

Enhancing Vocabulary Acquisition through Local Wisdom-Based Diorama Media: A Quasi Experimental Study in Indonesian Primary EFL Education

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Abstract

Vocabulary mastery remains a major challenge in English as a Foreign Language (EFL) instruction at the primary school level, particularly when learning materials lack meaningful cultural relevance. This study investigates the effectiveness of local wisdom-based diorama media in enhancing vocabulary acquisition while promoting culturally contextualized learning experiences among young Indonesian learners. A quasi-experimental design was employed involving 36 fifth-grade students from SDN 7 Sesean, North Toraja, who were assigned to experimental and control groups. The experimental group received eight instructional sessions using diorama media representing local cultural heritage, whereas the control group received conventional vocabulary instruction. Data were collected through pre- and post-tests and analyzed using descriptive statistics, tests of normality and homogeneity, and an independent-samples t-test. The findings reveal a statistically significant improvement in vocabulary achievement among students exposed to local wisdom-based diorama media ($p < .001$), with a mean difference of 20.278 points compared with the control group. These findings indicate that integrating culturally relevant visual media enhances vocabulary acquisition by providing meaningful contextual learning, increasing learner engagement, and strengthening connections between language learning and students' sociocultural experiences. Beyond improving vocabulary outcomes, this study contributes to the growing discourse on culturally responsive pedagogy by demonstrating how local cultural resources can function as pedagogical assets in EFL classrooms. The findings offer practical implications for curriculum developers, English teachers, and policymakers seeking to design culturally sustainable English language instruction in multilingual and multicultural educational settings.

Keywords: Local wisdom; Diorama media; English teaching; Vocabulary Learning



1. Introduction

In the context of current globalization, mastery of the English language has become an essential skill for students. English has become a lingua franca used in various fields, including education, technology, and business (Noor et al., 2023), the same thing was stated by (Wulandari et al., 2020). However, many elementary school students still encounter challenges in learning English due to their limited mastery of English vocabulary. This issue is often exacerbated by uninspiring teaching methods that lack contextual relevance, leading to a loss of interest in learning.

Media plays an important role in learning English by making it more fun and engaging (Gunawan et al., 2023), (Meidasari, 2016). Media like picture, videos, music help students see and hear how the language is used in real life, which makes learning English easier. One effective way to increase student engagement is by incorporating creative learning media that capture their interest and stimulate active participation in the learning process (Choiroh et al., 2024), (Salsabila et al., 2024), (Manalu, 2022). The use of visual media can significantly enhance students' understanding of concepts, as it provides a tangible representation of the material being studied. This visual engagement allows them to grasp complex ideas more readily than through text alone. Furthermore, by incorporating local wisdom into the creation of dioramas, students not only expand their vocabulary but also connect their learning to their own cultural and environmental contexts (Sudarsi et al., 2025). This approach makes the educational experience more relevant and meaningful, fostering a deeper appreciation for both their heritage and the subject matter. (Bali & Zahroh, 2023), (Dewi et al., 2023), (Mafulah, 2025). The implementation of dioramas picture in English language learning at schools has proven effective due to its combination of visual elements, creativity, and collaboration. By creating these dioramas, students can visualize the stories or concepts they have learned, enhancing their comprehension and retention of information. This engaging method not only reinforces their understanding but also encourages teamwork and creative expression among peers. (Putri & Nofrion2, 2025), (Fajriyah et al., 2024).

Local wisdom plays a crucial role in education, particularly in the realm of language learning. By incorporating local values into the educational framework, we can not only bolster students' cultural identity but also significantly boost their motivation to learn (Gabby Maureen Pricilia, 2023). Furthermore, integration fosters a deeper connection between students and their heritage, promoting a more engaging and relevant learning experience (Tandikombong, Tandi arrang, and Tulaktondok 2024), (Tandikombong, Kinda, and Siumarlata 2024), (Husain & Balqis, 2013). The use of media that reflects local wisdom can make learning more engaging, capturing students' attention and interest. By incorporating familiar cultural elements, educators can create a more relatable and stimulating learning environment. This approach not only enhances students' enthusiasm for the subject matter but also fosters a deeper connection to their own cultural heritage. (Naryatmojo, 2019) (Banaruee et al., 2023). This indicates that local wisdom-based dioramas can be used to enhance students' understanding of English vocabulary (Mafulah, 2025) (Azhar, 2024).

