of the English Language Education Study Program of Universitas Kristen Indonesia (Henceforth, ELE UKI) Jakarta in the 2022/2023 academic year when the study was conducted (November 2022). Of the whole students, 83 responded to the online survey posted in Google Forms. However, the responses screening stage revealed only 79 participants completely answered the 39 questions in Sections 1 and 2 of the questionnaire. Thus, this study involved 79 participants selected through a voluntary response sampling technique that was administered by sharing the online survey link through WhatsApp and asking the students to respond to the survey.

Instruments

To collect both the quantitative and qualitative data in this study, a survey was conducted online using the Google Form application. The instrument employed in the survey is a questionnaire including close-ended and open-ended questions. The questionnaire was adapted from the instruments developed by Mushtaq et al (2021). Tested using Cronbach's Alpha Test, the results showed that the Cronbach Alpha Coefficient of the print reading motivating factors section is ($r=0.728$), the print reading de-motivating factors section ($r=0.784$), the digital reading motivating factors section ($r=0.814$), and the digital reading de-motivating factors section ($r=0.835$), indicating a high degree of internal consistency. Some of the questions were modified to suit the current research purpose. In addition, four open-ended questions were added.

The questionnaire consists of three sections. The first includes 8 multiple-choice questions used to gauge information about the participants' reading habits. The second section includes 31 questions to be responded to on a 5-point Likert-type scale (strongly disagree to strongly agree). They are used to estimate the participants' motivational and de-motivational factors for preferring either print reading or digital reading. The third section consists of four open-ended questions. The four questions are used to collect qualitative data necessary to clarify the 'what' and 'why' of their preferred language, format, purpose, and sources to read.

Data Analysis

The collected data were analyzed descriptively by calculating the participants' responses in terms of frequency, percentage, and mean score as well as descriptive statistics analysis using the JASP application.

Findings and Discussion

Findings

The followings are the research results presented conforming to the research questions. It begins with the participants' reading habits in terms of preferred language, format, primary purposes, source, frequency, and place for reading during school hours and while at home, followed by the motivating and de-motivating factors in both print and digital reading.

Reading Habits

Preferred Language

Table 1 shows that the respondents have a higher preference to read in English (56%) than in Indonesian (44%). This is clarified by the qualitative responses provided to the question "What language do you prefer to read? Why?" Some of the respondents said that although they find it easier to comprehend texts in Indonesian, English texts are far more available than Indonesian texts on the internet, and as students majoring in English, reading English texts is inescapable. However, a majority of them prefer to read Indonesian texts for non-academic purposes. One of the participants wrote, "I read English texts to complete my class assignments, but I read both Indonesian and English texts to get news or practical ideas and solution to solve problems." Another student said, "Reading English texts for academic purposes and Indonesian texts for non-academic purposes. That's my principle in reading". Another

wrote, "As a student of an English study program, I should read as many English texts as possible. So, I also read English e-news and magazines besides e-books and e-journals. Anytime I find the text difficult, I copy and paste it to Google Translate." Thus, the respondents are both information-centered (as they mainly read in Indonesian for leisure, day-to-day knowledge, and sharing with others) and language-centered as they read in English for academic purposes).

Reading Purposes

In terms of reading purposes, Table 1 discloses that the number of participants who prioritize reading for leisure (38%) is almost equal to those who read for academics (36.7%). Other participants read for day-to-day knowledge (19%), and sharing with friends or family members (6.3%). The qualitative data reveal that the most common reading materials that the respondents take for leisure are short stories, comics, web-blog articles, magazines, and 'how to' guidelines, while the materials for academic purposes cover all of their school-related readings, such as textbooks, journal articles, lecture notes, PPT slides, and various guidelines for learning skills development. The reading-for-pleasure materials are taken digitally as they are available online. The qualitative responses also indicate that the participants take reading for pleasure voluntarily, but reading for study purposes is conducted obligatorily—they do it when they are assigned to do so. Additionally, if all reading for pleasure is done digitally, reading for academic purposes is conducted partly in print and partly digitally. One of the participants said, "I like reading short stories, histories, and guidelines to make cakes and other foods. I can get many good Indonesian and English texts about them online." Another student said, "I think reading my class texts is more complicated than reading for news and entertainment. To broaden my academic knowledge, I should read textbooks, modules, guidelines, and PowerPoint slides. To do it I should use my laptop." If the print version is not available, I read the digital version using my laptop." Another student added, "I think, reading to complete the class assignments is a must. Like it or not, I have to do it as a part of my study activities. In my spare time, I'm free to read the news to keep updated."

