



The Influence of Visual, Auditory, Kinesthetic (VAK) Learning Methods in Enhancing English Vocabulary for Students at MTs Nur-Rahma Kota Bengkulu

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ABSTRACT

This study aims to determine the effect of the Visual, Auditory, Kinesthetic (VAK) Learning method on the English vocabulary mastery of seventh-grade students at MTs Nur Rahma Kota Bengkulu. The research method used was quantitative with a pre-experimental design (One-Group Pretest-Posttest Design). The subjects of this study were 14 students of class VII Mekkah. Data were collected through vocabulary tests (pre-test and post-test) and analyzed using the Normality Test and Paired Sample t-Test with the assistance of SPSS version 27. The results of the study showed a significant improvement in students' vocabulary mastery after the implementation of the VAK method. This was evidenced by the average post-test score (61.57) being higher than the average pre-test score (41.43), as well as the result of the paired sample t-test with a significance value (2-tailed) of $0.001 < 0.05$. Therefore, it can be concluded that the Visual, Auditory, Kinesthetic (VAK) Learning method is effective in improving the English vocabulary mastery of seventh-grade students at MTs Nur Rahma Kota Bengkulu.

Keywords: Visual, Auditory, Kinesthetic (VAK) Learning, English Vocabulary

INTRODUCTION

English is an international language and serves as a second language in several countries, including Indonesia. It requires mastery of four skills: listening, speaking, reading, and writing, as well as essential language components such as grammar, pronunciation, spelling, and vocabulary. Among these, vocabulary plays a vital role. According to Joseph P. O'Rourke (1999), "Mastery of vocabulary is one of the factors involved in mastering English as a Foreign Language" (V. R et al., 2023).

A broad vocabulary helps students understand others and express ideas clearly. Expanding vocabulary supports the improvement of listening, speaking, reading, and writing skills (Sumardi, 2022). However, students often face difficulties in learning and memorizing new words because they lack motivation and encouragement (Rohmatillah, 2014; Nguyen et al., 2021). Nyikos and Fan (2007) explain that learning vocabulary is a complex process since students must memorize thousands of words to achieve fluency (Risnawati et al., 2023). Traditional methods such as writing and memorizing word lists are often monotonous and make students lose interest in English lessons (Yudha & Mandasari, 2021). Therefore, it is necessary to apply effective and engaging teaching methods that suit different learning styles.

Observations at MTs Nur Rahma, Bengkulu City, showed that students, especially in class 7 Mekkah, had difficulty remembering and applying vocabulary in context. This was caused by limited exposure to English, unvaried teaching methods, and low motivation. To address this, the Visual, Auditory, and Kinesthetic (VAK) learning method was used. This method combines visual learning through seeing, auditory learning through listening, and kinesthetic learning through physical activities to improve understanding and memory.

Research has shown that the VAK method is effective in enhancing vocabulary mastery. For example, Oes Udju (2022) found that its application at SMPN Haliulun increased students' participation and interest in learning English. In this study, basic vocabulary such as words related to body parts, household items, and school objects was taught using pictures in the visual method, pronunciation and repetition in the auditory method, and interactive games in the kinesthetic method.

Based on these findings, the research is titled "The Influence of Visual, Auditory, Kinesthetic (VAK) Learning Methods in Enhancing English Vocabulary." This study is expected to serve as a useful reference for future researchers.

MATERIALS AND METHODS

This research employed a quantitative approach using a pre-experimental design to examine the influence of the Visual, Auditory, and Kinesthetic (VAK) learning method on students' English vocabulary mastery. The pre-experimental one-group pretest-posttest design was selected because it allows the researcher to measure changes in students' performance before and after the implementation of the treatment without a control group for comparison (Sugiyono, 2013). The study was conducted at MTs Nur Rahma, Bengkulu City, a junior high school established in 2022 with limited facilities and teaching resources. The school was chosen because its English teaching methods are still conventional, relying mainly on memorization and textbook-based activities, which have led to students' low motivation and difficulties in mastering vocabulary.

