Journal of English Language and Education
ISSN 2597- 6850 (Online), 2502-4132 (Print)
Journal Homepage: https://jele.or.id/index.php/jele/index

OPEN ACCESS Article

Integrating Problem-Based Learning in Improving Speaking Skills of Seventh Grade Students at Bala Keselamatan Christian Junior High School Palu

https://doi.org/10.31004/jele.v11i2.2298

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A B S T R A C T

This study examines the effectiveness of Problem-Based Learning (PBL) in enhancing the speaking abilities of seventh-grade students at SMP Kristen BK Palu. It focuses on common challenges experienced by Indonesian EFL learners, particularly in terms of fluency, accuracy, and comprehensibility in oral communication. The research applied a quasi-experimental method using a non-equivalent control group pre-test–post-test design. The population included all seventh-grade students in the 2025/2026 academic year, with two existing classes selected as samples: Class 7A as the experimental group and Class 7B as the control group. The experimental group was taught using the PBL approach, while the control group received conventional teacher-centered instruction. Data were gathered through speaking tests conducted before and after the treatment period. Students' performances were assessed using an analytical rubric measuring fluency, accuracy, and comprehensibility. The findings revealed a significant improvement in the experimental group's speaking scores, which increased from a mean of 4.50 in the pre-test to 10.60 in the post-test. Meanwhile, the control group showed no notable progress, maintaining a mean score of 4.65. The independent sample t-test yielded a calculated value of 14.55, exceeding the critical value of 2.005 at a 0.05 significance level (df = 54). These results indicate a statistically significant difference between the groups, confirming the positive impact of PBL. Overall, the study suggests that PBL fosters interactive, collaborative learning, promotes active engagement, and improves students' confidence in speaking English.

Keywords: *Problem-Based Learning, Speaking Skill, Junior High School Students*

Article History:
Received 18th March 2026
Accepted 07th April 2026
Published 08th April 2026

INTRODUCTION

English plays a crucial role as an international language used for global communication in education, technology, and professional interaction. Because of this global importance, the ability to communicate orally in English has become an essential competence for learners of English as a Foreign Language (EFL). Speaking allows learners to express ideas, exchange information, and interact with others in meaningful communication. According to Brown (2007), speaking is an interactive process of constructing meaning that involves producing, receiving, and processing information. Therefore, speaking ability is often considered the most visible indicator of language proficiency.

In language learning, speaking is categorized as a productive skill that requires the integration of several linguistic elements, including vocabulary, grammar, pronunciation, and discourse organization. Learners must process their ideas quickly and express them in an understandable way during communication. Harmer (2007) explains that speaking involves not only the knowledge of language forms but also the ability to use language appropriately in different social contexts. Because of this complexity, speaking is frequently regarded as one of the most challenging skills for EFL learners.

In Indonesia, English is taught as a compulsory subject at the junior high school level with the aim of developing students' communicative competence. The national curriculum emphasizes that English learning should enable students to communicate effectively in everyday situations. According to Kemendikbudristek (2022), English instruction in junior high schools should focus on meaningful interaction and practical communication rather than memorization of linguistic rules.

Currently, Indonesian schools implement the Kurikulum Merdeka, which promotes student-centered learning and competency-based education. This curriculum provides flexibility for teachers to design learning activities that encourage critical thinking, collaboration, and communication. Indarta et al. (2022) explain that the Merdeka Curriculum aligns with the principles of 21st-century learning, which emphasize active student participation and authentic learning experiences.

Despite these curriculum expectations, many students in Indonesian EFL classrooms still experience difficulties in developing speaking skills. Several studies report that students often struggle to express their ideas in English due to limited vocabulary, low confidence, and lack of speaking practice. For example, Rusdin and Purwati (2023) found that Indonesian secondary school students frequently hesitate to speak English because they fear making mistakes and lack sufficient opportunities to practice oral communication.

Another challenge lies in the teaching approach used in many classrooms. In some cases, English instruction is still dominated by teacher-centered methods in which teachers explain grammar and vocabulary while students passively listen. Richards and Rodgers (2001) argue that traditional language teaching methods often limit learners' opportunities to practice authentic communication, which is essential for developing speaking competence.

In addition to pedagogical factors, psychological aspects such as anxiety and lack of confidence also influence students' speaking performance. Many learners feel nervous when they are required to speak English in front of their classmates. Lamb (2012) states that speaking anxiety is one of the major barriers for Indonesian EFL learners because students are afraid of making errors and being judged by others.

