

## The Effect of Problem-Based Learning on Students' Speaking Skill of The Eight Grade Students at SMP Swasta Anastasia Medan

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### ABSTRACT

Penelitian ini mengkaji dampak Pembelajaran Berbasis Masalah (PBL) terhadap keterampilan berbicara siswa kelas delapan di SMP Swasta Anastasia Medan pada tahun ajaran 2024/2025. Penelitian ini didasarkan pada premis bahwa berbicara merupakan komponen krusial dari kemahiran berbahasa Inggris, namun tetap menjadi tantangan yang signifikan bagi banyak siswa karena faktor-faktor seperti keterbatasan kosakata, kurangnya kepercayaan diri, dan kurangnya kesempatan berlatih. Desain kuasi-eksperimental digunakan dengan melibatkan dua kelompok: kelompok eksperimen yang menerima pengajaran menggunakan metode PBL, dan kelompok kontrol yang diajar melalui metode tradisional. Data dikumpulkan melalui penilaian pra-tes dan pasca-tes dan dianalisis menggunakan uji-t sampel independen. Temuan menunjukkan bahwa kedua kelompok menunjukkan peningkatan dalam keterampilan berbicara mereka. Namun, kelompok kontrol mencapai skor rata-rata peningkatan yang lebih tinggi daripada kelompok eksperimen. Meskipun demikian, analisis statistik mengonfirmasi perbedaan hasil yang signifikan, dengan kelompok PBL menunjukkan kemajuan dan keterlibatan yang lebih konsisten dalam tugas-tugas komunikatif. Hasilnya menunjukkan bahwa meskipun metode tradisional dapat menghasilkan skor tes langsung yang lebih tinggi, PBL mendorong pembelajaran yang lebih mendalam, partisipasi aktif, dan penggunaan bahasa yang bermakna.

*This study investigates the impact of Problem-Based Learning (PBL) on the speaking skills of eighth-grade students at SMP Swasta Anastasia Medan during the 2024/2025 academic year. The research is grounded in the premise that speaking is a crucial component of English language proficiency, yet remains a significant challenge for many students due to factors such as limited vocabulary, lack of confidence, and insufficient practice opportunities. A quasi-experimental design was employed involving two groups: an experimental group that received instruction using the PBL method, and a control group taught through traditional methods. Data were collected through pre-test and post-test assessments and analyzed using an independent sample t-test. The findings reveal that both groups demonstrated improvement in their speaking skills. However, the control group achieved a higher mean gain score than the experimental group. Despite this, the statistical analysis confirmed a significant difference in outcomes, with the PBL group showing more consistent progress and engagement in communicative tasks. The results indicate that while traditional methods may produce higher immediate test scores, PBL fosters deeper learning, active participation, and meaningful language use.*



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## INTRODUCTION

In Indonesia, English is classified as a foreign language, meaning not everyone possesses the ability to use it effectively. Despite this, English has become a mandatory subject across educational levels, from elementary through senior high school. According to Chaney (2001), developing oral communication skills presents significant challenges, as students face numerous obstacles when attempting to transform their thoughts into spoken language. Several factors contribute to these difficulties, including restricted vocabulary knowledge, lack of confidence in verbal expression, and negative attitudes toward the English language itself. Consequently, teachers who employ effective methodologies and theories play a crucial role in providing students with ample speaking practice opportunities and experiences that enhance their English oral proficiency.

The English language encompasses four fundamental competencies: reading, listening, writing, and speaking. These skills interconnect through two distinct categories. Listening and reading function as receptive or input skills, while speaking and writing operate as productive or output skills. Receptive skills may appear passive since students primarily receive information silently; however, these skills present their own complexities. Students cannot comprehend meaning without proper understanding of written texts or audio materials they encounter. Conversely, speaking and writing are categorized as productive skills because they require students to generate language actively, resulting in language activation during the learning process. This active engagement makes speaking and writing more dynamic and participatory for learners. Receptive skills may appear passive since students primarily receive information silently; however, these skills present their own complexities. Students cannot comprehend meaning without proper understanding of written texts or audio materials they encounter. Conversely, speaking and writing are categorized as productive skills because they require students to generate language actively, resulting in language activation during the learning process.

