

EXPLORING THE EFFECTIVENESS OF FRAYER MODEL ON EFL STUDENTS' VOCABULARY MASTERY IN REPORT TEXT

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Abstract

This research aims to find out the effectiveness of the Frayer Model on EFL students' vocabulary mastery in a report text. Employing true-experimental research design with a quantitative research approach, this research involved 70 students in the tenth grade of SMA Negeri 2 Slawi in the academic year 2024/2025. The data were collected through a vocabulary test, including a pre-test and a post-test. The findings showed that there is a positive effect of the Frayer Model to enhance EFL students' vocabulary mastery in Report Text. It is supported by the result of paired sample t-test revealed a p-value of 0.000, which is lower than the significance level of 0.05, signifying a statistically significant impact of the Frayer Model on students' vocabulary knowledge. In addition, experimental group showed an improvement in the mean score from 53.93 in the pre-test to 75.14 in the post-test, indicating significant enhancement in performance. The results indicate that the Frayer Model is an efficacious teaching technique for improving vocabulary learning. Future research is suggested to implement the Frayer Model in another skill or different learning context, as it is a good strategy to break down and support the understanding of a concept or material.

Keywords: *Frayer Model, Vocabulary Mastery, Report Text*

1 INTRODUCTION

Vocabulary plays a very significant role in learning English as a foreign language Wati et al. (2022). Kaypova (2021) defined vocabulary as the knowledge of words, including definitions of word meaning Ramadhaniarti (2016) identified vocabulary as a fundamental component that connects the four English language skills: speaking, listening, reading, and writing. Pandili et al. (2024a) stated vocabulary is an essential element of language acquisition, especially in the context of learning and teaching English. The large vocabulary individuals possess facilitates the expression of their thoughts, feelings, and ideas. It is also enabling the successful communication without any ambiguity. It is also stated by Yuni Priska et al. (2022) mastering vocabulary enables learners to articulate ideas, opinions, and emotions toward each other. On the other hand, learners with a limited vocabulary will struggle to convey their feelings, ideas, and thoughts effectively.

While vocabulary is recognized as a crucial component of learning English as a foreign language, numerous factors suggest that students encounter challenges in mastering vocabulary. During the researcher's teaching practice in a field experience or PLP at SMA N 2 Slawi, several challenges were encountered in the vocabulary teaching and learning process. The first challenge in vocabulary mastery is the reliance on traditional and monotonous ways for students' mastering vocabulary, resulting in diminished enthusiasm in learning vocabulary. In contrast with this condition, the theory of Hulsjin in Morin & Goebel (2008) stated that when teaching vocabulary, teachers should prioritize equipping students with effective strategies to enhance their vocabulary, alongside teaching them specific concepts.

The second challenge students encounter is choosing the appropriate words to express their ideas. This challenge confuses students regarding how to express of their ideas throughout the teaching and learning process, encompassing listening, reading, speaking, and writing. Consequently, students frequently experience minimized comprehension in English subjects, especially in vocabulary mastery. However, Thornbury (2002) stated that students who have mastered vocabulary may be able to communicate their thoughts, feelings, and ideas to one another verbally as well as in written.

Third, students frequently encounter difficulties in understanding texts in English subject matter. They are unable to comprehend the entire content from the text due to their limited vocabulary proficiency. The relevance of English textbooks being written in English requires that students possess

an extensive vocabulary to effectively understand the content. A study by Rahmat & Coxhead (2021) found that three sets of Indonesian EFL textbooks for senior high school students in grades tenth to twelfth are difficult for students to understand since they have to require the mastery on extensive vocabulary. Nation (2015a) claimed that a greater vocabulary correlates with enhanced text comprehension among students. Nation (2015b) explicitly states that kids must acquire 3,000 words to achieve reading fluency. This indicates that vocabulary is essential for acquiring the English language, especially in understanding textual content during the educational process. Ria & Perdawati (2021) discovered that an extensive vocabulary among students facilitates their comprehension of reading information. It is supported by Dauletova & Rahimova (2022) that the more vocabulary we have, the greater ideas or concepts that we would like to comprehend.

