

Flashcard Race Game Enhances EFL Students' Reading Comprehension

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Abstrak – Pemahaman bacaan adalah salah satu keterampilan bahasa penting yang harus dikuasai oleh pembelajar EFL karena secara signifikan memengaruhi prestasi akademik dan kemampuan berbahasa mereka. Meskipun demikian, banyak siswa masih mengalami kesulitan dalam mengidentifikasi ide utama, menemukan informasi detail, membuat kesimpulan, dan memahami kosakata yang tidak dikenal saat membaca teks bahasa Inggris. Masalah-masalah ini sering dikaitkan dengan praktik pengajaran yang berpusat pada guru yang memberikan kesempatan terbatas untuk keterlibatan aktif siswa. Studi ini bertujuan untuk menyelidiki efektivitas Permainan Balapan Kartu Flash dalam meningkatkan pemahaman bacaan siswa EFL. Penelitian ini menggunakan pendekatan kuantitatif dengan desain kuasi-eksperimental yang melibatkan dua kelas sebelas. Data dikumpulkan melalui pre-test dan post-test dan dianalisis menggunakan uji-t sampel independen. Temuan menunjukkan bahwa siswa yang diajar melalui Permainan Balapan Kartu Flash secara signifikan lebih unggul daripada mereka yang menerima pengajaran konvensional. Selain itu, strategi ini meningkatkan motivasi siswa, partisipasi di kelas, pembelajaran kolaboratif, dan kepercayaan diri selama kegiatan membaca. Studi ini menyimpulkan bahwa Permainan Balapan Kartu Flash adalah strategi pengajaran yang efektif untuk meningkatkan pemahaman bacaan siswa EFL dan menciptakan lingkungan belajar yang lebih interaktif.

Kata Kunci: Flashcard Race Game, Reading Comprehension, EFL Students, Active Learning, Reading Strategy

Abstract –Reading comprehension is one of the essential language skills that EFL learners must master because it significantly influences their academic achievement and language proficiency. Nevertheless, many students still encounter difficulties in identifying the main ideas, locating detailed information, making inferences, and understanding unfamiliar vocabulary while reading English texts. These problems are often associated with teacher-centered instructional practices that provide limited opportunities for active student engagement. This study aimed to investigate the effectiveness of the Flashcard Race Game in improving EFL students' reading comprehension. The research employed a quantitative approach using a quasi-experimental design involving two eleventh-grade classes. Data were collected through pre-tests and post-tests and analyzed using an independent samples t-test. The findings revealed that students taught through the Flashcard Race Game significantly outperformed those receiving conventional instruction. Moreover, the strategy enhanced students' motivation, classroom participation, collaborative learning, and confidence during reading activities. The study concludes that the Flashcard Race Game is an effective instructional strategy for improving EFL students' reading comprehension and creating a more interactive learning environment.

Keywords: Flashcard Race Game, Reading Comprehension, EFL Students, Active Learning, Reading Strategy

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INTRODUCTION

Reading is widely recognized as one of the most fundamental language skills that support learners in acquiring knowledge and developing academic competence. In English as a Foreign Language (EFL) context, reading serves not only as a means of understanding written texts but also as a foundation for improving vocabulary, grammar, writing ability, and critical thinking (Grabe & Stoller, 2020; Richards, 2022). Students who possess good reading comprehension are generally able to interpret ideas accurately, evaluate information critically, and apply knowledge gained from texts in various learning situations. Consequently, reading comprehension has become one of the primary objectives of English language instruction at secondary schools. Despite its importance, reading comprehension remains one of the most challenging skills for Indonesian EFL learners. Numerous studies have reported that many students experience difficulties in identifying the main idea, locating specific information, understanding contextual vocabulary, recognizing text organization, and drawing logical conclusions from reading passages (Grabe & Stoller, 2020). These challenges often lead to poor academic performance and low motivation to engage in reading activities. The inability to comprehend English texts effectively also limits students' opportunities to acquire broader knowledge and develop independent learning habits. One of the major factors contributing to students' low reading achievement is the instructional approach employed in classrooms.



