THE EFFECT OF DRILLING TECHNIQUE IN VOCABULARY MASTERY OF EIGHTH GRADE STUDENTS AT SMPS MARISI MEDAN

Veni Juwita[1], Christina Natalina Saragi[2], Fenty Debora Napitupulu[3]
Universitas University of HKBP Nommensen Medan[1], University of HKBP Nommensen Medan[2], University of HKBP Nommensen Medan[3]
Pos-el: veni.juwita@student.uhn.ac.id[1], christina.saragi@uhn.ac.id[2], fentynapitupulu@uhn.ac.id[3]

ABSTRAK

Penelitian ini menggunakan desain eksperimen kuantitatif, yang melibatkan kelas eksperimen (VIII-1) yang menerima pengajaran kosakata menggunakan teknik drilling dan kelas kontrol (VIII-2) yang diajar dengan metode konvensional. Data dikumpulkan melalui pre-test dan post-test dan kemudian dianalisis dengan menggunakan metode statistik untuk menilai efektivitas teknik drilling dalam meningkatkan penguasaan kosakata siswa. Hasil penelitian menunjukkan adanya perbedaan yang signifikan dalam penguasaan kosakata antara siswa yang diajar dengan teknik drilling dan yang tidak. Analisis statistik menunjukkan bahwa skor rata-rata pre-test kelompok eksperimen adalah 47,26, yang meningkat menjadi 65 pada post-test, yang mencerminkan peningkatan sebesar 17,73 poin. Sebaliknya, skor rata-rata kelompok kontrol meningkat dari 48 menjadi 59,5, dengan peningkatan yang lebih kecil yaitu 11,5 poin. Analisis uji-t (t-hitung = 2,58, t-tabel = 2,021) mengkonfirmasi bahwa perbedaan ini signifikan secara statistik ($p < 0,05$), yang mengarah pada penerimaan hipotesis alternatif (Ha) dan penolakan hipotesis nol (Ho). Teknik drilling secara efektif memperkuat retensi kosakata dan memungkinkan siswa untuk menerapkan kata-kata baru dalam penguasaan kosakata**.**

Kata Kunci: Penguasaan Kosakata, Teknik Drilling.

ABSTRACT

This study employed a quantitative experimental design, involving an experimental class (VIII-1) that received vocabulary instruction using the drilling technique and a control class (VIII-2) that was taught using conventional methods. Data were collected through pre-tests and post-tests and were then analyzed using statistical methods to assess the effectiveness of the drilling technique in enhancing students' vocabulary acquisition. The findings revealed a significant difference in vocabulary mastery between students taught using the drilling technique and those who were not. Statistical analysis indicated that the experimental group's average pre-test score was 47.26, which increased to 65 in the post-test, reflecting an improvement of 17.73 points. In contrast, the control group's average score increased from 48 to 59.5, with a smaller gain of 11.5 points. The t-test analysis (t-count = 2.58, t-table = 2.021) confirmed that this difference was statistically significant ($p < 0.05$), leading to the acceptance of the alternative hypothesis (Ha) and the rejection of the null hypothesis (Ho). The drilling technique effectively strengthened vocabulary retention and allowed students to apply new words in vocabulary mastery.

Keywords: Drilling Technique, Vocabulary Mastery.

1. INTRODUCTION

English was a global language. Some Western countries had made English their national language, while some Eastern countries like Indonesia made English a second or foreign language. In education, there was such a thing as a curriculum, which was a series of learning plans such as goals, teaching materials, and learning methods. The curriculum was closely related to education, especially in English language learning, because the learning design that had been implemented was expected to help students achieve learning goals such as creating effective, relevant, and meaningful learning experiences for students. Learning English was very helpful for students in keeping up with the times, as almost all fields had used English. Learning English at school helps students develop speaking, reading, writing, and listening skills (Manurung, 2022). To learn English, students needed to recognize and understand vocabulary. Vocabulary was the foundation of students' ability to master the four language skills. Holidazia & Rodliyah (2020) stated that mastering English cannot begin without first understanding the words of the language. Understanding vocabulary helped students understand pronunciation, meaning, grammar, and others. Many students did not understand or even recognize English vocabulary. To master language skills, students had to understand the concept of vocabulary use. A good vocabulary reflected good thinking skills and vice versa because vocabulary played an important role in communication (Eka et al., 2020). Vocabulary was a very important basic component in mastering English, as it served as the foundation for the four language skills: speaking, listening, reading, and writing (Tambaritji & Atmawidjaja, 2020). According to Paulstone and Burder, vocabulary instruction should have been conducted by teachers (Dewi, 2016). However, in actual classroom practice, especially at the junior high school level, many students experienced difficulties in remembering and using vocabulary in the correct context (Simarmata et al., 2024).

