THE EFFECT OF DIGITAL READING ON EFL LEARNERS' READING COMPREHENSION

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Abstract

The main objective of the current study is to investigate how digital reading can have an influence on the improvement of EFL learners' reading comprehension. The sample of this study was comprised of 32 males studying at the Al Mafraq First Basic School for Boys in Jordon. The study participants were enrolled in the 1st semester of the educational session 2020/2021. All the participants were categorized into a couple of groups namely the experimental and control groups whereby the participants in the former group employed digital reading to facilitate their reading comprehension while those in the latter group employed conventional system for this purpose. The effectiveness of both the mentioned methods was assessed by conducting a test. The test outcomes revealed that the reading comprehension of the experimental group outshined that of the control group. A positive outlook of the participants in the experimental group with respect to the use of digital reading was also discovered. Overall, it was concluded that digital reading proved effective in enhancing reading comprehension skills in learners both inside and outside the class.

Keywords: Digital reading, Jordon, reading comprehension, comprehension skills

Introduction

Throughout the world, new technologies are dominant in all parts of life. In particular the mobile devices are considered to be useful for the purpose of learning for both in and out of the school and thus thought to be valuable (Wagner, Castillo, Murphy, Crofton, & Zahra, 2014). An important role is played by the tablet computers in increasing the usefulness and the

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productivity of educational activities (Gungoren, Bektas, Ozturk & Horzum, 2014). Considering this, the education and the usage of the technology in the system of education are the two concepts that are considered alike (McCannon & Crews, 2000; Komis, Ergazakia & Zogzaa, 2007). As said by Jonassen (1999), the use of the technology possesses many benefits to educational environments, like the improvement of the students' critical thinking. It makes their preferred learning models more operative (Quintina & Donovan, 2013), and eliminates the limitation of only images and written words in the traditional texts (Larson, 2010). Students must be provided with all these benefits.

In advanced societies, students are interacting with technologies such as information and communication. Although a continuous change has occurred in the technology and the internet, the development and learning process of students, educators may make use of numerous materials in the reading education that can be from digital texts to the internet (Thoermer & Williams, 2012). According to (Walsh & Simpson, 2013), students are taking the advantage of technological materials in their learning to read and write outside of a school (Jahson, Adams & Cummins, 2012) and in a classroom (Akbar, Taqi, Dashti & Sadeq, 2015). The preference of a student will be performing these activities on a phone or the internet instead of reading the written material on books or listening to a teacher (Tolani, McCormac & Zimmermann, 2009). Therefore, it can be said that the technology is turning out to be an essential part of the education system.

There is a support of researchers to this situation as it is discussed above. When Leu, O'Byrne, Zawilinski, McVerry and Everett-Cacopardo (2009) inspected the studies relating to it, they found that reading skills of students improved when they were using the web-based literacy activities constantly. Moreover, it was discovered by Sackstein, Spark and Jenkins (2015) that the reading speed of most of participants increased by using iPad as a result of their work. VanAken (2014) also established that the reading attitudes and levels are influenced by the use of e-books or printed texts but no impact is seen on the reading skills. By considering these findings, it is evident that the technology not only helps in reaching the outside world, but it has also become an essential tool in the education and training (Luke, 2012). Moreover, the motivation and reading fluency of learners in the educational environment are refining where the use of digital texts is made (Thoermer & Williams, 2012). It is visible that the technological tools have a positive impact on the reading skills.

Problem of Study

As being a teacher of the English language for a long period of time, it is discovered that a lot of students of the English language face complication in the reading of the comprehension**.** The reason of this problem could be that foreign language teachers devote a lot of their time

teaching the reading of comprehension traditionally without making the use of the digital reading which may help in improving students' reading comprehension. Furthermore, the foreign language (FL) teachers lack in training their students regarding the up-to date techniques which could play a significant role in improving their reding. A lot of teachers are also uncertain regarding the best method and practice on how to teach reading and from where to begin the plan an instructional emphasis on the digital reading.

Purpose of Study

The reason of this study is the examination of the effects of using the digital reading on the tenth grade EFL learners' reading comprehension skills.

Question of Study

Following the question is answered by the present study:

1- Whether there is a substantial difference between reading comprehension scores of the experimental group of students by using the digital texts and the control group students by making use of the printed texts?

1.5 Hypotheses of Study

Following hypotheses is tested by the study

1. There exist no statistically considerable differences at ($\alpha \leq 0.05$) among the mean scores of the experimental and control groups because of the teaching method (digital texts vs. written texts)?

Significance of Study

1. The ministry of education could probably adopt the finding made from the study officially, i.e., making use of the digital reading for the development of students' reading comprehension.
2. this study may be fruitful for curricula designers, such that they may use the digital reading in teaching comprehension reading.
3. The alternative techniques may be used by the teachers in their teaching that can assist the method of teaching by using the digital reading for the development of EFL learners' reading comprehension.

4. The students could make use the digital reading in foreign language learning, particularly in the reading of comprehension and a method which makes FL learning more pleasurable and valuable.