An analysis of the challenges that students have in mastering new vocabulary reveals the necessity for an effective strategy to overcome these challenges and improve mastery of vocabulary. In addition, Pandili et al. (2024b) stated that the objectives of employing diverse teaching strategies are to facilitate students' comprehension in learning activities. Farahdiba et al. (2023) stated that the term "strategy" in this context refers to a process or sequence by which stages or activities in the designed teaching and learning process are planned or executed. Strategy is defined as teachers' efforts in the learning process to achieve the goals of learning. Eka Sulistyawati et al. (2022) stated that students' knowledge of the significance of learning strategy practices is crucial, as their ideas also affect their behaviors in learning activity.

There are numerous strategies for teaching vocabulary. One of the strategies that can be used in teaching vocabulary is Frayer Model. Frayer Model is considered an appropriate strategy to improve students' vocabulary mastery Kustati & Prisillia (2018) asserted that the Frayer Model is a learning strategy aimed at expanding students' vocabulary. In addition, Albadawy & Alashry (2018) also stated that Frayer Model is a vocabulary learning strategy that serves as a visual graphic organizer and it facilitating students' connection among many different words or topics. Frayer Model helps students enhance their mastery of new vocabulary as they listen, read, write, and view texts. Maswani et al. (2024) stated that Frayer Model facilitates deeper comprehension of newly acquired terminology or vocabulary. A research by Panjaitan & Sihotang (2020) claimed that Frayer Model facilitates students' comprehension of word meanings while also identifying relevant characteristics, examples, and non-examples. To help students acquire new words. Frayer Model has several steps that students must follow. When implementing Frayer Model, both the teacher and students must focus on the process of acquiring new vocabulary.

Additionally, Frayer Model may also be employed in group activities to help students derive the most fulfillment from their vocabulary learning and maximize their vocabulary learning. Through group activities, students can also become active learners by actively participating in the process of acquiring new vocabulary. Additionally, the teacher can make the learning process student-centered, focusing on students. Student-centered learning emerges as an innovator in the evolution of educational approaches. Emaliana (2017) stated that student-centered learning is a learning approach that puts the students at the center of the learning process. Pastini & Tri Lilasari (2023) student-centered learning put an emphasis on active participation, and collaborative exploration in the learning activity. Under the student-centered learning process, students are expected to take responsibility and initiative, actively participating in learning activities. Students will also have the opportunity and support to deepen their understanding of the material they are learning, which can enhance the quality of their knowledge at the end of the learning activity.

Considering the explanation, the researcher aims to investigate the application of Frayer Model in enhancing students' vocabulary mastery. Hence, the researcher conducted experimental research related to the problem entitled "Exploring the Effectiveness of Frayer Model on EFL Students' Vocabulary Mastery in Report Text". In this research, the researcher wants to apply Frayer Model as a strategy for teaching vocabulary. Frayer Model is designed to provide students with in-depth knowledge of new vocabulary while allowing them to be active learners during the learning activity. It can also make the students more interested in the learning activity process because it contains visual aids. By conducting research on Frayer Model, the researcher offers a helpful strategy to make the process of teaching and learning vocabulary more engaging and enhance students' vocabulary mastery.

2 METHODOLOGY

This research used a quantitative research approach with a true-experimental research design to determine the effect of the Frayer Model on EFL students' vocabulary mastery in Report Text. This research method was chosen to explore and observe the cause-and-effect relationship between variables. The study focused on 70 tenth-grade students from SMA Negeri 2 Slawi in the 2024/2025 academic year. The samples were selected using cluster random sampling. To gather data, the researcher administered a vocabulary test comprising 40 multiple-choice questions. Before using the instrument, the researcher conducted a validity test using SPSS 26 with Pearson's product-moment correlation analysis. Once deemed valid, all 70 students completed the vocabulary test, including a pre-test to assess their prior vocabulary mastery before applying the treatment using Frayer Model, and a post-test to evaluate the learning outcome after the treatment of Frayer Model. The vocabulary test, consisting of 40 multiple-choice questions, was conducted within a 60-minute time limit. The data were analyzed using a quantitative method with SPSS 26 software. A parametric test, specifically the paired sample t-test, was used to determine the effect of the Frayer Model on EFL students' vocabulary mastery.

