

Improving Students' Comprehension of Narrative Texts Through Educaplay Games

Alvia Dwi Aisyah

Universitas Negeri Surabaya
alvia.21057@mhs.unesa.ac.id

Abstrak

Studi kuantitatif ini menggunakan desain pre-eksperimental untuk menguji peningkatan pemahaman siswa terhadap teks naratif dalam pelajaran Bahasa Inggris melalui penggunaan media pembelajaran berbasis web dari Educaplay. Subjek penelitian ini adalah 34 siswa kelas XI dari sebuah sekolah menengah swasta yang mengikuti pelajaran Bahasa Inggris. Dalam penelitian ini, peneliti menggunakan tes pilihan ganda berupa pre-test dan post-test sebagai instrumen penelitian. Untuk menentukan apakah ada perbedaan hasil sebelum dan setelah perlakuan, peneliti menggunakan uji t berpasangan. Peneliti mengukur kekuatan efek perlakuan menggunakan Cohen's d, dan hasilnya menunjukkan peningkatan yang signifikan dan perbedaan yang signifikan dalam pemahaman siswa terhadap teks naratif setelah perlakuan. Hasil analisis menunjukkan perbedaan yang signifikan dalam pemahaman siswa terhadap teks naratif, sebagaimana ditunjukkan oleh nilai $p < 0.001$. Selain itu, nilai Cohen's d sebesar 1.6 menunjukkan efek yang kuat. Hasil penelitian ini menunjukkan bahwa Educaplay merupakan alat digital yang efektif untuk meningkatkan pemahaman siswa terhadap teks naratif dalam kelas bahasa Inggris.

Kata Kunci: Educaplay, permainan berbasis web, pemahaman membaca, teks naratif

Abstract

This quantitative study used a pre-experimental design to test the improvement in students' comprehension of narrative texts in English classes through the use of Educaplay web-based game learning media. The subjects of this study were 34 eleventh-grade students from a private high school who were taking English classes. In this study, the researcher used multiple-choice tests in the form of pre- and post-tests as research instruments. To determine whether there was a difference in the results before and after the treatment, the researcher used a paired t-test. The researcher measured the strength of the treatment effect using Cohen's d, and the results reflected a significant increase and a significant difference in students' understanding of narrative texts after the treatment. The results of the analysis revealed a significant difference in students' comprehension of narrative texts, as showed by a p-value < 0.001 . Furthermore, a Cohen's d value of 1.6 indicates a strong effect. The results of this study demonstrate that Educaplay is an effective digital tool for improving students' comprehension of narrative texts in English classes.

Keywords: Educaplay, web-based games, reading comprehension, narrative texts

INTRODUCTION

In learning English, especially as a foreign language, one of the most helpful things is reading comprehension. This is because reading comprehension helps students not only understand the meaning of a text, but also interpret the meaning of the text they have read. It is said by Erlidawati (2023) that students who master reading comprehension are better at accessing information and using it in both educational and social setting. By reading, students can also expand their knowledge and discover many ideas outside their environment (Julita, 2023).

To support students' literacy at school, they study a variety of texts, one of which is narrative text. Narrative text is text that has the aim of entertaining the

reader. Even though this text is an entertaining text, it was revealed that many students still experience difficulties (Yuvirawan et al., 2021). Many of them have difficulty identifying vocabulary, detailed information and also the hidden meaning of a narrative text. It is because students are taught using traditional teaching methods and often rely heavily on textbooks (Julaiha et al., 2022). To overcome this situation, teachers are encouraged to use interactive and engaging media to motivate students and support deeper understanding.

In this digital era, technology is very much needed, especially in the field of education. Moreover, many students spend a great deal of time with various types of technology, such as smartphones and online games (Maljur, 2024; Gabrito et al., 2023). Teachers can take advantage of this by creating media that can support

students' enthusiasm for learning through game-based learning method (Priyaadharshini et al., 2020). Game based learning method is a method that uses educational games to create engaging and interactive learning media.

One educational game that teachers can use in language learning classroom is Educaplay. Through the Educaplay platform, interactive activities such as quizzes, puzzles, and matching game can be designed by teachers to suit various subjects and skills level (W & Sison, 2021). It was found that students' vocabulary retention and motivation to learn are boosted by using Educaplay (Ayuningrum, 2024; Vargas-Saritama, 2024). Even so, studies examining its effect on overall reading comprehension, particularly on interpreting narrative texts, are lacking.

