The Role of Project-Based Learning in Boosting Student Communication Confidence

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ABSTRAK

Komunikasi yang efektif merupakan keterampilan penting yang harus dimiliki siswa, namun sering kali siswa mengalami kesulitan dalam berbicara secara percaya diri. Salah satu pendekatan yang telah terbukti meningkatkan keterampilan komunikasi adalah Project-Based Learning (PBL). Penelitian ini bertujuan untuk menganalisis pengaruh PBL dalam meningkatkan kemampuan komunikasi siswa, terutama dalam hal kepercayaan diri dan keterampilan kolaborasi. Metode penelitian yang digunakan adalah Systematic Literature Review (SLR), yang mengumpulkan data dari 15 artikel jurnal bereputasi yang relevan dengan topik ini. Data dianalisis menggunakan teknik analisis kualitatif untuk mengevaluasi temuan-temuan yang terkait dengan pengaruh PBL terhadap komunikasi siswa. Hasil penelitian menunjukkan bahwa PBL secara signifikan meningkatkan kepercayaan diri siswa dalam berbicara, keterampilan komunikasi antarpribadi, serta kolaborasi dalam tim. Selain itu, penerapan PBL yang efektif memerlukan desain proyek yang baik, dukungan teknologi, dan peran pendidik yang aktif dalam memfasilitasi pembelajaran. Penelitian ini menyimpulkan bahwa PBL adalah pendekatan yang efektif untuk meningkatkan keterampilan komunikasi siswa. Implikasinya, pendidik perlu merancang proyek berbasis komunikasi yang relevan dan menyediakan dukungan yang memadai untuk mencapai hasil yang optimal.

ABSTRACT

Effective communication is an important skill that students must possess, but often students struggle to speak confidently. One of the approaches that has been proven to improve communication skills is Project-Based Learning (PBL). This research aims to analyze the influence of Project-Based Learning (PBL) on improving students' communication skills, particularly in terms of confidence and collaboration skills. The research method used is a Systematic Literature Review (SLR), which collects data from 15 reputable journal articles relevant to this topic. Data were analyzed using qualitative analysis techniques to evaluate the findings related to the impact of PBL on student communication. The research results show that PBL significantly enhances students' confidence in speaking, interpersonal communication skills, and teamwork collaboration. In addition, the effective implementation of PBL requires good project design, technological support, and the active role of educators in facilitating learning. This study concludes that PBL is an effective approach to enhancing students' communication skills. The implication is that educators need to design relevant communication-based projects and provide adequate support to achieve optimal results.The implication is that educators need to design relevant communication-based projects and provide adequate support to achieve optimal results.

1. INTRODUCTION

Communication ability is one of the essential 21st-century skills that students must possess to navigate the complexities of global challenges. In today's interconnected world, effective communication is not only a crucial competency in education but also a fundamental requirement in professional settings and social interactions (Sujana & Rachmatin, 2019; Taufiqurrahman, 2023). Strong communication skills enable students to express their ideas clearly, collaborate efficiently, and engage in meaningful discourse, all of which contribute to their academic success and career readiness. However, despite its importance, many students continue to struggle with developing effective communication skills. Several factors hinder their progress, including anxiety, low self-confidence, and limited opportunities for active participation in communicative activities within the learning environment (Ramadhanti, 2023; Zubaidah, 2018). Anxiety often stems from fear of making mistakes or being judged by peers and teachers, which discourages students from expressing their thoughts openly. Additionally, a

lack of confidence can result from insufficient practice and inadequate feedback, making students hesitant to engage in discussions. Furthermore, traditional classroom settings that prioritize teacher-centered instruction over student interaction often fail to provide ample opportunities for learners to develop and refine their communication skills.

