

The Use of Matching Game to Improve Young Learners Vocabulary Mastery in Descriptive Text: A Case of Students' Eighth Grade SMP Negeri 1 Semarang

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui efektivitas penggunaan permainan mencocokkan kosakata (vocabulary matching game) dalam meningkatkan penguasaan kosakata pada pembelajar muda. Penelitian ini dilaksanakan di SMP Negeri 1 Semarang dengan menggunakan desain kuasi-eksperimental yang melibatkan dua kelas VIII: satu sebagai kelompok eksperimen yang menggunakan permainan mencocokkan kosakata, dan satu lagi sebagai kelompok kontrol yang menggunakan metode pembelajaran tradisional. Tes awal (pre-test) dan tes akhir (post-test) diberikan kepada kedua kelompok untuk mengukur perkembangan penguasaan kosakata mereka. Hasil penelitian menunjukkan adanya peningkatan yang signifikan pada penguasaan kosakata siswa kelompok eksperimen, dengan rata-rata skor meningkat dari 62,85 menjadi 78,62. Sementara itu, kelompok kontrol mengalami peningkatan dari 52,65 menjadi 65,41. Uji t antar kelompok (independent samples t-test) menunjukkan nilai p sebesar 0,020, yang mengindikasikan adanya perbedaan yang signifikan secara statistik antara kedua kelompok. Temuan ini mendukung pandangan bahwa pembelajaran berbasis permainan dapat meningkatkan keterlibatan aktif, daya ingat, dan motivasi siswa dalam belajar. Penelitian ini juga sejalan dengan studi-studi sebelumnya yang menekankan manfaat pedagogis dari pembelajaran kosakata yang bersifat interaktif. Dengan demikian, permainan mencocokkan kosakata terbukti menjadi strategi pembelajaran yang efektif dalam meningkatkan penguasaan kosakata dan layak dipertimbangkan sebagai alat yang berharga dalam pembelajaran bahasa di kelas.

Keyword: Penguasaan Kosakata; Permainan Mencocokkan; Pembelajaran Berbasis Permainan; Pemahaman Kosakata; Pelajar Usia Dini

ABSTRACT

This research aimed to investigate the effectiveness of using vocabulary matching games in improving young learners' vocabulary mastery. Conducted at SMP Negeri 1 Semarang, the study employed a quasi-experimental design involving two eighth-grade classes: one as the experimental group using vocabulary matching games, and the other as the control group using traditional methods. Pre-tests and post-tests were administered to both groups to assess vocabulary development. The findings revealed a significant improvement in the experimental group's vocabulary mastery, with the average score increasing from 62.85 to 78.62, while the control group improved from 52.65 to 65.41. An independent samples t-test showed a p-value of 0.020, indicating a statistically significant difference between the two groups. The results support the idea that game-based learning fosters active engagement, better retention, and enhanced motivation among students. This research further aligns with previous studies that emphasize the pedagogical benefits of interactive vocabulary instruction. In conclusion, vocabulary matching games proved to be an effective instructional strategy for enhancing vocabulary acquisition and should be considered as a valuable tool in language learning classrooms.

Keyword: Vocabulary Mastery; Matching Game; Game-Based Learning; Vocabulary Acquisition; Young Learners

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1. INTRODUCTION

Vocabulary plays a crucial role in the development of language proficiency, particularly in the early stages of second language acquisition. For young learners, a strong vocabulary foundation enables more effective communication and enhances their ability to comprehend and produce language in both spoken and written forms. Despite its significance, vocabulary acquisition among young learners remains a challenge due to factors such as limited attention spans, lack of motivation, and traditional teaching approaches that often fail to engage students actively in the learning process.

Traditional methods of vocabulary instruction, such as rote memorization and repetitive drilling, may result in temporary gains but do not consistently promote long-term retention or student engagement. As a result, there is a growing interest in alternative instructional strategies that offer more interactive and student-centered learning experiences. One such approach is the use of educational games, which have been recognized for their potential to make learning more enjoyable, engaging, and effective.

