Improving Students' Vocabulary Mastery through Visual Learning Style

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ABSTRACT

The aim of this research is to find whether the use of visual learning style can improve students' vocabulary of the seventh grade of MTsN 2 Kota Palu. This research used a quantitative research design, using a pre-experimental design, this type of research design only has one class, namely the experimental class. that means only one group of students are given a pretest, treatment and posttest. The population of this study was 7th grade students at MTsN 2 Palu City, totaling 256 students, using purposive sampling, 32 students in class VII D were selected. Data collection in this study used tests in the form of pretests and posttests. The results of this study showed that visual learning styles can improve students' vocabulary mastery, as evidenced by an increased in the average score from 14.06 (pretest) to 72.40 (posttest), with an increase of 58.34. These findings indicated that the visual learning style strategy is effective in improving students' vocabulary mastery.

1. Introduction

In learning English, mastery and understanding of vocabulary is very necessary as a basis for mastering other English language skills. Muhyidin et al, (2018) stated the more vocabulary the students have, the more skilled they will be in language. Understanding vocabulary is also an important aspect for understanding and learning English skills such as listening, speaking, reading, and writing. According to Badriah (2022) that in the English learning process, students will encounter difficulties in the language since they need to practice their vocabulary without understanding it. Due to this, vocabulary development is crucial in the English language learning process so that all of the nuances in the language may be discussed (Aswad et al., 2019; Yaumi et al., 2023; Ko et al., 2025).

Because of the importance of vocabulary in learning English, it is expected that junior high school students already have a stock of vocabulary that can make good and correct sentences in learning. As stated by Biyansyahna & Maulana (2020), junior high school students must master a vocabulary of more or less 1000-1500 words. Therefore, junior high school students must have sufficient vocabulary to communicate and write.

However, in reality, vocabulary mastery among students in Indonesia is still relatively low. Several studies have found that vocabulary mastery among students in Indonesia is still low. Machfudi et al, (2021) stated that understanding the meaning of pronunciation, words and mistakes in spelling is one of the difficulties which has by the students. The results of another study conducted by Machfudi & Afidah (2022) showed the similar results, but differentiated by memorizing and remembering aspect.

This was also experienced by students at MTsN 2 Kota Palu. From the results of questions and answers conducted by researchers with one of the English teachers at MTsN 2 Kota Palu through via WhatsApp chat conducted on November 6, 2024, it can be concluded that English language skills at MTsN 2 Kota Palu are still relatively low. This is caused by a less supportive environment and students' poor retention memory. Therefore, the key to create an effective learning process in this modern educational era is by acknowledging how individuals learn.

There are many techniques which can be used to improve students' ability to improve vocabulary. Teachers who understand and know how students learn can plan teaching strategies to improve student learning outcomes. In this case, teachers can plan teaching strategies by applying a visual learning style to help students meet their learning needs not only through explanations but also complemented by students' visual needs. Teachers can apply a visual learning style by displaying things that can be seen directly by the eye, through pictures, diagrams, videos, color, flashcard, etc.

A visual learning style is a medium which make students improve their vocabulary easier through what they see. The words that students see accompanied by pictures will make it easier for them to store the words in their memory. Supit et al, (2023) stated that visual learning style is a strategy which depends more on the sense of sight. Someone who has experienced visual learning style will more easily receive information through what he/she sees with their eyes. Students will more easily receive information in visual form, because what they can see directly with their eyes will be easier to remember than what they hear.

Visual learning style can help students to remember new words that they will see through their eyes. This method will not only improve students' vocabulary mastery but it can also make students explore language through pictures or impressions that they see in real life. Visual learning style can also make students read, spell and remember well. Students who learn through pictures or things they can see will grow interest and motivation to learn because students don't just listen to explanations of the material.

There are several previous studies that support this research to prove that visual learning style are one of the learning strategies for improving students' vocabulary. A study conducted by Prasetyo (2023) showed that the use of visual aids can increase rural students' vocabulary as evidenced by the results of daily assignment assessment scores for pretest and posttest. Another research was conducted by Kartiasih et al, (2023) with results namely The application of Visual Vocabulary significantly improved the ability of class VII students at SMP Negeri 32 Sigi as evidenced by the average score of students in the experimental group pre-test (30.45) and post- test (65.22) which was 36.59. Meanwhile, in the control group the pre-test (20.6) and post-test (35) was 16.2.

