

Enhancing Students' Reading Comprehension through Gimkit at the 10th Grade Students of SMKN 1 Pangkalan Baru

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ABSTRACT

Keywords:

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This study aimed to investigate whether there was a significant difference in students' reading comprehension between those taught using Gimkit and those who were not, as well as how does students' reading comprehension differ before and after implementing Gimkit at the 10th grade of SMKN 1 Pangkalan Baru. The research employed a quasi-experimental design with a pre-test and post-test control group involving 67 tenth-grade students of SMK Negeri 1 Pangkalan Baru. The participants were divided into two groups: 34 students in the experimental group and 33 in the control group. Both groups were given a pre-test and post-test focusing on short functional texts to measure their reading comprehension skill. The data were analyzed using t- tests in SPSS 26. The statistical analysis showed that the mean post-test score for the experimental group was 87.50, while the control group scored 59.85. The mean difference between the two groups was 27.653, with a standard error of 4.828. The Sig. (2-tailed) value was 0.000, and the t-obtained = 5.728, which was higher than the critical value of t-table = 2.00 at the 0.05 significance level with 65 degrees of freedom. Therefore, the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted. This means there was a significant difference in reading comprehension between students taught using Gimkit and those who were not. In conclusion, the use of Gimkit had a significant enhancement on the students' reading comprehension.



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Introduction

English has become an integral part of global communication, functioning not only as a bridge between diverse cultural and linguistic communities but also as a gateway to academic and professional advancement. As emphasized by Crystal (2003), English operates as a global language that supports international interaction, while Graddol (2006) and Kirkpatrick (2008) highlight its expanding influence in business, education, and digital platforms. In the school context, reading comprehension is one of the essential components of English learning because it enables students to construct meaning, connect prior

knowledge with new information, and interpret written texts critically. Anderson and Pearson (1984) explain that comprehension is an active, schema-driven process in which readers make sense of text through cognitive and linguistic engagement. Despite its importance, Indonesia continues to face severe challenges in reading literacy, as reflected in UNESCO reports (2024), the Central Connecticut State University ranking, and the 2022 PISA results, all of which show that Indonesian students remain far below the global proficiency benchmark.

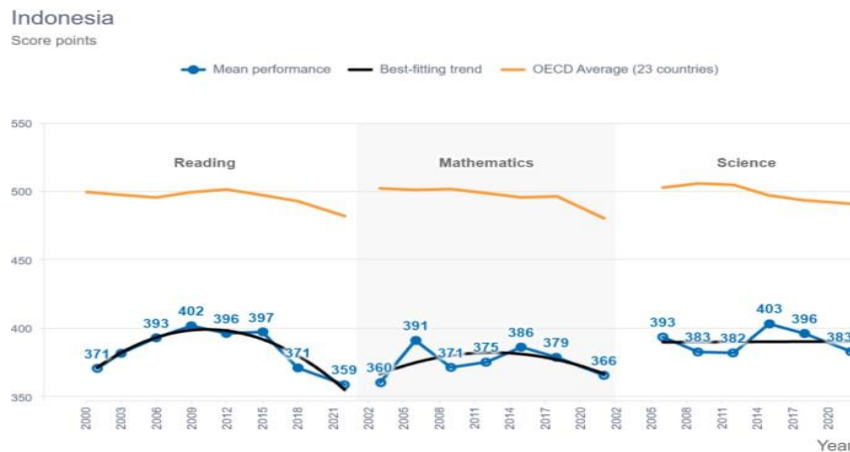


Figure 1 <Trends in Performance in Mathematics, Reading and Science>

These indicators signal an urgent need for more effective and engaging approaches to strengthen reading comprehension in the classroom.

Alongside these challenges, rapid digital development has reshaped how students interact with information. Mills (2015) argues that multimodal texts—ranging from visuals and videos to interactive media require learners to develop digital literacy skills beyond traditional print reading. This shift demands innovative instructional strategies that align with contemporary learning behaviors. One potential approach is gamification, which incorporates game-like features such as points, rewards, and challenges into educational contexts.