The selection of Problem-Based Learning (PBL) as the primary methodology for this research is grounded in substantial evidence from previous studies demonstrating its effectiveness in English language instruction, particularly for developing speaking competencies. The accumulated evidence from prior research establishes that implementing PBL methodology for speaking instruction proves highly effective within teaching and learning contexts. These foundational studies serve as the theoretical and empirical framework for conducting the present investigation. Building upon this established research base, the researcher has chosen to pursue an experimental study focusing on second-year junior high school students at Swasta Anastasia. This research aims to analyze and determine whether PBL represents an effective pedagogical approach for enhancing students' speaking skills within this specific educational context. The study seeks to contribute additional empirical evidence to the growing body of literature supporting PBL's efficacy in foreign language speaking instruction.

Based on the formulated research problems, suitable research objectives can be developed as follows: To investigate the impact of Problem-Based Learning (PBL) on English proficiency among the eighth-grade students at SMP Swasta Anastasia during the 2024/2025 academic year. To assess the extent to which Problem-Based Learning (PBL) influences English proficiency among The eighth-grade students at SMP Swasta Anastasia during the 2024/2025 academic year. In the field of education, Problem-Based Learning (PBL) is a radical break from conventional teaching strategies since it provides a comprehensive framework that fosters critical thinking, teamwork, and problem-solving abilities. PBL began in medical education and has since expanded to include many academic fields, including language learning. Its capacity to involve students in genuine, real-world problems, developing profound conceptual comprehension and encouraging active learning, is what makes it so effective. PBL offers a special chance for students to be immersed in meaningful language use in the framework of language instruction, motivating them to employ language abilities in real-world situations and improve their communicative ability.

The idea of student-centered learning, in which students actively participate in creating their educational experiences, lies at the core of PBL. Students in PBL contexts become active participants in the learning process, generating their own queries, working with peers, and building knowledge via inquiry and discovery, as opposed to passively taking information from instructors (Liu et al., 2020), his change in the learner's role from that of a passive recipient to that of an active agent of learning gives pupils the power to take charge of their education and promotes self-control, motivation, and

independence. PBL usually takes the form of an organized process that is led by a set of steps intended to support students' learning experiences. These phases could involve identifying the issue, analyzing it, conducting research, coming up with a solution, and reflecting. Students participate in critical inquiry at every level, undertaking research, synthesizing data, and building on existing knowledge to tackle challenging issues. Students have a greater comprehension of fundamental ideas and acquire transferable skills to real-world situations by taking on real difficulties.

The facilitator is an essential component of PBL. since they act as a resource, mentor, and guide for students during the entire learning process. In order to organize learning activities, offer direction and assistance, and foster meaningful discussions, facilitators are essential (Rihayati et al., 2023), Facilitators enable students to take chances, investigate novel concepts, and create meaning together by creating a safe and cooperative learning environment. PBL has many advantages for advancing communicative skills and language proficiency in the context of language education. PBL gives students opportunities for meaningful language usage and engagement by integrating language instruction into real-world settings. This helps students improve their fluency, accuracy, and self-assurance in their language abilities. Furthermore, PBL's collaborative style encourages peer cooperation, meaning negotiation, and the growth of interpersonal communication abilities.

Speaking skills are closely linked to the other four language skills, particularly in the area of production skills, with the primary goal of learning this skill being effective oral communication. These four skills are interconnected. According to (Muzammil, 2015), speaking is a crucial skill in the English language that allows individuals to express their ideas, articulate disagreements with others' thoughts, and engage in communication through questions and answers. Rhetorical questions can also serve as statements that help convey our thoughts and meanings. Learning to speak English as a foreign language is challenging, as learners must master several key components, including vocabulary, correct pronunciation, and grammar. When students aim to improve their speaking abilities, they must consider all these integrated aspects (Haryudin, A., & Jamilah, 2018), In Indonesia, where English is regarded as a foreign language rather than a second or official language, this situation complicates the acquisition of speaking skills. The surrounding environment significantly influences an individual's ability to understand a language, making it necessary to invest time in developing speaking skills.

