

The Effect of Linguistic Landscape in Project-Based Learning on Students' Vocabulary Mastery: A Pre-Experimental Study

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Abstract

Based on the 21st century there are 6 skills of students that need to be developed such as: Critical thinking, Creativity, Collaboration, Communication, Culture/Citizenship, and Character education/connectivity. To achieve proficiency in a language, it is crucial to develop strong communication skills. For young learners, a good starting point is to focus on memorizing vocabulary, since this will enhance their fluency in speaking. Teaching vocabulary to young learners is challenging, though, as the teacher must utilize an effective teaching method that accommodates the needs of each student. This study focused on the effect of linguistic landscape in project-based learning on students' vocabulary mastery. This study was conducted at SD Negeri 1 Banjar Jawa, the method used by the researcher was pre-experimental with pre-test and post-test as the instruments to collect the data. The result of this study demonstrated that using the linguistic landscape in project-based learning has a major impact on students' vocabulary mastery. Based on the findings of the pre-and post-tests, students' post-test scores increased significantly after their treatment. Students in class V.B. enthusiastically engaged in the project-based learning process, following its phases and ending in the creation of a linguistic landscape as a final product over the course of six meetings.

Keywords: *Linguistic Landscape, Project Based Learning, Vocabulary Mastery*

INTRODUCTION

Teaching English to children at a young age is an effective method for them to comprehend and apply the English language. Nevertheless, there is a significant number of students who haven't fully understood and comprehended the English language being taught. This can be related to the application of less engaging and less authentic teaching methods. It is necessary to enhance the abilities of students. Based on the 21st century there are 6 skills of students that need to be developed such as: Critical thinking, Creativity, Collaboration, Communication, Culture/Citizenship, and Character education/connectivity. To achieve proficiency in a language,

it is crucial to develop strong communication skills. For young learners, a good starting point is to focus on memorizing vocabulary, since this will enhance their fluency in speaking. Therefore, the primary factor influencing students' English competency is their command of vocabulary. (ALQAHTANI, 2015) states that English learners largely depend on the knowledge of vocabulary. Individuals who lack vocabulary proficiency would have difficulties in speaking English. It means that vocabulary is really important to be mastered to master the English language and can be used for communication.

Teaching vocabulary to young learners is challenging, though, as the teacher must utilize an effective teaching method that accommodates the needs of each student. Instead of assigning students to remember a list of a thousand words, teachers can employ more practical strategies that enable students to understand the meaning of the words they are learning. In addition, teachers make learning interesting by incorporating fun activities within the curriculum. To prevent students from becoming disinterested during the learning process, fun learning employs engaging learning techniques. As stated in the (Bukit, 2023) article, children will be joyful and excited about learning if they use entertaining learning activities.

In order to make instruction more authentic for students, the teaching method must be considered. Teaching strategies can be utilized with linguistic landscapes. According to (Al-Jarf, 2021), the linguistic landscape consists of language phrases found in generic signs that provide directions or information in public spaces. Everywhere that students go in their everyday lives stores, train stations, hospitals, streets, and other public spaces they see linguistic landscapes. Signs in public spaces demonstrate how each English vocabulary word is used, making language learning through linguistic landscape (LL) a highly authentic method for students. Linguistic landscapes are also present in the learning environment in the form of informational signs, room or place names, cautions, and directions. In addition, (Al-Jarf, 2021) said that learning English in class from a textbook only is unlikely to enhance students' proficiency levels. As students to learn English in a real-life environment, they must practice it outside of the classroom. Students can learn real English, and improve their vocabulary, grammatical structures, reading comprehension, inferencing skills, and intercultural awareness informally by using Linguistic Landscape.

For young learners, project-based learning may be an effective teaching strategy. A teaching strategy known as "project-based learning" makes use of projects to motivate students to learn. Project-based learning is a teaching method that offers student-centered instruction to achieve learning objectives because of the specific learning context, students actively participate in learning, and students can interact and share their knowledge and understanding with other friends, Cocco (2006), cited in (Kokotsaki, 2016). According to (Solomon, 2003), in project-based learning, students will address issues and obstacles that are actual and relevant to their everyday lives. In addition to enhancing students' speaking and writing abilities, project-based learning has been shown to enhance students' motivation, excitement, and passion throughout the project work process, (Artini, Ratminingsih, & Padmadewi, 2018). Elementary students may gain benefit from the project-based learning approach since it encourages students to participate in the learning process and take action.

