Uncovering Print and Digital Literacies: What Matters to Undergraduates

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Abstract: Reading has always been considered a crucial contributing factor in human advancement which is at the same time affecting one's intellectual and emotional growth. However in Malaysia, reading culture has seemingly not significantly changed as it was observed in the study of Pandian (2000) that only 20% are 'regular readers' and the rest of Malaysian populations are 'reluctant readers'. It was also found that when they were preparing for examinations, only then they spent time reading various materials. Nevertheless, with rapid development in Information and Communication Technology (ICT) taking place, it has impacted education system centred particularly on reading exercise. This is established by Hooper & Herath (2014) that reading habit has been affected by the technology which has changed the pattern of brain absorption of information. However, adolescents are reported devoting much more time reading digital resources and spending extra time to skim, download and browse information on the Internet (Liu, 2005). Therefore, current study aimed primarily at comparing reading habit percentage between print and screen-based of the respondents as well as investigating relationship between numbers and types of print-based materials. Quantitative data were collected and a questionnaire was used as a data collection tool. A total of 61 diploma students from Universiti Teknologi MARA (UiTM) Pahang Branch, Raub Campus, Malaysia were chosen and Spearman's Rank Correlation Coefficient was employed to analyse their views. The results revealed students' preferences in using traditional paper materials and how ICT has presented possibilities in encouraging students' reading habits to develop. It is anticipated that future researches in the area will benefit from the findings and suggestions provided in this study.

Keywords: digital resources, ICT, print-based materials

Introduction

It is obvious successful learners obtain and learn new information and become more competent in their subject matters via reading. Reading is one of fundamental language skills that will assist students to achieve academic progress. In fact, reading by its very nature helps very much to consolidate other language components i.e. writing, speaking and listening. This is supported by Nor (2011) that reading is regarded as the most essential academic skill particularly for second and foreign language learners at higher learning institutions.

Those people who have grown up reading printed materials seem to experience that reading process is more effective for them rather than reading from a screen. It has been observed that not only the way paper feels and is manipulated, but one's higher chances to highlight, jot notes, remember and absorb information are among significant factors that support their reading comprehension. However, due to different level of academic background and socio-economic status, number of books read, home educational resources and parents' employment situation to name a few will significantly influence achievements in reading and writing skills (Jariene & Razmantiene, 2006).

In recent years, as screen technology continues to advance along with development of the literacy level of students and their digital competence, it is apparent that their reading habits have significantly shifted from paper-based to digital-based reading (Shopova, 2014). Nonetheless, how far changes in technology and the convenience of using gadgets and mobile devices have made digital literacy enhanced and thus encouraged more effective reading habit? The future of print books is indefinite yet still predictable as electronic platforms also come with a lot of strengths and limitations. Whatever the issue is, the need to develop both i.e. paper and digital literacy skills seems important to balance reading and learning competency from the paper while at the same time digital literacy and navigation skills are also attended.

An interactive nature of the Internet and other media communication technologies has made its services more individualized and gradually becoming an irresistible source of education. Not only that, such tool is capable to change people's habits and behaviour, building new value models and vital tool for the development of reading literacy. As claimed by Coiro et al., (2008), "No previous technology for literacy has been adopted by so many, in so many different places, in such a short period of time, with such profound consequences. No previous technology for literacy permits the immediate dissemination of even newer technologies of literacy to every person on the Internet by connecting it to a single link on a screen". Here, it has been a belief of many people that it is significant to embed digital reading exercises into present education system as students are so immersed in the digital world. Ultimately, the pertinent issues which have been raised by one of the leading scholars of electronic literature, N. Katherine Hayles will go back to most course instructors i.e. how it is possible to enhance reading ability along with increased digital literacy and how to effectively bridge the gap between digital and conventional print reading (Hayles, 2010). Thus, this study sought to compare reading habit percentage between print and screen-based of the respondents as well as investigating relationship between numbers and types of print-based materials

Literature Review

It is obvious that reading habits determines whether the learners will be successful or vice versa. This practice is one of fundamental language skills that will assist students to achieve academic progress. Henceforth, this will boost their motivation to approach many texts of various genres. In addition, being literate is highly considered a precious opportunity for people to enjoy and engage in sheer enjoyment or to acquire about anything new around them. Indeed, not only this activity will stimulate interest especially among students; they will also attempt to transfer skills and strategies learnt in the classrooms into their reading experiences. Some factors should be taken into considerations including types of materials, strategies in reading and hours spent for reading so that the learners better comprehend what they read. Reading by its very nature helps very much to consolidate other language components i.e. writing, speaking and listening. Evidently, its effect on student's self-esteem and motivation to participate actively in class discussions will take place. Despite this, Malaysian students have been striving with reading practice for years. Thus, a lot of initiatives have been taken by educators to make reading activity to be more compelling. As a result, this phenomenon has created the widespread adoption of electronic devices in order to sustain motivation for the students to read more.