The population of this study included all seventh-grade students at MTs Nur Rahma, consisting of two classes: 7 Mekkah and 7 Madinah, totaling 28 students. Using a non-probability purposive sampling technique, class 7 Mekkah, comprising 14 students (6 males and 8 females), was selected as the research sample. This class was chosen because preliminary observations showed that students in 7 Mekkah experienced more difficulties in vocabulary learning and required more engaging teaching methods.

The independent variable (X) in this study was the VAK learning method, which integrates visual, auditory, and kinesthetic learning activities to accommodate different learning styles. The dependent variable (Y) was students' English vocabulary mastery, measured by their ability to recognize, understand, and use vocabulary appropriately in context. The instruments used for data collection included observation, tests, and documentation. Observation was conducted throughout the research process to record students' engagement, participation, and interaction during the learning sessions. Tests consisted of a pretest administered before the treatment and a posttest after the treatment to measure improvement in vocabulary mastery. Documentation such as photos, attendance records, and teaching materials was used to support data validity and provide contextual evidence of the learning process.

The treatment applied to the experimental class involved three stages corresponding to the VAK components. In the visual stage, students learned vocabulary through pictures and visual

media; in the auditory stage, they listened to and repeated vocabulary through songs and pronunciation drills; and in the kinesthetic stage, they engaged in games and physical activities such as pointing or matching objects. These activities aimed to create a more interactive and enjoyable learning experience to enhance students' vocabulary retention.

Data were analyzed using quantitative statistical techniques. The paired-sample t-test was employed to determine whether there was a significant difference between students' pretest and posttest scores after the implementation of the VAK method. The analysis was conducted using SPSS software. Before the t-test, normality and homogeneity tests were performed to ensure that the data met statistical assumptions. The Shapiro-Wilk test was used for normality testing, while Levene's test was applied to assess homogeneity. A significance level of 0.05 was used to interpret the results; if the p-value was lower than 0.05, it indicated a significant improvement in students' vocabulary mastery after using the VAK method.

Overall, the combination of systematic data collection through observation, testing, and documentation, along with rigorous quantitative analysis, ensured the validity and reliability of this research. This methodological framework provided a clear basis for evaluating the effectiveness of the VAK learning method in enhancing students' English vocabulary at MTs Nur Rahma, Bengkulu City.

RESULTS AND DISCUSSION

The general overview of the research variables in this study, including the pre-test and post-test of the experimental class, is presented through a descriptive statistical table. The table provides detailed information on the range, mean, and standard deviation, making it easier to understand the distribution and variation of students' performance before and after the treatment. These descriptive statistics serve as the basis for interpreting the effectiveness of the applied learning method, as presented systematically in Table 1 below.

Table 1. Descriptive statistics test result

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Pre test	14	18	90	41.43	20.568
Posttest	14	40	88	61.57	15.732
Valid N (listwise)	14				

Based on the data, the pre-test scores in the experimental class ranged from a minimum of 18 to a maximum of 90, with an average score of 41.43 and a standard deviation of 20.568. Meanwhile, the post-test scores ranged from 40 to 88, with an average score of 63.42 and a standard deviation of 15.732. These results indicate an improvement in students' performance after the treatment.

The English vocabulary skills of the 14 students in the experimental class were developed using the Visual, Auditory, and Kinesthetic (VAK) learning method. Students received treatment through vocabulary learning using various materials, including parts of the body, adjectives and verbs, school objects and rooms, types of clothing, and singular and plural nouns (things at home). The learning process integrated visual, auditory, and kinesthetic styles, enabling students to be more actively engaged in activities and to more easily remember and master new

vocabulary. This approach allowed students to learn according to their individual learning preferences, increased their motivation, and facilitated a deeper understanding of the material. Research data were collected through students' pre-test and post-test scores and then analyzed to assess improvement in their vocabulary mastery.