Speaking skills play a very important role in learning English as a foreign language (EFL). These skills provide opportunities for students to actively use language, convey thoughts, and communicate with others in a meaningful way. EFL learners who are skilled in speaking are able to interact effectively in various real-life situations, such as daily conversations, work environments, and academic contexts (Neman & Ganap, 2018; Villalba, 2022). In addition, speaking also contributes to the development of listening skills, as comprehension of the other person's speech is an important part of communication. Furthermore, oral interaction reinforces these skills through the use of proper grammar, vocabulary and pronunciation. Therefore, speaking activities need to be prioritized in EFL courses in order for students to have the necessary communication skills to succeed in today's global society (Husein La Ede et al., 2022; Kuo, 2008; Nassar, 2021). Speaking at the higher education level aims to convey emotions and ideas with precise words and confidence. At this level, speaking includes the ability to express emotions, ideas and opinions in writing in a coherent and logical manner (Asif, 2017; Usman et al., 2018). In addition, it also includes understanding the conversation and the ability to ask questions. The ability to speak is an important aspect in various professions, from architects to teachers. For students, speaking skills are a crucial element to achieve success in English language acquisition. Students need to be able to express opinions, arguments, questions and answers in a structured manner and understand conversations in depth (Bostancıoğlu & Handley, 2018; Lin et al., 2022). Speaking skills are one of the key components of English language learning that is essential for anyone, regardless of their field of study. Speaking plays a crucial role in supporting the process of self-development and success, as it is one of the main indicators of English language mastery. Previous research corroborates this view by stating that speaking is a natural part of everyday activities that is often taken for granted, yet is essential for every individual (Nguyen & Habók, 2021; Waluyo & Rofiah, 2021). As the most important form of communication, speaking requires an effective blend of fluency, grammar, pronunciation, and vocabulary acquisition (Lin et al., 2022; Prasetya, 2021).

Previous research results show that students are often more focused on cognitive academic aspects and less exposed to learning approaches that allow them to communicate actively and confidently (Sabiri, 2019). For example, in traditional teacher-centered learning, students tend to be passive and only receive information without much involvement in the discussion or presentation process. This creates an urgency to find learning methods that can bridge the gap (Dam et al., 2019; Simanjuntak & Sudibjo, 2019). Project-Based Learning (PBL) comes as one of the learning approaches that is believed to be able to overcome this problem. PBL offers authentic learning experiences through projects that are relevant to the real world, thus providing opportunities for students to develop communication skills through collaboration, discussion, and presentation (Inayah et al., 2021; Ningtyas & Jati, 2018). However, a deeper understanding of the effectiveness of PBL in improving students' communication skills is still limited, so this research is important to conduct. Various previous studies have demonstrated the benefits of PBL in educational contexts, including the development of 21st century skills such as collaboration, problem solving and communication. For example, previous research revealed that PBL helped students improve their speaking skills by providing opportunities to present their projects in a supportive atmosphere (Maretasani, 2018). Another study showed that students who engaged in PBL tended to be more confident in expressing their opinions compared to those who followed traditional learning methods (Amelia & Pujiastuti, 2016).

However, most of the previous studies only focus on specific contexts, such as higher education or specific fields of study, so they have not provided a comprehensive picture of how PBL affects students' communication skills at various levels of education. In addition, most studies focus on measuring cognitive learning outcomes, while affective aspects such as confidence in speaking are often neglected (Rahmatika et al., 2021). The novelty value of this study lies in the systematic approach used to analyze the existing literature, namely through the Systematic Literature Review (SLR) method. This research not only collects empirical evidence from various related studies, but also provides an in-depth synthesis of the factors that influence the success of PBL in improving students' communication skills, as well as the challenges faced in its implementation. This research aims to systematically analyze how Project-Based Learning (PBL) can improve students' communication skills. The results of this study are expected to contribute to the development of more effective learning methods, especially in improving students' communication skills. In addition, the findings of this research can be used as a reference for educators in designing relevant and applicable PBL-based learning strategies.

2. METHOD

This study used a Systematic Literature Review (SLR) design to review and analyze various relevant studies related to the effect of Project-Based Learning (PBL) on improving students' communication skills. SLR was chosen because this method allows researchers to collect, evaluate, and synthesize data from existing literature

in a systematic and transparent manner (Page et al., 2021). This approach aims to provide an in-depth, evidence-based understanding of the effectiveness of PBL in various educational contexts. This research focuses on reputable journal articles published in the 2015-2025 timeframe, with a priority on empirical studies relevant to this topic.

