

Application of Picture as an Interactive Learning Media to Improve English Vocabulary in Elementary School

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ABSTRACT

Vocabulary plays a pivotal role in English learning as it forms the foundation for developing core language skills. However, many elementary students struggle with vocabulary acquisition due to limited exposure and the use of less effective instructional methods. This research aimed to examine the effectiveness of picture media as an interactive learning tool in enhancing the vocabulary mastery of fifth-grade students at Kofalagadi Elementary School, Menui District. A pre-experimental method with a one-group pretest-posttest design was applied, involving 12 students as participants. The instrument used was a vocabulary test consisting of 20 items in the form of matching, multiple-choice, and jumbled-word questions. The findings showed that the students' mean score improved from 65.83 in the pre-test to 95.00 in the post-test, with a mean difference of 29.17 points. The paired samples t-test indicated a significance value of 0.000 ($p < 0.05$), confirming that there was a significant improvement in students' vocabulary mastery after the intervention. These results suggest that picture media, when applied interactively, can serve as an effective instructional strategy to support vocabulary learning, particularly at the elementary school level. Furthermore, this study provides practical insights for teachers in selecting engaging media and demonstrates that picture-based strategies can be effectively integrated into classroom practice to foster student motivation and vocabulary development.

Keywords: *Interactive Learning Media, Picture Media, Teaching Vocabulary, Effective Instructional Strategy, Pre-Experimental Study*

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INTRODUCTION

Vocabulary holds a pivotal role in English learning since it forms the basis for developing key language skills, including listening, speaking, reading, and writing. A lack of vocabulary knowledge often makes it difficult for learners to communicate, express ideas, and comprehend written texts effectively (Anggreni, 2020; Susanto et al., 2020). Prior research has highlighted that vocabulary mastery not only influences students' ability to construct and understand sentences but also boosts their confidence in communication (Al-Ahdal & Alharbi, 2021; Reynolds et al., 2022). Nevertheless, many elementary school students continue to experience difficulties in vocabulary acquisition due to insufficient exposure and the use of less effective instructional methods (Julaiha et al., 2022; Siregar et al., 2021; Fernanda et al., 2024).

Vocabulary is generally classified into two categories: active and passive. Active vocabulary encompasses words that learners can produce in speaking and writing, while passive vocabulary refers to words that learners recognize and comprehend when reading or listening but rarely use in production (Setiawan & Wiedarti, 2020; Hameleers et al., 2020). For young learners, the development of active vocabulary is particularly important as it directly contributes to communication skills. At the same time, passive vocabulary is equally valuable for supporting reading comprehension and overall language development. Hence, balancing the acquisition of both types highlights the significance of implementing effective strategies and suitable media in English learning.

Along with rapid technological advancement, English instruction has increasingly moved toward more interactive and innovative practices. Teachers have employed diverse media, such as flashcards, games, songs, animated videos, and digital platforms like YouTube or Quizizz, to enrich students' vocabulary learning experiences. These approaches create contextual and engaging learning environments that enhance vocabulary retention and overall proficiency (Fitriana et al., 2021; Zakiyah et al., 2022; Maulina et al., 2022; Maulina & Sari, 2022; Adyanti et al., 2024). As emphasized by Stein et al. (2021) and Ramadani et al. (2023), the use of learning media plays an essential role in capturing learners' attention, encouraging interest, and improving teaching effectiveness. In this regard, Wahyuni et al. (2025) highlighted that educational English videos significantly enhanced elementary students' vocabulary mastery, while Faridawati et al. (2024) underscored that integrating technology in elementary English classrooms could improve students' engagement and learning outcomes. Among the available options, picture-based media provide visual representations that help students better understand word meanings while making the learning process more enjoyable (Nurdini, 2018; Zulkifli, 2019).

Recent studies also emphasize that integrating media strategically is essential for improving vocabulary mastery. For example, Faridawati et al. (2024) in their study on strategic media integration at the tertiary level highlighted that careful media utilization significantly strengthens vocabulary instruction and enhances learning effectiveness. This reinforces the argument that the proper selection and application of instructional media, whether pictures, videos, or digital platforms, can provide substantial benefits for learners across various educational levels.

The use of pictures in language learning is grounded in Paivio's (1986) Dual Coding Theory, which asserts that combining verbal and visual input strengthens memory and understanding. Visual learning perspectives also argue that young learners are more likely to comprehend and retain information when it is presented through images (Fleming & Mills, 1992). Moreover, pictures help lower cognitive load (Sweller, 1988) and capture students' attention (Posner & Petersen, 1990), which are crucial for sustaining motivation and engagement.

