

The Effectiveness of Project-Based Learning Toward Students' Speaking Performance and Skill

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ABSTRACT

This article aims to investigate the impact of Project-Based Learning (PBL) on the speaking performance and skills of second-semester students in the English Study Program at Universitas Ma'arif Lampung. PBL was employed in this study to address issues encountered in speaking classes. A pre-test was administered to 18 students from the English Study Program as part of the research conducted in March 2024. The analysis of the pre-test revealed a mean score of 54.89, with a standard deviation of 7.738 and a sample size of 18, alongside a minimum score of 44 and a maximum score of 64. The post-test results indicated an increase in the average score of students taught using PBL, suggesting a significant enhancement in both their performance and speaking skills attributable to the project-based learning approach. This underscores the efficacy of this method in yielding notable differences between pre-test and post-test results. The implementation of PBL in speaking instruction encompasses several phases, including the formulation of a project strategy, the establishment of a timeline, monitoring the progress of students and the project, analysing outcomes, and evaluating the overall experience.

Keywords: *Project-Based Learning, Speaking Performance, Speaking Skill*

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PENDAHULUAN

In the realm of academic inquiry, the domain of speaking skill research stands as a pivotal avenue for understanding the multifaceted dynamics of human communication. Speaking is an interactive process that generates, receives, and processes data to construct meaning, influenced by various factors such as the conversational environment, participants, and purpose (Frazier & Brown, 2001). Another opinion states speaking is a way of saying something with the purpose to convey opinions or ideas to provide information, entertaining, or encouraging someone to interact or talk with others in society (Cj, 2018; Nicolls et al., 2024; Bonnet, 2018; Zou et al., 2024). Speaking is an important skill that necessitates interaction and performance (Anggini & Arjulayana, 2021; Yuskar, & Suhono, 2023). However, speaking is one of the abilities involved in learning English and is also referred to as oral communication.

This has grown to be a crucial subject that educators ought to teach (Indrawati, 2023).

The skill and understanding of correct pronunciation and usage are not necessarily well able to be controlled by students in this context for various reasons. The problems experienced by most students are a lack of confidence and vocabulary. This statement is supported by (Nursiah 2023) who states that factors that hinder the improvement of English language skills, especially speaking skills, are due to a low vocabulary and a lack of courage in practicing in students' daily lives that have not been seen significantly. The choice of teaching model is also very influential in learning activities. While assisting students with speaking in the classroom, teachers may run into a few speaking skill issues. These include restricted engagement, hesitation, ignorance, and mother tongue usage (Mido, 2022; Tai et al., 2024; Benning, et al., 2025). During the process of teaching and learning, the lecturer has an important role in selecting the model of learning that will be employed in the process of instruction and learning. Giving students lessons to encourage and assist them in speaking English is known as teaching speaking (Pratiwi et al., 2021).

One option is to select a project-based learning model for teachers in speaking learning activities. This learning paradigm gives students the autonomy to organize lessons, work together on projects, and ultimately create finished products that they may share with others (Mahendra, 2017). According to (Patton 2012) with project-based learning, students can be involved in organizing, constructing, and performing a project that culminates in a final result that is presented to others. This can help students solve problems experienced in the learning process provided by the teacher. Project Based Learning emphasizes on the process of how to solve problems that are ultimately able to produce a product (Siman, 2023). Project Based Learning may encourage students to speak up and help them develop their ability to communicate clearly and enthusiastically (Suryani & Argawati, 2023; Putra et al., 2024; Harya, 2022).