Reading lessons are frequently conducted using conventional methods in which teachers explain vocabulary, translate passages sentence by sentence, and ask students to answer comprehension questions individually. Such teacher-centered practices provide limited opportunities for students to interact with texts actively or collaborate with peers during learning. As a result, many students perceive reading lessons as monotonous, difficult, and uninteresting. Student engagement plays a crucial role in successful reading instruction. According to constructivist learning theory, meaningful learning occurs when students actively construct knowledge through interaction, collaboration, and problem-solving (Slavin, 2020). Therefore, English teachers need to implement instructional strategies that encourage active participation while simultaneously developing reading comprehension skills (Richards, 2022). Interactive learning activities have been shown to improve students' motivation, concentration, and confidence during classroom instruction.

Game-based learning has recently attracted considerable attention in language education because it combines cognitive learning with enjoyable classroom experiences. Educational games provide students with opportunities to participate actively, solve problems collaboratively, and receive immediate feedback in an enjoyable learning atmosphere. Previous research has demonstrated that game-based instruction can significantly improve vocabulary acquisition, speaking performance, classroom interaction, and students' motivation. However, relatively few studies have specifically investigated the effectiveness of competitive educational games for improving reading comprehension among Indonesian senior high school students. One instructional activity that integrates competition and collaboration is the Flashcard Race Game. In this activity, students work in teams to identify, categorize, and respond to information presented on flashcards within a limited period. Unlike traditional flashcards that merely introduce vocabulary, Flashcard Race Game requires students to analyze textual information, recognize main ideas, infer meanings, identify supporting details, and discuss answers collaboratively before making decisions. Such activities stimulate higher-order thinking while maintaining students' enthusiasm throughout the lesson. The theoretical foundation of Flashcard Race Game is supported by cooperative learning theory and active learning principles. Cooperative learning emphasizes positive interdependence, individual accountability, face-to-face interaction, and collaborative problem-solving, all of which contribute to deeper comprehension of learning materials (Slavin, 2020). Furthermore, active learning encourages learners to engage cognitively and socially during classroom instruction, resulting in better retention and understanding of information. From the perspective of reading comprehension, Flashcard Race Game enables students to practice multiple comprehension skills simultaneously. During the game, students are required to identify the main idea, locate explicit information, infer implicit meanings, interpret vocabulary in context, determine reference words, and summarize textual information. These activities correspond closely to the cognitive processes involved in effective reading comprehension.

Previous studies have shown that flashcard-based learning can effectively improve vocabulary mastery and language learning outcomes among EFL students (Aini et al., 2024; Nabela, 2024; Widiarti et al., 2024). In addition, competitive card-based activities have also demonstrated positive effects on students' reading comprehension and classroom engagement (Mufliha et al., 2024; Nurylah et al., 2024). Several previous studies have investigated the effectiveness of games in English language learning. Tasya and Mutiarani (2024) reported that the Scrabble Game improved students' reading comprehension performance. Similarly, Mufliha et al. (2024) found that the Rainbow Card strategy significantly enhanced students' reading comprehension through descriptive texts. Other studies have demonstrated that flashcards improve vocabulary mastery, memory retention, and language achievement among EFL learners (Rahmah et al., 2024; Aini et al., 2024; Nabela, 2024; Widiarti et al., 2024). In addition, Padwika et al. (2023) revealed that flashcard-based educational games also support early reading development through interactive learning activities. Educational games have been found to improve vocabulary mastery, students' motivation, speaking fluency, and collaborative learning. Other studies have shown that flashcards effectively enhance vocabulary acquisition and memory retention among EFL learners. Nevertheless, most previous research has focused primarily on vocabulary instruction rather than reading comprehension. Only limited studies have explored the integration of flashcard-based competitive games with reading comprehension instruction, particularly at Indonesian senior high schools.