A number of studies have demonstrated the benefits of picture-based media for vocabulary development. Liando et al. (2022) found that using pictures significantly enhanced learners' vocabulary mastery by stimulating active involvement and creating concrete associations. Similarly, Muabidah and Setiawan's (2024) meta-analysis showed that interactive learning media, including pictures, consistently improve vocabulary acquisition across various educational levels and contexts. These findings align with Maulina et al. (2022), who emphasized that social media utilization supports independent English learning, as well as Setyaningsih et al. (2022), who found that digital audio-visual media contributed to better speaking performance. Likewise, Faridawati et al. (2025) stressed the importance of using English videos to support vocabulary learning at the elementary level. Despite these encouraging findings, the use of picture media has not been widely optimized in many schools. Specifically, at Kofalagadi Elementary School in Menui District, there has been little research exploring the effectiveness of picture-based learning media. This condition points to the need for empirical investigation into the role of picture media in enhancing vocabulary learning outcomes.

Based on this background, the present study aims to investigate the effectiveness of picture media as interactive learning tools to improve elementary school students' vocabulary mastery. The results are expected to provide valuable evidence regarding the contribution of picture-based media to vocabulary learning and to offer practical insights for teachers in selecting appropriate instructional media to foster student engagement and English proficiency.

METHOD

This research adopted a pre-experimental design using a one-group pretest-posttest model. The design was chosen to evaluate the effectiveness of picture media in enhancing students' vocabulary mastery by comparing their performance before and after the treatment.

Respondents

The participants of this study were 12 fifth-grade students from Kofalagadi Elementary School, Menui District, who were selected through purposive sampling. They were considered representative of the target population for examining the influence of picture-based learning media on vocabulary acquisition.

Instruments

The instrument used in this study was a vocabulary test comprising 20 items in the form of matching, multiple-choice, and jumbled-word questions. Each correct response was assigned a score of 1, while incorrect responses received 0. To ensure validity and reliability, the test was reviewed and validated by experts in the field.

Procedures

The implementation of the study consisted of three main stages: (1) administering a pre-test to determine the students' initial vocabulary mastery, (2) conducting treatment sessions over three meetings (2×40 minutes each) where pictures were utilized as interactive learning tools, and (3) administering a post-test to evaluate students' vocabulary mastery after the intervention.

Data Analysis

The collected data were analyzed quantitatively through descriptive statistics, including mean, minimum, maximum, and standard deviation. Additionally, inferential statistics were applied using a paired samples t-test with the assistance of SPSS 26. A 0.05 level of significance was employed. When the p-value was below 0.05, the null hypothesis was rejected, indicating that the use of picture media had a significant effect on students' vocabulary mastery.

FINDINGS AND DISCUSSION

Findings

Teaching Activities



Figure 1. Pre-Test Administration

Figure 1 depicts the researchers administering the pre-test to fifth-grade students at Kofalagadi Elementary School, Menui District. At this stage, learners completed a vocabulary assessment comprising 20 items, including matching, multiple-choice, and jumbled-word tasks. The pre-test was intended to evaluate students' initial vocabulary knowledge prior to the use of picture media, and the results functioned as baseline data for comparison with the post-test.



Figure 2. Picture Media Usage in Teaching Vocabulary

Figure 2 illustrates the researchers delivering vocabulary instruction with the aid of picture media. Three topics were addressed during the treatment, namely Food and Taste, Parts of the Body, as well as Objects and Price. Visual representations were utilized in each lesson to help students connect English words with tangible objects, fostering a more engaging and interactive learning environment. This method aimed to strengthen students' understanding, retention, and ability to actively use vocabulary in various contexts.



Figure 3. Post-Test Administration

Figure 3 shows the administration of the post-test carried out after applying picture media in the classroom. In this stage, students completed the same type of test used in the pre-test, enabling a clear comparison of outcomes. The post-test was designed to assess improvements in students' vocabulary mastery and offered evidence of the effectiveness of picture media as an interactive tool for learning.

Pre-Test and Post-Test Result Analysis

The comparison of the pre-test and post-test results revealed a significant improvement in students' vocabulary mastery after the use of picture media. The mean score increased from 65.83 in the pre-test to 95.00 in the post-test, with a mean difference of 29.17 points. In addition, the standard deviation decreased from 15.64 to 6.03, indicating that students' scores became more consistent after the treatment. These results suggest that picture media was effective in enhancing students' vocabulary knowledge and ensuring more uniform learning progress among participants.

This section outlines the results of the pre-test and post-test that were conducted to measure students' vocabulary mastery following the use of picture media in English learning. Both descriptive statistics and inferential tests were applied to examine the effectiveness and impact of the intervention.

The descriptive findings indicate a noticeable difference in student performance between the posttest and pretest. Table 1 presents the distribution of scores, including the number of participants, average scores, and standard deviations.

Table 1. Descriptive Statistics of Student's Vocabulary Scores

Test	N	Mean	Standard deviation
Post-test	12	95.00	6.03
Pre-test	12	65.83	15.64

Table 2. Paired Samples Statistics

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Post-test	95.0000	12	6.03023	1.74078
	Pre-test	65.8333	12	15.64279	4.51569

As shown in Table 2, the average score in the post-test was 95.00, compared to 65.83 in the pre-test. This improvement of 29.17 points suggests that the use of picture media significantly enhanced students' vocabulary mastery. The reduction in the standard deviation

from 15.64 to 6.03 indicates that students' scores became more consistent after the intervention, meaning that most students experienced similar positive progress.