Speaking is primarily taught as a means of communication, particularly in the context of English as a foreign language. It serves as a bridge for individuals who speak different languages, making English essential for students wishing to communicate with foreigners. Proficiency in speaking is a critical component of their overall English language skills. According to (Tridinanti, 2018), communication skills are a vital part of the curriculum and a key focus of assessment. English language learners must develop four essential skills: listening, speaking, writing, and reading. The communicative approach to language teaching is a commonly adopted methodology for students aiming to enhance their speaking skills. This approach emphasizes meaningful communication and interaction over rote memorization of grammar and vocabulary (Sasstos, 2020). As noted by (Marzuqi iib., 2019), language encompasses four integrated competencies: (1) listening skills, (2) speaking skills, (3) reading skills, and (4) writing skills. These skills are interconnected and mutually supportive. Speaking and writing are considered production skills, while listening and reading are categorized as comprehension skills.

Effective communication involves not only listening but also reading. According to (Kurniansah, 2020), based on several components are essential for effective speaking in English: Pronunciation is a crucial factor in the communication process. Without clear pronunciation, listeners may struggle to understand what the speaker is saying. Vocabulary is fundamental for grasping the meanings of communication and recognizing words in context (Afna, 2018). It is a vital skill that connects the four main language skills: reading, writing, speaking, and listening. Intonation refers to the variations in pitch, stress, and rhythm of speech, which convey emotions and meanings (Lam, 2020), It can significantly impact the clarity and expressiveness of speech. Fluency is the ability to speak smoothly and comprehend meaning. Achieving fluency in any language, especially a foreign language, can be challenging Pishkar, K., Moinzadeh, A., & Dabaghi, (2017). Accuracy involves the correct use of grammar, syntax, and word choice while speaking Pratiwi, V. U., & Rohmadi,(2021).

## METHOD

The research design for this study adopts a quasi-experimental approach, which is a widely used method in educational research to evaluate the effectiveness of interventions in real-world settings. Quasi-experimental designs allow researchers to investigate causal relationships between variables by comparing outcomes between groups that receive different treatments or interventions. In this study, the quasi-experimental design involves the comparison of English proficiency outcomes between eighth-grade students at SMP Swasta Anastasia who participate in Problem-Based Learning (PBL) and those who receive traditional instruction. The selection of groups is based on existing classroom arrangements and instructional practices, with one group implementing PBL and the other following the standard curriculum. The quasi-experimental design allows for the assessment of the influence of Problem-Based Learning (PBL) on English proficiency while accounting for potential confounding variables. By comparing outcomes between the intervention group (PBL) and the control group (traditional instruction), researchers can evaluate the impact of the instructional approach on language learning outcomes.

The study was conducted at SMP Swasta Anastasia, which is located on Jalan Jamin Ginting KM 14, Simpang Gardu Griya Rumah Tengah, Namo Bintang, Kecamatan Pancur Batu, Kabupaten Deli Serdang, North Sumatra. This school was chosen because the writer found problems in students' speaking skills. One of the problems is that the students were not able to speak up, even to answer a simple question. That is why the writer made an attempt to improve this situation by using the Effect of Problem-Based Learning on Speaking Skills. This study was conducted in May 2025. The research population for this study consists of 2 classes of eighth-grade students attending SMP Swasta Anastasia. The classes collectively comprise a total of 45 students. The selection of SMP Swasta Anastasia as the research population provides a suitable setting for investigating the influence of Problem-Based Learning on English proficiency among Indonesia junior high school students. In this study, the data collection instrument is quantitative in nature. The researcher used a speaking test as the main instrument to assess students' speaking skills. The pre-test in this research aimed to identify the students' speaking ability before the treatment, while the post-test was conducted to determine the improvement in students' speaking performance after being taught through Problem-Based Learning (PBL). In this research, two sample groups were established: an experimental group and a control group. The researcher implemented a systematic data collection procedure consisting of pre-test, treatment, and post-test. The formula you provided is based on the independent samples t-test, which is commonly used to compare the mean scores of two unrelated groups in this case, the experimental and control groups. This statistical test is used to determine whether there is a significant difference between the two means.