Students frequently encounter difficulties learning English during the process, particularly in elementary school, as because of the language being foreign to them and the fact that teachers frequently employ less engaging and authentic teaching strategies. After conducting directly observations at SD Negeri 1 Banjar Jawa, it was discovered that fifth-graders learning English

frequently struggle to remember the vocabulary needed to construct sentences for casual interactions. The teacher primarily uses textbooks as educational tools, encouraging students to memorize definitions without understanding the true significance of each word. In addition, in order to help young learners comprehend more fully how the language is used in daily life, we must employ more realistic and real-world teaching strategies and methodologies. It is our responsibility as English teachers to employ engaging and real-world learning strategies that are, of course, adapted to the needs of our students.

As a result, the researcher studied the impact of the linguistic landscape on students' vocabulary mastery when paired with project-based learning. The novelty of this study is implementing linguistics landscape that combined with project based learning which is very rare to find research that examines the linguistic landscape as a teaching strategy when paired with project-based learning, especially at the elementary school level, particularly at 5th grade students at SD Negeri 1 Banjar Jawa. The purpose of this study is to investigate whether there is a significant effect of linguistic landscape in project-based learning on students' vocabulary mastery. This study has significance theoretically and practically. Theoretically, this research will provide a theoretical study regarding the application of linguistic landscapes through project-based learning on students' vocabulary mastery. Practically, the results of this study can provide benefits for students, teachers, school, other researchers, and Universitas Pendidikan Ganesha.

Linguistic Landscape

The scientific study of language that focuses on the characteristics of the language that people use to communicate in daily life is called linguistics. Linguistic landscapes are made up of language phrases that are employed in general signs that provide instructions or information in public spaces, according to a prior study by (Al-Jarf, 2021). Jaworski and Thurlow (2010), referenced in (Riadi & Warti, 2021), state that a person's perception, interpretation, and evaluation of an object or things in their environment in accordance with their cultural traditions constitutes their understanding of landscape in a broader sense. The words and images that are exposed and shown in public spaces, such as on billboard advertisements, public signs on government buildings, street names, place names, and road signs, are referred to as the linguistic landscape (LL). Linguistic landscapes are also present in the learning environment in the form of informational signs, room or place names, warnings, and directions. In this case, it concerns the effects on the students' vocabulary mastery of using this linguistic environment. In addition, (Al-Jarf, 2021) said that learning English in class from a textbook only will not improve students skill levels. For students to learn English in a real-world setting, they must practice it outside of the classroom. Linguistic landscapes give students an excellent opportunity. In a different previous study, (Jou, 2016) found that students at least encounter the target language more frequently in their surroundings, particularly if the language they are learning is not commonly spoken there. In addition, the previous study that conducted by (Roos, 2020), Elementary School students in Germany were asked to leave the classroom and pay attention to their surroundings, then they began to choose the appropriate pictures and make English terms so that they formed a sign in English that matched the surrounding context. In this case it can be seen that students can easily understand linguistics and the surrounding culture through linguistic landscapes which can train students' thinking skills, literacy and language structure of students. The linguistic landscape is beneficial for students learning as stated in the previous study by (Riadi & Warti, 2021), which

found that students can benefit from using the linguistic landscape to learn English because it can help them develop their vocabulary, literacy, pragmatic competence, grammatical structure, and social awareness. In addition, educators understand that linguistic diversity can benefit kids' English language acquisition.

Project Based Learning

Project-based learning is an instructional approach that motivates students to learn through the use of projects. According to Cocco (2006), referenced in (Kokotsaki, 2016), project-based learning is an instructional strategy that offers student-centered instruction to achieve learning objectives. Because of the different learning context, students actively engage in the learning process, and they can interact and share their knowledge and comprehension with peers. Students can work together with friends and develop problem-solving skills through project-based learning, which prepares them to generate finished goods that teachers can grade. According to (Artini, Ratminingsih, & Padmadewi, 2018), project-based learning can help students become more proficient communicators and writers. In addition, it may enhance students' motivation and excitement while they work on their projects. (Solomon, 2003) states that in project-based learning, students will address issues and obstacles that are real-world and pertinent to their everyday lives.