This limitation indicates an important research gap. Although flashcards have been widely used as vocabulary learning media, their potential to improve higher-order reading comprehension skills through competitive collaborative activities has received relatively little attention. Furthermore, previous studies rarely investigate how Flashcard Race Game influences students' motivation, classroom participation, and collaborative learning alongside reading achievement. The novelty of this study lies in integrating Flashcard Race Game into reading comprehension instruction through collaborative competition. Rather than using flashcards merely for vocabulary memorization, this study develops flashcard-based activities that require students to analyze complete reading passages, identify textual information, discuss answers collaboratively, and compete with other groups to solve comprehension tasks. This instructional approach is expected to create a more engaging learning environment while simultaneously improving students' cognitive and social learning outcomes.

Therefore, this study aims to investigate whether Flashcard Race Game significantly improves the reading comprehension achievement of eleventh-grade EFL students compared with conventional reading instruction. Additionally, the study explores students' classroom engagement during the implementation of the strategy. The findings are expected to contribute to English language teaching by providing an alternative instructional strategy that promotes active learning, collaboration, and improved reading comprehension. They may also serve as practical guidance for English teachers seeking innovative approaches to create enjoyable and meaningful reading instruction in EFL classrooms.

RESEARCH METHODOLOGY

This study employed a quantitative approach with a quasi-experimental pre-test–post-test control group design, which is widely used to investigate the effectiveness of instructional strategies in educational research where random assignment is not feasible (Creswell & Creswell, 2023; Fraenkel et al., 2019). The participants were 64 eleventh-grade students from a public senior high school in Lampung, Indonesia, divided into an experimental group and a control group, with 32 students in each group. The experimental group was taught using the Flashcard Race Game, while the control group received conventional reading instruction. The treatment was conducted over six meetings. Both groups completed a pre-test before the treatment and a post-test after the treatment. The research instrument was a 30-item multiple-choice reading comprehension test covering five aspects: identifying main ideas, finding specific information, understanding vocabulary in context, making inferences, and identifying references. The instrument was validated by two English education experts and obtained a Cronbach's alpha coefficient of 0.89, indicating high reliability. The data were analyzed using IBM SPSS Statistics 27. Descriptive statistics were used to examine the mean, standard deviation, minimum, and maximum scores. The Shapiro–Wilk test and Levene's test were applied to test normality and homogeneity. An independent-samples t-test was then used to determine whether there was a significant difference between the experimental and control groups at a significance level of 0.05 (Creswell & Creswell, 2023; Fraenkel et al., 2019).

