THE EFFECT OF USING PICTURE FLASH CARDS IN TEACHING VOCABULARY TO TENTH GRADE STUDENTS OF SMAN 1 KUPANG

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Article Info	ABSTRACT
	This study investigates the effect of using picture flashcards on the vocabulary mastery of tenth-grade students at SMAN 1 Kupang. Vocabulary is a fundamental component of English language proficiency, and visual media such as picture flashcards are widely recognized for enhancing learners' comprehension, retention, and motivation. This research employed a one-group pre-test and post-test quasi-experimental design involving 26 students. A vocabulary test and observation checklist were used to collect quantitative and qualitative data. The results revealed a significant improvement in students' vocabulary mastery following the intervention. The average score increased from 78.4 on the pre-test to 93.27 on the post-test, with more students achieving scores above 85. Observation data showed that students were highly engaged, demonstrated active participation, and showed greater enthusiasm when learning through picture flashcards. These findings support theoretical perspectives such as Dual Coding Theory and Multimodal Learning Theory, which highlight the effectiveness of combining words with images to enhance memory and understanding.In conclusion, picture flashcards are an effective and practical medium for improving vocabulary mastery among EFL students. The study offers valuable pedagogical implications for English teachers and curriculum developers. However, the limited sample size and short intervention period suggest that further research is needed to investigate broader and long-term effects.

1. INTRODUCTION

The English language has become a global tool for communication in education, business, technology, and international collaboration. It plays an essential role in modern society because individuals with strong English skills gain better access to information and global opportunities. According to Nation (2001), vocabulary is the foundation of English proficiency because learners need sufficient words to understand and express meaning in all language skills. Cameron (2001) also highlights that vocabulary is central to language learning for both children and adults, as it supports comprehension and communication. Students cannot participate effectively in English learning without adequate vocabulary knowledge. In the Indonesian context, EF EPI (2023) reports that the majority of Indonesian learners still struggle with English proficiency due to limited vocabulary mastery.

In helping students overcome vocabulary difficulties, teachers may use various kinds of media to support the teaching and learning process. Media serve as tools that help teachers explain abstract concepts, provide meaningful learning experiences, and motivate students to participate actively in class. Puspitarini and Hanif (2019) state that learning media increase student engagement and make learning more interactive. Furthermore, Dwijayani (2019) explains that media stimulate students' thinking, attention, and interest, allowing them to understand new information more easily. Parede et al. (2022) add that visual media help learners concentrate and process new vocabulary effectively because pictures make meaning more concrete. In addition, Widodo (2018) notes that the use of appropriate media allows teachers to vary their teaching methods, making vocabulary learning more enjoyable.

Among the various instructional tools available, picture flashcards hold an important role in vocabulary teaching because they provide immediate visual representations of words. Picture flashcards are important because they help students associate objects with their English names without relying on translation, which strengthens conceptual understanding. Aisyah et al. (2020) also point out that flashcards help young learners recognize and remember words more quickly due to the strong visual support. Chen and Chan (2019) emphasize that flashcards make learning concrete and meaningful by presenting vocabulary in context through images. Nalendra et al. (2020) further highlight that picture-based vocabulary instruction helps students improve both recognition and recall of English words.

Beyond their importance, numerous studies have demonstrated the benefits of using flashcards for vocabulary acquisition. Sage et al. (2019) state that flashcards strengthen memory through repetition and retrieval practice, which are essential for long-term retention. Romadhon et al. (2021) argue that the colorful and attractive visuals on flashcards stimulate student motivation and make learning more enjoyable. According to Musyaffa (2020), flashcards allow students to review vocabulary independently, making them useful for self-study and personalized learning. In addition, Fitriani et al. (2021) found that students who learned vocabulary using flashcards performed better in vocabulary tests compared to those who used conventional methods. These findings show that flashcards not only support vocabulary learning but also enhance learner confidence and engagement.

