APPLICATION OF THE TOY THEATER WEB GAME: PROMOTING STUDENTS' READING COMPREHENSION AT THE JUNIOR HIGH LEVEL

Haura Nafisah Putri Wahyudi[1], Arik Susanti[2]

[1,2]*Universitas Negeri Surabaya*
E-mail : [1]haurah.22033@mhs.unesa.ac.id , [2]ariksusanti@unesa.ac.id

ABSTRACT

Reading comprehension plays a vital role in English language learning, particularly for junior high school students who are required to understand various text types. However, the students show low results in reading comprehension. This research aims to prove that the Toy Theater web game is effective in enhancing students' reading comprehension of narrative texts. The research method was quantitative research with a one-group pre-test and post-test design (pre-experimental method). The sample of this research was thirty students of the ninth grade at a private junior high school in Sidoarjo, Indonesia. The data collection method used in this research was a reading comprehension test in multiple-choice format. The results show there is a statistically significant difference between the pre-test and post-test results since the result of p value is less than 0.05. It means that the alternative hypothesis is accepted, so that the Toy Theater web game is effective in enhancing junior high school students' reading comprehension.

Keywords : *Narrative Text, Reading Comprehension, Toy Theater*

ABSTRAK

Pemahaman bacaan memainkan peran penting dalam pembelajaran bahasa Inggris, terutama bagi siswa SMP yang diharuskan memahami berbagai jenis teks. Namun, siswa menunjukkan hasil yang rendah dalam pemahaman bacaan. Penelitian ini bertujuan untuk membuktikan bahwa permainan web Toy Theater efektif dalam meningkatkan pemahaman bacaan siswa terhadap teks naratif. Metode penelitian yang digunakan adalah penelitian kuantitatif dengan desain satu kelompok pra-tes dan pasca-tes (metode pra-eksperimental). Sampel penelitian ini terdiri dari tiga puluh siswa kelas sembilan di sebuah sekolah menengah pertama swasta di Sidoarjo, Indonesia. Metode pengumpulan data yang digunakan dalam penelitian ini adalah tes pemahaman membaca dalam format pilihan ganda. Hasil menunjukkan adanya perbedaan yang signifikan secara statistik antara hasil pre-test dan post-test, karena nilai p kurang dari 0,05. Hal ini berarti hipotesis alternatif diterima, sehingga permainan web Toy Theater efektif dalam meningkatkan pemahaman membaca siswa SMP.

Kata Kunci : *Teks Naratif, Pemahaman Membaca, Toy Theater*

INTRODUCTION

Reading comprehension is widely recognized as a key competence in academic learning because it enables students to construct meaning from written texts rather than merely decoding symbols. This competence allows learners to connect textual information with prior knowledge and contextual understanding, which is essential for meaningful learning (Shvartsman & Shaul, 2023). From a theoretical perspective, reading comprehension involves the integration of linguistic knowledge, background knowledge, and strategic processes that support understanding. Platas-García et al. (2020) explain that comprehension requires the simultaneous processing of vocabulary, grammatical structures, and meaning, as well as continuous self-monitoring of understanding. Consequently, students who develop strong reading comprehension skills are better prepared to engage with complex academic texts across subjects, whereas those with weak comprehension often encounter learning difficulties in various disciplines.

Despite its importance, reading comprehension remains a persistent challenge for Indonesian students. The concern has been addressed through international assessments of student achievement. The Programme for International Student Assessment (PISA) report shows that Indonesia had a reading literacy score of 371 in 2018 (OECD, 2019). The score is low compared to the international average. The latest PISA report shows that Indonesia has not made any significant improvements in reading literacy, as the country had a reading literacy score of 359 in 2022 (OECD, 2023). The low scores indicate that a significant number of Indonesian students are unable to comprehend what they read, which may negatively impact their academic performance. Moreover, low literacy achievement may have implications for the future academic and professional development of the students (Gildore et al., 2025).

Several studies have identified instructional factors contributing to low reading comprehension achievement. One of the main concerns is the dominance of teacher-centered instructional approaches that mostly place the learners in a passive position of receiving the information. Learning environments that promote this type of learning have limited the learners' engagement with the texts and have resulted in a mechanical form of reading. Hidayati & Utami (2025) noted that the lack of variation in digital learning media and the lack of explicit strategies in reading resulted in low engagement and poor reading comprehension. Fatra et al. (2023) noted that learners who did not receive digital scaffolding showed low performance in reading comprehension. This shows the importance of instructional support in the comprehension process.

In addition to instructional approaches, learning models that emphasize memorization and lecturing have also been found to hinder the development of reading comprehension. Suwastini et al. (2025) noted that the rote learning approach has limited the learners' opportunities for connection and inference. Learners have shown better learning outcomes in learning models that promote interactivity and the use of visual media. This has resulted in the increased need for the incorporation of technology-supported interactive media in the teaching of reading with the aim of converting the passive nature of reading into an active form of learning.