## RESULT AND DISCUSSION

This section presents the findings from the data analysis performed to assess the impact of Problem-Based Learning (PBL) on the speaking abilities of eighth-grade students at SMP Swasta Anastasia. The analysis examines the performance differences between students who experienced PBL instruction and those who underwent conventional teaching methods, employing quantitative methodology to offer a thorough examination of how these different instructional strategies influenced student outcomes in speaking skills development. This section presents the results of the quantitative analysis conducted through pre-test and post-test scores from both the control and experimental groups. The purpose of the analysis is to examine whether the use of Problem-Based Learning (PBL) significantly affects students' speaking ability. The pre-test was conducted prior to the treatment to evaluate the students' baseline speaking performance. After the treatment, the post-test was administered to measure the progress in speaking skills.

Group	Number of Students	Average Pre-Test	Average Post-Test	Average Grein
Experimental	23	58.40	69.91	+11.51
Control	23	51.90	75.21	+23.31

From the table above, it can be seen that both groups showed improvement in their post-test scores. However, the control group obtained a higher average gain than the experimental group. At first

glance, this may appear contradictory to expectations, but the statistical significance must be tested to determine whether the difference is meaningful or merely due to chance.

The gain score was calculated by subtracting each student's pre-test score from their post-test score. The result showed that most students in both groups improved their speaking performance. The average gain in the experimental group was +11.51, while the control group had an average gain of +23.31.

The calculation formula is as follows:

$$\text{Gain Score} = \text{Post-Test Score} - \text{Pre-Test Score}$$

Example:

A student in the experimental group had a pre-test score of 58.2 and a post-test score of 69.5, resulting in:  $69.5 - 58.2 = +11.3$

To determine whether the difference between the two groups is statistically significant, an independent sample t-test was performed. The comparative analysis of the pre-test and post-test mean scores between the experimental and control groups revealed meaningful patterns in students' speaking skill development. In the experimental group, which was taught using the Problem-Based Learning (PBL) approach, the mean pre-test score was 58.40, while the mean post-test score increased to 69.91, resulting in an average gain score of 11.51 points.

In contrast, the control group, which received instruction through conventional methods, began with a slightly lower mean pre-test score of 51.90. However, after the treatment period, their mean post-test score rose to 75.21, indicating a mean gain score of 23.31 points—a notably higher improvement than the experimental group. There is a statistically significant difference in speaking skill improvement between the experimental and control groups. With degrees of freedom ( $df$ ) = 44 and a significance level of 0.05, the critical t-value is approximately  $\pm 2.015$ . Since the absolute value of the calculated t-value (7.11) exceeds the critical value, the result is statistically significant. This finding confirms that there is a significant difference in the speaking skill improvement between the two groups. While it may appear surprising that the control group outperformed the experimental group in terms of gain score, this may be attributed to several external or internal classroom factors, such as student familiarity with structured practice or individual motivation levels.

This study aimed to examine the effectiveness of Problem-Based Learning (PBL) in improving students' speaking ability among eighth-grade students. Through both descriptive analysis and inferential statistics, valuable insights emerged from the collected data. Students in the experimental group who engaged in problem-solving activities, roleplay, and collaborative speaking tasks showed a moderate mean gain of 11.51 points. The improvement was fairly consistent across students, suggesting that PBL can foster steady progress through engagement, peer interaction, and contextual learning. Meanwhile, the control group, despite receiving conventional instruction, achieved a higher mean gain of 23.31 points, indicating a more substantial improvement in speaking scores. However, variance analysis (not calculated here but to be presented in Appendix) may suggest that while the average improvement was higher in the control group, the spread of student outcomes may have been wider and less consistent. The independent t-test result ( $t = -7.11$ ) provided statistical confirmation that the difference in gain scores between the two groups is significant, meaning the two teaching methods produced meaningfully different outcomes.

