

**IMPROVING SEVENTH-GRADE STUDENTS' VOCABULARY MASTERY FOR  
DESCRIPTIVE TEXT WRITING THROUGH PICTURE WORD MATCHING  
TECHNIQUE: A CLASSROOM ACTION RESEARCH AT SMP NEGERI 3  
PEMATANGSIANTAR**

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**Abstract**

This classroom action research investigated the effectiveness of the Picture and Word Matching Technique in enhancing the vocabulary mastery of seventh-grade students at SMP Negeri 3 Pematangsiantar. The study involved 30 students of Class VII-5 and was conducted in two cycles following the stages of planning, action, observation, and reflection. Data were obtained through vocabulary tests, classroom observations, and field notes. The results showed a consistent increase in students' vocabulary performance. The mean score improved from 60.00 in the pre-test to 73.33 in Cycle I and reached 86.00 in Cycle II. The percentage of students achieving the minimum mastery criterion (75) rose from 20% to 90%. Qualitative findings indicated higher student participation, stronger motivation, and more accurate vocabulary use during learning activities. The combination of visual support and word recognition tasks helped students recall and apply new vocabulary more effectively. Overall, the Picture and Word Matching Technique proved to be an effective approach for improving students' vocabulary mastery in descriptive text learning.

**Keywords:** Vocabulary Mastery; Descriptive Text; Picture and Word Matching Technique; Classroom Action Research; Junior High School.

**1. INTRODUCTION**

Vocabulary is one of the most essential components in language learning because it forms the foundation of all language skills listening, speaking, reading, and writing. Without sufficient vocabulary, students cannot comprehend messages or express their ideas effectively. Richards and Renandya (2022) state that vocabulary knowledge is central to communicative competence, as it determines how effectively learners can use the language in various contexts. Similarly, Nation (2013) defines vocabulary mastery as the ability to understand a word's meaning, form, pronunciation, and appropriate use in context. In other words, vocabulary mastery involves not only knowing the meaning of a word but also being able to apply it communicatively.

In the context of English learning at junior high schools in Indonesia, vocabulary mastery often becomes a major challenge for students. Many students find it difficult to remember new words and to use them correctly in sentences. This directly affects their ability to write, especially when producing descriptive texts. According to Gerot and Wignell (1994), descriptive text is a type of writing that aims to describe a person, place, or object in detail so that the reader can

imagine it clearly. The main linguistic features of descriptive text include the use of adjectives, nouns, and linking verbs. Therefore, a rich vocabulary is crucial for students to compose vivid and accurate descriptions. However, most students still have a limited range of vocabulary to write effective descriptive texts. They tend to repeat simple words, struggle to select appropriate vocabulary, and easily forget words they have previously learned. Susanti (2023) points out that vocabulary instruction in many Indonesian classrooms remains monotonous, relying on memorization and translation, which leads to low motivation and poor word retention among students.

To address these issues, teachers are encouraged to apply engaging, interactive, and contextual learning strategies. One effective method is the Picture and Word Matching Technique, in which students are asked to match pictures with corresponding words. Through this activity, students can connect word meanings with concrete visual representations. According to Paivio's Dual Coding Theory (2006), information presented both visually and verbally is processed through two distinct cognitive channels, resulting in stronger memory connections and better understanding of vocabulary. Several previous studies have reported positive outcomes from the use of visual-based techniques in vocabulary learning. Nuraeni and Lestari (2020) found that using picture-word cards improved students' vocabulary retention and classroom participation. Likewise, Rahayu and Siregar (2022) revealed that the Picture and Word Matching Technique increased both students' motivation and their vocabulary achievement at the junior high school level. Similarly, Husna (2023), in her classroom action research, reported that students became more active and showed greater vocabulary recall after engaging in picture-word matching activities.

Although previous studies have demonstrated the effectiveness of picture and word matching techniques in improving vocabulary retention, several gaps remain unaddressed. First, most prior research focused primarily on vocabulary recognition and recall, with limited attention to the application of vocabulary in productive writing tasks, particularly in descriptive text composition. Second, earlier studies often implemented the technique as a standalone activity without integrating it systematically into a complete writing lesson cycle. Third, there is insufficient evidence on how the technique affects not only test scores but also students' behavioral changes, such as motivation, engagement, and collaborative learning patterns during the learning process.