In this way, this study aims to fill this gap by exploring the impact of Educaplay web-based games on senior high school students' understanding of narrative texts. The focus of this study is placed on identifying main ideas, finding specific details, understanding vocabulary in context, recognizing grammatical elements, and drawing inferences. The results of this study are expected to provide insight into the potential of digital games in improving reading comprehension, along with providing creative teaching strategies for teaching English as a second language in the classroom.

METHODS

This study used a pre-experimental design with a pre-test and post-test format on one group to examine the impact of Educaplay Web-Based Games on students' reading comprehension of narrative texts. It said by Creswell (202) that this design allows the researcher to measure changes in students' performance before and after the treatment without involving a control group.

In the 2024/2025 academic year, this research involved 34 eleventh-grade students enrolled in a private senior high school located in Surabaya. Participant selection was based on purposive sampling, with consideration given to accessibility, class rediness, and alignment with the curriculum. Since narrative text had previously been learned and a basic level of English had already been acquired, the students were considered appropriate for the study.

To collect the data, a reading comprehension test consisting of 35 multiple-choice questions was employed, with the same set of items administered before and after the treatment. Five aspects of reading comprehension were assessed in the test, including understanding main ideas, finding spesific details, interpreting word meanings based on context, identifying grammatical elements, and drawing inferences. The selection of these indicators was guided by Brown (2018)

and adjusted to suit the objectives of the present study. Prior to its use, the test underwent expert judgment by an English education specialist and was tried out on students outside the research participants to confirm its validity and reliability.

The research took place in five meetings. To begin the process, the researcher assessed students' initial reading comprehension to identify their starting level. Educaplay was used in the second session to teach students how to identify vocabulary, including synonym and reference words, and to extract detailed information from narrative texts. The focus then shifted to identifying main ideas and making inferences, also through Educaplay-based tasks. The fourth meeting provided opportunities for students to present their analysis of main ideas and inferences using the narrative texts given. At the end of the meeting, the effect of the treatment was examined using a post-test that employed the same questions as the pre-test.

For the purposes of evaluating wether the intervention had a significant impact on students' reading comprehension scores, the researcher conducted paired sample t-test in SPSS using pre-test and post-test data. A comprehensive analysis was undertaken not only of the overall score improvement but also of the progress made in each of the five specific reading measures. Additionally, Cohen's d was calculated to asses the extent of the treatment effect.

RESULTS AND DISCUSSION

Data analysis was performed using SPSS version 30 to process students' test scores. As a first step, the researcher conducted a normality test to determine if the data were normal. The results of the normality test are presented in the table below.

Table 1
Normality Test

Test	Shapiro-Wilk		
	Statistic	df	Sig.
Pretest	.969	34	.423
Posttest	.965	34	.331

In Table 1, the normality test found that both pre test and post test data were normally distributed. Shapiro-Wilk values obtained for the pre-test were 0.969 with a significance level of 0.423, and for the post test, they were 0.965 with a significance level of 0.331. In this case, the data are normal since both significance values are higher than 0.05. Statistical analysis can be conducted on the basis of this assumption since it enables parametric analysis. Thus, the pre-test and post-test were compared

using a paired sample t-test in order to evaluate whether there was any significant difference.

Table 2
Paired Sample t-test

Test	t	df	Significance	
			One-sided p	Two-sided p
Posttest - Pretest	9.721	33	<.001	<.001

Students' pre-test and post-test scores after the treatment showed a significance difference in paired sample t-test results in the table above. This result was supported by the two-tailed significance value of 0.001, which was lower than the 0.05 significance level. In light of this result, the scores of the students improved significantly between the pre-test and post test. Hence, this study reveals that Educaplay was highly effective in helping students better comprehend narrative texts, especially in reading comprehension.