Students will see material from a variety of sources during the process, analyze it, and use it to solve challenges and finish projects. In this case, the teacher's job is to mentor students rather than assign or help them complete their tasks. The George Lucas Educational Foundation (2005), referenced by (Nurohman), provides a more thorough definition of project-based learning, including: (1) Project-based learning can provide students with guiding questions to help them identify the material or knowledge they have studied for the project after they respond to these questions. (2) The learning model known as "project-based learning" calls for instructors and/or students to provide guiding questions. Given that every student has a unique learning style, project-based learning gives pupils the chance to investigate material and carry out experiments in groups. (3) Through the process of working on a project, students can develop their critical thinking skills as project-based learning gives them the opportunity to practice problem analysis and real-world problem resolution. (4) Project-Based Learning is a method to education that considers students' comprehension. In order for students to comprehend the true significance or knowledge that they gain from working on the project more fully, they must explore, evaluate, interpret, and synthesize material. According to the results of the previous study by (Maulany, 2013), project-based learning has been shown to support students' learning and improve their oral communication abilities. In another previous study by (Riswandi, 2018), implementing project-based learning can help students to train their communication skills. By using project-based learning, students will be stimulated to learn the language itself to work on projects in learning English. As for the increased skills for students, they include students' fluency, vocabulary, pronunciation, grammar, and comprehension.

Vocabulary Mastery

The terms we need to know to communicate successfully are known as vocabulary; these include both expressive and receptive words for speaking and listening. Alqahtani (2015) quoted (Neuman & Dwyer, 2009). According to (Taslim dkk, 2019)., vocabulary is a group of words,

terms, and phrases put together to make sentences that are used to communicate verbally and express emotions to others. Vocabulary refers to "the total number of words in a language; vocabulary is a list of words with their meanings," according to Hornby (1995), who was cited by Alqahtani (2015). The words for everything in a language that must be learned in order to become fluent and utilize it in conversation are known as vocabulary. (Vitasromo, 2019) states that mastering vocabulary is knowing what words mean, being able to connect words to ideas or objects that are related to the topic, and being able to use words in reading, writing, speaking, and listening. When studying a foreign language, mastery of vocabulary is crucial. According to Taslim dkk (2019), in order to facilitate students' comprehension of the meaning and appropriate usage of vocabulary in talks, teachers should assign students vocabulary that is directly related to their immediate surroundings or everyday life.

METHOD

This study uses pre-experimental research with pre-test and post-test. The pre-test will be given to students before the treatment, six meetings will be conducted by the researcher in implementing the linguistic landscape in project-based learning, and the students will be given the post-test after the treatment to measure if there is a significant effect of linguistic landscape in project-based learning on students' vocabulary mastery. The population of this study were 5th grade students at SD Negeri 1 Banjar Jawa. The researcher take one class of 5th grade students as a sample of this study that is VB class that consist of 38 students. The instruments of this study are pre-test and post-test which consist of 20 questions in the form of multiple choice. The pre-test was given to the students at the beginning before the treatment and the post-test was given at the end after the treatment to measure if there is a significant effect of linguistic landscape in project-based learning for students' vocabulary mastery at SD Negeri 1 Banjar Jawa. There are several stages of the procedure in data collection carried out by the researcher : 1) Preparing an instrument that has been consulted and approved by the supervisory authorities, 2) Ask the Headmaster of the school for permission to conduct research in the school, 3) Conducting the Post-test before teaching the students, 4) Conducting teaching activities for six meetings with applying the linguistic landscape through project-based learning, 5) Conducting the post-test at the end, 6) Analyzing the data collection, 8) Concluding the result based on the findings.