3 RESULTS

3.1 Result of Paired Samples Statistics

The data used in paired sample t-test are the pre-test and post-test score of experimental group. The researcher conducted paired sample t-test as parametric test to examine the effect of Frayer Model on EFL students' vocabulary mastery in Report Text. The result of paired sample statistics is to analyze the initial overview of the central tendency and variability for paired score.

Table 1. Paired Sample Statistics.

	Mean	N	Std. Deviation	Std. Error Mean
Post-test Score	75.1429	35	7.29985	1.23390
Pre-test Score	53.9286	35	6.04170	1.02123

The Paired Samples Statistics table indicates that data were collected from 35 students in the experimental group who engaged in both the pre-test and post-test sessions. The statistical results indicate significant differences between the two score groups. The average score for the pre-test was 53.93; however, the average score for the post-test increased significantly to 75.14. The significant enhancement of 21.21 points indicates that the application of the Frayer Model as an educational technique positively influenced students' vocabulary mastery. The enhancement in post-test scores indicated that students successfully learned and utilized new vocabulary more efficiently after engaging Frayer Model in the learning activity.

Based on the result it is found the standard deviation for the post-test score is 7.29 and the standard deviation of pre-test score is 6.04. With the result of the standard deviation, the researcher calculated it to find the coefficient of variation of standard deviation:

$$CV = \frac{SD}{Mean} \times 100\%$$

$$CV = \frac{7.299}{75.143} \times 100\% = 9.72\%$$

Based on the calculation of the coefficient variation percentage (CV). Based on the interpretation of CV by Gomes (1985) it can be concluded that the variability or spread of the post-test scores is relatively low because it is lower than 10%. With the low variability of scores, it is indicated that the scores are tightly grouped around the mean. This indicates reliable performance among students in the post-test, demonstrating the effectiveness of Frayer Model. The low deviation indicated an even distribution of students' vocabulary mastery after the treatment.

The researcher also calculates the coefficient of variance of pre-test's standard deviation below.

$$CV = \frac{SD}{Mean} \times 100\%$$

$$CV = \frac{6.041}{53.928} \times 100\% = 11.20\%$$

The calculation indicates that the variation in the pre-test scores of the experimental group is moderate. Gomes (1985) states that a coefficient of variation ranging from 10% to 20% is classified as medium deviation, indicating a moderate variability of scores around the mean. This classification indicates that, before the Frayer Model was implemented, there was a significant level of variability in students' vocabulary mastery, although it was not overly pronounced. The existence of medium deviation indicates that students showed some variability in their initial vocabulary knowledge.

3.2 Result of Paired Samples Correlation

The paired sample correlation analysis illustrated the correlation between the pre-test and post-test scores of the 35 students in the experimental group. This investigation seeks to ascertain the degree of correlation between students' performance before and after to the implementation of Frayer Model strategy.

Table 2. Paired Sample Correlation.

	N	Correlation	Sig.
Post-test Score & Pre-test Score	35	.725	.000

The Paired Samples Correlations table revealed that the paired samples correlation analysis generates a correlation coefficient (r) of 0.725 between the pre-test and post-test scores of the 35 students in the experimental group. Cohen's (1988) criteria indicate that an r-value ranging from 0.50 to 1.00 signifies a high association. The observed value of 0.725 indicates a strong positive correlation.

This substantial correlation indicates that students who succeeded on the pre-test mostly performed well on the post-test, whereas those with lower pre-test scores showed similar improvement in the post-test results. The substantial rise in the group's overall mean score, as evidenced by the following statistical analysis, suggests that Frayer Model, facilitated a comprehensive enhancement across the entire sample, regardless of students' prior achievement levels.

The strength of the relationship highlights the internal consistency and reliability of the instrument, in addition to the effectiveness of the treatment. This indicates that the vocabulary skills evaluated in the pre-test were directly correlated with those measured in the post-test, confirming that the enhancement in scores was correlated to the specific learning strategy offered when using the Frayer Model strategy.