Flashcards also offer practical benefits for classroom implementation. Chen and Chan (2019) note that flashcards are flexible and can be used in various teaching activities such as games, group tasks, and pronunciation drills. Sage et al. (2020) explain that flashcards provide frequent review opportunities, helping learners reinforce vocabulary over time. Khairunnisa et al. (2022) report that flashcards improve students' speaking skills because learners can practice pronouncing words while looking at the corresponding pictures. Meanwhile, Pasaribu et al. (2022) found that flashcards encourage active participation, as students enjoy guessing, matching, and categorizing pictures during lessons. These benefits show that flashcards are a versatile and highly effective tool for vocabulary instruction.

Given the crucial role of vocabulary in English language learning and the effectiveness of visual instructional tools, the use of picture flashcards is a practical and powerful strategy for improving students' vocabulary mastery. Picture flashcards help learners build strong mental associations, enhance memory, increase motivation, and promote active learning. As Nation (2011) states, vocabulary acquisition requires repeated exposure and meaningful interaction with words, and flashcards provide both in a simple, attractive, and engaging format. Therefore, integrating picture flashcards into classroom

activities can significantly support students' development of English vocabulary and overall language proficiency.

Previous research has extensively examined the strategies and perceptions surrounding vocabulary teaching and learning in English as a Foreign Language (EFL) contexts, highlighting various effective methodologies and their impacts on student outcomes. Firstly, Sage et al. (2020) investigated digital flashcards in an online learning environment, revealing significant improvements in test performance and self-testing habits among learners, underscoring their role in enhancing motivation and retention. Secondly, Fitriani et al. (2021) explored the effects of flashcards on pupils' academic outcomes in an Indonesian setting, finding positive influences on test scores through visual aids that stimulated interactive learning activities. Thirdly, Pasaribu et al. (2022) examined flashcards' contribution to vocabulary enhancement, noting heightened student enthusiasm and engagement when images were incorporated into gameplay, resulting in more effective learning compared to conventional methods. Fourthly, Razaq (2022) focused on flashcards for improving word classes in vocabulary instruction, reporting substantial post-test gains in learner proficiency and highlighting their utility for targeted skill development. Fifthly, Supriatin and Rizkilillah (2020) highlighted flashcards as a valuable tool for young learners, demonstrating how they reduce mental blocks and promote retention, thereby improving overall language acquisition. These studies collectively provide a robust evidence base, affirming flashcards as a versatile, evidence-based strategy particularly suited to EFL contexts.

Building on this theoretical and empirical foundation, the present study investigates the effect of using picture flashcards in teaching vocabulary to tenth-grade students at SMAN 1 Kupang, a public high school in East Nusa Tenggara, Indonesia. By evaluating their impact on vocabulary mastery and student engagement within a one-day intervention, this research seeks to offer practical insights for educators, contributing to the ongoing discourse on accessible and innovative teaching strategies in foreign language education. The findings have the potential to inform pedagogical practices, helping to elevate Indonesia's English proficiency levels and equip students for success in an increasingly interconnected world.

2. METHODOLOGY

This study adopts a quasi-experimental method with pretest and posttest designs to evaluate the causal effects of picture flashcards on vocabulary teaching, allowing for the measurement of changes attributable to the intervention.

3. RESULT AND DISSCUSION
Student Demographics

This study was conducted in Grade 10 of SMAN 1 Kupang, involving a total of 26 students who participated. The demographic breakdown of the participants is as follows:

Table 1. Gender Distribution of Participants

Category	Number of Students
Total Students	26
Male	12
Female	14

Improvement of Vocabulary Mastery

To measure the effectiveness of using picture flashcards in improving students' vocabulary acquisition, pre-test and post-test were conducted. The pre-test measured students' initial vocabulary knowledge before the intervention, while the post-test assessed their improvement after being taught using picture flashcards. The results are summarized in Table 2 below.