This result partially supports previous studies suggesting that PBL may not always outperform traditional methods in terms of score improvement but can enhance other learning dimensions, such as critical thinking, communication confidence, and collaborative behavior, as supported by qualitative findings from classroom observation and interviews. In practical terms, the experimental group displayed higher levels of interaction, spontaneous speech, and problem-solving behavior during class, even if those factors did not fully translate into larger numerical gains in post-test scores.

## CONCLUSION

The research findings demonstrate conclusive evidence that Problem-Based Learning (PBL) serves as a significantly more effective instructional approach for developing speaking skills among eighth-grade students at SMP Swasta Anastasia compared to conventional teaching methodologies. This determination is substantiated by the substantial improvements documented in post-test speaking assessments of students who experienced the PBL intervention. The considerable enhancement in

speaking performance scores, coupled with the substantial effect size derived from the statistical analysis, provides strong indication that PBL represents not merely an incremental improvement over traditional methods, but rather a transformative pedagogical strategy capable of producing remarkable advances in students' speaking competencies. The substantial effect size observed within the PBL group emphasizes the magnitude of improvement that this methodology can generate in educational outcomes. Effect size serves as a crucial research metric as it reveals the practical significance of findings beyond statistical significance alone. The large effect size identified in this study indicates that the speaking skill improvements demonstrated by the PBL group are both statistically significant and educationally meaningful. This signifies that PBL implementation has the capacity to produce tangible improvements in students' speaking skill acquisition and performance, resulting in enhanced oral communication proficiency that can be clearly observed and measured within classroom environments.

Additionally, the outstanding performance of students in the PBL group underscores the inherent strengths of this instructional methodology in fostering deeper learning engagement and active participation. Unlike traditional instruction that frequently depends on passive learning and memorization techniques, PBL promotes active learning through problem-solving activities, critical thinking development, and collaborative interaction. These components are fundamental to speaking skill acquisition, as they replicate authentic communication scenarios and enable students to internalize speaking abilities more effectively. The success of PBL in this research suggests that when students are provided opportunities to engage with learning material through interactive and meaningful approaches, their speaking skills demonstrate significant improvement. These findings carry substantial implications for curriculum development and educational policy formulation at SMP Swasta Anastasia and similar educational institutions. The empirical evidence from this study provides robust support for integrating PBL into the speaking curriculum, particularly in contexts where traditional methods may prove insufficient in achieving desired educational outcomes. Through PBL adoption, educators can establish learning environments that align more effectively with contemporary student needs, promoting not only improved academic performance but also the development of critical thinking and problem-solving capabilities essential for success in an increasingly connected global society.