In analyzing the data, researchers used several methods. First, descriptive statistic, a descriptive statistic is a statistical representation of the data that includes the mean, median, mode, variance, range, and standard deviation, (Sutanapong, 2015). When analyzing data from a T-test, descriptive statistics are utilized to confirm or clarify the effect of applying linguistic landscape in project-based learning toward students' vocabulary mastery at SD Negeri 1 Banjar Jawa. Second, Inferential statistics include normality test, paired sample t-test, and effect size. The data contribution's normality is established using the normality test. The statistical program SPSS was used to evaluate the results of the normality test. The Kolmogorov-Smirnov test was employed to verify if the data was normal. The data is normally distributed if the values exceed 0.05. Conversely, if the values are less than 0.05, the data is considered abnormal, (Kwak, 2019). The paired t-test is a statistical analysis technique that is employed to compare whether or not a variable that is tested twice has quantitative differences (Kwak, 2019). In order to assess the significance of the data and determine if the study hypothesis was accepted, the post-test result will be examined using a paired sample t-test. The null hypothesis (H_0) and the alternative hypothesis (H_a) serve as

the foundation for this research's hypothesis. If the value is higher than 0.05, the Ho is accepted, but if the value is lower than 0.05, the Ha is accepted. According to Fritz (2012), effect size indicates the significance of the observed effect. In this study, Cohen's formula is applied to the effect size.

RESULT AND DISCUSSION

Findings

1.1.1 Descriptive Statistic

Table 1 Pre-test and Post-test Score

No	Subject	Pre-test	Post-test
1.	Student 1	60	75
2.	Student 2	60	80
3.	Student 3	75	95
4.	Student 4	70	85
5.	Student 5	70	90
6.	Student 6	65	85
7.	Student 7	70	90
8.	Student 8	75	95
9.	Student 9	65	85
10.	Student 10	60	85
11.	Student 11	75	90
12.	Student 12	60	80
13.	Student 13	70	85
14.	Student 14	65	85
15.	Student 15	55	75
16.	Student 16	50	70
17.	Student 17	50	75
18.	Student 18	55	80
19.	Student 19	55	75
20.	Student 20	80	100
21.	Student 21	55	75
22.	Student 22	50	75
23.	Student 23	65	80
24.	Student 24	75	90
25.	Student 25	65	80
26.	Student 26	70	95
27.	Student 27	60	90
28.	Student 28	70	90
29.	Student 29	60	80
30.	Student 30	85	100
31.	Student 31	70	90
32.	Student 32	80	100
33.	Student 33	60	85

34. Student 34	50	70
35. Student 35	65	95
36. Student 36	70	90
37. Student 37	80	100
38. Student 38	75	85

After calculating the pre-test and post-test results, the researcher used the SPSS program to carry out a descriptive analysis of the data.

Table 2. Pre-test and Post-test Statistic

Statistics		Pre-test	Post-test
N	Valid	38	38
	Missing	0	0
Mean		65.53	85.53
Median		65.00	85.00
Mode		70.00	85.00
Std. Deviation		9.36	8.52
Variance		87.55	72.69
Range		35.00	30.00
Minimum		50.00	70.00
Maximum		85.00	100.00

The mean is the overall score's average. The pre-test average was 65.53 and the post-test average was 85.53, based on Table 2. According to the Table 2, the post-test mean score was greater than the pre-test mean score. The halfway score between the lowest and highest scores is called the median. Table 2 displayed the 65.00 median score for the pre-test and the 85.00 median score for the post-test. Additionally, Table 2 demonstrates that the post-test median was greater than the pre-test median. The number that stood out the most in the list of numbers is the mode. According to Table 2, the pre-test's mode score was 70.00, whereas the post-test's mode score was 85.00. Additionally, Table 2 above showed that the post-test's mode score was higher than the pre-test's mode score. The data distribution's dispersion can be found using the standard deviation. The pre-test standard deviation was 9.36, whereas the post-test standard deviation was 8.52. The average of squared deviations from the mean score is called variance. The pre-test variance in Table 2 was 87.55, but the post-test variance was 72.69. The distance in the list of numbers between the highest and lowest number is known as the range. The maximum score from the pre-test was 85.00 and the minimum score was 50.00. Meanwhile the maximum score from the post-test was

70.00 and the minimum score was 100.00. It can be calculated that the pre-test ranges from the highest to the lowest score is 35.00. While the range from the post-test was 30.00, it can be concluded there are a difference between the range scores where the total gap is 5.00.