Table 2: Pre-Test Scores Distribution (Before Intervention)

Score Range	Number of Students	Percentage (%)
50	2	7.7%
65	4	15.4%
70	5	19.2%
80	3	11.5%
85	3	11.5%
90	2	7.7%
95	4	15.4%
100	3	11.5%
Total	26	100%

Table 3. Post-Test Score Distribution (After Intervention)

Score	Number of Students	Percentage (%)
80	2	7.7%
85	2	7.7%
90	9	34.6%
95	7	26.9%
100	6	23.1%
Total	26	100%

Observation Results

Observations during classroom implementation were conducted using an observation sheet that assessed both teacher performance and student engagement.

Table 4. Summary of Teacher's Performance

Observation Criteria	Result
Opened the class with greetings and prayer	✓
Explained learning objectives clearly	✓
Used picture flashcards to introduce vocabulary	✓
Modelled pronunciation clearly	✓
Engaged students in group/pair activities	✓
Monitored students' progress actively	✓
Provided constructive feedback	✓
Reflected at the end of the session	✓

Table 5. Student Engagement Levels

Engagement Criteria	Level
Responded during vocabulary drilling	Very Active
Participated in flashcard activities	Active
Collaborated in mini-dictionary activity	Active
Showed enthusiasm in presentations	Active
Completed individual tasks	Very Active
Reflected on their learning	Active
Listened attentively	Very Active
Asked and answered questions	Active
Helped peers during group work	Active
Showed interest in picture flashcards	Very Active

Based on the observation data, it was found that the level of student engagement was high, and the teacher's instructional effectiveness was rated as very effective. Students actively participated in both individual and group activities, and there was a noticeable increase in their motivation during the learning process.

The observer noted that passive students began participating more actively once the picture flashcards were introduced, especially during group-based activities. Furthermore, the flashcards were helpful in supporting visual learning and reinforcing word-meaning associations.

Discussion

Comparison of Pre-test and Post-test Scores

The data in Tables 2 and 3 show a clear improvement in vocabulary mastery among the students. The number of students achieving higher scores (90 and above) increased significantly in the post-test. Prior to the intervention, only 9 students scored 90 or above, whereas after the use of picture flashcards, this number rose to 22 students.

The improvement can also be seen in the increase of the class average score from the pre-test to the post-test, which was calculated as follows:

Pre-test average score:

Total Score =

$$\frac{(50\times2)+(65\times4)+(70\times5)+(80\times3)+(85\times3)+(90\times2)+(95\times4)+(100\times3)}{26} : 78.4$$

Post-test average score:

Total Score =

$$\frac{(80\times2)+(85\times2)+(90\times9)+(95\times7)+(100\times6)}{26} : 93.27$$

showed a significant improvement in students' vocabulary mastery after the implementation of picture flashcards as a learning media. Below is the comparison summary:

Table 6 Comparison between Pre-Test and Post-Test

Indicator	Pre-Test	Post-Test	Difference
Average Score	78.4	93.27	+14.23
Highest Score	100	100	-
Lowest Score	50	80	+30
Standard Deviation	15.41	6.87	-8.54 (more consistent)

Students Scoring ≥ 85	10 students (38%)	22 students (85%)	**+12 students**

This data illustrates a clear upward shift in performance, with not only a higher mean score but also a smaller standard deviation, indicating more consistent student performance. Additionally, the number of students scoring 85 and above increased significantly after the use of picture flashcards.

Comparison with Previous Studies

These results are consistent with prior research. For example:

- Depari et al. (2017) found that picture card games significantly improved vocabulary mastery among elementary students.
- Kumaat et al. (2023) also reported increased vocabulary retention through flashcard use.
- Kaloka (2021) and Paris (2022) emphasized the effectiveness of visual aids and word card activities for vocabulary development.

The current research strengthens these findings by applying the method in a real classroom setting through Classroom Action Research (CAR) and tracking student improvement over time, further reinforcing the value of interactive and visual learning aids.