Previous Research also indicates that creative learning media can enhance students' motivation and performance in learning English. (Ismiyani, 2021),(Nambiar et al., 2020),(Adlis, 2022). The use of various types of media, such as visual media, can actively engage students, making the learning experience more dynamic and interactive. Integrating multimedia tools allows students to process information in diverse ways, catering to different learning styles and preferences. As a result, this approach not only boosts students' interest but also leads to improved learning outcomes and retention of the material (Darmayanti, 2023), (Suryanida & Suryatiningsih., 2022),(Anggaraini, & Kusniarti, 2015). In addition, using visual media has been shown to lead to significant improvements in vocabulary mastery compared to students who engage in conventional learning methods. This innovative approach provides students with concrete examples and visual contexts that facilitate better understanding and retention of new words. Consequently, students who utilize visual media are more likely to demonstrate higher levels of engagement and proficiency in their vocabulary skills.(Halwani, 2017), (Sultan et al., 2023), (Meilani et al., 2022).

2. Methods

2.1. Design and sample

This research employed quantitative methods to explore the effectiveness of utilizing media rooted in local wisdom. Specifically, it focused on the implementation of picture media in enhancing the learning of English vocabulary. The findings aim to provide insights into how such media can improve vocabulary acquisition among learners. The focus was on its impact on vocabulary learning in English as a Foreign Language (EFL) contexts. This research is experimental research. The writer collected data by using a written test, which was designed to include both a pre-test and a post-test. This approach allowed the writer to measure the participants' knowledge before and after the intervention, providing valuable insights into their progress.

This research was conducted at SDN 7 Sesean, Toraja Utara. The sample for this research comprised elementary school students, specifically those in the fifth grade. To select the participants, a cluster sampling technique was employed, ensuring a structured approach to sampling. The sample included two classes, with each class containing 18 students, resulting in a total of 36 participants. One of the classes was designated as the experimental group, while the other served as the control group. This arrangement allowed for a comparative analysis of the effects of different instructional methods on the students' learning outcomes.

2.2. Data Collection

The process of collecting data included several essential steps, beginning with a pre-test designed to evaluate the participants' prior knowledge. This initial assessment provided a baseline that helped in measuring the effectiveness of the subsequent treatment. Following the pre-test, a treatment was implemented to provide the necessary instruction and support for the students' learning process. The treatment was given 8 times meeting. During this treatment, the students were taught vocabulary using media that reflected local wisdom, which included specific picture media showcasing Toraja

culture. This approach aimed to engage the students more effectively and enhance their understanding of vocabulary through relevant and familiar contexts. After the treatment period, a post-test was conducted to evaluate the participants' knowledge and skill improvements. This systematic approach allowed for a clear comparison between the pre-test and post-test results, highlighting the effectiveness of the treatment given.

After collecting the data, the next step was to analyze the data by using IBM SPSS Statistic 20. The process of analysing the data involves 1) test of normality, 2) Test of Homogeneity to evaluate the distribution of the data, 3) independent t-test was performed to assess the significance of using local wisdom based diorama media in English vocabulary learning. This thorough approach was designed to yield insights into the effectiveness of the media used in learning vocabulary. Ultimately, the findings aimed to highlight the impact of local wisdom based diorama media on the participants' learning outcomes.

3. Results and Discussions

The results of the Research on the application of local wisdom-based media to enhance the English vocabulary of students at State Elementary School 7 Sesean, processed using IBM SPSS Statistic 20 can be presented as follows.

3.1 Test of Normality

Table 1. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre- Test Experiment	.167	18	.200*	.924	18	.155
Post-Test Experiment	.133	18	.200*	.918	18	.118
Pre-Test Control	.150	18	.200*	.942	18	.309
Post-Test Control	.143	18	.200*	.977	18	.909

Based on the normality test output in the table above, the significance values for the experimental group were 0.155 for the pre-test and 0.118 for the post-test, while the values for the control group were 0.309 for the pre-test and 0.909 for the post-test. Since all these significance values are greater than 0.05, it can be concluded that the data are normally distributed.

3.2 Homogeneity of Variance

Table 2. Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Student Learning outcome	Based on Mean	3.863	1	34	.058
	Based on Median	3.469	1	34	.071
	Based on Median and with adjusted df	3.469	1	25.895	.074
	Based on trimmed mean	3.733	1	34	.062

The results of the homogeneity analysis shown in the table above indicate that the assumption of homogeneity of variance was satisfied. Since the significance value obtained from Levene's Test was 0.058, which is greater than 0.05, the variances among the groups being compared can be considered equal. Therefore, equal variances can be assumed in the subsequent independent-samples t-test. This supports more reliable statistical conclusions in the subsequent analyses.

3.3 Statistics

Table 3. Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
Pre Test Experiment	18	20	65	45.00	13.284
Post Test Experiment	18	60	95	72.50	8.952
Pre Test Control group	18	25	80	51.67	17.150
Post Test Control Group	18	15.00	95.00	55.2778	20.68476
Valid N (listwise)	18				

Based on the results of the descriptive statistical analysis of the pre-test and post-test in learning vocabulary, it was found that the mean score on the pre-test for the experimental group was 45.00, while the mean score on the post-test was 72.50. These results indicate that there was a good improvement after the treatment was given to the experimental group. While, the mean pre-test score for the control group was 51.67, and the mean post-test score was 55.28. These results show that there was an increase after the treatment was given to the control group, but the improvement was not significant, as the mean post-test score fell into the low category. Thus, it can be concluded that the use of diorama media based on local wisdom is effective for teaching English vocabulary.