Reading for 'day-to-day knowledge' is the third priority for the students. It takes one-fifth (19%) portion of their reading. They do it for updating themselves with news and current daily knowledge. The texts they read to meet these purposes are e-

newspapers, current affairs reportages, and problem solving articles. A student said, "I like to read news about politics and sports online in my spare time." Another student wrote, "We encounter various problems every day, like errors in your gadgets, how to create effective presentation slides, and so on. Thanks to the internet as it provides many solutions to these problems." A student added, "We are still under the threats of the Covid-19 pandemic. I always search for updated tips and solutions to avoid ourselves from being infected by the virus."

Table 1. Participants Reading Habits (n= 79)

Variables	f	%
<i>Preferred language to read</i>		
Indonesian	36	48
English	39	52
<i>Major purpose for reading</i>		
Academic	26	32.9
Leisure	28	35.4
Day to day knowledge	20	25.3
Sharing or chatting	5	6.3
<i>Preferred reading format</i>		
Print	33	41.8
Digital	46	58.2
<i>Preferred gadget to read digital texts</i>		
Smartphone	43	54.4
Laptop	28	35.4
Desktop	4	5.1
Tablet	2	2.5
E-book reader	2	2.5
<i>Preferred place for reading</i>		
Home	51	64.6
Classroom	14	17.7
Library	6	7.6
While Travelling	8	10.1
<i>Preferred source to get reading materials</i>		
Internet	54	68.4
Lecturers	15	19
Purchase	6	7.6
Borrow (from library/friends)	4	5.1
<i>Time for academic reading per day</i>		
Up to 1 hour	12	15.2
2 hours	29	36.7
3 hours	24	30.4
4 hours	9	11.4
5 hours	5	6.3
> 5 hours	0	0
<i>Time for non-academic reading per day</i>		
Up to 1 hour	37	46.8
2 hours	26	32.9
3 hours	16	20.3

Reading for sharing with friends or family members is conducted by exchanging information through social media like WhatsApp and Instagram. A student wrote, "Reading messages in some WhatsApp Groups is one of my routine activities. By

doing it, I will be updated about my friends or relatives." Another student said, "I like discussing certain lesson topics with my lecturers and classmates in our class WhatsApp groups."

Reading Formats

As shown in Table 1, the students prefer digital reading format (58.2%) rather than print (41.8%). Through the qualitative responses, one of the students said, "I prefer to read digital text, because it is more accessible, gives me more current information, and enables me to freely choose the topics I need." Another student wrote, "I think reading digital text is better because it is more practical and convenient in many ways." Another one accentuated. "I like reading digital text because it offers various sources for the same topic, and most of them are free."

The students who prefer paper-based reading argued that print texts are easy to put notes on, are safer for the eyes, help in comprehending the contents, and are familiar. A student wrote, "I prefer printed books because they are easy to highlight and safe for my eyes. I know print books are more expensive, but the price is worth it." Another one said, "I have a physical interaction with a printed book when I open it. It helps me understand more than when I read in the digital environment. It's possibly because of my habit in childhood with printed books that can't be changed." Due to their preference for paper-based reading, some students suggest libraries "to provide a complete print books collection" and "If possible ... the university provides many printed books to read instead of suggesting the digital book."