Many previous studies have shown that interactive and game-based digital media can serve as effective strategies to address reading comprehension problems. Alshammari (2020) also proved that playing online games increases motivation, attention, and engagement in students' activities, particularly in reading. In addition, Suja et al. (2024) also found that playing online games increases students' fluency in reading. Klimova & Zamborova (2020) and Qodr et al. (2021) also supported these findings, which prove that playing digital games increases students' reading

comprehension. However, these studies focused on digital games in general, not on specific aspects such as the pedagogical alignment of the games. In addition, few studies focused on the effectiveness of interactive web games in improving different aspects of reading comprehension, particularly in narrative texts, as in the case of the Independent Curriculum.

To address this gap, the present study investigates the use of the Toy Theater web game as an instructional medium for enhancing reading comprehension. Toy Theater is an interactive web game that includes visual elements, sequencing, and narrative context. It is appropriate to be used in teaching narrative texts. The game's alignment with narrative structures such as orientation, complication, and resolution provides pedagogical scaffolding to support students' meaning construction, inference-making, and comprehension monitoring. Thus, it is the objective of this study to determine whether Toy Theater, as an interactive web game, can effectively improve junior high school students' reading comprehension, particularly those in Phase D in the Independent Curriculum.

METHOD

This study employed a quantitative approach using a pre-experimental one-group pre-test and post-test design to examine the effectiveness of the Toy Theater Web Game on students' reading comprehension. The research was conducted in the 2025 academic year at a private junior high school in Sidoarjo, with Class IX A selected purposively because the students had relatively similar reading abilities and had not previously been exposed to game-based reading instruction. Prior to data collection, the reading test was validated through expert judgment involving an English lecturer and an English teacher to ensure content validity. The reliability of the instrument was examined using the pre-test and post-test scores, confirming that the test produced consistent results. After administering the pre-test, students received reading instruction using the Toy Theater Web Game, followed by a post-test. The collected data were analyzed using a paired-samples t-test to identify significant differences between students' pre-test and post-test scores. To strengthen the interpretation of the findings, effect size analysis was also conducted to determine the magnitude of the treatment effect.

RESULTS AND DISCUSSIONS

The findings of this study indicate that the Toy Theater Web Game effectively improves students' reading comprehension in learning narrative texts. This directly answers the research question, which seeks to examine whether the use of Toy Theater can enhance junior high school students' reading comprehension. To identify this improvement, students' reading performance before and after the treatment was compared.

The researcher obtained the data from a pre-test given to 30 students find out their reading comprehension abilities in narrative text. Then, the researcher implemented the treatment by applying Toy Theater we game as an instructional medium to enhance junior high school students' reading comprehension of narrative texts. After treatment was done, the researcher gave a post-test to find out the improvement of students' scores in reading comprehension of narrative texts. A summary of the Students' Mean Test results can be seen in Table 1.

Table 1. Students' Mean Test

Paired Samples Statistics

		Mean	N	Std. Deviation	**Std. Error Mean**
Pair 1	Pre Test	75.00	30	6.454	**1.178**
	Post Test	89.00	30	5.484	**1.001**

As shown in Table 1, shows that the average score of 30 students on the pre-test was 75.00, while the average score on the post-test was 89.00. The average scores for the pre-test and post-test differed. Descriptively, the difference in average scores between the pre-test and post-test of 14 points indicates a significant difference.

After analysing the students' scores using descriptive statistics, the researcher calculated a paired-samples t-test. This test was used to determine whether the hypothesis in this study was a significant improvement in students' scores after the Toy Theater treatment. The paired-samples t-test compares the average scores of two different tests for the same group. In this study, the researcher used students' pre-test and post-test scores as samples. The results of the paired-samples t-test are presented in Table 2.

Table 2. Paired Sample t-test

Paired Samples Test

		Paired Differences					t	df	**Significance**	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				One-Sided p	**Two-Sided p**
					Lower	Upper				
Pair 1	Pre Test Post Test	-14.000	8.473	1.547	-17.164	-10.836	-9.050	29	<,001	**<,001**

The results of the paired-sample t-test presented in the table above show that the Sig. (2-tailed) value is <0.001. This value is less than 0.05, so the researcher concludes that the alternative hypothesis (Ha) is accepted because the p-value less than 0.05. It can be concluded that the application of the Toy Theater web game significantly promoted students' reading comprehension in narrative text scores after the treatment. This finding aligns with previous studies reporting that digital game-based learning enhances reading outcomes by increasing students' engagement and active participation in the learning process, as discussed by Julita (2024) and Arifin et al. (2024).

