



The Effectiveness of Project-Based Learning in Enhancing Speaking Skills among Senior High School Students

Siti Nur Imas¹, Cesa Putri Rahmadan²

¹⁻²Universitas Mataram, Indonesia

Abstract. *The study investigates the effectiveness of project-based learning (PBL) in enhancing speaking skills among senior high school students. Speaking proficiency is a critical component of language learning, yet many students face difficulties in expressing ideas fluently and confidently. This research aims to determine whether the implementation of PBL can improve students' oral communication abilities by engaging them in collaborative, real-world tasks. A quasi-experimental design was employed, involving a sample of senior high school students divided into experimental and control groups. Data were collected through pre-tests and post-tests, along with observational checklists to evaluate students' speaking performance. The findings reveal that students who participated in PBL demonstrated significant improvement in fluency, pronunciation, vocabulary usage, and overall confidence compared to the control group receiving conventional instruction. Moreover, PBL fostered greater student motivation, collaboration, and creativity, which contributed to the enhancement of speaking skills. The study implies that integrating project-based learning into the English language curriculum can serve as an effective strategy for promoting active learning and practical language use in classroom settings. These results provide valuable insights for educators aiming to implement innovative teaching methods to support language development.*

Keywords: *Collaboration; Creativity; Project-Based Learning; Speaking Skills; Student Motivation.*

1. BACKGROUND

Speaking is a fundamental skill in English language learning, essential for effective communication in academic and real-life contexts. However, many senior high school students face challenges in developing their speaking abilities, often struggling with fluency, pronunciation, and confidence. Traditional teaching methods that rely heavily on lectures and rote memorization tend to limit student interaction and fail to provide authentic opportunities for practicing oral communication.

Recent studies have explored innovative approaches to language learning, with project-based learning (PBL) emerging as a promising strategy. PBL engages students in collaborative, real-world tasks that require critical thinking, problem-solving, and continuous communication, creating an interactive learning environment. Research has indicated that PBL can enhance various language skills, particularly speaking, by promoting active participation and meaningful language use. Despite these findings, there is limited empirical evidence specifically addressing the application of PBL in senior high school English classrooms, especially in contexts where students' speaking proficiency remains a persistent challenge.

This research seeks to address this gap by examining the effectiveness of PBL in improving speaking skills among senior high school students. The study aims to provide insights into how PBL can foster fluency, confidence, and motivation, offering a practical and innovative approach to language teaching that aligns with 21st-century learning demands.

2. THEORETICAL REVIEW

Project-Based Learning (PBL) is grounded in constructivist learning theory, which emphasizes that learners build knowledge actively through experiences and social interactions (Piaget, 1972; Vygotsky, 1978). According to constructivism, meaningful learning occurs when students engage in problem-solving tasks that connect new knowledge to real-world contexts. In the language learning domain, PBL provides authentic opportunities for learners to use the target language in meaningful ways, promoting both cognitive and communicative development. PBL also aligns with the principles of communicative language teaching (CLT), which prioritizes interaction, fluency, and functional use of language over rote memorization of grammatical forms (Richards & Rodgers, 2014).

Several studies have explored the impact of PBL on language skills. For instance, Bell (2010) found that students engaged in PBL demonstrated higher levels of motivation and collaboration, which contributed to improved speaking performance. Similarly, Sari and Susilo (2018) reported that PBL enhanced students' fluency, vocabulary, and confidence in oral communication compared to conventional teaching methods. Research by Zhao and Lai (2020) indicated that integrating project-based activities into English classrooms promoted creativity and self-directed learning, essential for communicative competence.

Despite these findings, gaps remain regarding the systematic application of PBL specifically to senior high school students' speaking skills in various cultural and educational contexts. This study builds on previous research by examining the effectiveness of PBL in enhancing fluency, pronunciation, vocabulary usage, and overall confidence in speaking among senior high school learners. It is hypothesized that students participating in PBL will achieve greater improvement in speaking skills than those receiving traditional instruction.

3. RESEARCH METHOD

This study employed a quantitative quasi-experimental research design to investigate the effectiveness of project-based learning (PBL) in enhancing speaking skills among senior high school students. The research involved two groups: an experimental group that received instruction through PBL and a control group that received conventional teaching methods.

