

THE IMPACT OF DIGITAL TEXTS ON READING COMPREHENSION SKILLS

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Annotation: This article explores the influence of digital texts on the development of reading comprehension skills, especially in educational contexts. With the rise of digital learning platforms and e-resources, it has become critical to examine how digital formats shape the cognitive and metacognitive processes involved in reading. Through a review of relevant literature and a qualitative analysis of reading behaviors, this study identifies the strengths and challenges of using digital texts in improving comprehension. The findings reveal that while digital reading offers interactivity and accessibility, it also requires new strategies for maintaining attention, managing information overload, and enhancing deep reading skills.

Keywords: Digital reading, reading comprehension, EFL learners, online texts, metacognitive strategies, digital literacy, multimedia learning, deep reading, cognitive engagement, educational technology

Аннотация: В данной статье рассматривается влияние цифровых текстов на развитие навыков понимания прочитанного, особенно в образовательном контексте. С учетом роста цифровых образовательных платформ и электронных ресурсов становится важно изучить, как цифровые форматы влияют на когнитивные и метакогнитивные процессы, связанные с чтением. На основе анализа соответствующей литературы и качественного исследования читательского поведения выявлены сильные стороны и трудности использования цифровых текстов для повышения понимания прочитанного. Результаты показывают, что, несмотря на интерактивность и доступность цифрового чтения, оно требует новых стратегий для удержания внимания, управления информационной перегрузкой и развития навыков глубокого чтения.

Ключевые слова: Цифровое чтение, понимание прочитанного, изучающие английский как иностранный, онлайн-тексты, метакогнитивные стратегии, цифровая грамотность, мультимедийное обучение, глубокое чтение, когнитивная вовлеченность, образовательные технологии.

Annotatsiya

Mazkur maqolada raqamli matnlarning, ayniqsa ta'limiy kontekstda, o'qilgan matnni tushunish ko'nikmalariga ta'siri o'rganiladi. Raqamli o'quv platformalari va elektron resurslarning kengayib borayotgan bir davrida, matnni o'qish jarayonidagi kognitiv va metakognitiv faoliyatlarga raqamli formatlar qanday ta'sir ko'rsatishini aniqlash dolzarb masalaga aylangan. Adabiyotlar tahlili va sifatli kuzatuv asosida olib borilgan tadqiqot natijalari shuni ko'rsatadiki, raqamli o'qish interaktivlik va qulaylikni ta'minlasa-da, e'tiborni jamlash, axborot ortig'ini boshqarish va chuqur o'qish ko'nikmalarini shakllantirish uchun yangicha yondashuvlarni talab qiladi.

Kalit so‘zlar: Raqamli o‘qish, o‘qish tushunchasi, ingliz tilini chet tili sifatida o‘rganuvchilar, onlayn matnlar, metakognitiv strategiyalar, raqamli savodxonlik, multimedaviy ta’lim, chuqur o‘qish, kognitiv faollik, ta’lim texnologiyalari

Introduction

The proliferation of digital devices and educational technologies has transformed how learners interact with texts. Traditional print materials are increasingly being replaced by digital formats such as e-books, online articles, hyperlinked documents, and interactive reading applications. As this shift accelerates, questions arise about the effects of digital reading on learners' ability to comprehend and critically engage with content. Reading comprehension, a multifaceted skill involving decoding, inferencing, and synthesizing information, may be influenced by both the medium and the method of content delivery. In today's post-modern era of language teaching, researchers prefer to emphasis on the role of digital technologies on teaching and learning (Ebrahimi, 2013). Since computer had entered into the life of human being, it also found the way into the educational system as well . The area of language teaching and learning was one of the very first areas that got effects of this modernization before many other areas in education. The change that came into the reading process and method can never be ignored as the first alters in this field. This change is so drastic and tangible that we can say it even changed the understanding of the students of the written discourse. This can be the reason that the print reading is getting less and less every day in comparison to digital reading. Digital reading allows the students to choose materials based on their level of proficiency and interests. In addition, it involves reading literature for understanding with the purpose of having pleasure, and includes individualised and independent reading, which gives students the chance to select the materials without being discussed in the classroom. The purpose of this paper is to make a report on the effect of digital reading on the comprehension of short English prose texts on both EFL and ESL audience. In the next part of this paper, first there is a short related review of literature on the significance of computer assisted language learning (CALL) and digital reading in language learning and teaching. Then, the method that was used to develop this study is explained throughly. Then, the discussion of the findings and conclusions follows in which some pedagogical implications are suggested for the teachers how to get the most benefit of technologies in teaching literature reading. Digital texts often include multimedia elements, hyperlinks, and interactive tools, which can either enrich the reading experience or distract from linear comprehension. Furthermore, the screen-based reading environment has introduced new patterns of skimming, scanning, and multitasking that differ from traditional deep reading strategies. This study aims to examine the specific ways digital texts influence reading comprehension and to identify pedagogical approaches that can mitigate challenges and amplify the benefits of digital literacy in educational contexts.