In the learning process, students have several problems as explained above, such as lack of vocabulary, pronunciation, and lack of confidence (Jaya & Petrus, 2022). Based on pre-survey activities carried out in the class of the second semester of English education at Maarif University in Lampung in February 2024, the questions given by the researcher to the students aimed to find out the students' initial knowledge about project-based learning. Some students were still unfamiliar with the learning model. The next question aimed to find out the students' English language skills. Many of them felt lacking in their English-speaking skill and performance. This problem is caused by several factors, including the fact that they feel lacking in grammar, vocabulary, and pronunciation, which

makes them less confident in speaking. As well as a lack of communication with classmates who use English. The results of the questionnaire obtained are as follows:

Figure 1 Pra-survey Question Result



The previous research discussed the effectiveness of project-based learning on speaking. Found that PBL interventions improve students' speaking skills (Firdaus & Septiady, 2023). According (Bakeer et al., 2023) this study found that project-based learning helped students become better at speaking, more confident, more independent, and more able to interact with others. Results showed that project-based learning assisted by video blogs improved students' speaking skills and encouraged them to actively participate in language learning (Jusmaya, 2022). In subsequent research, it was found that Project Based Learning changed the learning model from traditional to modern, making students more active and involved in the learning process (Cahyana, 2022). According (Dewi, 2020) this study found, during the learning process, promoting student

autonomy and project-based learning can have a positive impact on students' speaking skill and their overall proficiency. Hence the aim of this article was to investigate how Project-Based Learning (PBL) affects students' speaking performance and speaking skill of the second semester at English Study Program Universitas Ma'arif Lampung

METHOD

Research Design

This study used quantitative research methods, the purpose of which was to identify the effectiveness of project-based learning on student speaking. The quantitative approach is used so that all observed phenomena can be measured and converted into numbers so that statistical analysis can be carried out. The definition of quantitative research is a crucial component of any study that gathers, examines, and explains data using research techniques based on numbers and statistics (Barella et al., 2024). This research uses quasi-experimental method to prove that project-based learning is an effective method to improve speaking performance and skill. This research is conducted in one class without using a comparison or control class (Suharsimi Arikunto, 2006). The research design is quasi-experimental, meaning that one group pre-test after-test is used to measure differences before and after treatment (Rogers & Révész, 2023). To measure the one-group pretest and posttest research design, a pretest conducted before treatment and a posttest conducted after treatment were used. The scheme of the one-group pretest and posttest study is as follows:

Table 1 Research Design

Pre test	Treatment	Post test
T ₁	X	T ₂

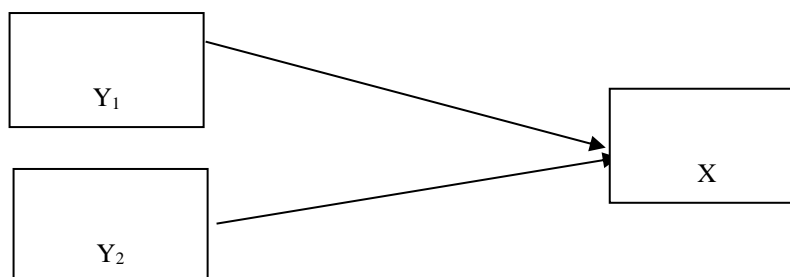
T₁ : The pre-test is conducted before the treatment is given.

X : Treatment is given to students by using project-based learning.

T₂ : The final test (post test) is done after being given treatment.

There are three variables in this study: two dependent variables and one independent variable. The variable that influences, generates, or results in the appearance of the dependent variable (Y) is known as the independent variable (X). Project-based learning is the study's independent variable (X). The variable that is impacted by or results from the independent variable (X) is known as the dependent variable (Y). The dependent variables (Y1) in this study are speaking performance and (Y2) speaking skills.

Figure 2 Model of Research Variable



Population and Sample

Population is the overall research component that includes objects and subjects that have certain characteristics (Amin et al., 2020). The population and samples in this study were second semester TBI UMALA students consisting of 18 people.

This research used purposive sampling based on the research objectives. Researchers purposely select groups of people in the population who are considered to have relevant information or characteristics for research. Using the purposeful sampling methodology as a sample strategy based on certain factors (Sugiyono, 2008). This technique can be used for quantitative research or those that do not generalize. Researchers select samples based on their characteristics, and they select sample members based on characteristics relevant to the study.