The researcher's aim in researching this matter is because the researcher is very confident that there are many problems regarding students' mastery of vocabulary. This is caused by a lack of motivation to learn and students' memory. Therefore, the visual learning style can provide new experiences and motivation to learn because students can explore words through something that can be seen directly and can improve vocabulary mastery.

2. Methodology

This research used quantitative research. Stated by Sugiyono (2015), In order to evaluate preconceived hypotheses, quantitative research methods—which are grounded in the positivist philosophy—are employed to identify specific groups or samples, gather data using research equipment, and analyze quantitative and artistic data.

2.1 Research Design

A pre-experimental design will be employed in this study. There is only one class for this kind of research. This indicates that just one student group received the pre-, treatment-, and post-tests. This research design combines posttest and pretest by conducting a test on one group before being given treatment and after being given treatment. The pretest will be carried out at the beginning of the research and the posttest will give when the research is complete.

Pretest	Treatment	Posttest
O	X	O

Notes:

O = Observation or test (Pretest/Posttest)

X = Treatment (Intervention or experimental action)

Winarto (2018)

2.2 Participants

The population of this research was 7th grade at MTsN 2 Palu City. There were six classes from VII A up to VII H. Each class consisted of 32 people. The total of population is 256 students

A sample is a portion of the population that will be analyzed in a study. In conducting this research, researchers use purposive sampling to obtain samples. "Purposive sampling is sampling using certain considerations in accordance with the desired criteria to be able to determine the number of samples to be studied" (Sugiyono 2015). Based on that statement, the researcher will choose the class with the lowest command of English so that the researcher can see clearly how much influence the visual learning style has in improving students' vocabulary. So, from the results of observations

made by researchers, class D is the class with the lowest command of English among all classes. Therefore, the researcher will choose class D in class 7 at MTsN 2 Palu City. But when they went into the field, only 25 students took the pretest and posttest, because 7 other students were absent when the test was given.

2.3 Research Variables

The independent variable and the dependent variable are the two variables that make up this research variable. The dependent variable was the students' vocabulary, while the independent variable was their visual learning technique.

2.4 Instruments

A test is the instrument utilized in this study. Pre-test and post-test were the tests that were administered. While the post-test was administered at the final meeting or following treatment, the pre-test was administered at the first meeting or prior to treatment. Meaning, scrambling, and sentence construction tests will be administered.

2.5 Data Collection

Data collection techniques are a way to obtain accurate data to support this research. In conducting this research, researchers will use tests and treatments. The tests that will be given are meaning test, scrambling tests, and sentence making tests. All tests will be pre-test and post-test and the treatment will be carried out 6 times by the researcher. In carrying out the treatment the researcher will use a visual learning style to improve students' vocabulary

1.) Pre-Test

This pre-test measures students' vocabulary. In this research, the researcher will provide three kinds of tests namely meaning test, scrambling test, and making sentence test.

2.) Post-Test

The post-test will be given after the treatment. Researcher provides the same type of test options for pre-test and post-test. A post-test will be given to determine the effect of the treatment given and whether the visual learning style is successful in improving students' vocabulary.

Table 1. Scoring System

Aspects	Criteria	Score	Number of Question	Obtained Score
Meaning Test	Very Understand	3		
	Understand	2	4	
	Less Understand	1		
Scrambling Test	Very Understand	3		
	Understand	2	4	
	Less Understand	1		
Making Sentence Test	Very Understand	3		
	Understand	2	4	
	Less Understand	1		

Notes :

Final Score = (Obtained Score ÷ Maximum Score) × 100

Adapted from Nurfitri (2018)

2.6 Data Analysis

After conducted the pretest and posttest, the researcher will analyze the students' scores using SPSS 30. The steps that the researcher took in the data analysis are as follows:

1.Scoring the pre-test and post-test.

The first step is to give scores to the pre-test and post-test results. The researcher will compute the individual scores for both the pre-test and post-test.

2.Arranging the score from pre-test and post-test

After all the scores are given, the researcher arranges the scores in a certain order, usually from the highest to the lowest or vice versa. This sorting helps in identifying changes and comparisons between the pre-test and post-test scores

3.Analyzing Descriptive Statistics.

This step is to conduct a descriptive statistical analysis, namely calculating the average score from the pre-test and post-test. This analysis provides an overview of changes in students' vocabulary abilities after the treatment is given, as well as determining whether there is a significant increase.

