

The Effect of Using Pictures on Students' Vocabulary Mastery at the Eighth Grade of SMP Negeri 5 Bayan

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Article Info

Article history:

Received: 14 June 2026

Publish: 1 July 2026

Keywords:

Picture media;

Vocabulary mastery;

English as a Foreign Language (EFL);

Visual learning;

Junior high school students

Abstract

Vocabulary mastery plays an important role in supporting students' English language learning because it influences their ability to understand and communicate effectively. However, many junior high school students still experience difficulties in understanding, remembering, and using English vocabulary appropriately. Therefore, appropriate instructional media are needed to facilitate vocabulary learning and increase students' engagement. This study aimed to investigate the effect of using pictures on students' vocabulary mastery at the eighth grade of SMP Negeri 5 Bayan in the 2025/2026 academic year. This study employed a pre-experimental research design using a one-group pre-test and post-test design. The participants consisted of 19 eighth-grade students selected as the research sample. Data were collected through vocabulary tests administered before and after the implementation of picture media. The collected data were analyzed using descriptive statistics and paired sample t-test with the assistance of SPSS 15.0. The findings revealed that students' vocabulary achievement improved after the implementation of picture media. The mean score increased from 32.21 in the pre-test to 50.32 in the post-test. The paired sample t-test showed a statistically significant difference between pre-test and post-test scores ($t = -5.204, p < .001$), indicating that picture media had a significant positive effect on students' vocabulary mastery. In conclusion, the use of pictures can be considered an effective instructional medium to improve students' vocabulary learning outcomes. The findings contribute to the growing evidence regarding visual-based vocabulary instruction and provide practical implications for English teachers in implementing accessible and engaging strategies for vocabulary learning.

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1. INTRODUCTION

Vocabulary mastery is considered one of the most fundamental components of English language learning because it supports learners' ability to understand and produce language effectively. In English as a Foreign Language (EFL) contexts, vocabulary knowledge contributes significantly to students' language development and influences their performance in listening, speaking, reading, and writing. Richards and Renandya (2002) stated that vocabulary serves as an essential element of communicative competence because learners require adequate lexical knowledge to express ideas and understand messages. Similarly, Thornbury (2002) emphasized that limited vocabulary often becomes a major obstacle preventing learners from achieving successful communication. Supporting this perspective, Alqahtani (2015) argued that vocabulary knowledge is one of the strongest predictors of language proficiency because communication becomes ineffective when learners lack sufficient vocabulary. Nation

(2013) further explained that vocabulary learning forms the foundation of language acquisition and directly influences students' ability to process and produce language.

Despite its importance, vocabulary learning remains challenging for many EFL learners, especially at the junior high school level. Students frequently experience difficulties in understanding word meanings, remembering newly introduced vocabulary, and applying vocabulary appropriately in communication. Schmitt (2008) explained that vocabulary acquisition requires repeated encounters with words and meaningful exposure to support long-term retention. Likewise, Webb and Nation (2017) highlighted that vocabulary learning becomes more effective when students engage actively with vocabulary in contextual and meaningful learning environments. Similar conditions were observed at SMP Negeri 5 Bayan, where students demonstrated limited vocabulary mastery and relatively low participation during English learning activities.

To address these challenges, English teachers need to implement instructional strategies and learning media that support vocabulary acquisition and increase students' engagement during learning. One instructional medium that has been widely discussed in language education is picture media. Pictures provide visual representations that enable learners to connect vocabulary items with concrete meanings and learning contexts. Hamalik (1994) explained that instructional media function as tools that transform abstract concepts into more meaningful learning experiences. In language learning contexts, visual support may strengthen students' understanding and improve information retention. Cameron (2001) argued that visual learning activities facilitate language acquisition because they help learners associate language with meaningful contexts. In addition, Pinter (2017) suggested that visual materials increase students' participation and support more interactive classroom learning.

Recent developments in language education have increasingly emphasized the importance of multimodal and visual-based learning approaches. Mayer (2021) proposed through Multimedia Learning Theory that combining verbal and visual information facilitates knowledge construction and improves learning outcomes. Similarly, Wong and Hwang (2021) reported that visual and technology-supported instruction contributed positively to vocabulary acquisition because learners received richer and more meaningful input. Teng (2023) also found that vocabulary learning supported by multiple modes of input enhanced vocabulary retention and promoted language achievement among EFL learners. Furthermore, Zhao and Zou (2022) demonstrated that visual-based instruction positively influenced students' vocabulary performance and learning engagement.

Several previous studies have specifically investigated the effectiveness of visual media in vocabulary instruction. Aprinawati (2017) found that picture-based learning created more interactive learning experiences and positively contributed to language development. Yusuf et al. (2021) also reported that visual learning strategies improved students' vocabulary achievement and encouraged greater classroom participation. More recently, Zhang (2022) found that visual-based instruction supported vocabulary retention and strengthened students' understanding of lexical items. However, most previous studies were conducted in technology-supported environments or different educational settings. Limited studies have specifically examined the effectiveness of simple picture media implemented in regular classroom instruction, particularly in rural junior high school EFL contexts.