Besides those who prefer either paper-based or digital-based reading formats, some students tend to combine both because they believe each of the modes has its advantages and disadvantages. A student wrote, "I find print reading more effective to study textbooks and digital reading for short articles." Another said, "Digital text is very important and efficient, but the print text also helps. I need them both."

Preferred Gadget

Table 1 shows that to facilitate their digital reading, the students prefer to use a smartphone (54.4%), followed by a laptop (35.4%), desktop (5.1%), and tablet and e-book reader (2.5% each). For them, a smartphone is the most practical tool.

However, as discussed earlier in the reading purpose subsection, they prefer to use laptops to read long texts. It seems they expect all reading materials to be short and concise so that they read everything using a smartphone. A student said, "With a smartphone, you can browse, scan, and read anywhere and anytime. I think it's the most effective tool for reading." Another one wrote, "In general, I prefer to use a smartphone than other gadgets, but it is effective only to browse and scan materials, and read short passages. So, if the texts are written without many elaborations, I mean, they contain only the main points, I will use a smartphone as the only tool to read. But if to read very long texts like research articles or textbooks, I prefer to use a laptop as it has a wider screen and allows me to highlight or put notes easily." Another student added, "Smartphone is my first choice to read online. But to deal with long texts in particular, I will use a laptop as it facilitates faster network speed, bigger spaces to store downloaded materials, and convenience of searching and editing."

Preferred Reading Places

As shown in Table 1, in terms of a preferred place to read, almost three-fourths (64.6%) of the students prefer to read at home, while the other one-third prefer to read in the classroom (17.7%), while traveling (on the train or bus) (10.1%), and at the library (7.6%). This finding indicates that the place for reading does not matter for the participants, as far as they have good access to the internet. Since home and classroom are naturally the two most conducive places for personal reading, it is not surprising if the participants choose them as the first and second most preferred places for reading.

Preferred Sources of Reading Material

In terms of preferred sources of reading materials, Table 1 shows that almost two-thirds (68.4%) of the students prefer to get their reading materials from the Internet. The second preferred source is lecturers (17.7%). Some students (7.6%) prefer to buy the materials. Only a few (5.1%) of them borrow the materials from the library or friends. Thus, to get reading materials, the Internet is their most preferred source, and borrowing from a library or family/relatives is the least preferred source.

Daily Time for Reading

Table 1 discloses that in terms of time spent for reading academic purposes, some (15.2%) of the students read up to an hour per day, about two-thirds (67.1%) read for 2 to 3 hours a day, 17.7% read for 4 to 5 hours, and none read for more than 5 hours. For non-academic purposes, about half (46.3%) of them read up to an hour per day, 32.9% read for 2 hours, and the rest (20.3%) read for three hours. Thus, on average the students read for 2.6 hours per day or 12.8 hours per week (5 working days) for academic purposes. For non-academic purposes, on average, they read for 1.9 hours per day or 9.7 hours per week.

Paper Reading Motivational Factors

As shown in Table 2. based on the mean of the responses the students prefer print reading because, respectively, print texts are easy to put marks on, more comfortable and eye-friendly, more familiar than digital texts, and easier to understand. This corresponds to the finding discussed in the reading formats section above revealing that the students who prefer to read print paper format find print texts easy to put notes on, safer for the eyes, more friendly as they have got accustomed to print texts, and easy to comprehend. Interestingly, the least motivating factor for paper reading is students' lack of digital texts. This indicates that the students, who also read online for non-academic purposes, are aware that tons of digital texts are available and easy to access on the internet. However, due to these motivational factors, they find print reading more favorable.

