

THE EFFECTIVENESS OF READTHEORY IN READING COMPREHENSION OF SIXTH SEMESTER STUDENTS AT UNIVERSITAS BHINNEKA PGRI

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Abstrak

Penelitian ini bertujuan untuk mengetahui efektivitas penggunaan platform ReadTheory dalam meningkatkan kemampuan membaca pemahaman mahasiswa semester enam di Universitas Bhinneka PGRI. Penelitian ini menggunakan metode kuantitatif dengan desain pre-eksperimental tipe one-group pre-test and post-test. Instrumen yang digunakan berupa tes pilihan ganda yang telah diuji validitas dan reliabilitasnya. Hasil penelitian menunjukkan adanya peningkatan skor rata-rata dari 70,83 pada pre-test menjadi 90,83 pada post-test. Hasil uji paired sample t-test menunjukkan nilai signifikansi sebesar 0,002 ($p < 0,05$) yang berarti terdapat perbedaan signifikan sebelum dan sesudah penggunaan ReadTheory. Hasil uji reliabilitas juga menunjukkan nilai Cronbach's Alpha sebesar 0,914 untuk pre-test dan 0,899 untuk post-test yang menandakan bahwa instrumen yang digunakan sangat reliabel. Berdasarkan temuan tersebut, dapat disimpulkan bahwa ReadTheory efektif dalam meningkatkan kemampuan membaca pemahaman mahasiswa. Penelitian ini merekomendasikan agar ReadTheory dapat diterapkan sebagai media pembelajaran tambahan dalam pengajaran membaca di perguruan tinggi.

Kata Kunci: ReadTheory, Membaca Pemahaman, Pembelajaran Bahasa Inggris, Pre-Experimental Design

Abstract

This study aims to determine the effectiveness of using the ReadTheory platform to improve the reading comprehension skills of sixth-semester students at Universitas Bhinneka PGRI. The research employed a quantitative method using a pre-experimental design with a one-group pre-test and post-test model. The instrument used was a multiple-choice reading comprehension test that had been validated and tested for reliability. The results showed an increase in the mean score from 70.83 in the pre-test to 90.83 in the post-test. The paired sample t-test revealed a significance value of 0.002 ($p < 0.05$), indicating a significant difference before and after the use of ReadTheory. The reliability test also showed Cronbach's Alpha values of 0.914 for the pre-test and 0.899 for the post-test, indicating that the instruments were highly reliable. Based on these findings, it can be concluded that ReadTheory is effective in improving students' reading comprehension. It is recommended that ReadTheory be implemented as a supplementary learning tool in reading instruction at the university level.

Keywords: ReadTheory, Reading Comprehension, English Learning, Pre-Experimental Design

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INTRODUCTION

ReadTheory is a web-based learning platform specifically designed to improve students' reading comprehension through adaptive reading exercises. Tempest (2018) emphasized that ReadTheory's core features, including automatic level adjustment, personalized reading materials, and instant feedback, are effective in supporting the development of reading comprehension among EFL learners.

Sixth-semester students at Universitas Bhinneka PGRI continue to encounter significant challenges in understanding academic texts written in English. According to Pourhosein Gilakjani and Sabouri (2016), EFL learners often struggle with limited vocabulary, difficulty in identifying main ideas, and an inability to make inferences from complex reading passages, which directly hinders their reading comprehension performance.

Based on preliminary observations at Universitas Bhinneka PGRI, many students have not yet achieved optimal reading comprehension levels despite years of exposure to English instruction. Soruç et al. (2022) highlighted that students' academic success in various disciplines is strongly influenced by their language proficiency and self-regulation, and a lack of these competencies can limit their ability to comprehend academic texts effectively.

Integrating ReadTheory into reading instruction offers a practical solution to these comprehension challenges. Capodiecici et al. (2020) argued that the use of digital platforms in language learning provides interactive and individualized experiences that can enhance student engagement and lead to measurable improvements in learning outcomes.