Instruments

An oral exam is the tool utilized in this study. The purpose of this test is to evaluate in students speaking skills and performance. There are two types of research instruments, namely pre-test and post-test. Before students receive treatment, their abilities are evaluated via a pre-test. Pre-testing was done without creating a project. While the post-test was used to determine the students' skill after using project-based learning. The test was conducted orally with the task of making a project. Students made posters in accordance with the provisions given. In this case, the assessment is carried out according to the indicators of each variable.

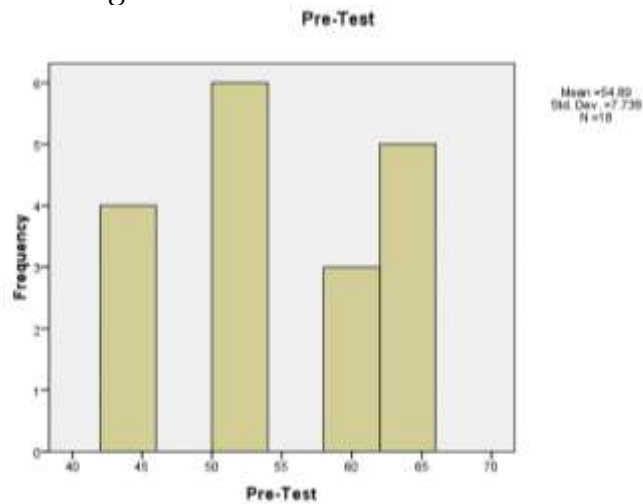
Data Analysis

In the analysis of quantitative data obtained from test results. The instruments' reliability and validity were also examined. The Statistical Package for Social Science (SPSS) v.16 for Windows software was then used to do statistical computations in order to ascertain the efficacy of this investigation.

RESULTS AND DISCUSSION

The finding was taken from pre-test and post-test result. The pre-test was conducted before the students received the treatment as a comparison to the skill and performance obtained from the post-test results. The pre-test was given to 18 students majoring in English education, which was conducted in March 2024. Figure 3 displays the pre-test results for the students.

Figure 3 Result of the Pre-test



According to the figure, four students received a score of 44, six received a score of 52, three received a score of 60, and five had a score of 64. The pre-test means, 54.89, with a standard deviation of 7.738 and N of 18, was determined by the researcher using the data collected; the minimum score was 44, and the maximum score was 64. Prior to receiving treatment, this was the speaking skill score of the students. A post-test measuring the students speaking skills following treatment was administered in April 2024.

Figure 4 Result of the Pre-test

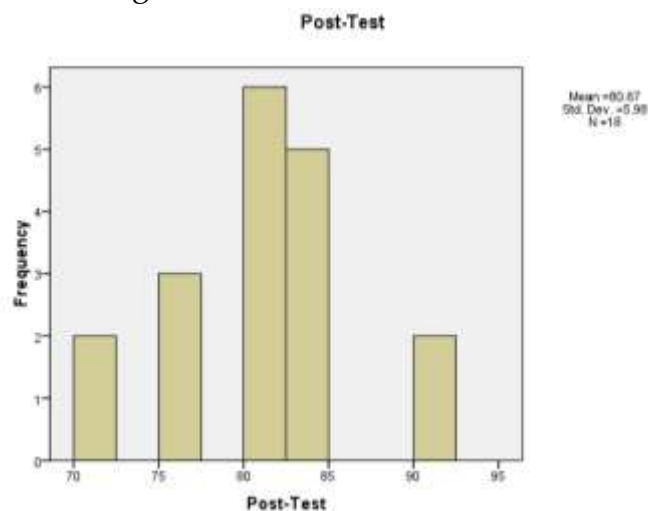


Figure 4 above shows that two students received a score of 70, three received a score of 76, six received an 80, five received an 84, and two received a 92. The experimental class's average post-test score is 80.67, with a standard deviation of 5.98 and a N of 18. This demonstrates the pupils' ability to speak following treatment.