A. Reading across Print Dimension

In the past, educators emphasized the importance of time as a way for them to ensure increased reading habit among their students. In other words, the time spent for reading printed materials would encourage better achievement as it does in other areas such as playing musical instruments, practicing calculus or playing sports and games. In regards to university and college students, reading is the most vital skill for them to be able to learn new information, to expand their cognitive horizons, to open more opportunities as well as to become more competent in their subject contents (Noor, 2011). Aside, the privilege of experiencing mental connection with the author, physical touch with the weight and texture of reading materials and balanced coordination of cognitive, motoric and neuromotor processes suggest that print and paper based remain to play an essential role in fostering

reading habit and reading skills. In 2014, a comparative study was conducted and it was found that e-readers who read Kindle short stories were experiencing difficulties and confusions at remembering the event orders as compared to those who did the same with actual books (Grate, 2014). Apparently, reading process is very much affected by the presentation medium as studies by both Benedetto (2013) and Kretzschmar et al. (2013) indicated that respondents' preference for digital media platforms was lesser than their preference towards printed materials. In simple terms, paper is still considered superior and can never be replaced by screens.

B. Reading across Screen Dimension

Reading and communicating via blogs, wikis, Facebook, podcasts, vodcasting, websites and other social media to name a few have become an emerging trend to many people particularly students as they spend so much time online. According to Bawden (2008), the conception of digital literacy is primarily about the ability to read, write, comprehend and utilize information in various formats from different sources which are available in computers. These digital applications have become a preferred choice as they are infinite, accessible, everywhere and welcome its visitors anytime. Undoubtedly, reading from the screen comes with advantages as it utilizes less paper, take up less space, easy to carry and easier to search and so forth. In addition, numerous devices such as eBook Reader, Kindle, ReederLITE as well as smart phones, tablet computers and navigation devices in the market could be said to increase the number of readers and types of reading (Tosun, 2014). According to a survey of 175 students in the Folke Bernadotte Memorial Library at Gustavus Adolphus College, between five to six percent of the students would opt for an e-book over a printed book where only three to four percent did that two years earlier (Gilbert & Fister, 2015).

Methodology

A total of 61 diploma students from Universiti Teknologi MARA (UiTM), Raub Campus were randomly selected for the study. Primary data were collected using survey questionnaire which comprised five sections in order to elicit information on students' reading habit. The questionnaire was divided into five sections, namely the respondents' personal information, types of reading materials read by the respondents and preferred activities while surfing the Internet and techniques they thought would help in developing their reading abilities. The respondents were required to evaluate a statement according to five Likert scale of Never, Rarely, Sometimes, Often and lastly Very Often. In addition, it was found that the reliability coefficients of sections two and three about the types of materials read was 0.797.

Results and Discussion

In this study, the respondents were asked to rate their reading habits according to types of paper-based materials as shown in Table 1. From the figures, about 70.6% and 72.4% of the respondents rated their reading habit in the range of Sometimes to Very Often for newspapers and textbooks respectively. Meanwhile, only 56.9% and 60.4% of the same criteria were recorded for magazines and novels respectively.

Reading	Never (%)	Rarely (%)	Sometimes (%)	Often (%)	Very Often (%)
Newspapers	6.9	22.4	53.4	15.5	1.7
Magazines	5.2	37.9	50	5.2	1.7
Textbooks	0	27.6	34.5	34.5	3.4
Novels	17.2	22.4	32.8	20.7	6.9

Meanwhile, in order to ascertain their practices while using electronic media, the respondents were asked based on dichotomous scale (Yes and No). Based on the results in Table 2, most of the respondents tend to say 'yes' for playing games, using MSN or Yahoo messenger and downloading all types of movies as their preferred activities while surfing the Internet. However, the mean scores for looking at photo album, listening to music, reading all kinds of information, doing online shopping, checking emails and chatting with friends are not their preference.

TABLE 2 Activities while on the Internet

What do you do when you surf on the Internet	Mean scores	Standard deviation
I play game	1.5172	.50407
I look at photo album	1.1071	.31209
I listen to music	1.0517	.22340
I read all kinds of information	1.2281	.42332
I shop online	1.4828	.50407
I use MSN messenger	1.7759	.42066
I use yahoo Messenger	1.7069	.45916
I check emails	1.1379	.34784
I chat with my friends	1.1207	.32861
I download all types of movies	1.7586	.43166

Findings in Table 3 highlight the feedback whether the respondents read all kinds of information when they surf on the Internet and on a positive note, about 78.57 percent responded 'yes'.