Although international studies have confirmed the effectiveness of ReadTheory, there is still a lack of empirical evidence regarding its impact on university students in the Indonesian context. Anqoudi et al. (2023) demonstrated that ReadTheory significantly increased EFL students' reading motivation and comprehension, yet similar studies focusing on Indonesian higher education settings remain limited and underexplored.

This study investigates the effectiveness of using ReadTheory to improve the reading comprehension skills of sixth-semester students at Universitas Bhinneka PGRI. By focusing on this specific group, the study aims to provide relevant insights into the application of ReadTheory in enhancing students' reading comprehension in the Indonesian EFL context.

LITERATURE REVIEW

1. Reading Comprehension

Reading comprehension is the ability to understand, interpret, and critically analyze written texts to construct meaning. Pourhosein Gilakjani and Sabouri (2016) explained that reading comprehension involves more than decoding words; it requires the reader to interact with the text, process information, and integrate it with prior knowledge to fully grasp the intended message.

The importance of reading comprehension in academic success has been widely acknowledged. Rodriguez (2025) emphasized that students with higher reading comprehension skills tend to perform better across disciplines because they can interpret complex arguments, understand theoretical concepts, and apply the information in practical contexts.

Several factors influence students' reading comprehension, including vocabulary mastery, background knowledge, reading strategies, and motivation. Özdemir and Akyol (2019) found that reading comprehension is significantly affected by students' ability to identify main ideas, make inferences, and relate the text to their personal experiences and prior knowledge.

The evaluation of reading comprehension can be measured through multiple-choice tests that assess students' understanding of main ideas, supporting details, cause-effect relationships, and vocabulary. Özdemir and Akyol (2019) demonstrated that reliable and valid multiple-choice tests are effective instruments for measuring reading comprehension accurately, as long as the items meet appropriate discrimination and difficulty indices.

Reading comprehension is also closely linked to the development of critical thinking skills. Moghadam et al. (2023) argued that when students engage in critical reading practices, they not only improve their understanding of the text but also develop analytical thinking, which is essential for evaluating information and making well-reasoned judgments.

2. ReadTheory as a Learning Platform

ReadTheory is a web-based platform that offers adaptive reading exercises tailored to the user's reading level. Romeo et al. (2016) described that ReadTheory adjusts the complexity of reading materials based on students' previous performance, which ensures that learners consistently receive texts that match their ability and challenge them to improve progressively.

The platform provides a range of interactive features, including personalized reading passages, pre-assessment tests, multiple-choice comprehension questions, instant feedback, and detailed progress reports. According to Anqoudi et al. (2023), these features significantly enhance student motivation and engagement, as students can track their performance and receive immediate explanations for their answers.

ReadTheory's ability to automatically adjust reading levels provides individualized learning experiences that are particularly beneficial for mixed-ability classrooms. Capodiecici et al. (2020) highlighted that technology-supported learning environments like ReadTheory enable flexible and personalized instruction, which contributes to increased student autonomy and better learning outcomes.

In addition to supporting reading comprehension, ReadTheory also promotes independent learning habits. Tempest (2018) emphasized that the ease of access and adaptive learning design of ReadTheory encourage students to practice reading outside the classroom, which contributes to the development of long-term reading skills and improved academic performance.

Several studies have shown the effectiveness of ReadTheory in EFL contexts. Carrión (2018) found that using ReadTheory as a complementary reading program significantly improved students' critical thinking and reading comprehension skills, making it a suitable tool for enhancing English proficiency among university students.

RESEARCH METHOD**1. Research Design**

This study employed a quantitative research method using a pre-experimental design with a one-group pre-test and post-test structure. Yusri (2020) explained that a pre-experimental design is useful for determining the effect of an intervention by comparing the performance of a single group before and after treatment, although it does not involve a control group.