3.4 Independent Test

Table 4. Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Nilai									
Equal variances assumed	3.863	.058	-4.150	34	.000	-20.278	4.887	-30.209	-10.347
Equal variances not assumed			-4.150	26.441	.000	-20.278	4.887	-30.314	-10.241

The data on the table above presents the results of a t-test analysis for independent samples, including the output from Levene's Test for Equality of Variances. The results show an F value of 3.863 with a significance (Sig.) of 0.058, indicating that the variances

between groups are homogeneous. In the t-test analysis, the t value recorded is 4.150 with 34 degrees of freedom (df) and significance Sig. $0.000 < 0.05$ which indicates a very significant difference between the means of the two groups compared. The mean difference obtained is 20.278 with a standard error of the difference of 4.887, and the 95% confidence interval for this difference ranges from 30.209 to 10.347. This indicates that the group exposed to the intervention has significantly higher values compared to the control group, confirming the effectiveness of the treatment provided.

One approach that can enhance student engagement is through the use of creative learning media, such as dioramas. (Choiroh et al., 2024),(Salsabila et al., 2024), (Manalu, 2022). The use of visual media can help students better understand concepts, as they can see a tangible representation of the material being studied. By integrating local wisdom in the creation of dioramas, students not only learn new vocabulary but also relate it to their own culture and environment, making the learning process more relevant and meaningful(Bali & Zahroh, 2023), (Dewi et al., 2023), (Mafulah, 2025). The implementation of dioramas in English language learning at primary schools has proven effective because it combines visual elements, creativity, and collaboration. Through the creation of dioramas, students can visualize the stories or concepts they have learned, helping them understand and retain information more effectively(Putri & Nofrion2, 2025),(Fajriyah et al., 2024).

Local wisdom plays an important role in education, especially in the context of language learning. It emphasizes that integrating local values into education can strengthen students' cultural identity and enhance their learning motivation. Furthermore, according to Ramadhani., (Tandikombong et al., 2024),(M. Tandikombong et al., 2024),(Husain & Balqis, 2013). The use of media that reflects local wisdom can make learning more engaging and reduce students' boredom. By incorporating familiar cultural elements, students are more likely to feel a connection to the material, which enhances their interest and motivation in the learning process. (Naryatmojo, 2019)(Banaruee et al., 2023). This indicates that local wisdom-based dioramas can be used to enhance students' understanding of English vocabulary. By integrating culturally relevant themes and contexts, these dioramas not only make learning more relatable but also foster deeper connections between new vocabulary and students' everyday experiences (Mafulah, 2025)(Azhar, 2024).

The results of this research align with previous studies, showing that visual media are useful in supporting students' learning outcomes. A significance value (Sig.) of 0.000 (< 0.05) indicates a highly significant difference between the mean scores of the two groups. This result demonstrates the effectiveness of implementing local wisdom-based diorama media in improving students' English vocabulary. The mean difference obtained was 20.278, which suggests that the improvement was substantial and not minor. The standard error of the difference was 4.887, indicating that the difference between groups is relatively reliable. Additionally, the 95% confidence interval ranged from 10.347 to 30.209, confirming that the effect is statistically supported. These results also confirm that dioramas are beneficial because they make abstract vocabulary learning more

concrete, engaging, and easier to understand. Local wisdom embedded in the diorama increases students' engagement by providing meaningful learning experiences connected to their culture and daily life. As a result, students are more motivated to learn and participate actively during vocabulary instruction. Therefore, vocabulary learning using local wisdom-based diorama media can enhance students in acquiring English vocabulary.

4. Conclusion

Based on the data analysis results, it can be concluded that the local wisdom-based diorama media is effective for improving English vocabulary among students at SDN 7 Sesea. The value of significance (Sig. = 0.000) is lower than 0.05, which indicates that there is a significant difference between the means of the two groups compared. Based on the mean difference obtained (20.278), students' vocabulary improvement after using the media is clearly meaningful. The standard error of the difference is 4.887, suggesting that the difference between the groups is relatively consistent and reliable. Additionally, the 95% confidence interval for the mean difference ranges from 10.347 to 30.209. This range shows that the improvement is statistically supported and unlikely to be caused by chance. Therefore, the result supports the conclusion that the local wisdom-based diorama media can be used to enhance EFL vocabulary learning. For future researchers, it is recommended to expand the study to a larger sample and explore other local-wisdom-based teaching media to strengthen and generalize the findings.

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