Following data collection, the researcher will concentrate on a number of hypotheses before employing the paired sample t-test to examine the data. The way to get the mean is the sum of all values then divided by the amount of data. While The way to get the standard deviation is that the group frequency is obtained from the division of the value, then it is calculated how many students get a value in that range, for example the value of 41-45 there are 3 students, so the frequency is 3. The middle value is obtained from the sum of the value ranges then divided by 2. for example 41 + 45: 2 = 43. the mean value is the same as the middle value, with the amount of data is the number of students = 18. As for the formula used to obtain standard deviation:

$$S \sqrt{\frac{\sum f_i (x_i - \bar{x})^2}{n}}$$

Description:

S : Standar Deviation

F_i : Group Frequency

X_i : Center Value

\bar{X} : Average Value (mean)

n : Total Data

While the way to get the standard error of the mean is the error value obtained from the number of standard deviations divided by the square root (take from the pre-test statistics). Example (taken from pre-test statistics): standard deviation on pre-test scores = 7.738, n : $\sqrt{18}$ = 4.24, standard error = 1.824. df value obtained from n-1, 18-1= 17.

Table 2 Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-Test	54.89	18	7.738	1.824
	Post-Test	80.67	18	5.980	1.410

Students scored an average of 54.89 on the pre-test and 80.67 on the post-test. This demonstrates that using the project-based learning approach led to progress. The average score of students taught using PBL is higher than it was previously, according to the post-test results. The

paired samples t-test, which is helpful in determining the difference between students' pretest and posttest scores, should be used to compute the difference between the two tests. The theory that was applied is as follows: (H1) Speaking proficiency and performance differed before and after implementing the project-based learning methodology. (H0) Speaking performance and proficiency are the same before and after utilizing the project-based learning paradigm. It will be covered in the part that follows.

However, the following is the formulation of the criterion for accepting or rejecting the hypothesis: If Sig. (Pvalue) > $\alpha = 0.05$, then H0 is acceptable. If Sig. (Pvalue) < $\alpha = 0.05$, then H1 is accepted.

Which will be discussed in the following section.

Table 3 Paired Sample Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Paired Sample 1 Pre-Test - Post-Test	-25.778	5.652	1.332	-28.589	-22.967	-19.349	17	.000

The difference between the two means was calculated by paired t-test analysis. A significance level of 0.05, or 95% confidence, is the criterion for rejecting or accepting the null hypothesis. There is a statistically significant difference between two conditions – posttest and pre-test – if the sig. value is less than 0.05 ($p < 0.05$). Based on the calculation results, there is a significant value of 0.000, which means H0 is rejected and H1 is accepted. This indicates that Project-Based Learning has a significant impact on students' performance and their speaking skill. These results show that this treatment effectively differentiates significant post-test and pre-test.

This research applied project-based learning to help solve a problem in a speaking class. The researcher designed a project that was considered familiar to students. The project was to create a poster with the themes of education, environment, and mental health. Students chose one of these themes. Then they describe the content of the poster and the reason they chose the theme in the

form of a video. The results of the video description were shared on their social media platforms.

Starting with the key question, creating a strategy, scheduling, tracking students' and the project's progress, analyzing the results, and assessing the experience are the processes involved in the methodical use of project-based learning in speaking instruction.

In the first meeting, the researcher used two steps of project-based learning. It started with asking important questions and making a project plan. To start the project, questions were asked about what tasks had been given to students in the previous meeting. By linking the previous tasks with the tasks that had been prepared for the class, the researcher tried to encourage students to work on a broader task. At this step, there was interaction with students. This showed that the researcher wanted to be involved in the students' activities in the previous meeting. In addition, this conversation aims to raise awareness that they are the creators of the project. As a result, this question is a very important one for the project.

In this section, students are asked to discuss with their friends making a project plan. This is after students have completed the assignment given by the lecturer in the first meeting. In this section, instructions are given on how to work on the given project. The topic is given by the researcher, students then have to choose the most appropriate and interesting topic for themselves.