Table 3. Paired Samples Correlations

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Post-test & Pre-test	12	.675	.016

Table 3 shows a significant correlation ($r = 0.675$, $p = 0.016$) between students' vocabulary scores in the post-test and the pre-test. This indicates that students who achieved relatively higher scores in the pre-test also tended to perform better in the post-test. The consistent progress across the group highlights that the treatment had a systematic and positive impact on learning outcomes, particularly in helping students recognize, recall, and apply vocabulary more effectively.

Paired Samples T-test

The paired samples t-test was used to determine whether there was a statistically significant difference between the pre-test and post-test results. Before conducting the test, a normality check was performed to ensure the data met the assumptions. The analysis was carried out using IBM SPSS Statistics 26 with a significance threshold of 0.05.

Hypotheses:

H_1 : Picture media have a significant effect on students' vocabulary mastery if $p < 0.05$ (H_1 accepted, H_0 rejected).

H_0 : Picture media have no significant effect on students' vocabulary mastery if $p > 0.05$ (H_1 rejected, H_0 accepted).

Table 4. Paired Samples Test

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post-test – Pre-test	29.16667	12.40112	3.57990	37.04597	21.28737	8.147	11	.000

Based on Table 4, the mean difference of 29.17 points between the post-test and pre-test was statistically significant, with a p-value of 0.000 (< 0.05). This confirms that the null hypothesis was rejected, and the alternative hypothesis was accepted, indicating that picture media had a significant impact on improving vocabulary mastery.

Discussion

The results showed that the use of picture media in learning English significantly improved the vocabulary acquisition of elementary school students. Theoretically, this increase is also supported by Paivio's Dual Coding Theory (1986) and Mayer's Cognitive Theory of Multimedia Learning (2001), which emphasize that presenting information visually and verbally enriches students' learning experiences and helps them process information through two channels simultaneously. This allows students to gain a more contextualized and authentic understanding of new vocabulary.

In addition, the findings of this study are in line with previous research conducted by Liando et al. (2022), Salmon et al. (2024), and Julaiha et al. (2022), who found that picture-based media make vocabulary learning more meaningful and effective. The ability of pictures to display words and their representations together provides stronger memory associations, making them a powerful medium to improve students' recall and understanding of the vocabulary taught. This is consistent with the findings of Maulina et al. (2022), who reported that social media utilization supports more independent and interactive English learning. Similarly, Setyaningsih et al. (2022) demonstrated that audio-visual digital media significantly enhance students' speaking skills, while Maulina et al. (2022) highlighted that the integration of social media and technological tools can improve learners' pronunciation. In line with this, Wahyuni et al. (2025) emphasized the effectiveness of English educational videos in

developing elementary students' vocabulary mastery, and Adyanti et al. (2024) confirmed that integrating technology in English classrooms creates richer learning experiences.

This study also resonates with Maulina et al. (2022), who explored the use of media technology in teaching listening skills, showing that appropriate digital media enhance comprehension and classroom interaction. Furthermore, Faridawati et al. (2025) underscored that English videos play an important role in strengthening students' vocabulary learning at the elementary level. These perspectives strengthen the findings of this study that both visual picture media and technology-based media provide complementary benefits for vocabulary development.

Overall, this study reinforces the importance of integrating visual media, especially pictures, into language learning curricula. It provides evidence that such media can be used strategically to enhance vocabulary mastery in elementary school education, particularly in contexts where students have limited exposure to English. Further research could examine the effects of combining picture media with digital technologies such as videos and online learning platforms to maximize student engagement and vocabulary retention (Maulina et al., 2022).

The results of this study demonstrate that picture-based learning approaches, especially for elementary school students, not only improve vocabulary mastery but also build interest in learning English. By providing meaningful visual support, pictures help strengthen pronunciation, comprehension, and confidence, thereby encouraging a more natural understanding and use of the language.

CONCLUSIONS

The present study investigated the effectiveness of picture media in enhancing the vocabulary acquisition of fifth-grade students at Kofalagadi Elementary School. The findings revealed a notable improvement in students' vocabulary mastery, with the average score rising from 65.83 in the pre-test to 95.00 in the post-test. The paired samples t-test produced a significance value of 0.000 ($p < 0.05$), confirming that there was a significant difference in students' performance before and after the intervention. Beyond measurable achievement, this study also demonstrated that picture-based learning fosters greater motivation, engagement, and enthusiasm among learners in studying English. Consequently, picture media can be considered an effective alternative instructional strategy, particularly for vocabulary teaching at the elementary level, where visual support plays a crucial role in language development.

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