This condition was also found at SMPS Marisi Medan, where vocabulary mastery remained a major obstacle in achieving the basic competencies of English. One of the causes was the lack of variation in teaching methods and the absence of approaches that promoted students' active engagement. Based on this, a learning technique that could help students remember vocabulary more effectively was needed.

According to Lado, as cited by Mardianawati (Manalu et al., 2022), several aspects of vocabulary had to be learned, including word meaning and word class. Word meaning referred to aspects of vocabulary defined as their relationship with other words, such as morphological, lexical, and semantic meanings. Meanwhile, word class referred to groups of words in terms of meaning, function, and form. In this study, the researcher focused on topics such as nouns, verbs, antonyms, synonyms, and translations, which were part of word classes.

Vocabulary played a crucial role in developing students' reading skills. Reading was not merely about recognizing letters and words; it involved comprehension, interpretation, and the ability to extract meaning from a text. Without sufficient vocabulary, students struggled to grasp the essence of what they read, which led to difficulties in understanding context, identifying main ideas, and drawing conclusions. A strong vocabulary foundation allowed students to interpret words easily, making reading more fluent and meaningful. In this study, the researcher focused on how vocabulary mastery affected students' reading skills.

The technique used in this study was the drilling technique. According to

Thornbury (Susanto, 2017), drilling was a form of repetitive exercise aimed at strengthening long-term memory of certain language forms. Drilling focused on developing thinking skills, including remembering, understanding, and applying information (Marantika et al., 2022). In short, this technique emphasized the continuous repetition and pronunciation of vocabulary so that students became accustomed to using it in appropriate contexts. Susanto (2017) stated that drilling improved students' pronunciation, meaning recognition, and vocabulary retention. The use of drilling had a positive impact on students' vocabulary improvement, particularly in memory retention and accuracy of usage (Fransiska & Jurianto, 2016). Similar results were also found by Muhdar et al. (2024) concluded that drilling encouraged students' active participation and accelerated the internalization process of new words.

This study aimed to examine the effect of the drilling technique on the vocabulary mastery of eighth-grade students at SMPS Marisi Medan. Using a quantitative approach and experimental design, the study involved two classes: an experimental class that received the drilling treatment and a control class that was taught using conventional methods. Data were collected through pre-tests and post-tests and were analyzed statistically to measure the effectiveness of the drilling technique. Overall, this study was expected to contribute to the innovation of vocabulary learning techniques in the classroom, particularly at the junior high school level. The findings of this study were not only relevant for English teachers but could also serve as a basis for developing a more communicative and student-centered curriculum. This study hypothesized that there was a significant effect of the drilling technique on the vocabulary mastery of eighth-grade students at SMPS Marisi Medan.

2. RESEARCH METHOD

This research was conducted at SMP Marisi Medan, focusing on eighth-grade students. A total of 42 students participated in the study, divided into two groups: the experimental group and the control group, consisting of 22 and 20 students respectively. To measure students' vocabulary mastery, a multiple-choice vocabulary test was developed, consisting of 40 items. The test items were carefully selected from 45 valid items to ensure their relevance to the research objectives.

The study employed a quantitative experimental design. The experimental group received instruction using the drilling technique, which involved repeated vocabulary exercises with direct feedback. On the other hand, the control group was taught using conventional methods. The instructional intervention was conducted for three weeks. Data were collected through a pre-test and a post-test. The pre-test was administered before the intervention to assess the students' initial vocabulary knowledge, while the post-test was administered after the intervention to evaluate the change in their vocabulary mastery. Both tests were scored on a scale from 0 to 100, with each correct answer earning 2.5 points.

Normality Test

The normality test was a series of statistical calculations and observations of the pattern of data distribution to determine whether the data was normally distributed.

VIII	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic		df	Sig.	Statistic	df	Sig.
NILAI	2	.174	20	.113	.925	20	.126
	1	.153	22	.198	.922	22	.082

For the control class, the Kolmogorov-Smirnov value is 0.174 with a significance of 0.113. Since the significance value is greater than 0.05, in other words, it does not reject the null hypothesis, which means that the data from the control class follows a normal distribution. For the experimental class,

the Kolmogorov-Smirnov value is 0.153 with a significance of 0.198, which is also greater than 0.05. This supports that the data in the experimental class also follows a normal distribution. Overall, the control class and experimental class were shown to follow a normal distribution based on the results of both normality tests conducted.

Homogeneity Tes

The homogeneity of variance test was conducted to ensure that the two groups had similar levels of variation, which was an important assumption in some advanced statistical analyses. If the F table value was greater than the F count, it could be concluded that the data came from a homogeneous population (Saragi et al., 2024). The result of this test indicated whether the variances of the two groups could be considered equal.

