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THE IMPACT OF PROBLEM BASED LEARNING ON STUDENTS' SPEAKING ABILITY AT SMA YP UNILA BANDAR LAMPUNG

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Abstract

Speaking is a fundamental skill in English learning, yet many students struggle because of limited vocabulary, low confidence, and insufficient practice. This study investigated the effect of Problem-Based Learning (PBL) on the speaking ability of tenth-grade students at SMA YP UNILA Bandar Lampung during the 2025/2026 academic year using a quasi-experimental design with a control group. Speaking tests were analyzed through descriptive and inferential statistics. The experimental group achieved a higher mean score (64.66) than the control group (58.42), with a significant t-value of 3.32, indicating that PBL effectively improved students' speaking ability through active participation and collaboration.

Keywords*: English Language Learning, EFL Students.Problem-Based Learning, Speaking Ability*

INTRODUCTION

English is widely acknowledged as a global language that plays a significant role in international communication, education, and professional advancement. In order to develop communicative competence, learners are required to acquire proficiency in the four core language skills: listening, speaking, reading, and writing. Among these skills, speaking is often regarded as the most important because it serves as the primary medium for expressing ideas, opinions, and feelings in real-life communication. (Harmer, 2007) states that the mastery of English requires competence in all four language skills, while (Nunan, 2015) emphasizes that speaking is the key indicator of language proficiency because people are generally considered fluent in a language when they can communicate orally. Therefore, developing speaking ability is a crucial objective in English language learning.

Despite its importance, speaking remains one of the most challenging skills for students to master. Many learners possess adequate knowledge of vocabulary and grammatical

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structures but struggle to express themselves orally. This difficulty is often caused by psychological factors such as fear of making mistakes, lack of confidence, and anxiety when speaking in front of others. (Sutarsyah, 2017) identifies speech anxiety as one of the major factors affecting students' speaking performance in English classrooms. Furthermore, (Saeed Al-Sobhi & Preece, 2018) argue that student-centered learning environments that provide opportunities for oral interaction through pair and group work can significantly enhance students' confidence and speaking competence. These findings indicate that the learning environment and instructional approaches play a significant role in encouraging students to communicate actively in English.

The challenges associated with speaking proficiency are also evident among tenth-grade students at SMA YP UNILA Bandar Lampung. Preliminary observations revealed that many students were reluctant to participate in speaking activities, often remaining silent when asked to express opinions or ask questions in English. Some students hesitated during conversations, frequently switched to Indonesian, and demonstrated limited confidence when speaking in front of their classmates. In addition, students experienced difficulties related to grammar, vocabulary, pronunciation, and idea expression. Their interest in learning English also appeared relatively low. These conditions suggest that existing classroom practices have not yet provided sufficient opportunities for students to engage actively in meaningful speaking activities.

To address these challenges, an instructional model that promotes active participation, collaboration, and meaningful communication is required. One learning model that has attracted considerable attention in recent years is Problem-Based Learning (PBL). According to (Hadi & Izzah, 2019), PBL emphasizes the process of solving problems, encouraging students to become active participants in constructing knowledge and finding solutions. Similarly, Barrows and Tamblyn, as cited in (Barrett, 2017), define PBL as a learning process that begins with a problem, allowing students to develop understanding through problem-solving activities. Through discussions, investigations, and presentations, students are encouraged to communicate their ideas, negotiate meaning, and engage in authentic language use, making PBL highly relevant to speaking instruction.

From a theoretical perspective, PBL provides substantial opportunities for developing speaking ability because it requires students to participate actively in collaborative learning. Watson in Duch, Groh, and Allen (2001), as cited in (Hikmah, 2020), explains that PBL involves group-based problem solving that promotes critical thinking, communication skills, and self-assessment. Throughout the learning process, students are required to discuss ideas, exchange opinions, defend arguments, and present solutions, all of which directly contribute to the improvement of speaking competence (Ester Tarigan et al., 2025); (Herliani & Amelia, 2024). Consequently, PBL not only facilitates content understanding but also creates a communicative learning environment where students can practice speaking in meaningful and authentic contexts.