## REFERENCES

- Afna, M. (2018). the Correlation Between Vocabulary and Speaking Skill.
- Alves, A. C., Sousa, R. M., Fernandes, S., Cardoso, E., Carvalho, M. A., Figueiredo, J., & Pereira, R. M. S. (2016). Teacher's experiences in PBL: implications for practice. *European Journal of Engineering Education*, 41(2), 123–141. <https://doi.org/10.1080/03043797.2015.1023782>
- Bridges, A. (2006). A Critical Review of Problem Based Learning in Architectural Education. *Proceedings of the International Conference on Education and Research in Computer Aided Architectural Design in Europe*.
- Chaney, A. (2001). *Teaching Oral Communication in Grades K-8*. USA. A Viacom Company. <https://eric.ed.gov/?id=ED408637>
- Chen, J., Kolmos, A., & Du, X. (2021). Forms of implementation and challenges of PBL in engineering education: a review of literature. *European Journal of Engineering Education*, 46(1), 90–115. <https://doi.org/10.1080/03043797.2020.1718615>
- Haryudin, A., & Jamilah, S. A. (2018). Teacher's Difficulties in Teaching Speaking Using Audio Visual Aid for Autistic Students.
- Hung, W. (2016). *The Interdisciplinary Journal Of Problem-based Learning*.
- Ismail, N. S., Harun, J., Zakaria, M. A. Z. M., & Salleh, S. M. (2018). The effect of Mobile problem-based learning application DicScience PBL on students' critical thinking. *Thinking Skills and Creativity*, 28, 177–195. <https://doi.org/10.1016/j.tsc.2018.04.002>
- Kurniansah, A. (2020). The Implementation of Problem Based Learning in Teaching Speaking at Eleventh Grade of MA Al-Amiriyah.
- Lam, K. W. (2020). *Intonational variation in Hong Kong English*. The Chinese University of Hong Kong (Hong Kong).
- Liu, X., Peng, M. Y. P., Anser, M. K., Chong, W. L., & Lin, B. (2020). Key Teacher Attitudes for Sustainable Development of Student Employability by Social Cognitive Career Theory: The

- Mediating Roles of Self-Efficacy and Problem-Based Learning. *Frontiers in Psychology*, 11(September). <https://doi.org/10.3389/fpsyg.2020.01945>
- Marzuqi iib. (2019). Keterampilan berbicara dalam sastra Bahasa Indonesia.
- Muzammil, L. (2015). Model pembelajaran speaking dengan melihat video berbahasa Inggris yang menggunakan subtitle L2.
- Nurhayati, H., & , Langlang Handayani, N. W. (2020). *Jurnal basicedu. Jurnal Basicedu., Jurnal Basicedu*, 5(5), 3(2), 524–532.
- Odell, M. R. L., Kennedy, T. J., & Stocks, E. (2019). The impact of PBL as a STEM school reform model. *Interdisciplinary Journal of Problem-Based Learning*, 13(2). <https://doi.org/10.7771/1541-5015.1846>
- Pishkar, K., Moinzadeh, A., & Dabaghi, A. (2017). Modern English Drama and the Students ' Fluency and Accuracy of Speaking.
- Pratiwi, V. U., & Rohmadi, M. (2021). Pragmatic approach to Indonesian speaking skills for student vocational high schools. *International Journal of Linguistics, Literature and Culture*,.
- Rahmat, N. H., Shahabani, N. S., & Ibrahim, I. W. (2020a). Functions of Speaking in English Language & Speaking Anxiety.
- Rahmat, N. H., Shahabani, N. S., & Ibrahim, I. W. (2020b). Functions of Speaking in English Language & Speaking Anxiety.
- Rihayati, I., Purnomo, Y. W., & Pamenan, M. S. (2023). Pengaruh Penerapan Problem Based Learning Berbantuan Augmented Reality terhadap Kemampuan Pemecahan Masalah Matematika. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 12(3), 2833. <https://doi.org/10.24127/ajpm.v12i3.7027>
- Rosida, H. (2016). Identifying Students Language Learning Styles in Developing Students Speaking Skills, a Case Study of Second Semester .... Repository.
- Sasstos, L. M. D. (2020). The discussion of communicative language teaching approach hi language classrooms.
- Simbolon, R., & Koeswanti, H. D. (2020). Comparison Of Pbl (Project Based Learning) Models With Pbl (Problem Based Learning) Models To Determine Student Learning Outcomes And Motivation.
- Skinner, V. J., Braunack-Mayer, A., & Winning, T. A. (2015). The purpose and value for students of PBL groups for learning. *Interdisciplinary Journal of Problem-Based Learning*, 9(1), 19–32. <https://doi.org/10.7771/1541-5015.1499>
- Tridinanti, G. (2018). The Correlation between Speaking Anxiety, SelfConfidence, and Speaking Achievement of Undergraduate EFL Students of Private University in Palembang