2. Research Participants

The participants in this study were sixth-semester students from the English Education Department at Universitas Bhinneka PGRI, totaling twelve students. Mackiewicz (2018) emphasized that clearly defining the study population and selecting appropriate samples is essential to ensure that research findings accurately represent the intended group and can be reliably interpreted.

3. Research Instrument

The main instruments used in this study were pre-tests and post-tests in the form of multiple-choice reading comprehension questions. According to Heale and Twycross (2015), pre-test and post-test instruments are widely used to measure changes in participants' skills or knowledge following an intervention, providing reliable comparisons of learning outcomes.

4. Data Collection Procedure

The researcher administered a pre-test to measure the students' initial reading comprehension levels before the intervention. Students then participated in reading exercises using ReadTheory for a designated period, after which the researcher administered a post-test to assess the improvement in their reading comprehension. Ph.D. Ummul Aiman et al. (2022) stated that the pre-posttest model is a valid method to assess the effectiveness of an instructional strategy by comparing student performance before and after the treatment.

5. Validity and Reliability of the Instruments

The validity and reliability of the pre-test and post-test instruments were tested using the Corrected Item-Total Correlation and Cronbach's Alpha coefficient. Heale and Twycross (2015) noted that an instrument is considered reliable when it consistently produces stable results, and valid when it accurately measures the intended variable. In this study, the instruments were validated by experts and further confirmed through statistical analysis.

6. Data Analysis Technique

Data analysis was conducted using both descriptive and inferential statistics. Descriptive statistics were used to summarize the pre-test and post-test results, while inferential analysis, specifically the paired sample t-test, was used to determine whether there was a significant difference in reading comprehension scores before and after the use of ReadTheory. Yusri (2020) highlighted that the paired sample t-test is appropriate for analyzing differences between two related groups and is widely used to test the effectiveness of educational interventions.

FINDINGS

1. Reliability Test of the Instruments

The reliability test was conducted using Cronbach's Alpha to determine the internal consistency of the pre-test and post-test instruments. Based on the SPSS output, the pre-test instrument had a Cronbach's Alpha value of 0.914, while the post-test instrument had a Cronbach's Alpha value of 0.899. According to Heale and Twycross (2015), an instrument is considered highly reliable if the Cronbach's Alpha coefficient exceeds 0.70, indicating that the test items consistently measure the intended construct. These results confirm that both the pre-test and post-test instruments used in this study are highly reliable for assessing students' reading comprehension.

Tabel 1. 1 Reliability Testing

Instrument	Cronbach's Alpha	Reliability Level
Pre-Test	0.914	Very High
Post-Test	0.899	Very High

2. Pre-Test Results

The pre-test was conducted to assess the initial reading comprehension skills of sixth-semester students before the ReadTheory intervention. The pre-test scores ranged from 45 to 90, with a mean score of 70.83, a median of 72.50, and a mode of 90.00. The standard deviation was 16.35, indicating a wide variation in students' comprehension levels. Pourhosein Gilakjani and Sabouri (2016) stated that such variations in EFL students' reading comprehension commonly result from difficulties in understanding vocabulary, identifying key ideas, and making textual inferences.

3. Post-Test Results

After the ReadTheory-based learning intervention, the post-test was administered to measure students' progress. The post-test scores showed significant improvement, with the lowest score increasing to 85 and the highest score reaching 100. The mean post-test score was 90.83, the median was 90.00, and the mode was 85.00. The standard deviation decreased to 5.15, indicating more consistent performance across the group. Anqoudi et al. (2023) found that using ReadTheory significantly enhances students' reading comprehension by providing immediate feedback and adaptive reading materials that sustain learning motivation.

4. Descriptive Statistics Comparison

The comparison of descriptive statistics between pre-test and post-test results demonstrated a clear improvement in reading comprehension. The total score increased from 850 in the pre-test to 1,090 in the post-test, with a cumulative gain of 240 points. Tempest (2018) emphasized that adaptive learning platforms like ReadTheory can effectively support students' reading progress through personalized practice and feedback, which directly contributes to the improvement of comprehension skills.