Empirical evidence also supports the effectiveness of Problem Based Learning in improving students' oral comunication. (Oktaviani et al., 2024) reported that learners who received speaking instruction through PBL showed greater fluency, stronger self-confidence, and higher learning motivation than those who were instructed using traditional teaching approaches. Likewise, (Dwiyamtini, 2023) reported that the implementation of PBL produced significant improvements in students' speaking performance by creating a more engaging and interactive classroom environment. These results indicate that PBL is an appropriate instructional approach for addressing learners' speaking challenges while encouraging more active participation in English learning activities.

Although previous studies have consistently reported the effectiveness of Problem-Based Learning in improving students' speaking ability, most of them were conducted in different educational settings and involved learners with diverse characteristics. Limited studies have specifically investigated the implementation of Problem-Based Learning among tenth-grade students at SMA YP UNILA Bandar Lampung using a quasi-experimental design. Furthermore, few studies have examined its influence on students' speaking ability based on the speaking components proposed by (Brown, 2004), including grammar, vocabulary, comprehension, fluency, pronunciation, and task achievement. Therefore, this study attempts to fill this gap by providing empirical evidence regarding the effectiveness of Problem-Based Learning in improving students' speaking ability in this particular educational context.

Based on the issues identified and the supporting theoretical and empirical evidence, it is necessary to investigate the application of Problem-Based Learning within English speaking classrooms. The relatively limited speaking proficiency demonstrated by the tenth-grade students of SMA YP UNILA Bandar Lampung indicates the need for an innovative learning model that can enhance students' participation, confidence, and communication skills. Therefore, the objective of this study is to examine the impact of Problem-Based Learning on students' speaking ability and to determine whether students taught through Problem-Based Learning achieve higher speaking performance than those taught through conventional teaching techniques at the tenth grade of SMA YP UNILA Bandar Lampung in the academic year 2025/2026.

RESEARCH METHOD

This study employed a quantitative approach using a quasi-experimental design to investigate the impact of Problem-Based Learning (PBL) on students' speaking ability. According to (Creswell, 2012), a quasi-experimental design is suitable for evaluating the impact of a treatment when participants cannot be assigned randomly to different groups. This study was carried out at SMA YP UNILA Bandar Lampung during the second semester of the 2025/2026 academic year. The research population comprised 395 tenth-grade students who were enrolled in twelve different classes. Using cluster random sampling, two classes were selected through a lottery procedure, resulting in Class X.5 as the experimental group, consisting of 29 students, and Class X.9 as the control group, consising of 26 students. Therefore, the total sample of this study was 55 students. Students in the experimental group were instructed using the Problem-Based Learning approach, whereas those in the control group learned through conventional instructional methods. To evaluate the students' speaking ability, both groups completed a pre-test prior to the treatment and a post-test after the instructional intervention had been completed.

In this study, Problem-Based Learning (PBL) functioned as the independent variable, whereas students' speaking ability served as the dependent variable. PBL was operationally defined as a student-centered learning model that engages learners in solving authentic problems through discussion, collaboration, investigation, and oral presentation activities.

Meanwhile, speaking ability referred to students' competence in expressing ideas, opinions, and information in English and was assessed through a story-retelling task adapted from (Brown, 2004). Students were required to read or listen to the unit entitled "Eco-Friendly Art, Help the Planet We Call Home" and then retell the content orally in their own words for a minimum of three minutes. Their performances were recorded and evaluated using six assessment criteria: grammar, vocabulary, comprehension, fluency, pronunciation, and task achievement. Each criterion was assessed using five point rating scale adapted from Brown (2004), in which higher scores represented better speaking performance. To establish the quality of the research instrument, content validity was established through alignment with the tenth-grade curriculum, while construct validity was determined by ensuring that the assessment measured the theoretical components of speaking ability. In addition, a readability test was conducted with students outside the research sample to verify the clarity of instructions, content, vocabulary, and assessment criteria.