RESULTS AND DISCUSSION

1. Descriptive Statistics

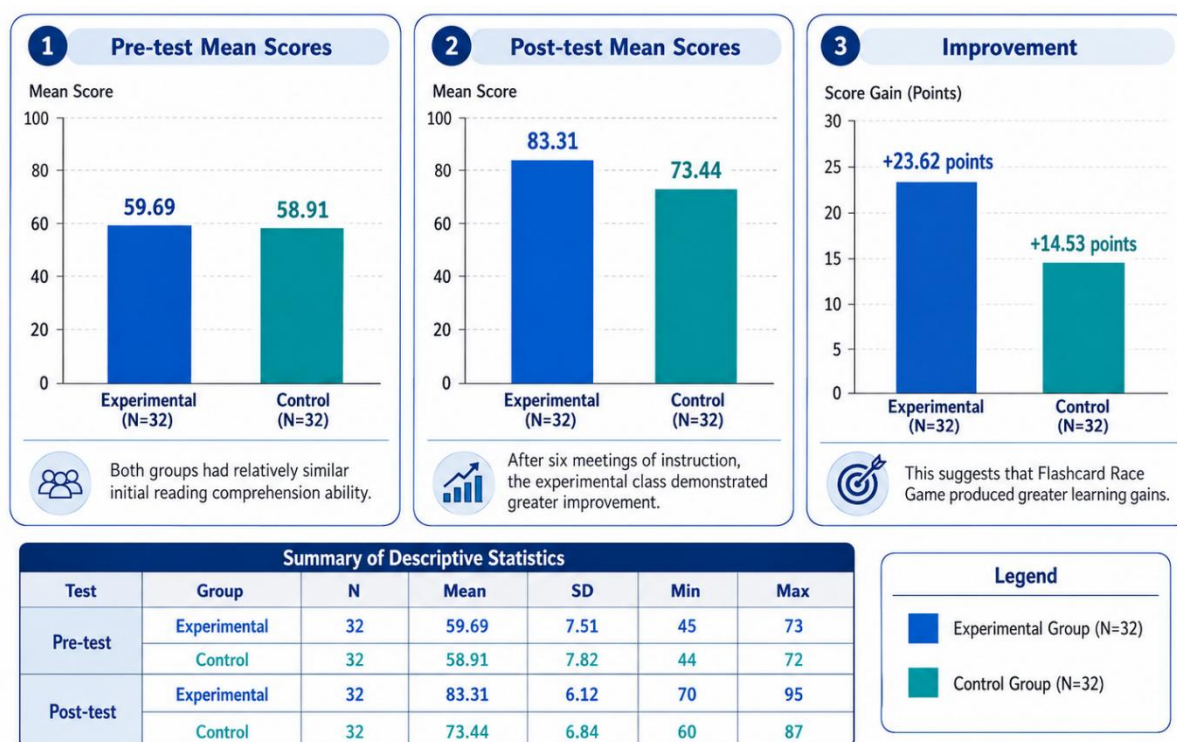


Figure 1. Pre-Test and Post-Test Score

The pre-test results indicate that both classes possessed relatively similar reading comprehension ability before the treatment. The difference between both classes was minimal, indicating comparable initial proficiency. After

six meetings of instruction, students in the experimental class demonstrated greater improvement. The experimental class improved by approximately **23.62 points**, while the control class improved by **14.53 points**. This finding suggests that Flashcard Race Game produced greater learning gains.

2. Normality Test

The normality of the data was examined using the Shapiro–Wilk test. The significance values for the experimental pre-test (0.219), experimental post-test (0.114), control pre-test (0.173), and control post-test (0.086) were all greater than 0.05. Therefore, the data from both groups were normally distributed and met the assumption for parametric testing.

Table 3. Normality Test

Group	Sig.
Experimental Pre-test	0.219
Experimental Post-test	0.114
Control Pre-test	0.173
Control Post-test	0.086

3. Homogeneity Test

Levene’s test was conducted to assess the homogeneity of variance between the experimental and control groups. As presented in Table 4, the significance value was 0.428, which was greater than 0.05. Therefore, the variances of the two groups were considered homogeneous, indicating that the assumption of homogeneity was satisfied.

Table 4. Homogeneity Test

Variable	Sig.
Post-test Scores	0.428

4. Independent Samples t-test

An independent-samples t-test was conducted to determine whether there was a significant difference in post-test scores between the experimental and control groups. As shown in Table 5, the analysis produced a t-value of 5.97 with 62 degrees of freedom and a significance value of 0.000. Since the significance value was lower than 0.05, the null hypothesis was rejected. Therefore, there was a statistically significant difference in reading comprehension achievement between the two groups. H_0 was rejected, and H_1 was accepted.