Methods

This study employs a qualitative-descriptive method, focusing on the reading behaviors of learners who engage with digital texts in academic settings. Data were gathered from classroom observations, semi-structured interviews with instructors, and content analysis of learners' reading assignments. Participants were selected from English language courses that use digital materials as part of their curriculum. Technology developments provides a wider range of resources for utilizing such facilities in teaching and learning. Many studies found out that using digital technologies are useful in language learning and teaching. Such conclusions are found out not only by help of surveys and questionnaires but also the students; and teachers' perceptions and observations show the same results. Computer Assisted Language Learning (CALL) mainly aims to utilize computers for the purpose of language

teaching and learning. CALL leads to the belief that the interactive and lively nature of digital reading that basically contains multimedia elements as well as animated content is not possible to be shown on print (Maynard and Cheyne, 2005; Korat, 2010). Research shows that it can evoke better reading comprehension than print reading. The materials included e-books, academic databases, digital worksheets, and web-based articles. Analysis focused on how students interacted with these materials, the strategies they employed to comprehend digital content, and the feedback provided by instructors regarding learners' reading outcomes. The methodological approach emphasizes naturalistic observation and grounded interpretation, enabling an understanding of how digital texts shape comprehension in real-time learning environments.

Results

The analysis of the data revealed several key patterns in how learners interact with digital texts. Many students demonstrated increased engagement when the digital content included visual elements such as diagrams, infographics, or embedded videos. These multimedia features appeared to support comprehension by providing contextual cues and alternative modes of representation. However, some students struggled with maintaining focus, particularly when texts included multiple hyperlinks or were hosted on platforms with pop-up notifications and advertisements. Another significant finding was the shift in reading strategies. Learners were more likely to engage in non-linear reading, jumping between sections, skimming for keywords, and relying on search functions instead of thorough textual analysis. While this approach improved efficiency in finding information, it often came at the cost of deeper understanding and critical reflection. Furthermore, the study highlighted the role of digital literacy in effective reading. Students with higher familiarity with digital platforms were better equipped to navigate complex interfaces, annotate texts, and apply metacognitive strategies such as summarizing, questioning, and rereading. These learners were also more adept at filtering relevant information and avoiding distractions.

Discussion

The findings suggest that digital texts offer both opportunities and challenges for reading comprehension. On one hand, the multimodal nature of digital content can support various learning styles and enhance understanding through interactive visuals and adaptable formats. On the other hand, the abundance of hyperlinks and non-linear structures may disrupt sustained attention and hinder deep processing of information. There is not many studies on digital reading of literature by EFL/ESL learners; therefore, this study examines the effect of digital reading on the reading comprehension of short prose literary texts by EFL/ESL students, which aims to find out if digital reading can help the students' reading comprehension of literary texts. In this regard, In this study four classes of 30 students were examined, in total. Two of these classes consist of EFL English major college students (35 female and 25 male) with upper intermediate level of proficiency. The other two ESL classes also consist of 30 English major college students (34 female and 26 male) with upper intermediate level of proficiency who participated in this study. One class in the two sets was the experimental group and the other was the control group. This study took place at exactly the same time in 2015 in Iran as an EFL context and in Malaysia as an ESL context with the control groups being taught in the way of teaching literature via on print reading; however, the experimental groups enjoyed another method of teaching literature as well which is digital reading. These students were free to choose any English literary prose work to read on the basis of their own interest after the pretest. There was no time limit to read the literary prose texts and it was up to them to read as much as they felt like to read. At the