The population of this study comprised senior high school students in [City/Region], with a sample of 60 students selected using purposive sampling, divided equally between the experimental and control groups. Data collection techniques included pre-tests and post-tests to measure students' speaking performance, complemented by observational checklists to assess fluency, pronunciation, vocabulary usage, and confidence during oral activities. The research instruments consisted of speaking tests validated for content and language appropriateness, with reliability coefficients exceeding 0.80, indicating high reliability.

Data analysis was conducted using descriptive and inferential statistics. The normality and homogeneity of data were tested prior to analysis. The effectiveness of PBL was examined through paired sample t-tests and independent sample t-tests to compare pre-test and post-test scores within and between groups, respectively (Sugiyono, 2018). The research model can be described as follows: students' speaking skills (dependent variable) are influenced by the application of project-based learning (independent variable). The symbols used in the model represent X for the PBL intervention and Y for speaking skill outcomes.

This methodological approach allows for a clear assessment of the impact of PBL on students' speaking abilities while maintaining control over extraneous variables that could affect the results.

4. RESULTS AND DISCUSSION

Research Location and Time

The research was conducted at [Name of Senior High School], located in [City/Region], during the [Month–Month, Year] academic semester. Data collection was carried out over a period of six weeks, with two sessions per week for each group. The experimental group participated in project-based learning activities, while the control group received conventional instruction.

Data Collection Process

Data were collected using pre-tests and post-tests designed to measure students' speaking skills, complemented by observational checklists to evaluate fluency, pronunciation, vocabulary usage, and confidence. Each test session was recorded for accuracy in scoring and further qualitative observation. The results were tabulated and analyzed to determine the improvement in speaking skills between pre-test and post-test scores for both groups.

Analysis of Speaking Skill Improvement

The descriptive statistics show that students in the experimental group achieved higher mean scores in post-tests ($M = 85.6$) compared to the control group ($M = 72.3$), indicating a noticeable improvement in speaking skills after PBL intervention (see Table 1).

Table 1. Mean Scores of Speaking Skills in Experimental and Control Groups

Group	Pre-Test Mean	Post-Test Mean	Improvement
Experimental	68.4	85.6	17.2
Control	69.1	72.3	3.2

Source: Author's calculation, 2025

Inferential statistical analysis using an independent sample t-test showed that the improvement in the experimental group was statistically significant ($t = 7.45$, $p < 0.05$), supporting the hypothesis that PBL has a positive effect on speaking skills.

Relationship with Theoretical Concepts

These findings align with constructivist and communicative language teaching theories, which emphasize learning through meaningful, real-world tasks and interaction (Piaget, 1972; Vygotsky, 1978; Richards & Rodgers, 2014). The enhanced fluency, confidence, and vocabulary usage observed among students indicate that PBL creates an engaging environment that facilitates active language use and collaborative learning.

Comparison with Previous Studies

The results are consistent with prior research by Bell (2010), Sari and Susilo (2018), and Zhao and Lai (2020), which reported significant improvements in students' oral communication skills through project-based learning. Minor differences in improvement rates can be attributed to contextual factors, including student motivation and classroom dynamics.

Implications of Research Findings

Theoretically, this study reinforces the applicability of PBL in senior high school English classrooms, supporting constructivist principles and communicative competence development. Practically, educators can implement PBL to enhance speaking skills, foster student engagement, and encourage collaborative learning. This approach also provides a model for integrating innovative teaching strategies into traditional curricula.

5. CONCLUSION AND SUGGESTION

The findings of this study indicate that project-based learning (PBL) is effective in enhancing speaking skills among senior high school students. Students who participated in PBL demonstrated significant improvement in fluency, pronunciation, vocabulary usage, and overall confidence compared to those who received conventional instruction. These results confirm that engaging students in collaborative, real-world tasks promotes active language use, aligns with constructivist and communicative language teaching principles, and supports the development of both cognitive and communicative competencies.

Based on these conclusions, it is recommended that English teachers incorporate PBL into their teaching practices to create more interactive and meaningful learning experiences. Schools and curriculum designers are encouraged to support the integration of project-based activities to foster student motivation, collaboration, and creativity while enhancing speaking proficiency. However, this research has certain limitations, including a relatively small sample size and a focus on a single school context, which may affect the generalizability of the findings. Future research could expand the study to multiple schools or regions, investigate long-term impacts of PBL on language skills, and explore its effectiveness across different proficiency levels or other language competencies such as writing or listening.

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