To address these challenges, language educators recommend the use of student-centered learning approaches that promote active participation and meaningful interaction. One instructional approach that has gained increasing attention in language education is Problem-Based Learning (PBL). According to Barrows (1996), Problem-Based Learning is an instructional approach in which students learn through the process of solving real or meaningful problems collaboratively.

Problem-Based Learning encourages students to discuss ideas, analyze problems, and propose solutions through communication and collaboration. Hmelo-Silver (2004) explains that PBL promotes deeper learning because students actively construct knowledge while interacting with their peers. In language classrooms, this interaction creates opportunities for learners to use the target language in authentic communication.

Several empirical studies have demonstrated the effectiveness of Problem-Based Learning in improving students' speaking skills. Gao and Chayanuvat (2024) reported that the implementation of PBL significantly improved junior high school students' English-speaking performance by increasing their participation in communicative tasks. Similarly, Fatimah et al. (2025) found that students who learned through PBL showed higher speaking scores and greater confidence compared to those who learned through conventional methods.

Although many studies have explored the effectiveness of PBL in English language teaching, research focusing on junior high school contexts in Indonesia, particularly among seventh-grade students, remains limited. Early exposure to communicative speaking activities is important because it can influence students' confidence and language development in later learning stages. Therefore, this study aims to investigate the effectiveness of Problem-Based Learning in improving the speaking skills of seventh-grade students at SMP Kristen BK Palu.

METHOD

This study employed a quasi-experimental research design using a non-equivalent control group pre-test–post-test design to investigate the effectiveness of Problem-Based Learning (PBL) in improving students' speaking skills. This design is commonly used in educational research when random assignment of participants is not feasible due to existing classroom structures. According to Creswell and Creswell (2018), quasi-experimental designs allow researchers to examine causal relationships in natural classroom settings while maintaining reasonable control over variables. In this study, two intact classes were selected: one class served as the experimental group receiving instruction through Problem-Based Learning, while the other class functioned as the control group receiving conventional teaching methods. Both groups completed a pre-test before the treatment and a post-test after the treatment to measure changes in students' speaking performance.

The participants of this research were seventh-grade students of SMP Kristen BK Palu during the 2025/2026 academic year. The population consisted of four classes with a total of 120 students. From this population, two classes were selected through purposive sampling based on their similar English proficiency levels and classroom characteristics. Class 7A, consisting of 32 students, was assigned as the experimental group, while Class 7B, consisting of 32 students, served as the control group. According to Fraenkel, Wallen, and Hyun (2019), purposive sampling is appropriate when researchers select participants based on specific characteristics relevant to the research objectives. This selection ensured that both groups had comparable initial abilities before the treatment was implemented.

The primary instrument used to collect data was an oral speaking test administered as both pre-test and post-test. The test measured students' speaking performance based on three components: fluency, accuracy, and comprehensibility. Students were asked to perform short speaking tasks such as self-introduction, describing people or places, and responding to simple questions. Each performance was evaluated using an analytical scoring rubric adapted from Brown (2004) and Hughes (2003). The collected data were analyzed using descriptive statistics, including mean and standard deviation, followed by an independent samples t-test to determine whether there was a significant difference between the experimental and control groups after the treatment. This statistical technique is commonly used to compare the means of two independent groups in experimental studies (Field, 2018).

FINDINGS AND DISCUSSION

In collecting the data for this research, the researcher used speaking tests for both the experimental and control groups. The tests were administered before and after the treatment (pre-test and post-test). The researcher gave treatment to the experimental group by implementing Problem-Based Learning (PBL) in teaching speaking, while the control group received conventional teaching methods. The data collection was conducted from January 13th, 2025 until February 6th, 2025. The main reason to test the students was to verify whether using Problem-Based Learning can improve the speaking skill of seventh-grade students at SMP Kristen BK Palu or not.

The Result of Pre-Test

The pre-test was administered to both experimental and control groups before the treatment to measure their initial speaking ability. The pre-test consisted of three components: fluency, accuracy, and comprehensibility, with a maximum score of 15 points.

Table 1 The Students' Individual Scores on Pre-test

No	Experimental Group	Control Group
1	3	6
2	12	5
3	6	4
4	8	10
5	4	5
6	3	5
7	3	3
8	3	4
9	4	5
10	3	6
11	4	5
12	7	5
13	3	5
14	3	3
15	5	4
16	5	4
17	3	7
18	4	6
19	3	4
20	4	3
21	6	3
22	5	3
23	5	4
24	3	4
25	3	5
26	3	3
27	5	-
28	4	-
29	6	-
30	5	-
Mean	**4.50**	**4.65**

Based on Table 1, the mean score of the experimental group's pre-test was 4.50, while the control group's mean score was 4.65. This indicates that both groups had relatively similar speaking abilities before the treatment was given.