Based on this research gap, the present study investigated the effect of using pictures on students' vocabulary mastery at the eighth grade of SMP Negeri 5 Bayan in the 2025/2026 academic year. This study contributes to the growing evidence regarding visual-based vocabulary instruction by providing empirical findings from a junior high school

EFL context and offering practical implications for English teachers in implementing accessible and effective strategies to improve students' vocabulary learning outcomes.

2. RESEARCH METHODS

This study employed a quantitative approach using a pre-experimental design with a one-group pre-test and post-test design. This design was selected to examine the effect of using pictures on students' vocabulary mastery by comparing students' performance before and after the implementation of the treatment.

The research was conducted at SMP Negeri 5 Bayan during the 2025/2026 academic year. The population of this study consisted of all eighth-grade students, totaling 84 students distributed across three classes. The sample was selected using cluster random sampling technique, resulting in class VIII B as the experimental group consisting of 19 students.

The instrument used in this research was a vocabulary test in the form of multiple-choice questions. The test consisted of 25 items that measured students' vocabulary mastery based on four indicators adapted from Thornbury (2002), namely pronunciation, spelling, meaning, and word use. The same instrument was administered as both pre-test and post-test to measure students' vocabulary achievement before and after the treatment.

Before being implemented, the instrument was tested for validity and reliability. Item validity was analyzed using Pearson Product Moment correlation through SPSS 15.0. The results showed that all 25 selected items met the validity criteria and were considered appropriate for use in the study. Reliability testing was conducted using Cronbach's Alpha coefficient and produced a value of 0.984, indicating that the instrument had a very high level of reliability.

Data collection was conducted in three stages. First, students completed a pre-test to identify their initial vocabulary mastery. Second, the treatment was conducted by applying picture media during vocabulary learning activities. Students learned vocabulary through visual materials involving several topics, including animals, body parts, and fruits. Third, a post-test was administered to measure students' vocabulary mastery after the treatment.

The collected data were analyzed using descriptive and inferential statistics with the assistance of SPSS 15.0. Descriptive analysis was used to calculate mean and standard deviation scores. Meanwhile, inferential analysis employed a paired sample t-test to determine whether there was a significant difference between students' pre-test and post-test results. Prior to hypothesis testing, normality testing was conducted using the Shapiro–Wilk test to ensure that the data met the assumptions required for parametric analysis. Statistical significance was determined at the 0.05 level.

3. RESULTS AND DISCUSSION

3.1. Research Results

This study was conducted to examine the effect of using pictures on students' vocabulary mastery at the eighth grade of SMP Negeri 5 Bayan. The treatment was implemented through vocabulary learning activities using picture media covering several topics, namely animals, body parts, and fruits. To measure students' vocabulary achievement, pre-test and post-test were administered before and after the treatment.

Before conducting hypothesis testing, a normality test was performed using the Shapiro–Wilk test. The results showed that the significance value of the pre-test was 0.638 and the post-test was 0.478. Since both values were higher than 0.05, the data were considered normally distributed and appropriate for further analysis using parametric statistics.

Descriptive Statistics

Table 1 descriptive statistics of students' vocabulary scores before and after the treatment.

Table 1. Descriptive Statistics of Students' Vocabulary Scores

Variable	N	Mean	Standard Deviation
Pre-test	19	32.21	9.090
Post-test	19	50.32	12.097

As presented in Table 1, students' vocabulary mastery improved after the implementation of picture media. Before receiving treatment, the mean score of students' vocabulary achievement was 32.21. After the treatment, the mean score increased to 50.32. This result indicates an increase of 18.11 points. In addition, the standard deviation increased from 9.090 to 12.097, indicating variation in students' learning achievement after the treatment.

Hypothesis Testing

To determine whether the improvement was statistically significant, a paired sample t-test was conducted.

Table 2. Paired Sample t-Test Result

Comparison	Mean Difference	t	df	Sig. (2-tailed)
Pre-test – Post-test	-18.105	-5.204	18	< .001

The paired sample t-test showed that the significance value was lower than the significance level of 0.05 ($p < .001$). Therefore, there was a statistically significant difference between students' vocabulary scores before and after the implementation of picture media.

The result indicates that students achieved better vocabulary performance after receiving treatment using pictures. Based on the statistical findings, the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted. Thus, the use of pictures had a significant effect on students' vocabulary mastery at the eighth grade of SMP Negeri 5 Bayan.

3.2. Discussion

The findings of this study revealed that the use of pictures significantly improved students' vocabulary mastery at the eighth grade of SMP Negeri 5 Bayan. The statistical analysis showed that students' mean score increased from 32.21 in the pre-test to 50.32 in the post-test, with an improvement of 18.11 points after the implementation of picture media. In addition, the paired sample t-test indicated a statistically significant difference between students' vocabulary achievement before and after the treatment ($p < .001$). These findings suggest that picture media contributed positively to students' vocabulary learning outcomes and supported their vocabulary development during classroom instruction.