This study addresses these gaps by integrating the Picture and Word Matching Technique into a structured descriptive text writing program within a Classroom Action Research framework. Unlike previous studies, this research emphasizes the practical application of learned vocabulary in constructing complete descriptive texts, rather than solely focusing on word memorization. The study implements a two-cycle action research design with systematic modifications between cycles based on reflection. Furthermore, this study provides a comprehensive analysis of both quantitative outcomes (vocabulary test scores covering word recognition, meaning comprehension, and contextual usage) and qualitative aspects (student participation, motivation, and learning behavior) across two complete cycles of intervention. The vocabulary assessment goes beyond simple matching tasks to include students' ability to use new vocabulary in constructing descriptive sentences and paragraphs.

Based on these considerations, this research aims to determine whether the Picture and Word Matching Technique can improve students' vocabulary mastery in descriptive text at the seventh grade of SMP Negeri 3 Pematangsiantar.

## **2. RESEARCH METHOD**

### **Research Design**

This study employed a Classroom Action Research (CAR) design, which aimed to improve students' vocabulary mastery through the implementation of the Picture and Word Matching Technique. According to Kemmis and McTaggart (1988), classroom action research is a cyclical process consisting of four stages: planning, acting, observing, and reflecting. This design enables teachers and researchers to identify learning problems, apply specific instructional actions, and evaluate their effectiveness through continuous reflection. The study was conducted in two cycles, and each cycle consisted of two meetings. In every cycle, the researcher designed the learning activities, implemented the Picture and Word Matching Technique in class, observed students' participation and responses, and reflected on the results to make necessary improvements for the next cycle. The main goal of this classroom action research was to determine to what extent the use of the Picture and Word Matching Technique could improve students' vocabulary mastery in writing descriptive texts.

### **Participants / Data**

The participants of this research were 30 students of Class VII-5 at SMP Negeri 3 Pematangsiantar in the academic year 2024/2025. This class was chosen based on preliminary observations showing that most students had difficulties mastering English vocabulary, especially in using appropriate words when writing descriptive texts. The data of this research were collected from two types of sources: quantitative and qualitative. Quantitative data were obtained from the results of vocabulary tests (pre-test and post-tests of each cycle), while qualitative data were gathered from classroom observations and field notes recorded during the learning process.

### **Instruments / Variables**

To collect the required data, several instruments were used in this study. These instruments were designed to measure both the improvement of students' vocabulary mastery and the changes in their learning behavior during the implementation of the Picture and Word Matching Technique. Vocabulary Tests (Pre-test and Post-tests) served as the main instrument used to measure the improvement of students' vocabulary mastery. The vocabulary test was administered before and after each cycle. Each test consisted of 20 items, including multiple-choice and matching exercises related to descriptive text topics such as describing people, animals, and places. The scoring rubric assessed three aspects of vocabulary knowledge: word recognition (students' ability to identify and spell words correctly), word meaning understanding (students' comprehension of word meanings), and word usage (students' ability to use vocabulary appropriately in sentences or descriptive contexts). The total score was converted into a scale of 100. The tests were validated by an English teacher at SMP Negeri 3 Pematangsiantar to ensure their appropriateness, clarity, and alignment

with curriculum objectives. Before implementation, the test items were also tried out in another class (VII-4) to check their reliability and clarity.

The content validity of the vocabulary tests was established through expert judgment using a blueprint that mapped test items to specific vocabulary indicators: word recognition (7 items), meaning comprehension (7 items), and contextual usage (6 items). The blueprint was reviewed by two English education experts and one experienced English teacher to ensure alignment with the curriculum objectives and descriptive text competencies. The reliability of the instrument was measured through a pilot test in Class VII-4 (n=28 students), yielding a Cronbach's alpha coefficient of 0.82, which indicates good internal consistency. Item analysis revealed that all items had acceptable difficulty indices (0.30-0.70) and discrimination indices (>0.25).

For the observation sheet, two observers (the researcher and a collaborating English teacher) conducted simultaneous observations during each lesson. Inter-rater reliability was calculated using Cohen's kappa, resulting in a coefficient of 0.78, indicating substantial agreement between the two observers. Any discrepancies in observation were discussed and resolved through consensus immediately after each session.

Observation Sheet was used to record students' engagement, participation, and enthusiasm during the learning process. The aspects observed included students' activeness, motivation, attention, and cooperation in the picture and word matching activities. The results of observation were analyzed qualitatively to support the quantitative data obtained from the tests.

Field Notes were written by the researcher during the teaching and learning process to describe the classroom atmosphere, students' attitudes, and significant events that occurred during the lessons. These notes served as qualitative evidence to support the improvement seen in the test results. The main variable of this study was students' vocabulary mastery, defined as their ability to understand, recall, and use English words accurately in descriptive writing. The independent variable was the Picture and Word Matching Technique, which served as the instructional treatment applied by the researcher to improve students' vocabulary mastery.