Operational Definitions

1. Reading comprehension: It is the process of developing an understanding of the meaning of the complete text and what it discusses about in a way that is faster and easier by making use of the digital reading.

2. Digital reading: the procedure of the extraction of the meaning from a text which is in a digital format either on a PC or a mobile device.

3. Regular Instruction: it is a term that refers to the teaching without the assistance of the technology that is frequently used in the classrooms, by making use of the normal activities like the developmental drills (reading dialogues, and listening to the instructor, work in pairs and imitating).

Limitations of Study

The limitations that are faced by this study are as follows:

1. A limited period of 2 weeks was available for carrying the study.

2. The students' reading comprehension skills by using the digital reading was meant to be measured in the study.

3. A small group of male students of tenth grade were selected as participants for the study.

4. A written reading texts was provided to the control group whereas the experimental group was given digital reading texts.

Literature Review

Reading Comprehension

There are various purposes behind reading; sometimes it is done to capture the basic concept or for finding the particularly needed data. Often, texts are gone through with the intention of learning and occasionally to integrate information for taking a critical position. Most often we read general comprehension for developing an understanding of a basic concept besides the corresponding data (Kaplan, 2002; Grabe, 1991; Grabe & Stoller, 2001). Hence, it is rightly proposed by Katims (1997) that reading is worthless if it is not comprehended.

Reading specialists like Aebersold and Field (1997) and Anderson and Pearson (1984) claim that bottom-up methodology is the best way to teach reading. It involves reading through corresponding alphabets and sounds. In this method, students concentrate on vocabulary, paragraph structure, language and information within text. Ferhan (1999) considered that top-down methodology outshines others. This concept is presently referred to as psycholinguistic theory for learning and gives significant importance to reader's previous knowledge. But, some scholars suggested a collaborated reading technique involving bottom-up and top-down simultaneously. These scholars included Grabe and Stoller (2002), Eskey and Grabe (1988) and Kintsch (2005). They believed that decision about the use of any reading methodology must be taken at the discretion of reader depending on circumstances. Precisely, top-down methodology is suitable when readers possess earlier knowledge related to texts. Conversely, bottom-up approach would be fruitful in case of absence of knowledge pertaining to main topic (Dubin & Bycina, 1991; Brown, 2000; Harmer, 2001; Hedge, 2008).

Sahin (2010) defined reading of comprehension as devising implications from text. This calls for various reading aptitudes like language fluency, lexical expertise, word identification and quick undertaking of pre-existing knowledge. Tompkins (2011) associated reading comprehension with text comprehension. Such comprehension is supported by the interaction of various words in text and the way these words extract the knowledge that is not apparently contained inside the texts. He also regarded comprehension as an innovative phenomenon grounded on 4 aptitudes; syntax, phonologu, semantics and pragmatics.

Digital Reading

According to (Knobel & Lankshear, 2014; 2011; 2010), the phrase digital literacy denotes the association of text with various multimedia modes which form part of the electronic context. It can be said that not every on-screen text is considered digital. Two characteristics must be met by texts to qualify as digital:

1. The incorporation of verbal, transcribed, graphic, touch screen and various other modes of expression of reading; it also includes reading modalities associated with space and gesture.
2. Having various connecting elements to link the text; these include hyperlinks (MECD, 2010). The concept of literacy extends beyond the written communication as emphasized by Plester and Wood (2009). It entails formats that allow communication of ideas by different resources including video, audio or spatial resources. Sometimes, all these resources are collectively found such as in videogames. A major difference between any two formats is usually not established by Generation Z

Digital texts have brought about revolution in the field of reading and comprehension according to Nicholas (2011). Both Nicholas (2011) and McLuhan (1964) showed agreement on the concept that thinking process is shaped by the environment; hence, they considered employing various tools for adjustment of environment by making changes in individuals' social participation or in various systems like educational, corporate and others. Mangen et al. (2013) performed a research in Norway whereby he approached a couple of schools and selected 72 students studying in grade 10. He discovered that students performed better in reading printed texts as compared to digital texts. Aydemir et al. (2013) performed a study to determine the impact of using digital text reading. He approached 60 students studying in grade 5 for his study. He found that the participants depicted different levels of reading comprehension. He also found that there was no noteworthy impact of text type on the mean scores achieved by students of both groups (83 Journal of English Teaching, Volume5 (2), June2019).

Another study was carried out by Fard and Nabifar's (2011) whereby they analyzed the reading comprehension level of 40 EFL students in Iran. All the students were females and were intermediate level students. The study revealed higher reading comprehension skills of the participants using digital reading than those involved in printed reading. Bhatti (2013) performed a research in Pakistan whereby he approached 60 students studying in grade 9. All the students were boys. The outcomes revealed 35% superior performance of CALL in comparison to conventional classroom settings. Moreover, better reading comprehension of digital reading group in comparison to printed reading group was also asserted by Huang's (2014).