Data collection was done by searching for articles in several academic databases such as Scopus, Springer, Taylor & Francis, and Google Scholar. The keywords used included Project-Based Learning, communication skills, student confidence, and education. Inclusion criteria included studies that focused on the implementation of PBL to improve students' communication skills, published in reputable journals, and used both quantitative and qualitative research methods. Meanwhile, the exclusion criteria included articles that were not relevant to the topic, not available in English, or did not contain empirical data. The selection process was conducted in stages, starting from abstract screening, full-text assessment, to validation of articles that fit the research focus. The data screening process is illustrated in Figure 1.
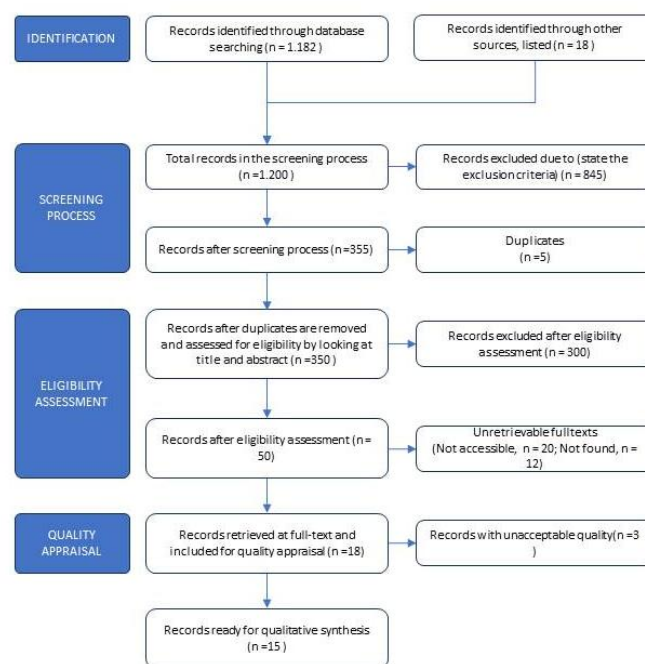

Figure 1. Data Screening Process

The data obtained were analyzed using a thematic approach to identify patterns, trends and key findings from each selected article. The stages of analysis included data extraction, grouping findings based on key themes such as PBL's contribution to communication skills, supporting factors, and implementation challenges. Findings were then compared and synthesized to provide a holistic picture of the effectiveness of PBL. In addition, the methodological quality of each article was evaluated using a critical appraisal tool to ensure the validity and reliability of the results of this study.

3. RESULT AND DISCUSSION

Result

This study analyzed 15 articles that discussed the effect of Project-Based Learning (PBL) on students' communication skills. These articles were selected based on the predetermined inclusion and exclusion criteria. The results of the analysis are summarized in Table 1.

Table 1. Summary of Analyzed Articles

No.	Authors	Title	Result
1	(Beneroso & Robinson, 2022)	Online project-based learning in engineering design: Supporting the acquisition of design skills	PBL improved students' presentation skills by 30% through discussion and group work

No.	Authors	Title	Result
2	(Tri Pudji Astuti, 2019)	*Model Problem Based Learning dengan Mind Mapping dalam Pembelajaran IPA Abad 21*	Students became more confident in speaking after completing the group project.
3	(Serevina et al., 2018)	Development of E-Module Based on Problem Based Learning (PBL) on Heat and Temperature to Improve Student's Science Process Skill	PBL is effective in improving communication and collaboration, especially on team-based project
4	(Harisantoso et al., 2020)	The Influence of the Problem Based Learning (PBL) Model on Students' Mathematical Problem-Solving Abilities	ESL students show improvement in speaking skills, especially in vocabulary use.
5	(Monica et al., 2019)	The Influence of the Problem-Based Learning Model on Students' Mathematical Problem-Solving Ability and Mathematical Confidence	PBL gives students the opportunity to learn public speaking with confidence.
6	(Zarouk et al., 2020)	The impact of flipped project-based learning on self-regulation in higher education	PBL increases critical thinking and communication skills by 25% compared to other methods.
7	(Maretasani, 2018)	The Application of Problem Based Learning (PBL) on Students' Mathematical Problem-Solving Abilities	Students find it more relevant to learn through real projects, so they are more active in communicating.
8	(Ahdhianto et al., 2020)	The Application of Problem Based Learning (PBL) on Students' Mathematical Problem-Solving Abilities	PBL increases students' motivation to speak actively during learning.
9	(Harisantoso et al., 2020)	The Influence of the Problem Based Learning (PBL) Model on Students' Mathematical Problem-Solving Abilities	Collaboration in PBL helps students overcome public speaking anxiety.
10	(Pawar et al., 2020)	Project based learning: An innovative approach for integrating 21st century skills	Students showed significant improvement in academic communication skills.
11	(Haatainen & Aksela, 2021)	Project-based learning in integrated science education: Active teachers' perceptions and practices	The technology used in PBL accelerates students' mastery of speaking skills.
12	(Nuswowati et al., 2017)	Implementation of problem-based learning with green chemistry vision to improve creative thinking skill and students' creative actions	PBL allows students to speak more frequently and improves interpersonal skills.
13	(Alias et al., 2015)	Self, peer and teacher assessments in problem based learning: are they in agreements?	PBL helps second language students speak more confidently in the learning environment.
14	(Boye & Agyei, 2023)	Effectiveness of problem-based learning strategy in improving teaching and learning of mathematics for pre-service teachers in Ghana	Students successfully improved communication structure in formal presentations through PBL
15	(Jabarullah & Iqbal Hussain, 2019)	The effectiveness of problem-based learning in technical and vocational education in Malaysia	Meta-analysis showed an average of 35% improvement in speaking ability with PBL.