3.3 Result of Paired Samples T-test

The paired samples t-test analysis presented the outcomes of the statistical analysis conducted to compare the pre-test and post-test scores of the 35 students in the experimental group. This test determined if the observed differences in mean scores is statistically significant, consequently evaluating the effectiveness of the Frayer Model strategy in enhancing students' vocabulary mastery.

Table 3. Paired Sample Test.

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Post-test Score & Pre-test Score	21.21429	5.08644	.85976	19.46703	22.96154	24.675	34	.000

According to Table Paired Sample Test, it is shown that the paired sample t-test resulted a t-value = 24.675 and degrees of freedom (df) = 34 where it is found by $(df) = n - 1 = 35 - 1 = 34$. From the degree of freedom, the researcher found the t-table in the 5% of significance level ($\alpha = 0.05$) is 2.032. Then, first the researcher evaluated the statistical significance of paired samples t-test result by comparing the the t-value and the t-table. The analysis resulted t-value is 24.675 and the t-value is 2.032. It is shown that the t-value is higher than t-table. Additionally, the researcher evaluated the statistical significance of paired samples t-test result by comparing the p-value and significance level (0.05). From the table, it is shown that the p-value is 0.000. The p-value is shown to be lower than the significance level, 0.05. It confirmed that there is a positive effect of Frayer Model on EFL students' vocabulary mastery in Report Text.

4 CONCLUSIONS

The findings of this research indicated a significant improvement in vocabulary mastery among students in the experimental group following learning with the Frayer Model. The average score of the pre-test was 53.93, which significantly increased to 75.14 in the post-test, demonstrating a considerable improvement in students' vocabulary mastery. The paired sample t-test result showed that the p-value is 0.000, which is lower than 0.05, validating that the application of the Frayer Model positively influences EFL students' vocabulary mastery.

Frayer Model in teaching vocabulary encourages students' retention and recall of their existing knowledge of target vocabulary. By obtaining and keeping their current understanding while incorporating new understandings for vocabulary, students build long-term memory, thus minimizing the possibility of forgetting the studied vocabulary. This is consistent with Yuricki (2020), who asserted that long-term memory of words enhances students' mastery of vocabulary. This is evidenced during discussion activities where many students ask the researcher about vocabulary based on their prior knowledge.

According to the results' analysis, it is showed that the Frayer Model is a successful teaching strategy for improving vocabulary mastery in EFL settings. The implementation of structured vocabulary strategy in EFL classes to encourage deeper word learning and long-term retention is supported quantitatively by these findings.

REFERENCES

- [1] Albadawy, S., & Alashry, A.-N. (2018). The Impact of Frayer Model and Contextual Redefinition Strategy on Improving Preparatory Stage Pupils' Vocabulary Learning Introduction. *Journal of Research in Curriculum, Instruction and Educational Technology JRCIET*, 4(4).
- [2] Dauletova, D. B., & Rahimova, D. (2022). The Importance of Vocabulary in Language Learning. *Ренессанс в Парадигме Новаций Образования и Технологий в XXI Веке*, 172–173. <https://doi.org/https://doi.org/10.47689/innovations-in-edu-vol-iss1-pp173-174>
- [3] Eka Sulistyawati, A., Yuvita, & Wardhani, S. (2022). Integrating Digital Literacy into Sociolinguistics Class in MBKM Curriculum through Theory of Planned Behavior History. *Cakrawala Jurnal Pendidikan*, 16(1). <https://doi.org/10.24905/cakrawala.v16i1>
- [4] Emaliana, I. (2017). Teacher-centered or Student-centered Learning Approach to Promote Learning? *Jurnal Sosial Humaniora*, 10(2), 59–70. <https://doi.org/http://creativecommons.org/licenses/by/4.0/>
- [5] Farahdiba, A., Sunra, L., & Amirullah. (2023). EXPLORING EFL TEACHERS' STRATEGIES IN TEACHING VOCABULARY AT SENIOR HIGH SCHOOL LEVEL (CASE STUDY AT SMKN 1 BARRU). *PERFORMANCE: Journal of English Education and Literature*, 3(1), 74–82. <https://doi.org/https://doi.org/10.26858/performance.v3i1.59579>
- [6] Gomes, F. P. (1985). *Curso de estatística experimental* (11th ed.). Nobel.
- [7] Каирова, С. К. (2021). The Definition of Vocabulary and Behaviorist Learning Theory. *НА ПЕРЕСЕЧЕНИИ ЯЗЫКОВ И КУЛЬТУР: Актуальные Вопросы Гуманитарного Знания*, 10(1), 168–171.
- [8] Kustati, M., & Prisillia, Y. (2018). *The Implementation of Frayer Model Strategy in Reinforcing Young Learners' Vocabulary Achievement*. 98–110. <https://doi.org/https://scholar.uinib.ac.id/id/eprint/453>
- [9] Maswani, Alawiyah, N. L., & Safira. (2024). The Frayer Model Effectiveness in The Arabic Vocabulary Development for Students in Madrasah. *An Nabighoh*, 26(1), 17–30. <https://doi.org/10.32332/annabighoh.v26i1.17-30>