All the earlier mentioned studies gave different conclusions about how reading comprehension is influenced by use of digital text reading. But, as per recent research, digital text reading was found to yield better performance as compared to printed text reading. Due to the most basic and simplest forms of computer technology prevailing in earlier days, most studies of that time emphasized on a better performance of printed text reading. However, with advancements in digital technologies, it was found that digital reading can reap thousands of benefits. But this does not imply that printed text reading has been rendered obsolete; it is still considered more effective in some recent studies and in some particular circumstances. The research outcomes gave mixed conclusions about the effectiveness of digital and printed reading texts due to the effect of variable factors like technological advancement, technological expertise of readers and learners' expertise in reading comprehension. Studies pertaining to application of digital reading to facilitate the process of instructing students to learn reading comprehension skills were reviewed. It was evident from this review that a number of studies on digital reading is not adequate especially in Jordon. But, the current study involves experimental testing of the impact of digital reading over EFL learners' reading comprehension skills.

Methodology

The manner of obtaining the required information and the course of action followed to do something is referred to as Methodology. In the context of research, methodology entails research settings, context, participants, instruments of study, procedures of study, and reliability and validity of the test which are used to analyze the data.

Setting and Context

This study compares two groups of students of grade 10 studying English language in the Al Mafraq First Basic School for Boys. The students were enrolled in the 1st semester of 2020/2021 educational session. The students that formed the experimental group employed digital reading by using their PCs or mobile phones. The control group studied through traditional method in a classroom using their text books.

Participants

Participants were categorized into groups namely the experimental and control ones. The former one had 16 individuals who studied via digital reading and the latter one consisted of 16 students who studied via traditional method. All of them were males aged between 15 and 16.

Instrument of Study

The researcher designed a test to determine the influence of digital reading over reading comprehension skills of learners.

Procedures of Study

The study was scheduled in the 1st semester of 2020-2021 session. The researcher obtained the consent of the Directorate of Education before initiating the study. Next, he followed the subsequently given course of action.

1. The study venue was decided to be the Al Mafraq First Basic boys School in Jordon.
2. The tenth-grade male students at the Al Mafraq First Basic School for Boys were chosen as the study sample
3. The participants were categorized into groups namely the experimental and control ones. The former one had been selected randomly.
4. The participating students were briefed about the study's nature and purpose.

5. Prior to initiation of the experiment, a pre-test was taken of both the groups. The pre-test allowed the researcher to find out the existing level of reading comprehension skills possessed by the students.

6. A post-test was administrated to both the groups after the experiment.

Reliability of Test

To establish the test reliability, test-retest technique was used. This involved conducting a pilot study where test was given to 15 students who were not included in the final study. This test was again taken by students involved in the pilot study after a couple of weeks. This was followed by computing the reliability coefficient for the test through the Pearson formula. The test was reliable as the computed coefficient was 0.88%.

Test Validity

The validity of the study instrument was determined by experts including experienced English language professors and instructors. The validity was checked on the basis of text type. The experts approved the validity. However, they recommended incorporation of more text types besides suggesting the use of percentages during the frequency analysis.

Results and Discussions

The pre-reading comprehension test was administrated to both the groups for identification of the level of reading skills possessed by students at the start of the experiment. Table1 shows the values of means, t-test scores and standard deviation calculated to determine significant differences among the students in experimental and control groups.

Table # 1: The data pertaining to students' pre-reading comprehension tests; their Means, t-test outcomes and standard deviation for each of the 2 groups.

	Group	N	Mean	SD	t	df	Sig. (2-tailed)
Pre-test	**Experimental**	16	43.00	13.115	-.219	30	.828
	Control	16	44.13	15.819			

Table 1 depicts that scores achieved by students of control and experimental groups were very close in pre-reading comprehension tests. The similarity of scores indicates that no statistically

significant difference was found in the scores made during the pre-reading comprehension test by students of the two groups.

1- **Determine any significant difference among the experimental and control group students on the basis of their scores?**

Means and standard deviation of groups were computed. Moreover, t-test determined if significant differences were found among experimental group and control group.

Table 2: Data for post-reading comprehension test and the calculated Means, t-test scores and standard deviation for groups

	Group	N	Mean	SD	T	df	Sig. (2-tailed)
Post-test	Experimental	16	75.19	11.143	2.177	30	.037
	Control	16	65.44	14.082			

As per table 2, statistically significant differences were observed ($\alpha=0.05$) among group 1 mean and group 2 mean of scores made by students in the post-reading comprehension tests.

This can also be explained as follows:

1. Learners of the experimental group felt at ease when using digital reading to improve their reading comprehension skills
2. Learners of the experimental group enjoyed independent learning during digital reading.
3. When digital reading was applied in a classroom setting, it unveiled new chances of applying it both within and beyond the classroom settings for promoting the instruction of reading skills.

Conclusion

There is a significant influence of digital reading on the process of instructing students to learn reading comprehension skills. As compared to other learners, EFL learners enjoy an additional benefit in the form of self-learning prospects that allow them to learn on their own. EFL students are familiar with the use of digital reading which improves their reading and comprehension skills. Besides this, EFL students enjoy the benefit of dual learning since they

can learn under their teacher in a classroom setting and independently beyond the classroom setting.

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