The Result of Post-Test

After the treatment, a post-test was administered to both groups to measure any improvement in their speaking abilities.

Table 2 The Students' Individual Scores on Post-test

No	Experimental Group	Control Group
1	11	6
2	15	5
3	12	4
4	12	10
5	12	5
6	9	5
7	11	3
8	9	4
9	9	5
10	9	6
11	10	5
12	10	5
13	9	5
14	10	3
15	9	4
16	10	4
17	11	7

No	Experimental Group	Control Group
18	12	6
19	9	4
20	12	3
21	9	3
22	11	3
23	12	4
24	10	4
25	9	5
26	9	3
27	12	-
28	12	-
29	11	-
30	12	-
Mean	**10.60**	**4.65**

Based on Table 2, the mean score of the experimental group's post-test was 10.60, showing a significant increase from the pre-test score of 4.50. Meanwhile, the control group's post-test mean score remained at 4.65, showing no improvement.

Mean Score

The formula for calculating the mean score is:

$$M = \frac{\Sigma x}{N}$$

Where:

M = Mean score

Σx = Sum of all scores

N = Number of students

Calculation:

Experimental Group Pre-test: - Σx = 135 - N = 30 - M = 135 / 30 = 4.50

Experimental Group Post-test: - Σx = 318 - N = 30 - M = 318 / 30 = 10.60

Control Group Pre-test: - Σx = 121 - N = 26 - M = 121 / 26 = 4.65

Control Group Post-test: - Σx = 121 - N = 26 - M = 121 / 26 = 4.65

Table 3 Mean Scores Summary

Group	Pre-test Mean	Post-test Mean	Improvement
Experimental	4.50	10.60	**+6.10**
Control	4.65	4.65	0.00

The table shows that the experimental group improved by 6.10 points, while the control group showed no improvement.

Standard Deviation

The formula for calculating standard deviation is:

$$SD = \sqrt{\frac{\Sigma(X - M)^2}{N - 1}}$$

Where:

SD = Standard Deviation

X = Individual score

M = Mean score

N = Number of students

Calculation Results:

Experimental Group : - Pre-test SD = 1.96 - Post-test SD = 1.50

Control Group : - Pre-test SD = 1.55 - Post-test SD = 1.55

Testing Hypothesis

The hypothesis was tested using Independent Sample t-Test to determine whether there is a significant difference between the experimental and control groups.

Research Hypotheses: - H_0: There is no significant difference between experimental and control groups - H_1: There is a significant difference between experimental and control groups

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

Where:
X_1 = Mean of experimental group
X_2 = Mean of control group
S_1^2 = Variance of experimental group
S_2^2 = Variance of control group
N_1 = Number of students in experimental group
N_2 = Number of students in control group

Calculation:

Given: - X_1 = 10.60 - X_2 = 4.65 - S_1^2 = 2.2483 - S_2^2 = 2.3954 - N_1 = 30 - N_2 = 26

Step-by-step:

1. $X_1 - X_2 = 10.60 - 4.65 = 5.95$
2. $S_1^2/N_1 = 2.2483/30 = 0.074943$
3. $S_2^2/N_2 = 2.3954/26 = 0.092130$
4. Sum = 0.074943 + 0.092130 = 0.167073
5. √Sum = √0.167073 = 0.4087
6. t = 5.95 / 0.4087 = 14.5473
7. df = $N_1 + N_2 - 2 = 30 + 26 - 2 = 54$

Table 4 Test Statistics

Statistic	Value
t-calculated	14.5473
df	54
t-table (α=0.05)	2.005
Decision	H_0 Rejected

Interpretation:

Since t-calculated (14.55) > t-table (2.005), the null hypothesis (H_0) is rejected. This means there is a significant difference between the speaking abilities of the experimental and control groups. Therefore, Problem-Based Learning is effective in improving students' speaking skills.

Discussion

The findings of this study indicate that Problem-Based Learning (PBL) is effective in improving the speaking skills of seventh-grade students at SMP Kristen BK Palu. Based on the data analysis, there is a significant difference between the experimental group (Class 7A) and the control group (Class 7B), as evidenced by the substantial improvement in the experimental group's post-test scores compared to the control group.

On the first day of the research, the researcher conducted a pre-test and initial interviews in both Class 7A and Class 7B. During this phase, it was found that the majority of students were unable to answer basic questions in English. Most students did not even understand the meaning of the questions being asked. Although the students were socially active and enjoyed interacting with their peers, they became very passive and silent when the context shifted to English learning. The seventh-graders at SMP Kristen BK Palu also showed a low attention span and were easily bored when the material was delivered through long, theoretical explanations.