		Levene Statistic	df1	df2	Sig.
NILAI	Based on Mean	.001	1	40	.980
	Based on Median	.026	1	40	.872
	Based on the Median and with adjusted df	.026	1	39.453	.872
	Based on trimmed mean	.001	1	40	.982

The Test of Homogeneity of Variances examined whether the variances of the two groups (VIII-1 and VIII-2) were equal, a crucial assumption for conducting certain statistical tests like ANOVA. For the test based on the mean, the Levene Statistic was 0.001, with a significance value of 0.980. Since this p-value was much greater than 0.05, we failed to reject the null hypothesis, indicating that the variances of the two groups were equal. Similarly, for the test based on the median, the Levene Statistic was 0.026, and the significance value was 0.872, which also exceeded 0.05. This result suggested that the variances between the two groups were homogeneous based on the median as well. For the test based on the median with adjusted degrees of freedom, the result remained the same, with a Levene Statistic of 0.026 and a significance value of 0.872, further supporting the conclusion that the variances were equal. Lastly, the test based on the trimmed mean gave a Levene Statistic of 0.001 and a significance value of 0.982. Again, with this p-value being far above 0.05, we failed to reject the null hypothesis, confirming that the variances were homogeneous when considering the trimmed mean.

Validity

In testing a study, a validity value was needed which stated that the test affected the object of research. Validity was a conclusion obtained from the test scores that had been carried out. This showed the importance of a theoretical understanding of the concept to ensure that the instrument used measured what was intended. In short, construct validity was a tool that measured the test used to measure abilities accurately. In this study, the researcher administered a multiple-choice vocabulary test. The assessment included one aspect of vocabulary, namely word class.

Reliability

Reliability indicated an understanding that an instrument could be trusted enough to be used as a data collection tool because the instrument is good enough.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.934	.932	70

The items are: Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q30, Q31, Q32. Q33, Q34, Q35, Q36, Q37, Q38, Q39, Q40, Q41, Q42, Q43, Q44, Q45, Q46, Q47, Q48, Q49. Q50, Q51, Q52, Q53, Q54, Q55, Q56, Q57, Q58, Q59, Q60, Q61, Q61, Q63, Q64, Q65, Q66, Q67, Q68, Q69, Q70.

The results of the reliability analysis show that the test instrument used in this experimental research is consistent and dependable. A high-reliability coefficient indicates that the instrument produces stable and repeatable results, which is essential for ensuring the credibility of findings in experimental studies. Therefore, the instrument can be considered reliable for measuring students' vocabulary mastery.

3. DISCUSSION

After the tests were administered, both the experimental and control groups

showed an increase in scores following the treatments, whether using the drilling technique or conventional methods. However, the improvement in the experimental group was more significant than that of the control group.

Table 4.3 The Calculation of Pre-Test and Post-Test of Experimental Group

No.	Students' Initial Names	Pre-Test (X1)	Post-Test (X2)	Difference Score (d=X2-X1)	Square of Difference Score (d^2)
1	R	27.5	55	27.5	784
2	M	10	37.5	27.5	756.25
3	PSS	57.5	60	2.5	6.25
4	AGS	47.5	70	22.5	506.25
5	GV	60	67.5	7.5	56.25
6	OV	25	55	30	900
7	LH	40	60	20	400
8	WD	35	57.5	22.5	506.25
9	TE	50	70	20	400
10	DS	70	87.5	17.5	306.25
11	B	72.5	82.5	10	100
12	RI	40	65	25	625
13	SY	32.5	50	17.5	306.25
14	SE	70	75	5	25
15	SA	70	77.5	7.5	56.25
16	PS	62.5	70	7.5	56.25
17	TH	55	77.5	22.5	506.25
18	GI	57.5	75	17.5	306.25
19	JL	32.5	57.5	25	625
20	YS	42.5	67.5	25	625
21	SC	12.5	32.5	17.5	306.25
22	KZ	67.5	80	12.5	156.25
Total		1039.8	1430	390.2	7805.25
Mean		47.26	65	17.73	354.78

The experimental group, which was taught using the drilling technique, showed an average score increase from 47.26 on the pre-test to 65 on the post-test, with a mean gain of 17.73 points. The score distribution showed that most students benefited from the drilling technique, demonstrating its effectiveness in students' vocabulary mastery. However, some students showed less progress, indicating the need for further adjustments in teaching to meet the diverse learning needs. It was found that the students' level of understanding and ability to remember new vocabulary also varied. However, students in the experimental class received special treatment in the form of the drilling technique during the learning process. Through this technique, students are actively involved in structured repetitive exercises. The drilling activity helped to improve students' understanding and strengthen their memory of the vocabulary learned. As a result, the post-test scores of students in the experimental class showed more significance.