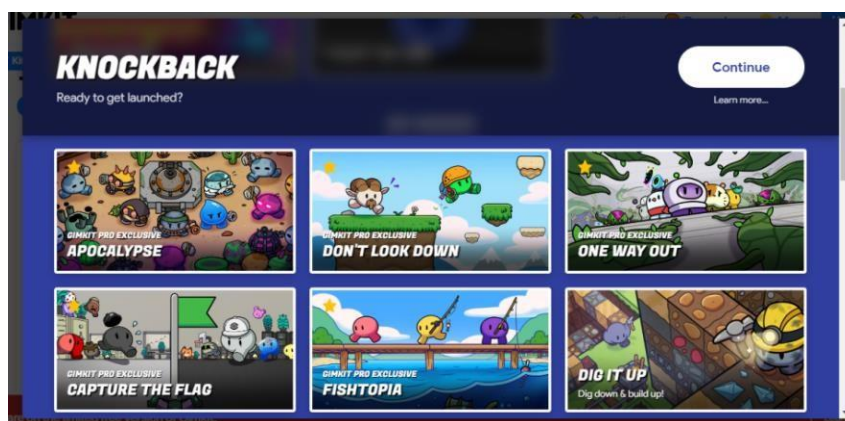


Figure 2 <Gimkit Display>

Research by Goehle (2013), Prensky (2009), and Johnson (2016) shows that gamification can enhance students' motivation by providing real-time feedback and creating enjoyable learning environments. Gimkit, a digital game-based learning platform developed by Josh Feinsilber, integrates these elements into interactive quizzes, allowing students to answer questions, earn virtual currency, and make strategic decisions through

various game modes. Studies by Christopoulos & Mystakidis (2023), Vesa (2021), and Bicen & Kocakoyun (2018) highlight Gimkit's effectiveness in promoting engagement and deepening comprehension through its competitive and collaborative features.

Previous research supports the use of gamified tools in language learning. Sanabria Huertas (2021) found that gamification enhanced reading comprehension and engagement among secondary students. Osadhi (2024) showed that gamified vocabulary learning significantly enhanced lexical mastery, which is foundational for text comprehension. Wright (2024) demonstrated that Gimkit increased vocabulary retention and student motivation. Although these studies provide strong evidence for the benefits of gamification, most focus on vocabulary development, formative assessment, or general reading comprehension at the junior high or higher-education levels. Very few studies investigate the use of Gimkit specifically for enhancing comprehension of short functional texts in vocational schools, creating a research gap that the present study seeks to address.

A preliminary study at SMKN 1 Pangkalan Baru revealed that students still encountered difficulties in identifying main ideas, locating specific information, understanding persuasive vocabulary, and interpreting implied meanings in short functional texts such as invitations, advertisements, and announcements. Interviews with teachers and students indicated low motivation and challenges in sustaining attention during conventional lessons. Preliminary test results further showed that classes X LP (64) and X AKL (60) had the lowest average reading comprehension scores, indicating that traditional instructional methods were insufficient to meet students' learning needs.

Based on these findings, this study aims to examine the effectiveness of Gimkit in enhancing students' reading comprehension of short functional texts. The independent variable in this study is the use of Gimkit, while the dependent variable is students' reading comprehension performance. Through a quantitative pre-test–post-test design, the study investigates whether students taught with Gimkit demonstrate significantly higher enhancement compared to those taught through conventional methods. The main hypothesis is that the integration of Gimkit will lead to greater gains in comprehension.

This research contributes to the broader field of gamified learning by offering empirical evidence from a vocational school context, where studies on digital gamification remain limited. It also provides practical insights for teachers seeking alternative strategies to support student engagement and comprehension. Ultimately, the study raises new questions about how interactive digital tools can address literacy challenges in vocational education and how such tools may reshape future reading instruction practices.