4.Inferential statistic using normality test

In this research, the researcher will conduct a normality test to determine whether the data are normally distributed. Since the sample size is fewer than 50 students, the Shapiro-Wilk test will be used with a significance level of a=0.05. The data are considered not normally distributed if the test result is less than o (<n-0.05). Conversely, if the result was greater than a (>a=0.05), the data were deemed normally distributed.

3. Result and Discussion

3.1 Result

The data were conducted at MTsn 2 Palu City from February 21, 2025, to March 19, 2025, using a pre-experimental design. Data collection was carried out by the researcher used a meaning test, scrambling test, and making sentence test which were divided into 2 parts, namely pre-test and post-test. The pre-test was given at the first meeting and the post-test was given at the last meeting for class VII D as the experimental class. 3.1. Sub-heading of the discussion

a. The Result of Pretest

The purpose of the pre-test is to gauge pupils past vocabulary knowledge. On February 21, 2023, the pre-test for class VII D was administered by the researcher. The pretest results showed a maximum score of 36.10 and a minimum score of 0. At MTsN 2 Palu City, no student achieved the standard score of 70, which was the KKM success criterion. Following pretest scoring, the following table displays the students' mean score:

Table 2. Mean score of student's pretests

	N	Min	Max	Mean	Std. Deviation
Descriptive Statistics					
Pre-Test	25	0.00	36.10	14.06	11.611
Valid (N)	25				

The table 1 indicates that students have a maximum score is 36.10 and a minimum score is 0.00. Additionally, it shows that the standard deviation is 11.611 and the mean score for the vocab test of the posttest is 14.06 for the students.

b. The Result of Posttest

After the treatment, on March 19, 2025, the researcher administered the posttest to the experimental to assess their vocabulary mastery. The purpose of this posttest was to measure the student's level of progress and to determine whether ot not the treatment provided has progressed. The posttest results obtained were with the lowest score of the students was 33.30 and the highest score was 97.20. There are 13 Students who passed with the school standard used in MTsN 2 Kota Palu, which is 70. It shows that more students improve their vocab skill after treatment. After scoring the pretest, the mean score of student's pretests can be look at the following table:

Table 3. Mean score of student's posttests

Descriptive Statistics

	N	Min	Max	Mean	Std. Deviation
Pre-Test	25	33.30	97.20	72.38	19.771
Valid (N)	25				

The table 3 indicates that students have a maximum score is 97.20 and a minimum score is 33.30. Additionally, it shows that the standard deviation error is 19.771 and the mean score for the vocab test of the posttest is 72.38 for the students.

c. The Comparison Between the Pretest and Posttest

In addition to presenting the mean score for the vocab test, this research compares the pretest and posttest mean score as well as their total means and standard deviations. The result present in the paired samples statistics table. It can be seen in the following table:

Table 4. The paired samples statistics of the pretest and posttest

Paired Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Pre-Test	25	14.06	11.611	2.3013
Post-Test	25	72.38	19.771	3.9542

The mean score of the students who were present was 14.06, while the mean score of the posttest was 72.38, as shown in table 4. It indicates that pupils' comprehension of language has improved as a result of their visual learning approach.

d. Test Normality

Table 5. Results of Normality Test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PRETEST	.132	25	.200*	.926	25	.069
POSTTEST	.157	25	.115	.923	25	.059

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

a. Lilliefors Significance Correction

Tests of Normality Shapiro-Wilk used by researchers to test the normality test of the data in this study. The significant results obtained were .065 for the pretest and .059 for the posttest. All data obtained values > 0.05, thus it can be stated that the results of the Shapiro-Wilk normality test indicate that all data are normally distributed.

e. Result of Testing Hypothesis

SPSS 30 was used to test the hypothesis. The researcher used a paired sample t-test (significance testing) in this instance to ascertain whether there was a significant difference between the mean scores of the students' pretest and posttest findings.

Table 6. Paired samples Test of the Pretest and Posttest

		Paired Sample Test								
		Pair Difference							Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided P	Two-Sided P
					Lower	Upper				
Pair 1	Pretest-Posttest	-58.32	24.227	4.845	-68.424	-48.323	-12.037	24	<.001	<.001

The table 6 indicates that the mean score from pretest and posttest was 58.32, standard deviation from this research was 24.227, and standard error mean was 4.845. According to the difference's confidence interval, the lower and upper limits of this study were -68.424 and -48.323, respectively. the outcome of statistical analysis with degree of freedom (df) = N - 1 and level of significance 0,05, where N = 25 df = 24. Alpha (α) 0.001< 0.05 was greater than the probability value. This indicates that the null hypothesis (Ho) was rejected and the alternative hypothesis (Ha) was accepted.