Table 4.4 The Calculation of Pre-Test and Post-Test of Control Group

No.	Students' Initial Names	Pre-Test (Y_1)	Post-Test (Y_2)	Difference Score ($d=Y_2-Y_1$)	Square of Difference Score (d^2)
1.	T	60	72.5	12.5	156.25
2.	R	35	55	20	400
3.	FR	47.5	62.5	15	225
4.	SF	47.5	60	12.5	156.25
5.	M	50	52.5	2.5	6.25
6.	F	32.5	40	7.5	56.25
7.	SO	47.5	50	2.5	6.25
8.	Y	57.5	70	12.5	156.25
9.	AD	40	55	15	225
10.	G	25	35	10	100
11.	P	32.5	55	22.5	506.25
12.	RP	35	40	5	25
13.	AL	72.5	80	7.5	56.25
14.	AF	52.5	60	7.5	56.25
15.	I	60	75	15	225
16.	RS	47.5	72.5	25	625
17.	NH	52.5	55	2.5	6.25
18.	MT	47.5	67.5	20	400
19.	DS	67.5	72.5	5	25
20.	PS	50	60	10	100
Total		960	1190	230	3512.5
Mean		48	59.5	11.5	175.62

Although some students had progressed, the average score increase was smaller than the experimental group. The mean score had risen from 48 in the pre-test to 59.5 in the post-test, reflecting an average improvement of 11.5 points. From the results obtained from the students in the control class, it was found that some students experienced difficulties because many of the verbs and nouns introduced during learning were new to them. This unfamiliarity hindered their ability to follow the learning process optimally. In addition, some students showed a low ability to recall new vocabulary, which further exacerbated their difficulties in working on the questions given. Although the post-test questions were the same as the pre-test questions, many students still experienced difficulties in solving them due to these limitations. The findings of this study showed a significant effect of the drilling technique on students' vocabulary acquisition. As evidenced by the experimental data, students who received drilling-based instruction demonstrated greater improvement compared to those who were taught using conventional methods. Statistical analysis revealed a t-value of 2.58, confirming that this difference was statistically significant and not due to chance.

The results of this study showed that the drilling technique had a significant effect on the vocabulary mastery of eighth-grade students at SMPS Marisi Medan. This was evident from the increase in the average scores of students in the experimental group, which was higher compared to the control group. Statistically, the t-value was greater than the t-table value, indicating that the difference did not occur by chance but was a direct result of the treatment in the form of the drilling technique.

These findings supported the theory proposed by Susanto (2017), who stated that vocabulary mastery was a fundamental aspect of English learning, and that repeated practice (drilling) was an effective method to strengthen memory and vocabulary usage. In the context of foreign language learning, structured repetition allowed students to internalize new words and use them in broader contexts.

In addition, this study also strengthened the findings of the previous research conducted by Fransiska & Jurianto (2016). In their study, it was found that the application of the drilling technique helped seventh-grade students improve their vocabulary mastery. Although there was a difference in grade level between their study (seventh grade) and this study (eighth grade), the consistent results showed that the drilling technique could be widely applied in junior high school education.

Furthermore, the results were also in line with the findings of Saputra (2023), which showed that drilling not only improved vocabulary mastery but also had a positive impact on students' speaking skills. This indicated that vocabulary acquisition through drilling contributed to other language skills, such as speaking because students felt more confident and were able to recall the vocabulary they had learned more effectively.

This study also aligned with the findings of Muhdar et al. (2024), even though their research subjects were third-semester university students. Their study revealed a significant increase in scores between the pre-test and post-test after the treatment with the drilling technique. The results of this study were also supported by classroom observations and informal interviews. When the researcher asked the students about their response to learning vocabulary using the drilling technique, most of them stated that they enjoyed the method and that it was very helpful in understanding and remembering new words. This indicated that drilling was not only effective in terms of learning outcomes but also well-received by the students in terms of motivation and learning experience. These findings were expected to contribute to the development of English teaching methods at the junior high school level, particularly in the area of vocabulary mastery.

4. CONCLUSION

The findings showed a marked difference in vocabulary acquisition between students taught using the drilling technique and students who received instruction through conventional methods. The statistical analysis showed a t-value of 2.58, which was greater than the t-table value of 2.021, confirming that the difference in vocabulary performance between the experimental and control groups was statistically significant. However, the improvement seen in students' understanding during the learning process is not always fully reflected in their test results. This condition may occur due to several factors. First, students showed active participation and good comprehension when they were asked to repeat, pronounce, and use the vocabulary. However, when they were tested using multiple-choice questions, some of them struggled to remember or choose the

correct answer. Another possible reason was that the students were still adapting to the new learning technique. Although the drilling technique helps to reinforce vocabulary through repetition, not all students can directly transfer that knowledge into written test performance. Despite these limitations, the drilling technique still made a positive contribution to vocabulary learning. Future researchers are advised to explore the use of the drilling technique by combining it with other teaching strategies or applying it to other language skills such as reading or writing, to maximize its effectiveness in various aspects of learning.

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