Interpretation of Results

The findings from the pre-test and post-test results clearly show that the use of picture flashcards had a positive impact on students' vocabulary mastery. Prior to the intervention, most students scored between 50–85, with only a few reaching 90 or above. After the implementation of picture flashcards, the scores significantly improved, with a majority of students scoring between 90–100. This indicates an increased understanding and retention of vocabulary.

a. Effectiveness of Picture Flashcards

The improvement in scores indicates that picture flashcards were effective in enhancing vocabulary retention and comprehension. The use of visual media helped bridge the gap between form and meaning, especially for young learners who are more responsive to imagery and colors.

b. Student Engagement and Participation

Observation data revealed that:

- Students were more motivated during lessons involving flashcards.
- Activities such as group work, games, and presentations fostered collaborative learning.
- Students actively responded and engaged during vocabulary practice, as seen in observation results where most students were categorized as active or very active.

This implies that picture flashcards not only helped cognitive learning but also improved students' affective and social domains.

c. Improvement in Classroom Atmosphere

The teacher's consistent use of interactive techniques and encouragement contributed to a positive and supportive learning environment. The use of picture flashcards made the vocabulary lessons more dynamic, interactive, and enjoyable.

d. Retention and Pronunciation

Many students could recall and pronounce words more accurately due to the association between the image and the vocabulary item. This supports the dual coding theory, which suggests that visual and verbal information processed together enhances memory retention.

This improvement supports the Dual Coding Theory (Paivio, 1986) which suggests that verbal information, when paired with visuals, enhances memory retention. Flashcards provide both verbal input and visual context, helping students to better internalize and recall new vocabulary. It also aligns with Mayer's (2001) Multimodal Learning Theory, which

states that learning is most effective when multiple modes of information (visual, verbal, and kinesthetic) are combined.

Moreover, classroom observations revealed high levels of engagement, with students actively participating in group work, flashcard games, and vocabulary drills. These activities not only made learning more enjoyable but also facilitated social interaction, a key element of Vygotsky's Constructivist Theory, which emphasizes the role of social context in learning.

Implications and Limitations

- Implications
1. For Teachers:

Teachers can utilize picture flashcards as an effective tool to enhance vocabulary learning, especially for young learners. It fosters not just memorization but also meaningful engagement through fun and interactive methods.

2. For Curriculum Developers:

The study highlights the need to integrate visual-based and game-based vocabulary strategies into primary EFL curriculum frameworks.

3. For Future Researchers:

The research provides a model of how picture flashcards can be implemented and assessed through CAR methodology, offering a foundation for further studies across different age groups or school contexts.

- Limitations

1. Sample Size and Scope:

The study was limited to 26 students from a single school. Thus, generalizations should be made cautiously.

2. Time Constraints:

The intervention was conducted within a short duration. A longer implementation period could yield even more significant insights.

3. Limited Vocabulary Range:

The flashcards covered a basic vocabulary set. Further studies could expand the vocabulary level to assess broader language impact

4. CONCLUSION

The study conducted at SMAN 1 Kupang on the use of picture flashcards to improve vocabulary mastery among tenth-grade students demonstrated significant positive outcomes. The findings revealed a substantial increase in students' vocabulary comprehension, as shown by the rise in average test scores from approximately 78.4 in the pre-test to 93.27 in the post-test. This improvement indicates that picture flashcards effectively support vocabulary acquisition by enhancing memory retention and understanding. Additionally, observations highlighted high levels of student engagement and motivation during lessons incorporating flashcards, fostering an interactive and collaborative learning environment. The teacher's effective use of the flashcards, along with clear instruction and active facilitation, contributed to a productive classroom atmosphere. The results align well with educational theories such as Dual Coding and Multimodal Learning, which emphasize combining visual and verbal information for better learning outcomes. Despite its promising results, the study's limited sample size and duration suggest that further research is needed to examine long-term impacts and broader applicability. Overall, this study confirms that picture flashcards are a valuable and practical tool to enhance vocabulary mastery in elementary EFL classrooms, offering meaningful implications for both teachers and curriculum developers.

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