The criteria of taking decision

• If probability (sig.) > 0.05 it means that Ha is rejected

• If probability (sig.) < 0.05, it means that Ha is accepted

The result showed that there is a difference in vocabulary teaching before and after the use of visual learning style. As a result, the researcher found that visual learning style can help grade VII D students at MTsN 2 Kota Palu improve their vocabulary mastery.

3.2 Discussion

This research aims to find whether the use of visual learning style can improve students' vocabulary of the seventh grade of MTsN 2 Kota Palu. From the results of the pretest given, in fact there are still many students whose vocabulary mastery is below the standard of the passing grade. The main problem is the inability of students to make sentences due to very minimal vocabulary mastery, as indicated by almost 25 students who did not do the sentence-making test. Sunariarti et al, (2019) stated students with poor vocabulary mastery will struggle to articulate their thoughts, form sentences, string words together, and employ sentence variations in their writing; conversely and students with strong vocabulary mastery will benefit from broader vocabulary insight and knowledge, which will enable them to compose or create sentences effectively. In addition, Machfudi et al. (2021) also said that vocabulary will be extremely beneficial in the communication of concepts or ideas when perusing a straightforward English text. If students' vocabulary use is good, then students will easily capture information or content from the text.

Based on the problems faced by students, namely limited vocabulary and difficulty in making sentences, the researcher tried to carry out treatment using a visual learning style. By using visual learning style, a vocabulary teaching method that will make it easier for students to understand and improve vocabulary through what they see, this is supported by Supit et al, (2023) which claim that using a visual learning approach can aid students in remembering directly visible course content, which has a favorable correlation with the learning outcomes attained. Using visual learning style in the classroom can add unique experience and creativity to each lesson (Kolodii et al, (2017). Research has shown that the use of visual learning styles changes the classroom atmosphere from monotonous to more dynamic, making learning more interactive and enjoyable (Amalia et al., 2022; Rahman & Widyastuti, 2023; Sachiya et al., 2025). Research has also shown that learning with visual aids not only increases student motivation but also improves learning outcomes by engaging students and facilitating better understanding of the material. In addition, visual learning styles can motivate students to actively participate in their education. Overall, applying visual learning styles to learning is a powerful strategy for fostering a more stimulating and effective learning environment.

After conducted the treatment, the researcher gave posttest to students with the aim of seeing the progress of the students' vocabulary mastery, then the researcher got the posttest results that increased compared to the pretest. These data show positive improvements in students' vocabulary mastery, because the majority of students can do all the tests (meaning test, scrambling test, and making sentence test). The majority of students who can do sentences also understand

how to make good and correct simple sentences. This progress shows that the teaching method used may have contributed to improving their vocabulary. By using visual learning style, students can improve their vocabulary in a unique way, students can see directly the vocabulary given through visual aids such as pictures, videos, mind mapping, diagrams, doodles, etc. Therefore, visual learning style can improve students' vocabulary. This is supported by Indriyaningrum et al, (2022) who said that "visual media also succeeded in increasing students' learning motivation, so it can be seen that visual learning style can work to improve students' vocabulary".

Based on the discussion above, the results of this study are that visual learning style can improve students' vocabulary. The existing data shows positive scores in students' vocabulary mastery, indicated that students have made significant progress in their abilities and are now closer to the expected level of mastery. The increase in the mean score and score range indicates that the teaching strategy has effectively improved their vocabulary mastery. In this case, the researcher can explain that visual learning style has a very important influence in fostering students' learning motivation and can improve students' achievement in vocabulary mastery.

4. Conclusion

The researcher came to the conclusion that students' vocabulary mastering can be enhanced by a visual learning approach based on the data. The positive statistical analysis and the notable increase in mean scores from the pretest to the posttest suggest that using a visual learning style as a teaching approach improves students' vocabulary knowledge. In this instance, it may be claimed that a visual learning approach significantly contributes to pupils' vocabulary growth. This finding aligns with previous studies emphasizing the importance of visual aids in language learning. Visual elements such as images, videos, and diagrams help learners better retain and recall new vocabulary. Therefore, incorporating visual strategies into teaching methods can be an effective way to support language development.

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