### Research Procedure

The implementation of this research followed two cycles based on Kemmis and McTaggart's model. Each cycle consisted of four stages: planning, acting, observing, and reflecting. To ensure replicability and clarity, the detailed lesson flow and activities for each cycle are presented in Table 1 below.

**Table 1. Lesson Flow and Activities per Cycle**

<b>Stage</b>	<b>Cycle I</b>	<b>Cycle II</b>
Duration	2 meetings x 80 minutes	2 meetings x 80 minutes
Media	-40 picture cards (15 x 10 cm) -40 word cards -Topics : animals, people	-60 pictures cards (larger variety) -60 word cards -Additional topics : places, objects
Warm-up (10 min)	Vocabulary introduction via pictures	Quick review game (flashcard race)
Main Activity (50 min)	1. Individual matching (20 min) 2. Sentence construction using	1. Pair matching competition (15 min)

	matched words (20 min) 3.Sharing (10 min)	2.Group collaborative writing (20 min) 3.Peer review & gallery walk (15 min)
Closing (20 min)	Vocabulary review & short quiz	Reflection & descriptive paragraph writing task

**Key improvements in Cycle II based on Cycle I reflection:**

- a. Increased number of vocabulary items from 40 to 60 words to provide more variety and challenge
- b. Changed from individual to pair/group work to promote collaborative learning and peer support
- c. Added competitive elements (matching race) to increase motivation
- d. Integrated writing tasks more systematically by requiring students to produce complete descriptive paragraphs using the learned vocabulary
- e. Implemented peer review activities to enhance critical thinking and vocabulary application accuracy

Planning stage involved the researcher identifying problems in vocabulary learning through the pre-test and initial observation. Based on these findings, the researcher designed a lesson plan that applied the Picture and Word Matching Technique. The materials focused on descriptive text topics such as describing people, animals, and places. Teaching media in the form of picture and word cards were prepared, as well as observation sheets and post-test questions for each cycle. Acting stage involved the researcher implementing the learning activities according to the lesson plan. Students were given picture and word cards and asked to match them correctly. Afterward, they were encouraged to use the new vocabulary in simple descriptive sentences. In the second cycle, the activities were made more interactive by adding group competitions (matching race) and collaborative writing tasks to enhance vocabulary retention and application. Observing stage involved the researcher and collaborator observing students' behavior and engagement during the learning process. The aspects observed included students' activeness, motivation, and accuracy in using vocabulary. Data were collected through observation sheets, test results, and field notes. Reflecting stage involved the researcher analyzing the test results and observation data to identify strengths and weaknesses in the learning process. The reflection from Cycle I was used to improve the planning and implementation in Cycle II. The research was stopped after Cycle II because students showed significant improvement in their vocabulary mastery and met the success criteria.

Both quantitatively and qualitatively to provide a comprehensive picture of students' improvement during the implementation of the Picture and Word Matching Technique.

Quantitative Data Analysis involved analyzing the results of the vocabulary tests to measure improvement between the pre-test, post-test I, and post-test II. The mean score of each test was calculated using the following formula:  $MEAN = \frac{\sum X}{N}$ . The improvement between cycles was analyzed by comparing the mean scores of the pre-test, post-test I, and post-test II. The percentage of students who achieved the minimum mastery criterion (KKM = 75) was calculated

using the following formula:  $P = (F/N) \times 100\%$ . The research was considered successful if at least 75% of the students obtained a score of 75 or higher. Additionally, effect sizes were calculated using Cohen's *d* to measure the practical significance of the intervention. Qualitative Data Analysis involved analyzing the qualitative data from observation sheets and field notes descriptively to explain students' learning behavior, motivation, and participation during the lessons. This analysis aimed to describe how the implementation of the Picture and Word Matching Technique affected students' engagement and supported the quantitative improvement observed in their test results.

### 3. RESULTS AND DISCUSSION

#### Research Findings

This study was conducted to investigate whether the implementation of the Picture and Word Matching Technique could improve students' vocabulary mastery in descriptive texts at Class VII-5 of SMP Negeri 3 Pematangsiantar. The research was carried out in two cycles, and each cycle consisted of four stages: planning, acting, observing, and reflecting. The findings were obtained from both quantitative and qualitative data.

#### Quantitative Findings

The quantitative data were obtained from the results of the vocabulary tests (pre-test, post-test I, and post-test II). The students' scores showed a steady improvement from one stage to another, as presented in Table 2 below.