Table 2. The total score of Students Pre-test and Post-test

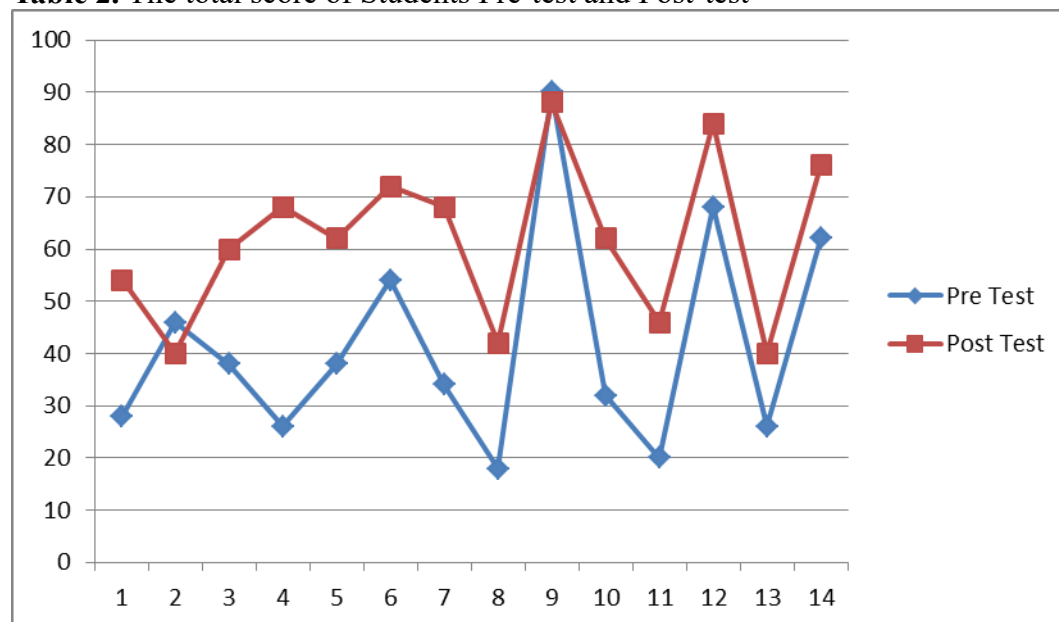


Table 3. Grade Result in the Experimental Class

No	Name	Pre test	Post Test
1.	Algibran Hastan Pratama	28	54
2.	Aqila Zevanya. R	46	40
3.	Arrayan Al-Fikri Kurniawan	38	60
4.	Bilal Rizkyllah	26	68
5.	Ibrahim Alie	38	62
6.	Intan Putri Kirana	54	72
7.	Lutfi Re ski Iswandai	34	68
8.	M. Iqbal Ramadhan	18	42
9.	Mutiara Azelia	90	88
10.	Nabila Vanessa	32	62
11.	Raisya Putri Novianti	20	46
12.	Ramdhan Ainnurachman	68	84
13.	Rayhan Hasim Nasution	26	40
14.	Viola Queenza Repani	62	76

Based on Table 3, the lowest pre-test score was 18, while the highest was 90. In comparison, the lowest post-test score was 40, and the highest was 88.

Table 4. Score Distribution in Experiment Class

Score Interval	Categories	Pre Test		Post Test	
		Frequency	Percentage	Frequency	Percentage
85-100	Excellent	1	7%	1	7%
75-84	Good	0	0%	2	14%
56-74	Fair	2	14%	6	42%
<55	Low	11	57%	5	35%

Referring to Table 4.5, the pre-test results show that 1 student (7%) was categorized as excellent, no students (0%) were in the good category, 2 students (14%) were in the fair category, and 11 students (79%) were in the low category. Conversely, the post-test results indicate an improvement: 1 student (7%) reached the excellent level, 2 students (14%) were categorized as good, 6 students (42%) were in the fair category, and only 5 students (35%) remained in the low category.

The normality test was conducted to determine whether the pre-test and post-test data were normally distributed, which is required for applying parametric statistical analysis. In this study, the Shapiro-Wilk test in SPSS version 27 was used. The results guided whether parametric methods could be applied or a non-parametric approach was needed. The criteria were: if the p-value (Sig.) > 0.05, the data were considered normally distributed; if Sig. ≤ 0.05, the data were not normally distributed. This step ensures the validity of the statistical analysis and the accuracy of the research findings.