Table 3
Percentage of Correct Answer

Indicators in Reading Comprehension Test	Questions	Percentage of Correct Answer	
		Pretest	Posttest
Identifying main idea of narrative texts	2	58.82%	69.12%
Finding specific facts and events from the story	9	72.22%	82.68%
Synonym	8	73.53%	87.13%
Reference Words	8	71.32%	80.51%
Inference	8	68.75%	76.47%

As can be seen in the table, students' reading comprehension increased across all indicators. Each aspect, including identifying the main idea, finding specific details, understanding vocabulary, recognizing reference words, and making inferences, demonstrates higher percentages of correct answers after the treatment. The bottom line is that students' reading comprehension of narrative texts improved as a result of the instructional intervention when this overall growth is taken into account. In order to estimate the strength of this improvement, Cohen's d was performed to calculate the effect size.

Table 4
Cohen's d Test for Effect Size

Test	Cohen's d Standardized	Point	95% Confidence Interval	
			Lower	Upper
Posttest-pretest	6.19247	1.667	1.139	2.185

According to Table 4, the magnitude of the change between students' pre-test and post-test scores has been estimated using Cohen's d. Cohen's d value of 1.667 is considered a large effect size in this analysis. It means that students' reading comprehension performance was strongly affected by this treatment. As a practical matter, using Educaplay helped students to optimize their academic performance and comprehend narrative texts better.

A clear rise in students' reading comprehension was observed after the classroom use of Educaplay, indicating a meaningful change in learning performance. What supports the effectiveness of the treatment is the statistically significant gap found between the pre-test and post-test scores in interpreting narrative texts. With reference to these results, the improvement of low reading proficiency may be supported through the inclusion of digital game-based learning tools, such as Educaplay.

Before using Educaplay, many students seem struggle to understand unfamiliar words in context. They often simply guessed or skipped over unfamiliar words. However, after playing the vocabulary matching game, the students demonstrated greater confidence and accuracy in interpreting the meaning of words. This is in accordance with previous studies conducted by Ayuningrum (2024) and Vargas-Saritama (2024), which found that Educaplay can improve students' vocabulary retention. While previous study has demonstrated that Educaplay can enhance students' vocabulary retention, it is important to note that reading is not merely about deciphering words, but also involves higher-order thinking skills (Nunan, 2005). In other words, readers must not only recognize and pronounce words correctly, but also understand, evaluate, and connect them to the author's ideas (Astantih et al., 2022). Educaplay offers the Froggy Jumps quiz feature, which helps students practice identifying specific details within a narrative text. Indirectly, their ability to scanning and skimming detailed information from a text has also improved. Research conducted by Mujahidah and Mailani (2025) also showed that the Froggy Jumps Quiz feature can boost students' concentration and participation in learning activities.

Little contrast can be seen between the present results and earlier investigations, particularly those indicating that the use of digital learning tools such as Educaplay supports students' motivation and classroom engagement. As reported by Mukni'ah et al. (2025) and Mykytka et al. (2022), interactive media make learning more engaging and enjoyable, thus encouraging students to take part more fully in the learning process. Within learning environments where active involvement is fostered, higher levels of focus tend to emerge, accompanied by more frequent participation and reduced feelings of boredom and academic stress.

CONCLUSION

In this study, the researcher seeks to determine whether students can improve their comprehension of narrative text by using Educaplay Web-Based Games. The results showed an improvement in students' reading comprehension after Educaplay was applied. When the post-test scores were compared with the pre-test results, students achieved noticeably higher levels of reading comprehension. An effect size analysis was conducted, and the findings indicated that the treatment had a strong impact on learning outcomes.

These outcomes suggest that game-based learning activities function as a practical approach for strengthening learners' comprehension of narrative texts. Within English reading instruction, an interactive online platform may be incorporated to encourage deeper textual understanding while creating a more engaging learning atmosphere.

Despite these encouraging results, the study is not without limitations. Because participation was restricted to a limited number of learners from one institution, the findings could not be extended confidently to wider educational settings. An exclusive emphasis was placed on reading comprehension, whereas speaking, listening, and writing development were left unexplored.

A broader range of participants from varied educational backgrounds will need to be involved in subsequent investigations to strengthen the scope of the findings. If digital learning tools continue to be examined, further inquiry could focus on how game-based platforms contribute to the growth of additional language abilities and accommodate multiple text categories. To that end, it would be worthwhile to investigate how Educaplay affects other language skills or types of texts so as to gain a more comprehensive understanding of how it works as an English language learning tool.

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