The collected data were quantitatively analyzed through descriptive and inferential statistical procedures. First, the mean scores of the pre-test and post-test were calculated to determine students' speaking achievement. Before testing the hypotheses, the data were examined for normality using the Chi-square test and for homogeneity using the F-test to ensure that the assumptions for parametric analysis were met. After confirming that the data were normally distributed and homogeneous, an independent-samples t-test was employed to examine whether there was a significant difference between the speaking achievement of students taught through Problem-Based Learning and those taught through conventional techniques. The hypotheses were tested at significance levels of 5% and 1%, where the alternative hypothesis was accepted if the calculated t-value was greater than the critical t-value, demonstrating that the implementation of Problem-Based Learning produced a statistically significant positive impact on students' speaking ability.

FINDING AND DISCUSSION

Finding

The results indicated that students taught through Problem-Based Learning (PBL) achieved better speaking performance than those taught through conventional teaching

techniques. Before testing the hypothesis, the data were examined for normality and homogeneity to verify that all assumptions required for parametric statistical analysis had been satisfied.

The normality test using the Chi-square (χ^2) formula revealed that both groups were normally distributed. The experimental class obtained a mean score of 64.66 with a standard deviation of 6.80, while the control class obtained a mean score of 58.42 with a standard deviation of 7.26. The obtained χ^2 values for the experimental and control classes were 6.42 and 6.82, respectively, both of which were lower than the critical χ^2 value at the 0.05 significance level (7.81). Therefore, the data from both classes met the normality assumption.

Table 1. Summary of Normality Test Results

Class	Mean	SD	χ^2ratio	χ^2table (0.05)	Conclusion
Experimental	64.66	6.80	6.42	7.81	Normal
Control	58.42	7.26	6.82	7.81	Normal

After confirming normality, the homogeneity of the data was evaluated using the F-test. The obtained F-ratio was 1.14, while the F-table values were 1.90 at the 0.05 significance level and 2.50 at the 0.01 significance level. Since the F-ratio was lower than both critical values, the variance between the experimental and control groups was regarded as homogeneous. These results confirmed that the data satisfied the assumptions necessary to perform the independent-samples t-test.

The higher mean score achieved by the experimental group indicates that students who learned through PBL demonstrated better speaking performance than those who received conventional instruction. Pedagogically, this finding suggests that PBL provides students with more opportunities to engage in authentic communication, collaborative problem-solving, and active participation during classroom activities. These learning experiences likely contributed to greater confidence and more effective oral communication, resulting in improved speaking performance.

Table 2. Result of Homogeneity Test

F_{Ratio}	F_{Table} (0.05)	F_{Table} (0,01)	Conclusion
1.14	1.90	2.50	Homogeneous

An independent-samples t-test was employed to determine whether Problem-Based Learning (PBL) significantly affected students' speaking ability. The analysis produced a t-value of 3.32. This value exceeded the critical t-values at both the 0.05 significance level (2.00) and the 0.01 significance level (2.67), indicating a statistically significant difference between the two groups. Therefore, the alternative hypothesis was accepted, confirming that the implementation of Problem-Based Learning significantly improved students' speaking ability.

Furthermore, the independent-samples t-test showed that the experimental group achieved a significantly higher mean score (64.66) than the control group (58.42). This finding suggests that students who participated in PBL benefited from learning activities that emphasized authentic communication, collaborative problem-solving, and active engagement in classroom discussions. Such learning experiences likely enhanced students' confidence and provided more opportunities to practice speaking in meaningful contexts, leading to better speaking performance than conventional teaching techniques.

Table 3. Summary of Hypothesis Testing

Variable	Experimental Class	Control Class	t-value	t-table (0.05)	Conclusion
Speaking Ability	64.66	58.42	3.32	2.00	Significant Difference

Pedagogically, these findings suggest that students who experienced Problem-Based Learning (PBL) were provided with more opportunities to practice meaningful communication through collaborative discussions and problem-solving activities. These learning experiences likely enhanced their confidence, fluency, and active participation, resulting in better speaking performance than that of students who learned through conventional teaching techniques. Overall, the findings indicate that the implementation of Problem-Based Learning effectively improved the speaking ability of tenth-grade students at SMA YP UNILA Bandar Lampung in the 2025/2026 academic year.