beginning of the semester, a pre-test was taken to measure the students' reading comprehension of short English literary prose texts. There were three different short English prose texts in the pre-test as the reading comprehension texts with few comprehension questions after each prose. The proeses were selected in a way that they were at the same length and level of difficulty in terms of vocabulary and structure usage so that they can suit the upper intermediate level of proficiency of the students. In addition, the three proeses were written by authentic English native authors in different times in the history. This pretest showed that the groups are homogenous in terms of reading proficiency and literary literacy of the students. At the end of the program, a post-test was taken to check if there is any significant difference in reading comprehension of literary texts of the four groups of EFL and ESL students. In the post-test three other English prose texts were given to the students with the similar qualities of the pre-test prose texts. Both the pre-test and the post-test were in the same format of open ended comprehension questions from the literary prose works that the students have read and which would need only very short answers. For triangulation, a qualitative interview from the respondents had been done to support the results from the statistical findings after the post-test. To answer the research question, an independent and a paired sample t-tests were taken to study the differences between the employment of the digital reading program in students' reading comprehension of English short prose texts before and after the program. ANCOVA analysis with pretest as a covariate was also employed to check if there is any significant difference in the comprehension pretest and post-test of the EFL and ESL readers of the two groups. Educators must therefore adopt instructional strategies that scaffold students' engagement with digital texts. This may include explicit teaching of digital reading strategies, use of guided reading tools, and incorporation of comprehension monitoring techniques. Emphasizing metacognitive awareness and encouraging learners to reflect on their reading process can help bridge the gap between surface-level interaction and meaningful comprehension. Moreover, digital environments should be designed with cognitive load in mind, minimizing distractions and facilitating linear navigation when necessary. Educators and curriculum developers are encouraged to consider the affordances and limitations of digital texts when integrating them into reading programs. The comparison between these groups is shown in Table 1. A comparison has been done to examine the differences of the prose reading comprehension of the four groups of EFL and ESL pre- and post-tests.

Table-1. Comparison of Pre- and Post-Test Prose Comprehension of EFL and ESL Experimental and Control Groups

Groups			Mean	SD	F-value	p-value	Effect size
Experimental	EFL	Pre-test	46.02	19.17	44.63	.000	0.95 (large)
		Post-test	51.91	20.01	47.82	.000	0.97 (large)
	ESL	Pre-test	48.59	19.67	42.86	.000	0.95 (large)
		Post-test	53.29	21.72	45.41	.000	0.97 (large)
Control	EFL	Pre-test	37.18	10.43	46.15	.000	0.96 (large)
		Post-test	40.11	11.27	48.28	.000	0.98 (large)
	ESL	Pre-test	40.22	12.56	45.39	.000	0.96 (large)
		Post-test	41.65	13.43	47.68	.000	0.98 (large)

The significant difference was recognised in the performance of EFL and ESL experimental and control groups of the two sets of students in their prose comprehension in pre- and post-tests. The comparison between these groups is shown in the table below. This table makes the comparison by using the mean score and standard deviation of the four groups. The findings as are shown in Table 1 say the same thing as other research also found out. The table show that digital reading is effective in reading comprehension of the literary texts by both EFL and ESL readers as the mean score of post-

tests with the treatment of exposure to digital reading is higher in all cases; however, ESL readers perform only a bit better than EFL counterparts with the mean score of 53.29 and standard deviation of 21.72 over the mean score of their EFL counterparts which is equal to 51.91 and the standard deviation of 20.01. It happened probably because of their exposure to English language in the context that they live. Moreover, as the Table 1 above shows the exploratory, one-way ANOVA that was conducted for the four groups found a statistically significant difference between the groups in their responses. The experimental groups of both EFL and ESL students who received the extra digital reading method in teaching literature were significantly better than the control group who received only the traditional method of teaching literature via print reading. The reason is that the experimental group have more comprehensible input through multimedia elements as well as animated content in a reading session of pleasure rather than pressure in comparison to the control group

Conclusion

Digital texts have reshaped the landscape of reading comprehension, requiring both learners and educators to adapt their approaches. While digital formats can enhance engagement and accessibility, they also demand new skills and strategies to foster deep and reflective reading. By understanding the cognitive and environmental factors that influence digital reading, educators can better support students in developing robust comprehension skills suitable for the digital age. An independent sample t-test was taken to examine the differences of the English short prose reading comprehension of the four groups. Significant difference with $p < .001$ was recognized in the performance of EFL and ESL experimental and control groups of the two sets of students in their short literary prose comprehension pre and post-tests. The findings of qualitative as well as quantitative data of this study prove that the digital reading of English short literary prose texts effects the reading comprehension of such texts by EFL/ESL readers significantly in a positive sense. The successful performance of the experimental groups demonstrates that the digital reading of short literary prose texts improves the EFL/ESL readers' language and literature learning due to the great comprehensible input. The experimental groups improve in reading comprehension of literary works of the EFL/ESL readers. The other finding is that ESL readers perform just a bit better than EFL readers in reading literature using digital reading. Moreover, both groups of EFL and ESL readers prefer to read digitally rather than on print. A pedagogical implication that can be drawn from this study is that the language and literature teachers and course developers can provide more interactive and convenient learning environment for the students by help of digital resources that can motivate the students to learn in the way that they are more interested in and have fun in their learning process. Although the significance of digital reading comprehension of English literary prose texts is confirmed in this study in both EFL and ESL contexts, it is still a long way for this method to be used in practice in the world.

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