In the third step, students are asked to determine their schedule planning, determining the dates of work and materials needed in the project. At this stage, students are asked to work on the project individually. In this activity, the researcher is responsible for monitoring students' activities while completing the project. Furthermore, consider deadlines when students have to submit and share their projects on social media. In the section on assessing results, the researcher assesses the The assessment of the speaking component is in line with Brown's theory that the criteria for students' speaking scores can be measured by five criteria (Brown, 2001): pronunciation, grammar, vocabulary, fluency, and comprehension. Before uploading the project to their social media, the researcher tried to remind them about each material about each of the materials. How the content should be created, the duration of the content. In the evaluating the experience, students were asked to present the results of the project they made in front of the class. They explained their process in making the project before uploading it to social media. As for the pre-test results before treatment, that is :

Figure 2 Student Score in pre-test



Pronunciation	: 3
Grammar	: 2
Vocabulary	: 2
Fluency	: 3
Comprehension	: 3
Score	: 52

As for the results of the students' post-test in front of the class, as the project-based learning stage is evaluation, which is done in class as follows:

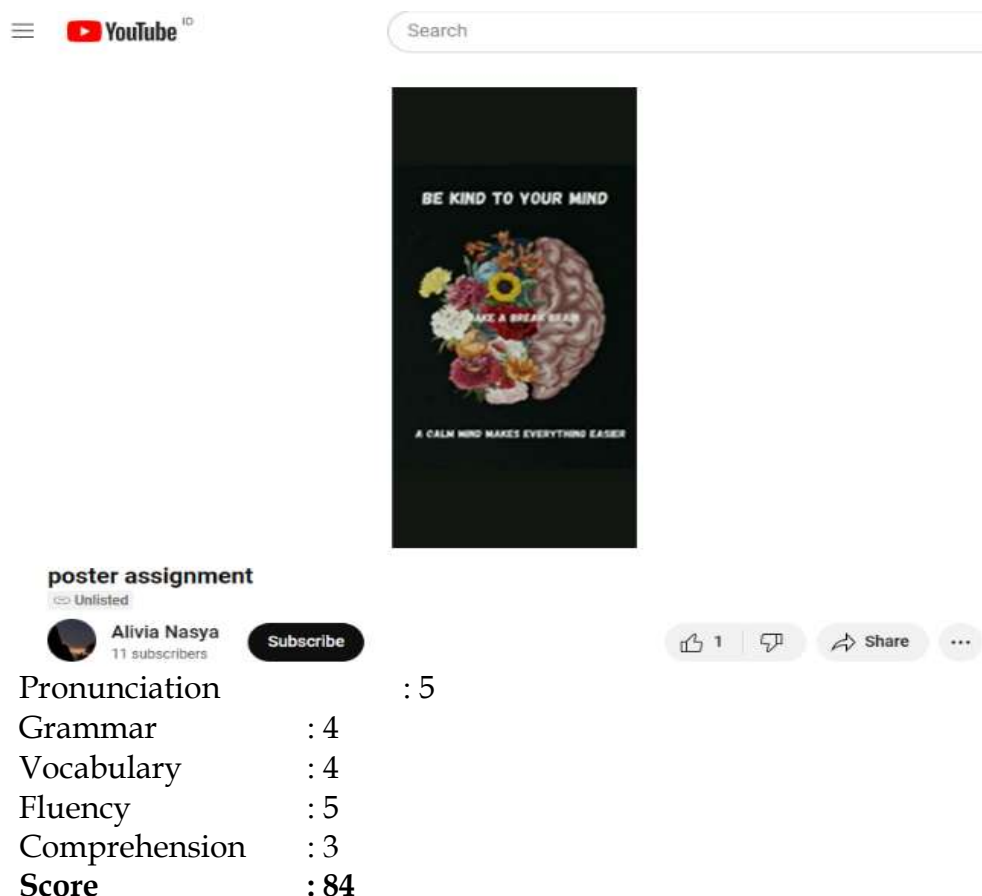
Figure 3 Student Score in Post-Test



Pronunciation	: 4
Grammar	: 5
Vocabulary	: 4
Fluency	: 5
Comprehension	: 5
Score	: 92

As for the pretest results uploaded via the youtube platform, as follows:

Figure 4 Student Score In Post-Test



DISCUSSION

The main findings of this study show that project-based learning significantly benefits students' speaking skills and performance, including confidence, comprehension, fluency, and pronunciation, improved as students took part in project-based learning activities. Project-based learning makes students more motivated and engaged in the learning process as it gives them the opportunity to practice their speaking skills in actual situations. In addition, project-based learning projects encourage students to collaborate and speak actively with their friends, which helps them learn to communicate with others.