Discussion

The Average Score of Students' Speaking Ability Taught Through Problem-Based Learning

The result showed that students who learned through problem based learning obtained a higher average speaking score that those who received conventional classroom instruction.

The experimental class obtained a mean score of 64.66, while the control class achieved a mean score of 58.42. This result indicates that students who learned through PBL demonstrated better speaking performance than those who learned through conventional instruction. The higher achievement of the experimental class suggests that PBL provided more effective opportunities for students to develop their speaking ability through active participation, discussion, and collaborative problem-solving activities.

The improvement in students' speaking ability was reflected in all speaking components proposed by (Brown, 2004), namely grammar, vocabulary, comprehension, fluency, pronunciation, and task achievement. Before the treatment, many students experienced difficulties in expressing ideas orally because they lacked confidence, had limited vocabulary, and were afraid of making grammatical and pronunciation errors. However, after the implementation of PBL, students gradually demonstrated better speaking performance. Through group discussions, problem-solving activities, and presentations, students were encouraged to communicate actively with their peers, resulting in increased confidence and greater participation in classroom interaction.

The improvement was particularly evident in grammar and vocabulary. Students became more capable of constructing understandable sentences and using appropriate vocabulary to express opinions and explain solutions during discussions. PBL exposed students to meaningful communication situations that required them to search for information, negotiate meaning, and exchange ideas. Consequently, students acquired new vocabulary and became more familiar with grammatical structures through continuous language use. Comprehension also improved because students regularly listened to and responded to their classmates' opinions during collaborative learning activities. As a result, they became more capable of understanding spoken information and participating effectively in discussions.

Furthermore, students' fluency and pronunciation showed noticeable progress. Prior to the treatment, many students frequently hesitated, paused, or repeated words because they lacked experience in speaking English. However, regular communication practice during discussions and presentations reduced anxiety and increased confidence. Students gradually became more fluent and natural in expressing their ideas. Pronunciation also improved

through repeated speaking practice, peer interaction, and teacher feedback. Although some pronunciation errors remained, students were able to communicate more clearly and understandably than before. In addition, task achievement improved because students became more capable of organizing ideas, presenting arguments, and completing speaking tasks effectively.

These findings imply that the effectiveness of Problem-Based Learning lies not only in increasing students' speaking scores but also in creating an interactive learning environment where communication occurs naturally. Unlike conventional instruction, students are encouraged to negotiate meaning, express ideas spontaneously, and solve authentic problems collaboratively. Such learning experiences enable learners to develop communicative competence in a more meaningful way.

The findings indicate that PBL successfully created a student-centered learning environment that encouraged active communication. Unlike conventional teaching techniques, which tend to emphasize teacher explanation, PBL required students to interact, discuss, and collaborate continuously throughout the learning process. This finding supports (Brown, 2004) theory that speaking is an interactive process involving the production, reception, and processing of information. It is also consistent with (Nunan et al., 2003), who argue that speaking skills develop effectively when learners are given opportunities to use language in authentic communication contexts. Similarly, (Richards & Renandya, 2002) emphasize that effective speaking instruction should encourage active participation and meaningful communication.

The results of this study are also supported by previous research. (Razi et al., 2021) found that students taught through PBL achieved higher speaking scores than those taught through traditional methods. Likewise, (Ester Tarigan et al., 2025) reported that PBL is a more effective instructional approach for developing speaking skills. Similar findings were reported by (Nurhazizah et al., 2022), (Herliani & Amelia, 2024), and (Dwiyamtini, 2023), who concluded that PBL positively affects students' communication and speaking abilities. In contrast, students in the control class showed lower improvement because learning activities were more teacher-centered and provided fewer opportunities for active speaking practice.

Therefore, it can be concluded that Problem-Based Learning is more effective than conventional teaching techniques in improving students' speaking ability.