Table 5. Independent Samples t-test

Variable	t	df	Sig. (2-tailed)
Post-test	5.97	62	0.000

Discussion

The results indicate that integrating the Flashcard Race Game into reading instruction had a positive impact on students' reading comprehension achievement. Students in the experimental class obtained substantially higher post-test scores than those in the control class, suggesting that the game-based strategy effectively facilitated comprehension of English texts. This finding is consistent with previous studies reporting that educational games promote meaningful learning experiences by encouraging learners to participate actively in classroom activities (Richards, 2022; Slavin, 2020). Several factors may explain these findings. First, the Flashcard Race Game transformed the reading lesson into an active learning experience. Instead of passively reading texts and answering questions individually, students collaborated in small groups to analyze passages, identify key information, and compete to solve comprehension tasks. This interactive environment encouraged greater cognitive engagement and sustained attention throughout the lesson. Second, the competitive yet collaborative nature of the activity increased students' motivation. Many students who were previously reluctant to participate became more willing to express opinions, negotiate answers, and justify their reasoning. The opportunity to earn points for their groups fostered healthy competition while maintaining cooperation among peers.

Third, the flashcards scaffolded the reading process by breaking complex comprehension tasks into manageable components. Students practiced identifying main ideas, locating supporting details, interpreting vocabulary in context, making inferences, and recognizing reference words through repeated exposure and discussion. Such

structured practice strengthened both literal and inferential comprehension skills. These findings support previous research indicating that game-based learning enhances language acquisition by increasing learner engagement, promoting collaboration, and providing immediate feedback. Furthermore, they align with constructivist learning theory, which emphasizes that knowledge is constructed through meaningful interaction and social negotiation. By integrating competition with cooperative learning, the Flashcard Race Game created an enjoyable classroom atmosphere that reduced students' anxiety and encouraged active participation. Overall, the findings demonstrate that the Flashcard Race Game is not only effective in improving reading comprehension achievement but also beneficial for fostering motivation, confidence, teamwork, and active learning among EFL students. The findings also indicate that the Flashcard Race Game increased students' motivation to participate during reading lessons. Students who previously showed limited participation became more enthusiastic about expressing opinions, discussing possible answers, and contributing to group performance. The competitive atmosphere created by the game encouraged students to remain focused while simultaneously promoting cooperation among teammates. Similar findings were reported by **Rahmah et al. (2024)**, who found that flashcard games significantly increased students' motivation and vocabulary mastery through enjoyable classroom activities. Likewise, **Richards (2022)** argues that interactive learning activities enhance learners' confidence and willingness to communicate in language classrooms.

CONCLUSION

This study investigated the effectiveness of the **Flashcard Race Game** in improving the reading comprehension achievement of eleventh-grade EFL students. Based on the findings, students who were taught using the Flashcard Race Game demonstrated significantly higher post-test scores than those who received conventional reading instruction. The independent samples *t*-test confirmed a statistically significant difference between the two groups ($p < 0.05$), indicating that the instructional strategy had a positive effect on students' reading comprehension. Beyond improving academic achievement, the implementation of the Flashcard Race Game also enhanced students' classroom engagement. During the learning process, students actively participated in discussions, collaborated with teammates, responded enthusiastically to reading tasks, and demonstrated greater confidence in expressing their ideas. The competitive yet cooperative learning environment encouraged learners to interact meaningfully with reading texts while reducing boredom commonly associated with traditional reading instruction.

The findings suggest that integrating game-based learning into reading instruction can facilitate both cognitive and affective aspects of language learning. The Flashcard Race Game enabled students to practice identifying main ideas, locating specific information, making inferences, interpreting vocabulary in context, and recognizing reference words through enjoyable collaborative activities. Consequently, the strategy contributed not only to higher reading comprehension scores but also to increased motivation and active participation. This study contributes to English language teaching by providing empirical evidence that the Flashcard Race Game is an effective instructional strategy for teaching reading comprehension in EFL classrooms. English teachers are encouraged to incorporate interactive and collaborative learning activities into reading lessons to create more engaging learning environments and improve students' comprehension skills. Nevertheless, this study has several limitations. The participants were limited to one senior high school and the duration of the treatment was relatively short. Future studies are recommended to involve larger samples from different educational contexts, extend the treatment period, and investigate the effectiveness of the Flashcard Race Game for different text genres, language skills, or technology-assisted learning environments. Such studies would provide broader evidence regarding the applicability of game-based learning in English language education.

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