Based on Table 1, the majority of studies show that Project-Based Learning (PBL) significantly contributes to improving students' communication skills. Students become more confident, active and skillful in conveying ideas in various learning situations. In addition, the use of technology and collaborative project-based learning proved to be the main supporting factors that accelerated the improvement of communication skills.

Discussion

The results of this study show that Project-Based Learning (PBL) has a significant positive impact on improving students' communication skills. This finding is in line with previous research highlighting the

effectiveness of PBL in developing 21st century skills, especially in verbal communication. One of the main aspects found from the analysis is that PBL consistently improves students' confidence in speaking, both in formal and informal settings (Baghoussi & Zoubida El Ouchdi, 2019; Maretasani, 2018). For example, previous research has shown that students involved in PBL become more comfortable with public speaking because they are used to conveying their ideas during project work (Ningtyas & Jati, 2018; Zarouk et al., 2020). This suggests that through project-based activities, students can overcoming speech anxiety, which is often a major barrier to communication. This confidence seems to be nurtured by the nature of PBL which puts students in an active role, where they have to seek information, discuss and present results independently (Tian, 2019; Tridinanti, 2018). This process provides authentic experiences that prepare students to deal with real-world communication situations.

Other findings suggest that PBL not only improves individual speaking ability, but also interpersonal communication and collaboration skills. For example, previous research highlights that team-based projects provide opportunities for students to discuss, listen and understand others' perspectives (Dewi, 2022; Ramadhanti, 2023). These activities train them to be more effective communicators in groups. In addition, collaboration in PBL also helps students develop empathy and conflict resolution skills, which are crucial in building interpersonal relationships (Rochmatin & Muchlis, 2023; Tawfik, 2015). These skills are not only relevant in the classroom, but also in the world of work and students' social lives. The benefits of PBL are clear, several studies have also highlighted the challenges faced during implementation. For example, previous research noted that the success of PBL in improving communication depends heavily on project design, technology support, and the role of the facilitator (Handayani & Koeswanti, 2021). Without careful planning and teacher support, students can feel overwhelmed by the demands of the project, which can hinder their communication development. In addition, technology as a support for PBL is also a concern. Although research shows that technology can accelerate the acquisition of communication skills, student unpreparedness or limited facilities can be significant barriers (Maretasani, 2018; Muhammad et al., 2019). Therefore, training for educators and provision of adequate infrastructure are needed to optimally support the implementation of PBL.

This research makes new contributions by identifying patterns and trends in research related to PBL and communication, such as the importance of authenticity in projects and the role of technology in supporting student communication. The practical implication is that educators need to design projects that are relevant to students' lives and provide intensive guidance during the PBL process. In addition, technology integration needs to be utilized to expand students' opportunities for communication, such as through virtual presentations or online collaboration. Although this study provides valuable insights into the effect of Project-Based Learning (PBL) on improving students' communication skills, there are some limitations that need to be noted. Firstly, the number of articles analyzed was limited to 15, which although includes a variety of relevant studies, is still relatively small to represent the overall research in this area. This limited number may affect the generalization of the research results, given the changing dynamics of educational and technological developments. Another limitation is the focus on articles using quantitative and qualitative methodologies only. Therefore, research using other methodological approaches, such as more in-depth qualitative studies or action research, are not included in this analysis.

4. CONCLUSION

This study concluded that Project-Based Learning (PBL) has a significant influence in improving students' communication skills. PBL not only helps students overcome their speaking anxiety and increase their confidence, but also encourages the development of collaboration and interpersonal communication skills through team-based activities. Nonetheless, successful implementation of PBL relies heavily on good project design, adequate technological support, as well as the active role of educators in facilitating the learning process. This research makes an important contribution to the understanding of the effectiveness of PBL in education, but there are still opportunities for further research that can broaden the scope and explore different educational contexts.

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