Method

This study employed a quantitative experimental design to determine the effectiveness of Gimkit in enhancing students' reading comprehension of short functional texts. The use of a quantitative approach was intended to provide systematic measurement, clear procedural steps, and replicable outcomes, enabling other researchers to evaluate and reproduce the study with similar conditions (Creswell & Creswell, 2017). The research was carried out at SMK Negeri 1 Pangkalan Baru and involved tenth-grade students as its target population. Based on preliminary results showing the lowest reading comprehension scores, two classes X LP and X AKL were purposively selected as the study sample (Etikan et al., 2016). Each class contained approximately 30–32 students, with one assigned as the experimental group receiving treatment using Gimkit, and the other as the control group receiving instruction through conventional teaching.

To collect data, a reading comprehension test was used as the main instrument. The test consisted of multiple-choice questions focusing on short functional texts such as announcements, advertisements, and invitations. Item development followed the 10th-grade English curriculum and tested students' abilities in identifying main ideas, specific information, implied meanings, and vocabulary in context. To ensure content validity, two English teachers with expertise in reading instruction reviewed the items, following standard guidelines for test development. Additionally, validity referred to the degree to which an instrument accurately measured what it was intended to measure. In this study, content validity was considered the most essential form of validity because the instrument aimed to measure students' reading comprehension performance aligned with the school curriculum. To strengthen statistical validity, the Pearson Product Moment Correlation was calculated using SPSS 26 to determine the validity coefficient of each test item. Items were considered valid when their *r*-count exceeded the *r*-table value at a 5% significance

level. The analysis revealed that 16 out of 40 items met the validity criteria, and only those valid items were retained to ensure that the final test accurately assessed students' comprehension abilities.

The instrument was administered twice: once as a pre-test to establish initial reading competence and once as a post-test to measure enhancement after the intervention. The research was conducted over twelve meetings, each lasting 45 minutes. In the first meeting, both groups completed the pre-test under the same conditions. From the second to the eleventh meeting, the experimental group received instruction supported by Gimkit, integrated into reading lessons every even-numbered meeting after Meeting 2. During these sessions, students accessed Gimkit through their mobile devices, while the teacher operated the platform using a laptop and projector. Meanwhile, the control group received traditional instruction emphasizing teacher explanation, reading exercises, and written practice. In the final meeting, both groups took the post-test, which was administered in the same format as the pre-test to ensure comparability.

Data were analyzed using descriptive and inferential statistical techniques. Mean scores and standard deviations were used to describe patterns of student performance before and after instruction. A normality test and homogeneity test were first conducted to verify that the data met the assumptions required for parametric testing. A paired sample t-test was used to measure enhancement within each group, while an independent sample t-test was employed to compare the post-test scores between the two groups, following common procedures for experimental research in education (Field, 2013).