The Impact of Problem-Based Learning on Students' Speaking Ability

The second objective of this study was to determine whether Problem-Based Learning had a significant impact on students' speaking ability. The statistical analysis showed that the obtained t-test value (3.32) was higher than the critical t-values at both the 0.05 significance level (2.00) and the 0.01 significance level (2.67). Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted. These results indicate that Problem-Based Learning had a statistically significant impact on students' speaking ability at the tenth grade of SMA YP UNILA Bandar Lampung.

The significant impact of PBL can be attributed to its emphasis on collaborative learning and active participation. Through group discussions and problem-solving activities, students were required to communicate ideas, share information, negotiate meaning, and present solutions orally. These activities provided students with meaningful opportunities to practice speaking English in authentic contexts. Collaborative interaction also reduced students' anxiety and increased their confidence because they could receive support from their peers during communication activities. As a result, students became more willing to speak and participate actively in classroom discussions.

Another important contribution of PBL was the development of students' critical thinking skills. During the learning process, students analyzed problems, evaluated information, and proposed solutions through discussion and presentation activities. This process encouraged students not only to speak English but also to organize and communicate ideas logically. Consequently, students improved their ability to express arguments, defend opinions, and respond to different perspectives during classroom interaction. These findings suggest that PBL promotes both speaking ability and higher-order thinking skills simultaneously.

The findings support the theory proposed by Howard S. Barrows in (Ansari et al., 2015), who describes PBL as a student-centered approach that develops communication skills, problem-solving abilities, and active learning. They are also consistent with the theory of Duch, Groh, and Allen (2001, cited in (Savary, 2006), who state that PBL promotes critical

thinking, cooperative learning, and effective communication skills. Through continuous interaction and problem-solving activities, students developed speaking competence more effectively than those who learned through conventional instruction.

Although the present findings are consistent with previous studies, the magnitude of improvement may vary across educational contexts. Differences in students' English proficiency, classroom environment, teacher facilitation, and learning motivation may contribute to variations in the effectiveness of Problem-Based Learning reported in earlier research. Therefore, contextual factors should also be considered when implementing PBL in English speaking classrooms.

The results are further supported by previous studies. (Moslemi et al., 2024) found that PBL significantly and positively affects EFL learners' speaking proficiency. Similarly, (Sutrisna & Luh Putu Artini, 2020) reported a significant impact of PBL on students' English-speaking skills. (Ester Tarigan et al., 2025)also emphasized that PBL produces substantial improvement in speaking performance compared to traditional methods. Moreover, (Utama & Imansyah, 2022) found that PBL significantly improves both critical thinking and speaking ability, while (Darmuki & Hidayat, 2026) reported positive effects of PBL on students' public speaking skills. These findings reinforce the conclusion that PBL is an effective instructional approach for improving speaking achievement.

Overall, the results of this study confirm that Problem-Based Learning significantly improves students' speaking ability by providing meaningful communication opportunities, increasing confidence, encouraging active participation, and developing critical thinking skills. Therefore, PBL can be considered an effective learning model for enhancing students' speaking performance and achievement in English language learning.

CONCLUSION

Based on the findings of this study, it can be concluded that Problem-Based Learning (PBL) had a significant positive impact on the speaking ability of the tenth-grade students at SMA YP UNILA Bandar Lampung in the 2025/2026 academic year. The result of the hypothesis testing showed that the obtained t-value (3.32) was higher than the t-table values at both the 0.05 significance level (2.00) and the 0.01 significance level (2.67), indicating that

the alternative hypothesis was accepted. Furthermore, the experimental group achieved a higher mean score (64.66) than the control group (58.42), demonstrating that students taught through PBL performed better in speaking than those taught through conventional teaching techniques. These findings indicate that PBL is an effective student-centered learning approach for improving students' speaking ability by encouraging active participation, collaboration, and meaningful communication in English classrooms.

Based on these findings, English teachers are encouraged to implement Problem-Based Learning by designing authentic problem-solving activities, facilitating group discussions, and providing regular opportunities for students to practice speaking in meaningful contexts. Students are expected to participate actively in collaborative learning activities and practice speaking consistently to improve their communicative competence. Future researchers are recommended to investigate the implementation of PBL in different educational settings or explore its impact on other English language skills and affective factors, such as motivation, confidence, and speaking anxiety.

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