The findings of this research are consistent with studies carried by (Wuntuet et al., 2022) The article explores at how Project-Based Learning (PBL) is used to teach English as a foreign language in Indonesia and shows how well it works to increase speaking, critical thinking, and student involvement. Further research by (Nugroho & Anugerahwati, 2019) the research tenth-grade accounting students at a vocational school saw a considerable improvement in speaking skills when project-based learning (PBL) was implemented using Vlog. Fluency, grammatical accuracy, pronunciation, vocabulary, and content

all improved among the pupils. Similarly, research conducted by (Wahyuni et al., 2018) the study's findings, the students' speaking skills improved in a number of domains, such as grammar, vocabulary, fluency, confidence, and pronunciation. These components were strengthened by a variety of speaking activities, such as oral presentations, voice recordings, interviews, and group discussions. Research conducted by (Mafruudloh & Fitriati, 2020) the research indicate that there was a significant effect of project-based learning (PBL) on students' speaking ability in a non-English class (Management class) and to find out the effect of PBL on students' speaking ability. According to (Iin, 2022) state that students' speaking skills improve as a result of project-based learning. The experimental group's post-test results demonstrated a notable improvement, demonstrating the efficacy of video project-based learning as a technique for improving speaking proficiency. Research by (Widiyati & Pangesti, 2022) also state that students' speaking skills as well as their motivation, inventiveness, and excitement for studying English were greatly enhanced by project-based learning (PBL). The study's findings demonstrated the efficacy of project-based learning with English presentations in enhancing students' English-speaking skills (Sirisrimangkorn, 2021). On research by (Misbahun Haidir Firmansyah et al., 2023) According to the study, ninth-grade students at SMPN 3 Surabaya can improve their speaking skills by combining Quizizz digital media with Project-Based Learning. Based on the research by (Riswandi, 2018) findings of this study, it can be said that using PBL to teach speaking can help students become more motivated and proficient speakers. According to (Huang & Sun, 2022) the study's findings, Project-Based Learning (PBL) improves the speaking skills of learners, especially in terms of vocabulary and fluency.

This research different from previous studies in several important ways. First, this study focuses on Umala's TBI second semester students, which allows for learning more about how project-based learning (PBL) interacts with local elements such as learning culture and curriculum. Second, this study specifically emphasizes the impact of PBL on speaking skills, allowing for the study of details such as accuracy and fluency, which may not have been the main focus of previous research.

This research can strengthen our understanding of how PBL affects speaking performance and skill, and what factors play a role in its successful implementation. Socially, improving students' speaking performance and skill will have a positive impact on their ability to communicate effectively in academic and professional contexts. There are of course the possible drawback is that the sample size can be small, thus care must be taken when extrapolating the results to a larger population. Furthermore, this study might have trouble regulating outside factors like prior learning experiences or personal motivation levels that could influence students' speaking abilities. Comparative research can be conducted to compare project-based learning with other English teaching approaches, such as task-based learning or content-based learning, but this study has provided insights into how project-based learning improves students' speaking ability.

CONCLUSION

Students' speaking skills improved as a result of using project-based learning. The paired t-test analysis revealed a statistically significant difference between the two circumstances, and the post-test scores were higher than the pre-test levels. As a result, the hypothesis that performance and speaking abilities differ before and after utilizing project-based learning was approved. Project-Based Learning is an effective method to improve speaking performance and skill. This study found that Project-Based Learning significantly impacts students' speaking skill, making them more confident and able to interact with others. Therefore, incorporating Project-Based Learning into English-speaking teaching and learning can benefit students' language skill and performance.

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