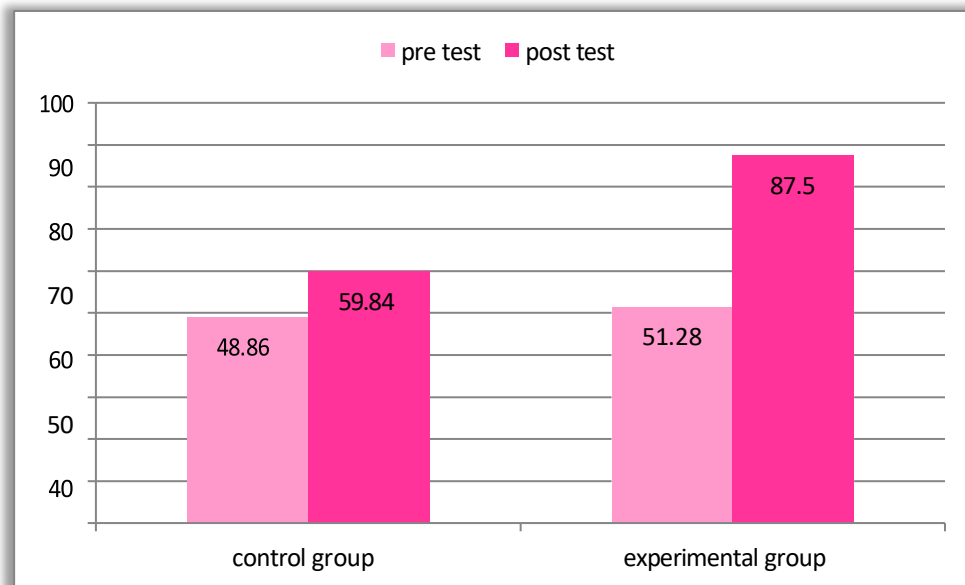
To ensure validity and reliability, the instrument underwent expert judgment for content validity, guided by the Standards for Educational and Psychological Testing (AERA, APA, & NCME, 1985). For statistical validation, the Pearson Product Moment provided empirical evidence regarding item accuracy. Reliability was then measured using Cronbach's Alpha to assess internal consistency, an appropriate technique for multi-item assessments in language research (Tavakol & Dennick, 2011). Cronbach's Alpha was calculated using SPSS Version 26, producing a coefficient of 0.764. According to established reliability classifications, a coefficient above 0.70 indicates acceptable reliability, meaning that the instrument consistently measured students' reading comprehension. This combination of expert review, item-level statistical validation, and reliability analysis ensured that the instrument used in this study was both valid and dependable.

The analysis assumed normal data distribution, equal variances between groups, and independent responses from participants. Only data fulfilling these assumptions were included in the inferential analysis. The methodological scope of this study was limited to reading comprehension of short functional texts in a single vocational school, which may affect generalizability to broader contexts. The reliance on digital tools also required stable internet connectivity, which may vary across school environments. Despite these limitations, the detailed procedures, rigorous validation steps, standardized assessments, and transparent analysis offer a replicable research framework for future studies investigating the use of gamified digital tools in reading comprehension.

Results and Discussions

This study investigated the effectiveness of Gimkit in enhancing students' reading comprehension among tenth-grade learners at SMKN 1 Pangkalan Baru. A quasi-experimental design was used with two intact classes: one serving as the control group and the other as the experimental group. Students in the experimental group received instruction using Gimkit for 12 meetings, while the control group received conventional reading instruction.

The descriptive results show a clear enhancement in both groups. However, the extent of enhancement differs significantly. The graphic highlights a substantial gap between the two groups' post-test scores, indicating the strong influence of Gimkit on students' reading comprehension.



Graphic 1 <Comparison of Pre-test and Post-test Scores in Control and Experimental Groups>

The statistical analyses were conducted to verify whether the differences between the control and experimental groups were significant. The normality and homogeneity tests confirmed that the data met the assumptions required for parametric analysis, allowing the use of t-tests to examine changes in students' reading comprehension. The paired sample t-test revealed that both groups showed significant enhancement from pre-test to post-test; however, the experimental group achieved a much greater mean gain than the control group, indicating the strong influence of Gimkit-based instruction. Furthermore, the independent sample t-test comparing the two groups' post-test scores yielded a p-value of 0.000, demonstrating that students who received instruction through Gimkit performed significantly better than those taught using conventional methods. These results validate the effectiveness of Gimkit in enhancing students' reading comprehension in the vocational high school setting.

The substantial enhancement observed in the experimental group can be explained by several characteristics of Gimkit that support student learning. Its interactive quizzes, real-time feedback, and competitive mechanics appear to heighten student engagement and motivation throughout the reading lessons. Such features encourage repeated exposure to the reading material, enabling students to process information more deeply and retain it more effectively. This pattern aligns with Vygotsky's scaffolding theory, which proposes that students benefit when they receive guided practice and continuous, structured support. In addition, Gimkit promotes autonomy, competence, and relatedness three psychological needs emphasized in Self-Determination Theory. When these needs are fulfilled, students tend to show greater focus, willingness to participate, and persistence in learning tasks, all of which were evident in the experimental group's performance.