1.1.2 Normality Test

Table 3 . Test of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre test	,131	38	,098	,958	38	,159
Post test	,121	38	,173	,948	38	,076

Lilliefors Significance Correction

From the results of the table above, it showed that the pre test significance value was 0.098 and the post test significance value was 0.173. The results also showed that the significance value is greater than 0.05 so it can be said that this data is normally distributed.

1.1.3 Paired Sample T-test

Table 4. Paired Sample T Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pre-test - Post-test	-20,00000	4,19137	,67993	-21,37767	-18,62233	-29,415	37	,000

From the paired sample t test results in the table above, it is known that the Sig (2 tailed) value is 0.000 which is smaller than 0.05. Therefore, it can be concluded that there is a significant effect of the implementation of the linguistic landscape through project based learning on students' vocabulary mastery at SD N Banjar Jawa

1.1.4 Effect Size

Table 5. Effect Size Result

Cohen's d = $\frac{d}{Sd}$ = $\frac{19,74}{4,18}$ = 4,72	d: the average of the differences between pre-test and post-test Sd: the standard deviation of the differences between pre-test and post-test
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The result of the effect size is 4,72 which is higher than 1, therefore it can be concluded that the implementation of linguistic landscape through project-based learning has a very significant effect on students' vocabulary mastery at SD Negeri 1 Banjar Jawa.

Discussion

Among the several methods of learning that teachers might use for teaching vocabulary to young learners is the linguistic landscape method. According to (Padmadewi, 2022), the linguistic landscape is accessible, indicating that students can locate LL anywhere, making the LL learning process beneficial for students. Because linguistic landscapes can be found in the surroundings of schools, children may gain vocabulary through a knowledge of its meaning and application in daily life. This makes such an authentic learning method. Researchers have applied the linguistic landscape in project-based learning for students' vocabulary mastery. The vocabulary mastery of class V.B. students at SD Negeri 1 Banjar Jawa has been utilized through several stages, including the administration of a pre-test, treatment with the application of linguistic landscape through project-based learning, and the final administration of a post-test. To treat the students, the researcher convened six sessions and assigned homework, as well as having the students work on a linguistic landscape project that was adapted to the textbook's lesson plan. Overall, the study's findings demonstrate that using the linguistic landscape in project-based learning has a major impact on students' vocabulary mastery. Based on the findings of the pre-and post-tests, students' post-test scores increased significantly after their treatment. Apart from that, based on the research results obtained by researchers regarding the effect of linguistic landscape in project-based learning in class V.B students at SDN 1 Banjar Jawa, the results of this research prove to be able to support previous research related to the implementation of linguistic landscape in project-based learning. Previous research presented in the empirical review states that there is a significant influence on students' vocabulary mastery from the implementation of linguistic landscape through project-based learning.

This research implies that using the linguistic landscape in project-based learning will improve students' vocabulary mastery. Researchers' learning strategies may help students in comprehending words found in their surroundings. Students in class V.B. receive instruction in the form of project-based learning, which is a very appropriate method of helping them learn vocabulary in the English language. This study also implies that the students in class V.B at SDN 1 Banjar Jawa who received treatment enjoyed using the linguistic landscape in project-based learning. Learning is enjoyable and has the potential to boost student involvement. Researchers attempt to include linguistic landscape into project-based learning for English language instruction so that other teachers can utilize it in the future. The outcome of the research was that students

who received the treatment responded positively to project-based learning that was combined with the linguistic landscape technique and applied for six meetings. Aside from that, the findings of the teacher questionnaire and interview responses are really encouraging.

CONCLUSION

Students frequently encounter difficulties learning English during the process, particularly in elementary school, because of the language being foreign to them and the fact that teachers frequently employ less engaging and authentic teaching strategies. The researcher examined the impact of linguistic landscape in project-based learning on students' vocabulary mastery and discovered that, as evidenced by the difference in average scores between pre-and post-test results, students in class V.B at SD Negeri 1 Banjar Jawa demonstrated significant benefit from the application of linguistic landscape in project-based learning. Students in class V.B. enthusiastically engaged in the project-based learning process, following its phases and ending in the creation of a linguistic landscape as a final product over the course of six meetings. The study outcome demonstrates that using the linguistic landscape in project-based learning has a major impact on students' vocabulary mastery. the results of this research prove to be able to support previous research related to the implementation of linguistic landscape in project-based learning.

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