Table 2. Motivational Factors for Paper Reading (n= 79)

No	Statement	Responses (%)					M
		SD	D	N	A	SA	
1	Easier to read and understand than digital texts	6.3	17.7	26.6	24.1	25.3	3.44
2	Easy to mark (underline, highlight, etc.)	2.5	6.3	24.1	31.6	35.4	3.91
3	More familiar than digital text	2.5	15.2	29.1	26.6	26.6	3.59
4	more comfortable, eye-friendly, or less tiring	3.8	16.5	24.1	24.1	31.6	3.63
5	Dislike to replace print with digital reading	10.1	16.5	31.6	21.5	20.3	3.25
6	Prefer print due to lacking of digital materials	16.5	29.1	27.8	16.5	10.1	2.75
7	Friends also prefer print to digital reading	6.3	27.8	27.8	19.0	19.0	3.16

Paper Reading De-motivational Factors

Table 3 shows that for the students, the most demotivating factors for paper-based reading are, respectively, that print-reading materials are expensive, print materials are insufficient to fulfill information needs, borrowing books from the library takes time, library materials are difficult to navigate, a borrowed book cannot be marked with marginal notes. The least demotivating factors include the library has limited collection, and the books are heavy to carry anywhere.

Table 3. De-motivational Factors for Paper Reading (n= 79)

No	Statement	Responses (%)					M
		SD	D	N	A	SA	
1	Borrowed books cannot be marked (underlined, etc.)	8.9	19.0	26.6	24.1	21.5	3.3
2	The library has limited copies of print books	11.4	15.2	30.4	25.3	17.7	3.23
3	To borrow books from the library spends much time	7.6	16.5	30.4	21.5	24.1	3.38
4	Print books are heavy to carry	13.9	21.5	21.5	21.5	21.5	3.15
5	Print books are expensive	10.1	8.9	24.1	30.4	26.6	3.54
6	Library books/materials are difficult to navigate	8.9	17.7	30.4	22.8	20.3	3.28
7	Print collection cannot the information needs	7.6	11.4	34.2	25.3	21.5	3.42

Digital Reading Motivational Factors

Table 4 shows that digital texts' ease to use and access is the top motivational reason why the participants prefer digital reading. Some features of digital tools, including portability, ease to cut or copy data, and provision of up-to-date information are the next leading factors that encourage the participants to read digital texts. Interestingly, the ease to highlight and underline important information is the least important factor for the students. This is possibly due to their preference for using smartphones, which, unlike laptop or tablet, has limited feature to provide marks on texts. This finding confirms the findings of Pardede (2019) that students prefer digital texts due to their provision of greater portability and speedier access than print texts.

Table 4. Motivational Factors for Digital Reading (n= 79)

No	Statement	Responses (%)					M
		SD	D	N	A	SA	
1	Finding specific information is easier in digital texts than in print text	3.8	6.3	24.1	30.4	35.4	3.87
2	My friends/siblings also prefer digital to print texts	3.8	15.2	30.4	26.6	24.1	3.52
3	Digital texts provide more up-to-date/latest information	2.5	5.1	16.5	36.7	39.2	4.05
4	I can bring digital text anywhere	0.0	6.3	13.9	34.2	45.6	4.19
5	Digital text is easy to cut/copy data	2.5	5.1	20.3	26.6	45.6	4.08

6	Hyperlinks in digital texts lead to other useful information	3.8	8.9	29.1	32.9	25.3	3.67
7	Digital text is easy to use and accessible all the time	2.3	5.7	23.9	28.4	39.8	4.43
8	Digital text is easy to highlight and underline important information.	7.6	17.7	29.1	25.3	20.3	3.33
9	Screen reading is time-saving	7.6	12.7	27.8	30.4	21.5	3.46

Digital Reading De-motivational Factors

As shown in Table 5, difficulty to comprehend long texts such as textbooks by reading them through a smartphone is the top de-motivating factor of digital reading for the participants. It is followed by eye strain caused by screens, distracts caused by links and advertisements, slow internet connection, and difficulty to select the most appropriate texts due to the massive number of texts available on the internet. The least de-motivational factor is time wastage in screen reading. This might imply the students' belief that digital-based reading is so important that it is not a time waste.