This study focuses on the implementation of a vocabulary matching game as a game-based learning strategy to improve vocabulary mastery among young learners. The research was conducted at SMP Negeri 1 Semarang, involving eighth-grade students as participants. By comparing the vocabulary acquisition of students taught through matching games with those taught using traditional methods, the study aimed to evaluate the effectiveness of game-based learning in enhancing vocabulary mastery.

The primary objective of this research was to determine whether the vocabulary matching game significantly improved students' vocabulary mastery. The study also sought to explore how game-based learning strategies contribute to student engagement, retention, and motivation in vocabulary acquisition. The findings of this research contribute to the growing body of literature supporting active learning approaches and provide practical implications for educators seeking to implement more innovative and effective teaching strategies in language education.

2. RESEARCH METHOD

This study employed a quasi-experimental design with a non-equivalent control group pre-test and post-test format. This design was selected to allow the comparison of learning outcomes between two groups—an experimental group receiving vocabulary instruction through a matching game, and a control group taught using conventional methods—without random assignment (Creswell, 2012). The quasi-experimental approach was appropriate for classroom-based educational settings where randomization is not always feasible. The participants of the study were eighth-grade students from SMP Negeri 1 Semarang. Two intact classes were selected: Class VIII I as the experimental group (receiving the vocabulary matching game treatment) and Class VIII E as the control group (receiving traditional instruction). Each class consisted of approximately 30 students aged 13–14 years. The selection was based on purposive sampling considering the homogeneity of class level and accessibility for the researcher.

The research procedure comprised a systematic sequence of stages: pre-test administration, treatment implementation, post-test administration, and statistical data analysis. Initially, both the control class (VIII E) and the experimental class (VIII I) were given a vocabulary pre-test to establish their baseline proficiency levels. The test included multiple-choice and matching items specifically designed to assess students' recognition and understanding of target vocabulary.

Following this, the experimental group received the treatment in the form of vocabulary matching games over a series of instructional sessions. These games involved activities such as matching words to definitions, associating vocabulary with images, and peer-based competition to enhance engagement and retention. The control group, on the other hand, continued with traditional teaching methods including dictionary exercises, rote memorization, and teacher-led instruction without the integration of interactive games.

Each instructional session for both groups followed a consistent schedule, with the same duration and focus on similar vocabulary themes to ensure comparability. After the intervention period was completed, both groups were given a post-test containing items similar in structure to the pre-test to measure vocabulary improvement. The collected data from pre- and post-tests were then analyzed using SPSS version 25. A series of statistical tests were employed to validate the findings. The normality test (Shapiro-Wilk) was conducted to determine whether the data followed a normal distribution. The homogeneity of variances between groups was tested using Levene's Test.

Finally, an independent samples t-test was used to examine whether the differences in vocabulary achievement between the experimental and control groups were statistically significant. This methodological approach ensured that the findings were reliable, valid, and scientifically grounded, in line with the procedures recommended by Creswell (2012) for quasi-experimental research designs.

Table 1. Pre-test and Post-test Design of The Research

Class	Test	Treatment	Test
Experimental class	Pre-test	Experimental treatment (Using matching game)	Post-test
Control class	Pre-test	No treatment (Using PPT)	Post-test

3. RESULTS AND DISCUSSION

This study aimed to examine the effectiveness of vocabulary matching games in enhancing vocabulary mastery among eighth-grade students of SMP Negeri 1 Semarang. The research used a quasi-experimental design, involving two groups: the experimental group (VIII I), taught using vocabulary matching games, and the control group (VIII E), taught using traditional methods. Pre-tests and post-tests were administered to measure students' vocabulary mastery before and after the treatment. The statistical analysis included normality test, homogeneity test, and independent samples t-test to determine the validity and significance of the results.

A. The Result of Normality Test

The normality test was conducted using the Shapiro-Wilk method to determine whether the data from the pre-test and post-test scores in both groups were normally distributed.

Table 2. The Normality Test of Pre-test and Post-test

Class	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pre test experiment	,136	34	,116	,952	34	,138
post test experiment	,154	34	,040	,973	34	,542
pre test control	,106	34	,200*	,948	34	,106
post test control	,127	34	,184	,969	34	,443

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the table of the normality test above, the results of the Shapiro-Wilk test indicated that the data in both the experimental and control classes were normally distributed. In the pre-test, the significance value for the experimental class was 0.138, while for the control class, it was 0.106. Since both values exceeded the threshold of 0.05, the pre-test data could be considered normally distributed. Similarly, for the post-test, the significance values were 0.542 for the experimental class and 0.443 for the control class, both of which were greater than 0.05. Therefore, the post-test data in both classes also met the assumption of normality.