Table 5. The normality test of pre-test and post-test

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre test	.209	14	.098	.901	14	.117
Posttest	.125	14	.200*	.946	14	.500
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Since the research sample consisted of fewer than 50 participants (14 in total), the Shapiro-Wilk test was used to assess data normality. The results showed a significance value (Sig.) of 0.117 for the pre-test and 0.500 for the post-test, both greater than 0.05, indicating that the data were normally distributed. This confirms that the normality assumption was met, making the data suitable for parametric analysis. Therefore, the researcher proceeded with a paired sample t-test to evaluate the effectiveness of the applied learning model, ensuring both the validity of the statistical analysis and the reliability of the findings regarding students' skill improvement.

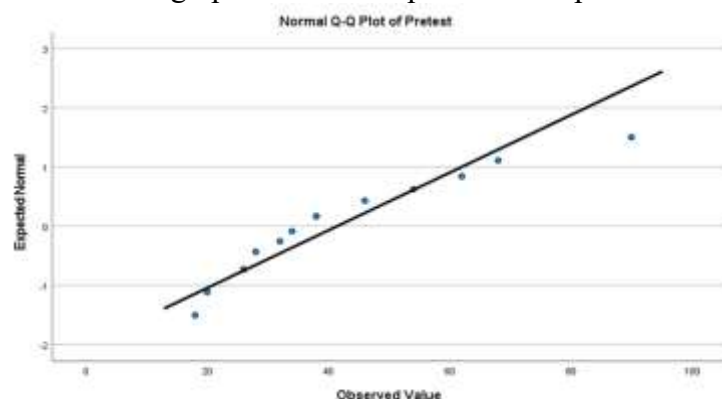
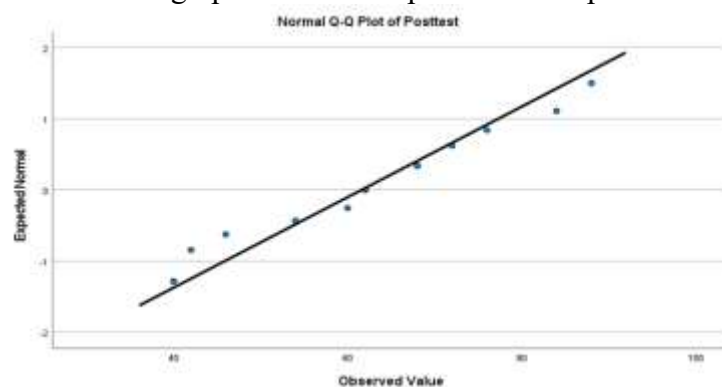
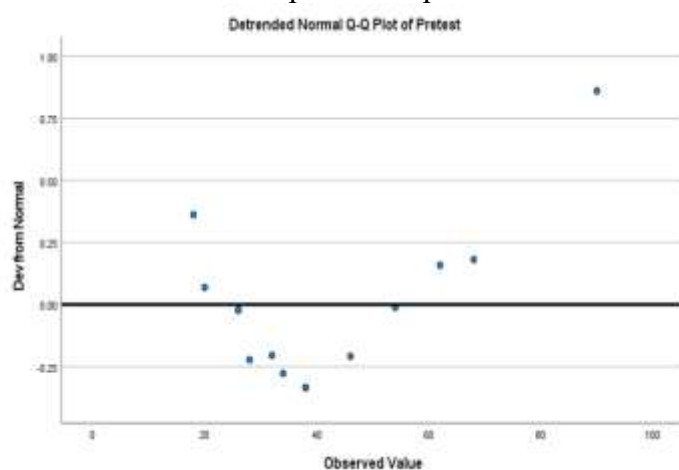
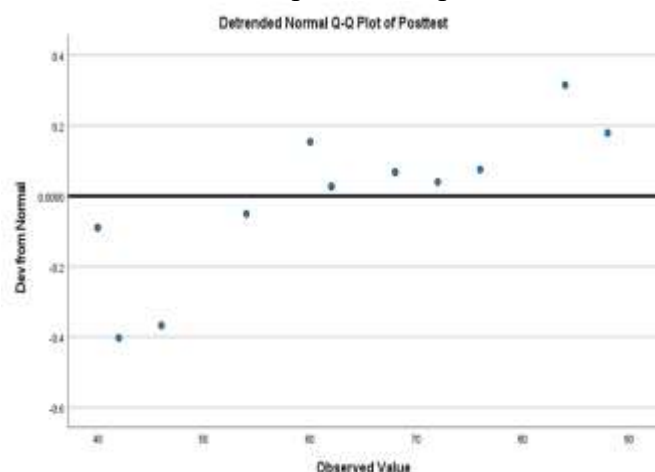
Table 6. The graph of students' pre-test in experimental class**Table 7.** The graph of students' post-test in experimental class**Table 8.** Detrended of pre-test experimental class