**Table 2. Vocabulary Test Results Across Three Measurement Points**

Test Stage	Mean	SD	Min	Max	% $\geq 75$	Effect Size ( <i>d</i> )
Pre-test	60.00	8.45	45	75	20%	-
Post-test I	73.33	7.92	60	90	55%	1.62 (large)
Post-test II	86.00	6.18	70	100	90%	3.46 (large)

Note: Effect size calculated using Cohen's  $d = (M2-M1)/SD_{pooled}$ . The improvement was evident across all three aspects of vocabulary mastery assessed in the test:

- a. Word Recognition: Mean scores increased from 18.5/25 (pre-test) to 21.2/25 (Cycle I) and 24.1/25 (Cycle II), indicating students became more proficient in identifying and spelling vocabulary correctly.
- b. Word Meaning Comprehension: Mean scores improved from 14.8/25 (pre-test) to 18.5/25 (Cycle I) and 22.3/25 (Cycle II), showing enhanced understanding of word meanings through visual associations.
- c. Contextual Usage: The most significant improvement occurred in this aspect, with mean scores rising from 11.2/25 (pre-test) to 16.8/25 (Cycle I) and 21.1/25 (Cycle II).

The effect sizes (Cohen's  $d = 1.62$  for Cycle I and  $3.46$  for Cycle II) indicate large practical significance of the intervention, confirming that the Picture and Word Matching Technique had substantial impact on students' vocabulary mastery.

## **Qualitative Findings**

The qualitative data were collected through classroom observations and field notes. The observations revealed that the students became more active, motivated, and confident throughout the two cycles. In Cycle I, most students showed enthusiasm during the matching activities, but some still relied on their peers and made errors in using vocabulary in sentences. About 60% of students were classified as active participants, while the others were still hesitant. In Cycle II, students showed remarkable improvement. They worked more independently, collaborated actively in groups, and used new vocabulary more accurately. The classroom atmosphere became more interactive and enjoyable. Approximately 90% of the students were actively engaged, and they demonstrated higher confidence when constructing descriptive sentences. Field notes also indicated positive behavioral changes—students paid more attention to meaning, pronunciation, and context when learning new words. The use of picture-word pairs made it easier for them to remember and understand the meaning of new vocabulary.

## **Discussion**

The findings of this study revealed that the use of the Picture and Word Matching Technique successfully improved students' vocabulary mastery and engagement in learning descriptive texts. The improvement in students' test scores indicates that visual-based learning activities help students associate words with concrete images, making it easier to recall and understand their meanings. This result supports Paivio's Dual Coding Theory (2006), which emphasizes that verbal and visual information processed together in the brain strengthens memory retention. Furthermore, the increase in classroom participation and motivation aligns with the findings of Nuraeni and Lestari (2020), who reported that using picture-word cards improved students' vocabulary retention and classroom interaction. Similarly, Rahayu and Siregar (2022) found that the Picture and Word Matching Technique enhanced students' learning motivation and performance in vocabulary learning. In this study, the combination of visual and linguistic input made vocabulary learning more engaging and meaningful. The technique allowed students not only to memorize words but also to apply them in context through sentence construction and descriptive writing. It also promoted collaborative learning, where students shared ideas and supported each other during the matching and writing activities.

Overall, both the quantitative and qualitative results demonstrated that the Picture and Word Matching Technique was an effective strategy for improving students' vocabulary mastery in descriptive text writing. The improvement in students' test results and their positive learning behavior indicate that this technique can serve as a practical and enjoyable approach for English teachers to enhance vocabulary instruction in junior high school contexts.

## **4. CONCLUSION**

Based on the findings and analysis of this classroom action research, it can be concluded that the implementation of the Picture and Word Matching Technique significantly improved the students' vocabulary mastery in descriptive texts at the seventh grade of SMP Negeri 3 Pematangsiantar. The improvement was evident from both the quantitative and qualitative results.

The students' mean score increased from 60.00 in the pre-test to 73.33 in post-test I and 86.00 in post-test II. Likewise, the percentage of students achieving the minimum mastery criterion (KKM = 75) rose from 20% in the pre-test to 90% in post-test II. These findings indicate that the use of visual aids such as pictures and word cards helps students remember and understand vocabulary more effectively. Qualitative data from classroom observations and field notes also supported these findings. The students became more active, motivated, and confident during the learning process. The technique encouraged collaborative learning, fostered a more engaging classroom atmosphere, and allowed students to apply new vocabulary meaningfully in descriptive writing. In conclusion, the Picture and Word Matching Technique proved to be an effective and enjoyable method for teaching vocabulary to junior high school students. This technique not only enhanced students' word retention and comprehension but also increased their participation and interest in learning English. Therefore, it is recommended that English teachers apply this technique as an alternative strategy to improve vocabulary mastery, especially in teaching descriptive texts or other language skills where vocabulary plays a vital role.

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