B. The Result of Homogeneity Test

Following the normality test, the data underwent a homogeneity test to determine whether the pre-test and post-test results in both the experimental and control classes were comparable. To conduct this analysis, Levene's Statistic in IBM SPSS software version 25 was used. The results of this analysis are presented as follows:

Table 3. The Homogeneity Test of Pre-Test in Control Class and Experimental Class

Test of Homogeneity of Variance						
		Levene Statistic	df1	df2	Sig.	
Score	Based on Mean	,212	1	66	,647	
	Based on Median	,216	1	66	,643	
	Based on Median and with adjusted df	,216	1	56,519	,644	
	Based on trimmed mean	,223	1	66	,639	

As shown in the table above, the significance value for the pre-test in both the experimental and control classes, based on the mean, was 0.647. Since this value was higher than the significance level ($\alpha = 0.05$), the results indicated that the pre-test data were not homogeneous. This suggested that there was a significant difference in the variance between the two classes.

Table 4. The homogeneity Test of Post-Test in Control Class and Experimental Class

Test of Homogeneity of Variance						
		Levene Statistic	df1	df2	Sig.	
Score	Based on Mean	3,696	1	66	,059	
	Based on Median	2,278	1	66	,136	
	Based on Median and with adjusted df	2,278	1	54,390	,137	
	Based on trimmed mean	3,301	1	66	,074	

In Table 4.5, the significance value based on the mean was 0.059. Since this value was greater than the significance level ($\alpha = 0.05$), the post-test results in both the experimental and control classes could be

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present in the classroom. Factors such as individual learning styles, prior knowledge, motivation, and engagement levels likely played a role in influencing the degree of progress achieved by each student.

Moreover, the moderate improvement observed in the control group implies that traditional methods, which often emphasize teacher-centered instruction and textbook-based learning, may not be sufficiently engaging or stimulating for all learners. These methods tend to prioritize memorization and passive learning, which can limit opportunities for students to actively interact with new vocabulary in meaningful and context-rich ways. As a result, students may struggle to retain and apply the vocabulary they are exposed to during lessons.

The findings further indicate that traditional approaches may not provide equitable learning opportunities for all students. While some learners are able to adapt to and benefit from these methods, others may require more interactive and participatory strategies to fully engage with the material. The presence of students who showed only minimal improvement or remained at the same level reinforces the idea that instructional techniques must be flexible and responsive to individual differences in order to be effective..

Second, the findings of the research revealed the vocabulary mastery of students taught using matching games. In contrast to the control group, students in the experimental class, who were taught using matching games, demonstrated a more significant improvement. The findings of the study demonstrated that the use of matching games had a significantly positive impact on students' vocabulary mastery. Students in the experimental group, who were taught through matching game-based activities, showed greater improvement in their performance compared to those in the control group, who received traditional instruction. This suggests that incorporating interactive and student-centered learning strategies, such as games, can foster more effective vocabulary mastery. One of the most notable outcomes was the marked progress observed among individual students in the experimental class. Prior to the intervention, some students had relatively low vocabulary scores, but after participating in the game-based learning sessions, their post-test results showed substantial improvement. Even students who initially performed well experienced further gains, indicating that the matching game approach was beneficial across varying proficiency levels.

Furthermore, the score gains among students varied, with several learners demonstrating exceptional progress. This pattern reflects the engaging and motivating nature of matching games, which may enhance student focus, participation, and retention of new vocabulary. The overall trend suggests that game-based learning not only supports academic development but also promotes a more enjoyable and dynamic classroom environment. Therefore, matching games can be considered an effective and practical alternative to traditional vocabulary teaching methods, especially for young learners who thrive in interactive settings.

These findings align with theories of active learning, which propose that interactive and engaging activities facilitate better retention and understanding of vocabulary. The matching game required students to actively associate words with their meanings, reinforcing word recognition, comprehension, and recall. This cognitive engagement is a key factor in the superior performance observed in the experimental group.