- [10] Morin, R., & Goebel, J. Jr. (2008). Basic Vocabulary Instruction: Teaching Strategies or Teaching Words? *Foreign Language Annals*, 34(1). <https://doi.org/10.1111/j.1944-9720.2001.tb02797.x>
- [11] Nation, P. (2015). Principles Guiding Vocabulary Learning Through Extensive Reading. *Reading in a Foreign Language*, 27(1), 136–145. <http://nflrc.hawaii.edu/rfl>
- [12] Pandili, R. P., Sulistianingsih, E., & Rofiudin, R. (2024). Efektifitas Penggunaan Mnemonik Terhadap Prestasi Kosakata Siswa. *Prosiding Seminar Nasional Literasi Dan Pedagogi (SRADA)*, 5(1), 96–101.
- [13] Panjaitan, N. B., & Sihotang, H. M. (2020). A Comparative Study Between Frayer Model And Concept Mapping Strategy to Enhance Students' Vocabulary Acquisition. *Acuity: Journal of English Language Pedagogy, Literature and Culture*, 5(1), 39–66. <https://doi.org/10.35974/acuity.v5i1.2221>
- [14] Pastini, N. W., & Tri Lilasari, L. N. (2023). Empowering EFL students: A review of student-centred learning effectiveness and impact. *Journal of Applied Studies in Language*, 7(2), 246–259. <http://ojs.pnb.ac.id/index.php/JASL><http://ojs.pnb.ac.id/index.php/JASL>
- [15] Rahmat, Y. N., & Coxhead, A. (2021). Investigating vocabulary coverage and load in an Indonesian EFL textbook series. *Indonesian Journal of Applied Linguistics*, 10(3), 804–814. <https://doi.org/10.17509/ijal.v10i3.31768>
- [16] Ramadhaniarti, T. (2016). Teaching English Vocabulary Through Game: Views From the Students. *Proceedings of the Fourth International Seminar On English Language and Teaching (ISELT-4)*, 4, 382–387.
- [17] Ria, N., & Perdawati, N. (2021). The Correlation Between VOcabulary Mastery and Reading Comprehension of The Eleventh Grade Students of SMA Negeri 1 Indralaya. *Journal English Education*, 2(2), 109–115. <https://doi.org/http://dx.doi.org/10.52333%2Fd.v2i2.825>
- [18] Thornbury, S. (2002). *How to Teach Vocabulary* (S. Harnes, Ed.). Pearson Education Limited .
- [19] Wati, I., Kamaluddin, & Alimin. (n.d.). The Use of Frayer Model in Teaching Vocabulary at the Tenth Grade Students. *JTE Journal of Teaching of English*, 7(3), 2548–6810.
- [20] Yuni Priska, S., Wardhani, S., & Sulistyawati, A. E. (2022). *Building Teachers and Students' Literacies in English Language Teaching Tegal*. 23, 161–169.