TABLE 3 Reading Habit

	Percentage of response 'I read all kinds of information when I surf on the Internet'
Yes	78.57
No	21.43
Total	100

Table 4 indicates the mean scores and standard deviation of materials usually read by the respondents on the Internet. The mean score for online news is the highest at 3.6724 which means that the respondents often chose to read online news on the Internet. Meanwhile, e-book, horoscope and weather report have mean score less than 2.5 which indicate as rarely chosen materials by the respondents. In contrast, the materials such as online magazines, stories/novels, email, journal articles, sales information, movie review, health information, comic strips, jokes, fashion information, sports, job information and food/nutrition have obtained mean scores in the range between 2.5 and 3.5, which suggest that the respondents sometimes do read this type of reading materials on the Internet.

TABLE 4 Mean scores of materials read on the Internet

What do you usually read on the Internet	Mean	Standard Deviation
I read online news	3.6724	.92505
I read Online magazines	2.5439	.78080
I read e-book	2.2759	.87445
I read stories/novels	3.2241	1.04366
I read emails	2.9828	.92701
I read journal articles	2.6379	.89243
I read sales information	3.1552	1.03960
I read movie review	3.1897	.88767
I read horoscope	2.0862	.92309

I read weather report	2.4828	.84275
I read health information	3.3276	.82479
I read comic strips	2.6207	.95196
I read jokes	3.3448	1.10106
I read fashion information	3.1379	.99909
I read sports	2.7759	.91849
I read job information	2.9655	.87791
I read food/nutrition	3.4310	.93868

For further affirmation regarding the reading habits of the respondents, the Spearman's Rank Correlation Coefficient was used to check the relationship between the number of books read in a year and the types of the reading materials. The results are reported as in Table 5. There are three positive significant (p-value greater than 0.05) correlation coefficients between the number of books read in a year and reading materials which are novels, newspapers and magazines. This suggests that novels, newspapers and magazines do have a relationship with the number of books read in a year by the respondents.

TABLE 5 Spearman's Rank Correlation Coefficient

		Nove ls	Newspa per	Magaz ines	Textbo oks	E-mail s	Online informat ion
Number Books	Correlation Coefficient	.5 97 **	.407**	.322*	.213	-.108	.148
	Sig. (2-tailed)	.0 00	.003	.020	.130	.451	.295
Novels	Correlation Coefficient	1. 00 0	.397**	.271*	.276*	-.005	.235
	Sig. (2-tailed)	.	.002	.041	.038	.972	.078
Newspap ers	Correlation Coefficient		1.000	.181	.050	-.136	.128
	Sig. (2-tailed)		.	.175	.709	.314	.338
Magazine s	Correlation Coefficient			1.000	.094	.113	-.018
	Sig. (2-tailed)			.	.485	.403	.895
Textbook s	Correlation Coefficient				1.000	.321*	.281*
	Sig. (2-tailed)				.	.015	.033
E-mails	Correlation Coefficient					1.00 0	.337*
	Sig. (2-tailed)					.	.010

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

In addition, based on the respondents' responses in the questionnaire, multiple interpretations related to 'digital literacy' were summarized which include:

a) *Conceptualizations of the changing of learning paradigm in the digital age.*

b) *Deictic approaches to learning and communication.*

c) *Set of understandings needed in the digital era to understand, produce and negotiate meaning in a culture made up of powerful images, words and sounds.*

d) *A combination of technical-procedural, cognitive and emotional-social skills.*

e) Ability to understand and use information in multiple formats from a wide range of sources when this is presented via computers.

f) Complex cognitive, motor, sociological, and emotional skills that users need in order to function effectively in digital environments.

g) Awareness, attitude and underling abilities needed to use digital tools appropriately and to reflect upon this process.

Conclusion

Based on the findings of this study, the students claimed that they spent time mostly reading printed newspapers and followed by textbooks, magazines and novels. Nevertheless, about 79% of them preferred screen reading even though they were not really focusing on reading academic materials. Despite the preference, they actually read less about weather report, horoscope and comic strips online. Apparently, the findings demonstrate that the emergence of technology does not encourage the students to read more regardless kinds of materials. For instance, the respondents reported that they preferred to read printed textbooks yet online, they preferred novels more. In other words, the students involved in this study favoured print literacy for certain reading genres and it is arguable to emphasize that physical materials are becoming irrelevant among adolescents these days.

Therefore, few pedagogical implications could be drawn for future studies. Instructors have to realize that in this digital era, new different teaching preferences should be employed and one of them is specific approach of screen reading. The growth of gadgets such as e-books, pocket books and tablet PCs can be maximized by educators particularly at universities or colleges to effectively encourage their students to read extensively the materials of academic in nature.

It is no doubt that specific training and guides should be given to students as some issues in regard to reading from a screen do matter. However, since the students find the use of ICT is capable of giving them unlimited resources, it has become inevitable for class instructors to rethink its necessity in the current context of education. Although there are limitations and constraints in finding relevancy of technology in a classroom, it is hoped that this research is able to provide better perspective and rationale for having screen reading during lectures, time spent in completing reading tasks as well as to justify its role in assisting the students to improve their reading habit in the target language i.e. English.

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