Third is the significant difference between the two teaching methods. To determine whether the difference in vocabulary mastery between students taught using matching games and those taught using the regular method was statistically significant, a t-test was conducted. the t-test compared the post-test scores of the experimental group (taught with matching games) and the control group (taught with traditional methods). The analysis produced a p-value below the standard significance level of 0.05, indicating that the difference in vocabulary performance between the two groups was statistically significant. This means that the use of matching games had a real and measurable impact on students' vocabulary acquisition.

Although both groups improved after the intervention, the experimental group showed greater progress, which suggests that the matching game method was more effective in enhancing vocabulary mastery. This finding aligns with existing research that supports game-based learning strategies as beneficial for student engagement, motivation, and retention. Therefore, it can be concluded that integrating matching games into vocabulary instruction provides a more interactive and effective learning experience compared to traditional approaches.

The results of this research align with previous research that examined the impact of game-based learning on students' vocabulary mastery. Various studies have demonstrated that interactive games contribute significantly to vocabulary development by increasing student engagement and retention. A research conducted by Erlin Alpatikah (2019) investigated the effect of using Wordwall.net on students' vocabulary mastery. The research found that students in the experimental group, who were exposed to interactive digital vocabulary games, showed a mean post-test score increase of 17.5 points, while the control group, which used traditional learning methods, improved by only 9.2 points. The findings suggested that digital game-based learning tools, such as Wordwall.net, provide a more engaging and effective method for vocabulary acquisition compared to conventional strategies. Similarly, the current research found that students who used matching games experienced a significant improvement in vocabulary mastery, with an average post-test score of 78.62, compared to 65.41 in the control group.

Further supporting this, Sukma Syam Maspa (2019) conducted a research on the effectiveness of guessing games in vocabulary learning at Mindset English Center (MEC) in Kabupaten Pinrang. The research utilized a quasi-experimental design and revealed that students in the experimental group achieved an 18% higher vocabulary retention rate compared to those in the control group. The research highlighted that interactive guessing games encourage students to think critically and contextually, leading to improved word recall. Likewise, in the present research, the implementation of matching games provided a structured yet engaging learning environment that enhanced students' ability to associate words with meanings, resulting in higher vocabulary mastery scores.

Additionally, Al-Audh, Muhayyang, and Sakkir (2023) also conducted a pre-experimental study entitled The use of matching game to improve students' vocabulary with seventh-grade students at SMPN 1 Bajeng. Their findings indicated a substantial increase in students' vocabulary scores, with pre-test scores rising from 50.19 to 68.13 after the implementation of matching games. The researchers concluded that matching games effectively increased student interest and vocabulary retention. Their study emphasized that students were more enthusiastic and attentive during game-based sessions, which contributed to better learning outcomes. Similarly, the present study observed high levels of enthusiasm among students in the experimental class, who actively participated in the vocabulary games and were more motivated during class activities.

Finally, a study by Rizky Fatmawati (2021) entitled The Influence of Matching Game Toward Students' Vocabulary Mastery at The First Semester of Eighth Grade of SMP 1 PGRI Palas, Lampung Selatan, which employed a quasi-experimental design involving eighth-grade students at SMP PGRI 1 Palas, also supports these findings. The study utilized SPSS to analyze the collected data and reported a significant result (Sig. = 0.000, α = 0.05), confirming the positive influence of matching games on vocabulary mastery. Fatmawati's study involved a clear comparison between experimental and control groups and found that students exposed to game-based instruction performed significantly better in vocabulary assessments. This study reinforces the findings of the present research, demonstrating that matching games are not only effective but also adaptable across different grade levels and student populations.

The findings of the current research are consistent with the previous research, all of which indicate that game-based learning strategies significantly enhance vocabulary mastery. Quantitative data from various studies have shown that students exposed to interactive vocabulary games achieve higher post-test scores and greater retention rates than those taught using traditional methods. The improvement in vocabulary test results observed in this research (from 62.85 to 78.62 in the experimental group) further supports the argument that integrating interactive games, such as matching games, is an effective pedagogical approach to improving students' vocabulary skills.

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