From this result, the research questions in chapter 1 can be answered the research question stated in Chapter I can be answered, indicating that there is a significant difference in junior high school students' reading comprehension of narrative texts after the application of the Toy Theater web game. This finding is evidenced by the increase in the students' mean scores and the results of the paired-sample t-test. The analysis shows that the objective of the study was successfully achieved. Specifically, the students' mean score improved by 14.00-point after receiving the treatment. Furthermore, the paired-sample t-test result reveals that Sig. (2-tailed) = 0.000, which is lower than the significance level of 0.05, indicating that the alternative hypothesis is accepted and cannot be rejected.

To determine the practical impact of the treatment, the researcher calculated the effect size using Cohen's d value obtained through analysis in SPSS version 29. This calculation can help inform the size of the difference between pre-test and post-test scores regardless of statistical significance. To put this effect size into perspective, it can be compared against the guidelines proposed by Cohen, which classify effect sizes as small, medium, or large. These results also serve as additional information regarding the size of the difference pointed out in the previous analysis. The results of the effect size calculation are presented in Table 3.

Table 3. Paired Samples Effect Sizes

Paired Samples Effect Sizes						
			Standardizer[a]	Point Estimate	**95% Confidence Interval**	
					Lower	**Upper**
Pair 1	Pre Test – Post Test	Cohen's d	8.473	-1.652	-2.200	**-1.092**
		Hedges' correction	8.700	-1.609	-2.143	**-1.063**

As shown in Table 3, the value of the effect size using Cohen's d is -1.652, which exceeds the 0.8 level, and this means that the pre-test and post-test scores' differences lie in the 'large' category as defined by Cohen in Chapter 3. Furthermore, the Hedges correction results also show an effect size of -1.609 with a 95% confidence interval that does not cross zero. The confidence interval revealed the stability of the observed effect size from the test. It is evident that the results of the post-test have a substantial difference compared to the results of the pre-test.

In order to provide a closer look at the results, the researcher calculated the scores of the students in relation to the different components. To better identify the reading comprehension skills of the students, the next step focused on five aspects of reading comprehension: activating word meanings, understanding sentences, making inferences, comprehension monitoring, understanding text structures. The results are presented in Table 4.

Table 4. Students' Improvement across Reading Comprehension Components

Components	Average Score		Increase
	Pre- Test	Post- Test	
Activating Word Meaning	12.66	18.55	5.89
Understanding Sentences	16.66	16.88	0.22
Making Inferences	17.44	20	2.56
Comprehension Monitoring	13.33	19.88	6.55
Understanding Text Structure	19.44	20	0.56

Table 4 shows improvement across all components, with the highest gains in comprehension monitoring and activating word meaning. This indicates that students developed stronger metacognitive awareness and contextual vocabulary understanding, which are essential for constructing meaning from narrative texts. These results support (Haryono, 2023), who emphasized the role of metacognitive processes in reading comprehension, and are consistent with findings by Munajah et al. (2022) and Atika Puspitarini et al. (2024) regarding the effectiveness of visual and contextual vocabulary learning. Meanwhile, understanding sentences and text structure showed more modest gains, reflecting the instructional focus on global comprehension rather than isolated linguistic features, as also noted by Patra et al. (2022).

Overall, the results demonstrate that the Toy Theater Web Game effectively improves junior high school students' reading comprehension of narrative texts. By integrating visual elements, interactive tasks, and story-based activities, the game supports meaningful engagement during reading. This finding is consistent with previous research highlighting the pedagogical value of digital game-based learning in promoting equitable and active learning environments, as discussed by Rajan (2022) and Subroto et al. (2024). Therefore, the Toy Theater Web Game can be considered a relevant and effective instructional medium for enhancing reading comprehension in junior high school contexts.

CONCLUSIONS

This research reveals that the use of toy theater is effective in improving students' reading comprehension using narrative texts. Based on the findings of this study, it can be concluded that the application of the Toy Theater web game effectively promotes students' reading comprehension in narrative texts. It can be seen from the improvement of students' scores all components of reading comprehension: activating word meaning, understanding sentences, making inferences, comprehension monitoring, and comprehending text because the researcher provided several narrative texts as learning resources through the Toy Theater web game, which helped guide students in understanding the structure, language features, and main ideas of the texts.

Among the five indicators of reading comprehension, comprehension monitoring was the aspect with the highest improvement, indicating that students were increasingly able to monitor, evaluate, and refine their comprehension throughout the reading process. Most likely, this was because the learning task that used Toy Theater encouraged learners to actively track the storyline and make constant reflections on their personal understanding. On the other hand, the task that required understanding sentences showed the least improvement, which means that understanding meaning at the sentence level still proves to be a problem for these learners, especially in terms of sentence structure and relationships between sentences. Thus, this study concludes that Toy Theater is effective in improving students' reading comprehension, with the strongest impact on comprehension monitoring skills and a relatively more limited impact on understanding sentences.

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