Table 5. De-motivational Factors for Digital Reading (n= 79)

No	Statement	Responses (%)					M
		SD	D	N	A	SA	
1	Digital reading causes eye strain	7.6	13.9	24.1	35.4	19.0	3.44
2	Various links, advertisements, animation, and alerts distract.	6.3	20.3	22.8	29.1	21.5	3.39
3	Slow speed of Wi-Fi/ internet disturbs.	8.9	21.5	20.3	29.1	20.3	3.3
4	I find it difficult to search/ surf electronic document	20.3	20.3	24.1	19.0	16.5	2.91
5	Difficult to find appropriate digital texts as the internet offers too many options	8.9	20.3	25.3	24.1	21.5	3.29
6	Reading long materials (textbooks) is difficult on my smartphone	6.3	16.5	22.8	25.3	29.1	3.54
7	Running out of internet quota to access materials	10.1	20.3	27.8	24.1	17.7	3.19
8	Screen reading is time wastage	22.8	30.4	26.6	12.7	7.6	2.52

As shown in Table 6, the overall mean score of digital reading motivational (DRM) factors (3.844) is much higher than print reading motivational (PRM) factors (3.39), and the mean score of digital de-motivational (DRD) factors (3.189) is lower than print reading de-motivational (PRD) factors (3.329). This finding indicates that the participants prefer digital reading to print reading mode.

Table 6. Descriptive Statistics of Print and Digital Reading Motivational and De-Motivational Factors

	PRM	PRD	DRM	DRD
Mean	3.390	3.329	3.844	3.189
Std. Deviation	0.326	0.112	0.372	0.312
Coefficient of variation	0.096	0.034	0.097	0.098

Minimum	2.750	3.150	3.330	2.520
Maximum	3.910	3.540	4.430	3.540

Discussion

Reading Habits

In terms of preferred language, the findings reveal that the participants prefer to read in English than in Indonesian due to the high availability of English texts and their inescapability to read English for their study. This finding echoes the results reported by Iftanti (2015) that students in five Indonesian colleges prefer to read English online due to the vast amount of English texts accessible on the internet. However, English learners' preference to read English texts over texts in their first language does not occur exclusively in Indonesia. Abidin et al. (2014) reported that 72.9% of the secondary school students in Penang, Malaysia participated in their study preferred to read English online due to the availability of the immense amount of searchable information presented in English.

Does the students' preference to read English text digitally affect their reading comprehension and speed? Sackstein et al. (2015) reported there was no significant difference in reading speeds and comprehension between students who read print texts and those who read digital texts. However, they suggested a reader's familiarity with the digital technology employed in reading contributes to eliminating any difficulty he may encounter while reading on screens.

In terms of reading purposes, a majority of participants prioritize reading for leisure and for academics in almost equal percentage. A few other participants read for day-to-day knowledge and for sharing with friends or family members. Additionally, the participants read academic materials on an obligatory basis but read for non-academic purposes voluntarily. This indicates that the participants do not read academic materials during their spare time. This finding confirms the result of the study by Hejase et al. (2020) revealing that in their spare time their respondents did not deal with academic materials but surfing the internet, on social media, or playing online games. They also tended to read only the academic materials assigned to them—no self-initiative for finding relevant additional texts for their study topics.

In terms of reading formats, more participants prefer digital reading format (58.2%) rather than print (41.8%) due to the high accessibility, information updates, and topic varieties to choose from in the digital environment. This confirms the results

of Manalu's (2019) review that today's students' interest to read digital texts keeps on growing because they are cost-effective, convenient to store and carry anywhere (portable), accessible, easy to search, and user-friendly. This reflects the findings of Ahmed and Zia (2019) revealing that most students use digital-based media or content to read for leisure and use print-based materials and media for academic purposes and Wang et al., (2016) revealing that after starting to use digital tools, university students in Hong Kong read more types and number of magazines.