The improvement in students' vocabulary mastery may be explained by the role of visual representation in facilitating vocabulary acquisition and retention. During the treatment sessions, students learned vocabulary through pictures related to animals, body parts, and fruits, which enabled them to associate English words with concrete meanings. This finding supports Thornbury (2002), who argued that vocabulary learning becomes more effective when learners experience meaningful and memorable encounters with language. Likewise, Nation (2013) emphasized that repeated and meaningful exposure to vocabulary facilitates lexical development and strengthens learners' ability to retrieve and

apply vocabulary knowledge. The use of pictures in the present study may have supported these processes by making vocabulary input more understandable and easier to remember.

The findings can also be interpreted through multimedia and visual learning perspectives. Mayer (2021) explained through Multimedia Learning Theory that learning becomes more effective when information is presented through multiple channels, particularly verbal and visual modes. Although the present study employed simple picture media rather than digital multimedia, visual support may have reduced students' cognitive burden and enabled more efficient vocabulary processing. This explanation is consistent with Wong and Hwang (2021), who reported that visual learning environments contribute positively to vocabulary acquisition because learners receive richer input and stronger support for meaning construction.

Furthermore, the findings align with Richards and Renandya (2002), who emphasized that vocabulary knowledge is a fundamental component of language proficiency and influences students' ability to participate successfully in language learning activities. Supporting this perspective, Webb and Nation (2017) argued that vocabulary learning becomes more effective when students engage actively with lexical items and encounter words repeatedly in meaningful contexts. In the present study, picture media appeared to increase students' engagement and encourage active participation during vocabulary learning activities, which may have contributed to the observed improvement in vocabulary achievement.

The present findings are also consistent with previous empirical studies. Aprinawati (2017) reported that picture-based learning created more interactive learning experiences and positively influenced language development. Similarly, Yusuf et al. (2021) found that visual learning strategies improved students' vocabulary achievement and promoted greater classroom participation. More recently, Teng (2023) reported that multimodal vocabulary instruction enhanced vocabulary retention and supported language learning outcomes among EFL students. Zhang (2022) also demonstrated that visual-based instruction strengthened vocabulary retention and facilitated students' understanding of lexical meanings. The consistency between previous findings and the present study indicates that visual support remains an effective instructional approach for vocabulary learning across different educational contexts.

However, this study also identified several limitations. Although students demonstrated significant improvement after the implementation of picture media, the post-test mean score indicates that vocabulary mastery had not yet reached an optimal level. This condition suggests that picture media should not be considered a single solution for vocabulary learning. As explained by Schmitt (2008), vocabulary development requires continuous exposure, repeated practice, and opportunities to use vocabulary in meaningful communication. In addition, the present study involved a relatively small sample and was conducted within a limited treatment duration. Therefore, future studies are encouraged to involve larger samples and compare picture media with other instructional approaches to provide broader evidence regarding vocabulary instruction effectiveness.

This study extends previous evidence regarding visual-based vocabulary instruction by demonstrating that simple picture media implemented in a regular classroom setting may effectively support students' vocabulary mastery. Unlike many recent studies that focus on technology-supported learning environments, this study shows that low-cost and accessible visual media can still provide meaningful contributions to vocabulary learning in junior high school EFL classrooms.

4. CONCLUSION

This study aimed to investigate the effect of using pictures on students' vocabulary mastery at the eighth grade of SMP Negeri 5 Bayan. The findings revealed that the implementation of picture media significantly improved students' vocabulary achievement. This result was indicated by the increase in the mean score from 32.21 in the pre-test to 50.32 in the post-test and supported by the paired sample t-test result showing a statistically significant difference ($p < .001$). Therefore, the use of pictures was proven to have a positive effect on students' vocabulary mastery.

The findings suggest that picture media can facilitate vocabulary learning by helping students connect words with visual meaning, increasing engagement, and supporting vocabulary retention during learning activities. Although students' achievement improved after the treatment, picture media should be integrated with continuous practice and contextual learning activities to optimize vocabulary development. This study contributes to the growing evidence on visual-based vocabulary instruction in EFL classrooms and implies that picture media may serve as an accessible and practical alternative for English teachers, particularly in junior high school contexts.

5. ACKNOWLEDGMENTS

The author would like to express sincere gratitude to the English Language Education Study Program, Faculty of Culture, Management, and Business, Mandalika University of Education, for the academic support and learning opportunities provided throughout the completion of this study. The author also extends appreciation to the headmaster, English teacher, and students of SMP Negeri 5 Bayan for their cooperation and participation during the research process. Special appreciation is addressed to all lecturers and academic staff who provided guidance, encouragement, and valuable contributions throughout the preparation and completion of this article.

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