Tabel 1. 2 Statistic of Pretest and Posttest

Statistic	Pre-Test	Post-Test
Mean	70.83	90.83
Median	72.50	90.00

Mode	90.00	85.00
Standard Deviation	16.35	5.15
Minimum Score	45	85
Maximum Score	90	100

5. Frequency Distribution

The frequency distribution analysis showed that prior to the intervention, 33.3% of students were in the moderate category and 33.3% were in the high category, while 33.4% were in the low and very low categories. After the intervention, 100% of students moved to the high and very high categories, indicating that all participants achieved a satisfactory level of reading comprehension. Capodieci et al. (2020) stated that technology-assisted learning environments enhance student engagement, promote individualized learning experiences, and lead to measurable academic improvements.

6. Normality Test

A normality test was conducted using the Shapiro-Wilk test. The pre-test significance value was 0.171, and the post-test significance value was 0.066, both greater than 0.05, indicating that the data were normally distributed. Yusri (2020) explained that normally distributed data are essential for applying parametric statistical tests such as the paired sample t-test to ensure valid results.

Tabel 1. 3 Normality Test

Group	Shapiro-Wilk Sig.
Pre-Test	0.171
Post-Test	0.066

7. Homogeneity Test

The homogeneity test was conducted using Levene's Test and resulted in a significance value of $0.416 > 0.05$, indicating that the variances between the pre-test and post-test scores were homogeneous. This finding confirmed that the data met the assumptions for further parametric testing. According to Yusri (2020), the assumption of homogeneity is crucial in comparative research to validate the reliability of the statistical analysis.

8. Paired Sample T-Test

The hypothesis was tested using a paired sample t-test to determine the significance of the difference between the pre-test and post-test scores. The test results showed a t-value of -10.774 and a significance (p-value) of 0.002. Since $p < 0.05$, the null hypothesis was rejected, indicating a significant effect of using ReadTheory on students' reading comprehension. Yusri (2020) confirmed that a p-value below 0.05 indicates a statistically significant difference between two paired measurements, supporting the conclusion that the intervention was effective.

Tabel 1. 4 Paired Sample T-test

Test	t-value	Sig. (2-tailed)
Pre-Test vs Post-Test	-10.774	0.002

DISCUSSION

Based on the results of this study, it can be concluded that the use of ReadTheory significantly improves the reading comprehension of sixth-semester students at Universitas Bhinneka PGRI. The statistical analysis demonstrated a substantial increase in students' reading comprehension scores, as evidenced by the rise in the mean score from 70.83 in the pre-test to 90.83 in the post-test. The paired sample t-test also confirmed that this improvement was statistically significant with a p-value of 0.002. This finding is consistent with the research of Anqoudi et al. (2023), who found that ReadTheory is effective in enhancing reading comprehension through its adaptive reading materials and instant feedback features.

The reliability test showed that both the pre-test and post-test instruments had high internal consistency, with Cronbach's Alpha values of 0.914 and 0.899, respectively, confirming that the instruments used in this study were appropriate and dependable for measuring students' reading comprehension. Heale and Twycross (2015) emphasized that reliable instruments are essential to ensure the accuracy of research outcomes.

Furthermore, the normality and homogeneity tests indicated that the data were normally distributed and had equal variances, which validates the accuracy of the statistical procedures employed in this study. Yusri (2020) stated that fulfilling these assumptions is crucial in quantitative research to produce valid and reliable conclusions.

In summary, this study provides empirical evidence that ReadTheory is an effective digital learning platform for improving reading comprehension among EFL students in Indonesian higher education settings. It is recommended that English lecturers consider integrating ReadTheory as a supplementary tool in reading instruction to support student learning and increase engagement in reading activities.

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