The participants who prefer paper-based reading argued that print texts are easy to put notes on, are safer for the eyes, help in comprehending the contents, and are familiar. Some other participants, however, tend to combine both digital and print because they believe each of the modes has its advantages and disadvantages. This approves the findings of Farinosi et al. (2016) and Baron (2017) that students preferred print texts to read longer texts.

The increasing preference of students to read digital texts cannot essentially be avoided due to the growth of digitization. However, its effect on reading comprehension, speed, and accuracy has long been questioned, and research results show inconsistent results concerning this (Bresó-Grancha et al., 2022). The majority of earlier studies tend to report that printed text reading outperformed digital reading in terms of reading comprehension, speed, and accuracy. However, more current studies tend to indicate digital reading superiority (Pardede, 2019).

In terms of preferred gadgets, a majority of the participants prefer to use a smartphone (54.4%) and a laptop (35.4%). Only a few used desktop, tablet, or e-book readers because smartphones are much more practical and portable than other types of gadgets. However, since smartphones are practical only to browse and scan materials and to read short passages, they find laptops more effective to read long texts as they facilitate faster network speed (and, thus faster searching and downloading), provide bigger spaces to store downloaded materials, and offers ease of editing. This finding confirms the results of some previous studies (Lau et al., 2017; Wai et al., 2018) indicating that despite their preference to browse and scan materials on smartphones, students favor reading on desktops or laptops. This is due to the fact that, compared to smartphones, desktops or laptops offer more convenient searching and navigating, bigger screens, faster network speeds, bigger storing spaces, and ease of editing and downloading.

The finding concerning preferred reading places shows that almost three-fourths of the participants prefer to read at home, while the other one-third prefer to read in the classroom, on the train or bus (while traveling), and at the library. This indicates that to read, the participants did not need specific places as far as they have good access to the internet. Since home and classroom are naturally the two most conducive places for personal reading, it is not surprising if the participants choose them as the first and second most preferred places for reading. This finding echoes Oh et al.'s (2022) research results revealing that Malaysian pre-university students could read anywhere as long as they had free time and internet access.

In terms of preferred sources of reading material, the participants' most preferred source to get reading materials is the Internet. and the least preferred source is borrowing from a library or friends/relatives. This finding clarifies the result of the study conducted by Huang et al. (2014) revealing that the Internet is a significant source of reading materials for students. Concerning this, they suggested professors acknowledge the essence of technology in the reading habits of students, and, therefore, adjust their teaching strategies.

In terms of time spent for reading, on average the participants read for 2.6 hours per day or 12.8 hours per week (5 working days) for academic purposes. For non-academic purposes, on average, they read for 1.9 hours per day or 9.7 hours per week. Interestingly, the average reading time for non-academic purposes found in the present study is also higher than the time spent by most Lebanese and French university students who read 1-4 hours per week excluding reading for academic purposes (Hejase et al., 2020).

Research has found that the time spent for academic purposes naturally depends on the student's educational level. The higher the levels, the longer the time required. For instance, Deale and Lee (2022) found that to complete the reading necessary for classes each week, sophomores spent 3.20 hours; juniors 4.59 hours; seniors, 7.18 hours, and graduate students, 9.29 hours. What is more, the lengths of time students spent on reading enhances their academic performances (Florence et al., 2017). Even reading for non-academic purposes positively affects concept understanding, reading comprehension, verbal fluency, vivid thinking, and academic achievement (Whitten et al., 2016).

Motivational and De-motivational Factors for Print vs. Digital Reading

The finding shows that the overall mean score of digital reading motivational (DRM) factors is much higher than print reading motivational (PRM) factors, and the mean score of digital de-motivational (DRD) factors is lower than print reading de-motivational (PRD) factors. Consequently, the participants prefer digital reading to print reading mode. This confirms the findings of Singer & Alexander (2017) that undergraduate students prefer digital texts to print texts. It also affirms the finding of Verma & Malviya (2014) on today's students' preference for digital reading to study as they think digital environments enable them to search materials in a short and easy-to-learn format so that they can process them quickly.