Table 9. Detrended of post-test experimental class

The purpose of the homogeneity test is to determine whether the samples come from the same population and have uniform variance. In this study, the significance values of the pre-test and post-test were examined to assess data homogeneity. If $\text{Sig.} < 0.05$, the hypothesis is rejected, indicating non-homogeneous variance; if $\text{Sig.} > 0.05$, the hypothesis is accepted, indicating homogeneous variance. When the data are homogeneous, further analysis, such as the t-test, can be appropriately applied to evaluate the effect of the learning method on students' vocabulary mastery. SPSS was used to conduct this test.

Table 10. Homogeneity test of pre-test and post-test

Tests of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
English vocabulary learning outcomes	Based on Mean	.830	1	26	.371
	Based on Median	.357	1	26	.556
	Based on Median and with adjusted df	.357	1	21.824	.556
	Based on trimmed mean	.602	1	26	.445

The significance value (Sig.) for the variance of English vocabulary learning outcomes is 0.371. Since $0.371 > 0.05$, it can be concluded that the variance is homogeneous, meaning the data distribution across sample groups is relatively uniform with no significant differences in variability. Meeting this homogeneity assumption is important for parametric tests, such as the paired sample t-test, ensuring that the analysis results are reliable and accurately reflect students' vocabulary learning abilities.

The paired sample t-test is used to determine whether there is a significant difference between the mean scores of two related samples. The null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted if the calculated t-value is greater than the critical t-value from the t-distribution table. This test requires normally distributed data, which must be

confirmed before analysis. Using SPSS version 27, the p-value (Sig. 2-tailed) is used to decide: if p-value < 0.05, H_a is accepted, and if p-value > 0.05, H_0 is rejected. The results of the paired sample t-test are presented in the table below.

Table 11. Paired sample t-test experimental class

Paired Samples Test									
		Paired Differences							
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Mean	Lower			
Pair 1	Pre Test - Post Test	-20.14266	12.82940	3.42680	-27.55033	-12.73538	-5.875	13	<.001

Overall, this study confirms that the implementation of the Visual, Auditory, Kinesthetic (VAK) learning method significantly enhances English vocabulary mastery among seventh-grade students at MTs Nur Rahma, Bengkulu City. It proves to be an effective, interactive, and innovative teaching strategy, allowing students to learn vocabulary in ways that suit their individual learning preferences, leading to better retention, increased motivation, and a more positive learning experience.

CONCLUSIONS

The study shows that the Visual, Auditory, Kinesthetic (VAK) method significantly improves English vocabulary mastery among seventh-grade students in Meikkah class at MTs Nur Rahma, Bengkulu City, with average scores rising from 41.43 in the pre-test to 61.57 in the post-test. Students actively engaged through visual, auditory, and kinesthetic activities, which made learning more interactive, enjoyable, and effective, helping them better understand, remember, and use new vocabulary. The Paired Sample T-test confirmed this improvement with a p-value of 0.001 (< 0.05), proving the method's effectiveness. Overall, the VAK method enhances vocabulary skills, motivation, and engagement, making it an innovative and practical teaching strategy for meaningful language learning.

Recommendations Based on the Research Findings:

1. For Teachers: Routinely apply the VAK method in teaching vocabulary, combining visual, auditory, and kinesthetic activities to create an engaging, interactive, and effective learning environment.
2. For Students: Actively participate in all VAK stages and practice independently through flashcards, listening to English songs, and connecting new words to daily life to strengthen memory and understanding.
3. For Future Researchers: Expand studies with larger samples or control groups, and explore VAK's application in other language skills like speaking, writing, or reading to gain deeper insights into its effectiveness.

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