The findings of this study echo those of previous research that has highlighted the benefits of gamified learning tools in enhancing language skills. Several studies, including those by Wulandari (2021), Sari et al. (2020), and Azizah (2021), found that gamification increases student motivation and enhances comprehension during reading tasks. Similarly, Saari and Varjonen (2020) reported that Gimkit is effective in enhancing vocabulary retention and overall student engagement. The present study supports these conclusions and extends them to vocational high school learners, showing that Gimkit is particularly effective in contexts where students often show limited interest in traditional reading instruction.

Although the results strongly suggest that Gimkit contributed to the enhancement in students' reading comprehension, it is possible that additional factors also played a role. Students may have been motivated by the novelty of using a technology-based learning tool, or they may have been influenced by the competitive

elements inherent in the game format. Nonetheless, the magnitude of the experimental group's enhancement suggests that such factors alone cannot account for the overall effect, and that the platform itself offered meaningful support to students' learning.

The results of this study carry several important educational implications. Gimkit can be used as a valuable supplement to traditional reading instruction, offering teachers an engaging tool for presenting material in a way that captures students' interest. The platform's immediate feedback mechanism enables learners to monitor their progress and correct mistakes efficiently, supporting deeper comprehension. For vocational students in particular, who may be less motivated by conventional reading tasks, Gimkit provides an appealing and relatable learning environment that encourages active participation.

Despite its promising findings, this study has several limitations. It was conducted in a single school with a relatively small sample size, which limits the generalizability of the results. The study relied primarily on quantitative data, leaving out qualitative insights into students' experiences, attitudes, or engagement during the learning process. Additionally, the treatment focused exclusively on short functional texts, which means the results may not apply to other types of reading materials such as narratives, descriptive texts, or expository passages.

Future research should consider expanding the sample size and including multiple schools to strengthen the generalizability of the findings. Researchers may also explore the long-term effects of Gimkit on reading comprehension and compare its effectiveness with other digital learning platforms. Incorporating qualitative methods such as interviews and classroom observations could provide deeper insight into how and why students respond to gamified learning environments. Finally, applying Gimkit to different text genres or other language skills could offer a broader understanding of its educational potential.

Conclusions

The findings of this study show clearly that the integration of Gimkit into reading instruction offers a meaningful enhancement in students' ability to comprehend short functional texts. The strong progress demonstrated by the experimental group highlights how a gamified digital environment can create an engaging and motivating learning experience, especially for vocational high school students who often struggle with traditional reading tasks. This study reinforces existing research on gamification but also provides original evidence that Gimkit, when applied consistently across multiple learning sessions, can significantly strengthen comprehension skills. These results underline the relevance of interactive technology in modern language classrooms and suggest that platforms like Gimkit can enrich instructional practice by promoting deeper student involvement, repeated exposure to text, and immediate feedback.

Given these outcomes, teachers may benefit from adopting more interactive and student-centered approaches that leverage digital tools to enhance reading comprehension. Creating classroom activities that are meaningful, enjoyable, and supported by structured feedback can help learners engage more confidently with reading tasks. Students themselves play a key role in this process; their willingness to participate actively, respond thoughtfully, and use interactive tools as opportunities for practice greatly contributes to the effectiveness of gamified learning. At the same time, the study opens potential avenues for further research. Future investigations could examine the long-term effects of Gimkit, compare it with other game-based learning tools, or apply it to different text genres or language skills. Including qualitative insights such as student perceptions or teacher observations could also deepen the understanding of how digital gamification shapes learning behavior. Overall, the study contributes to the development of technology-enhanced language learning and highlights Gimkit as a promising platform for enhancing students' reading comprehension in vocational education settings.

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