Additionally, the overall mean scores PRM and PRD factors are merely slightly different, i.e. 3.390 vs. 3.329. Such a small difference indicates that the students' preference towards this reading mode does not have a strong foundation, and would eventually change. This confirms the trend suggested by Rideout et al. (2010) that more and more young people will prefer reading digital texts in the years to come because the amount of time spent by youth reading print texts has been keeping on decreasing,

Unlike the small difference between the overall mean scores of PRM and PRD, the difference between the overall mean scores of the DRM and DRD is much higher (3.84 vs 3.12). This indicates the students' preference for digital reading has a stronger motivational foundation. Thus, it will be much harder for students who prefer digital reading to move to print reading than their counterparts preferring paper-based reading to change print reading to digital reading.

The findings and discussions above, particularly those related to students' motivational and de-motivational factors that encourage students to prefer digital reading format and the reasons why they prefer to use smartphones and laptops are interesting to relate to various studies and discussions highlighting digital reading tools as the cause of individuals' reading habits decline. Based on their finding showing that students owning more digital devices held a less positive attitude toward reading in general, Al-Adwani and Al-Fadley (2017), for instance, underscored that digital device ownership can harm students' reading attitudes. However, such a notion needs to challenge as it is grounded on the traditional reading perspective viewing reading as the process of decoding and interpreting information from printed texts. It ignores the digital-based reading factor (Mirza et al.,

2021) and the fact that the world has now been taken over by the digital edge that makes information just at the fingertip (Rosmani et al., 2020).

As discussed earlier, many features of digital-based materials, including easy information search, storage, editing and portability, low costs, and text-reader interaction essentially help readers easily find specific materials that suit their reading purposes (leisure, academic, day-to-day knowledge, and sharing information). Various research has indicated that the skills and strategies needed to comprehend printed text are interwoven with a set of new and more multifaceted skills and strategies to successfully comprehend digital texts so that viewing reading habits from the traditional print-based mode perspective is no more valid. Therefore, there is a need to construct and teach effective digital reading strategies, readjust texts that cater to effective digital reading, and improve gadgets that boost extensive as well as intensive reading among students. By so doing, they will cultivate good reading habits, because the longer time students devote to reading, the more skillful they will be (Kim & Anderson, 2011).

Conclusion and Suggestion

The revolutionary penetration of ICT into human communication has increasingly turned reading from paper-based to screen-based. So, the reading habits today's students need to cultivate have been different from those in the 20th century. The results of this study show that the participants prefer to read in English because, as students majoring in English, they should deal with many English materials, and a vast amount of information presented in English can be easily accessed using digital tools. The findings also show that a majority of the participants prefer digital reading to print reading because digital-based materials' practicality and convenience help them easily find specific materials that suit their reading purposes. Although they prefer to use smartphones over other types of gadgets, they tend to use laptops to read long academic texts. Some of them even turned to print reading for comprehending long academic texts. Another finding reveals that although academic reading is the second priority, the participants spent more time on it than on non-academic reading. This might be due to their belief that academic reading is more burdensome. Finally, the findings related to the motivational and de-motivational factors of reading show that the students' preference towards digital reading has a stronger motivational foundation.

This study involved only 79 participants selected using a voluntary response sampling technique and the qualitative data were collected using an online survey. To get more rigorous findings, further studies are recommended to involve a larger number of participants employing a random sampling technique and to administer interviews for collecting the data. Additionally, considering that the digital edge has now taken over the world, today's students should not be forced to nurture the traditional paper-based reading habits but be facilitated to cultivate effective digital reading habits. Therefore, future studies are also recommended to focus on effective digital reading skills and strategies development, and reform of digital media that are more compatible with reading activities.

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