In Class 7A, which had English sessions every Tuesday and Thursday, the researcher implemented the Problem-Based Learning treatment. At the beginning of the treatment, the students faced difficulties in adapting to the PBL stages, especially in identifying the problems

and finding the right vocabulary. However, as the researcher provided guidance and the sessions progressed, the students began to show a significant improvement in understanding the material.

The collaborative nature of PBL effectively addressed the students' boredom. Instead of being passive listeners, students were actively involved in group discussions to solve real-world problems. This transition from a passive to an active learning environment was the key factor that led to a significant increase in Class 7A's mean score from 4.50 to 10.60.

In contrast, Class 7B, which held English sessions every Wednesday and Friday, was taught using a conventional method. In this class, the researcher acted as the primary source of information, explaining grammar and vocabulary in a teacher-centered manner. The atmosphere was monotonous, and as the researcher observed, the students quickly became bored and disengaged. Without the challenge of problem-solving or interactive group work, the students remained passive and hesitant to speak. This explains why Class 7B's mean score remained stagnant at 4.65 in the post-test.

The findings of this study are consistent with several previous researchers. The success of Class 7A supports the study by Fatimah et al. (2025), who found that PBL significantly improves students' speaking proficiency by creating a dynamic and engaging classroom environment. Similarly, the finding that students' interest is higher when using PBL aligns with Gao and Chayanuvat (2024), who emphasized that active engagement is crucial for overcoming students' boredom in EFL classrooms.

Furthermore, the lack of progress in Class 7B echoes the observations of Tarigan et al. (2025). They noted that while traditional methods might be useful for delivering basic theory, they often fail to provide the "meaningful communication" needed to improve speaking fluency. In the context of SMP Kristen BK Palu, the stark difference between the post-test results of the two classes confirms that PBL is a much more effective model for seventh-grade students compared to a monotonous, teacher-centered approach.

The superior effectiveness of PBL in improving speaking skills can be attributed to several key advantages. PBL situates language use within authentic, meaningful contexts, compelling students to use English as a genuine communicative tool rather than merely repeating linguistic input (Hmelo-Silver, 2004). Additionally, the collaborative nature of PBL provides repeated opportunities for negotiation of meaning — a process central to second language acquisition — while simultaneously fostering student autonomy and intrinsic motivation, which is particularly valuable for early secondary school students who are prone to boredom in teacher-centered classrooms (Gao & Chayanuvat, 2024).

Among Arends's (2012) five-phase PBL syntax, Phase 3 (Group Investigation) and Phase 4 (Solution Presentation) provided the most substantial speaking practice opportunities. In Phase 3, students engaged in approximately 20 minutes of sustained group discussion in English, functioning as an intensive rehearsal stage in a low-anxiety peer environment. Phase 4 then required each group to present their solution, explain their reasoning, and respond to questions — directly exercising the core speaking components of fluency, pronunciation, vocabulary, and comprehensibility. Together, these two phases ensured students actively used English for over 35 minutes per session, far exceeding the speaking opportunities available in the conventional classroom.

This study was not without limitations. Two main challenges were identified during the research: students' limited English vocabulary and a noisy classroom atmosphere in which students frequently sought attention. To address these issues, the researcher approached each group directly, asking whether they understood the material, whether they had experienced the topic personally, or requesting them to produce their own example words or sentences. This strategy helped redirect students' focus while also scaffolding their vocabulary use in a communicative context.

CONCLUSIONS

This study aimed to examine the effectiveness of Problem-Based Learning (PBL) in improving the speaking skills of seventh-grade students at SMP Kristen BK Palu. The findings demonstrate that the implementation of PBL significantly enhanced students' speaking performance compared with conventional teacher-centered instruction. The analysis of the pre-test and post-test results revealed that students in the experimental group showed substantial improvement in their speaking ability, particularly in the components of fluency, accuracy, and comprehensibility. The mean score of the experimental group increased from 4.50 in the pre-test to 10.60 in the post-test, while the control group showed no meaningful improvement, with their mean score remaining at 4.65. Statistical analysis using an independent sample t-test further confirmed that the difference between the two groups was statistically significant, indicating that the use of PBL had a positive effect on students' speaking development. The improvement occurred because PBL created an interactive learning environment in which students actively participated in discussions, collaborated with peers, and used English to solve meaningful problems. These communicative activities provided students with greater opportunities to practice speaking and develop confidence in expressing their ideas. Therefore, it can be concluded that Problem-Based Learning is an effective instructional approach for improving junior high school students' speaking skills in EFL classrooms.

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