

The Development of Problem-Based Learning in English Language Education Through Academic Literature

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Abstract. With this study, the authors explore the evolution of Problem-Based Learning (PBL) in English language education and its substantial contribution to language proficiency, critical thinking, and student engagement. With technology evolving at a fast pace and world becoming a global village, the conventional means of education are slowly dying and are not enough to prepare students for the challenges of the 21st century. In response to these challenges, Project-Based Learning (PBL) has matured as a student-centered approach that promotes relevant and real-world problems and tasks, active learning, and collaboration. The corresponding research brings together research published from 1980 through 2024, emphasizing the period of 2019–2024. Employing thematic analysis, three main themes emerged from the literature, which were language proficiency, developing critical thinking skills, challenges in implementing PBL, and technological integration. The research shows that PBL leads to higher levels of language proficiency, especially in speaking and writing, promotes critical thinking, and increases engagement among learners. However, many barriers exist, including lack of teacher preparation and limited curriculum and materials availability. Finally, the paper concludes that the potential of PBL in English language education is maximized with teacher training, curricular flexibility, and equitable access to technology.

Keywords: *Problem-Based Learning, English Language Education, Critical Thinking, Student Engagement, Language Proficiency, Technological Integration, 21st-Century Skills*

Introduction

The rapid evolution of education driven by advances in technology and growing interconnectedness has created a need for innovative teaching methods. The advent of new educational paradigms has made conventional modes of education, which primarily rely on memorization and passive learning, insufficient in equipping students for the challenges and opportunities of the 21st century. By building essential skills such as critical thinking, creativity, collaboration, communication, and self-directed learning (Aeni & Apriani; 2022; Trilling & Fadel, 2009b); (World Economic Forum, 2020) That matters in a fast-paced global world, modern education has to focus on this.

To meet this need, we have increasingly, as educators and researchers, turned our attention to student-centred teaching alternatives. Problem-Based Learning (PBL) One such model of PBL emerges as a pedagogical paradigm shift away from a teacher-centered paradigm into a student-centered paradigm⁴ (Barrows & Tamblyn, 1980). PBL was first developed in the context of medical education but has been adapted to several disciplines, including the English language. Through this approach, students work on problem-solving tasks that mimic situations in the real world, and students are encouraged to use language that is authentic and applicable to their lives. (Hmelo-Silver, 2004);(Richards, 2014).

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This study has significant implications regarding how it collates and assesses the literature on PBL in English language teaching in recent years. While existing studies have reported positive effects of PBL on language skills, critical thinking, and general competencies (Prabowo et al., 2021; Orhan, 2025), little is known about the long-term dynamics of PBL practices and contextual factors that contribute to its successful implementation. Moreover, although technology integration into PBL has received significant academic attention, the varying availability of digital resources and students' and teachers' heterogeneous digital competencies can impede effective implementation (Jaleniauskiene & Lisaite, 2023). To fill these gaps, this research will provide an extensive overview of the PBL use in English language education, exploring the history of PBL in English language teaching, consider the challenges affecting its adoption through mini cases and highlight the technologies supporting current and future practice.

The research employs a qualitative library research design, choosing academic articles, books, and other scholarly sources published between 1980 and 2024 while highlighting recent contributions from 2019 to 2024. Through inclusive thematic analysis, this work maps out the literature to provide a comprehensive overview of the development and continuation of PBL throughout the field of English language education.

The sources for this study were selected through a systematic review of the literature, which aimed to aggregate peer-reviewed sources that make significant contributions to the understanding of PBL in the field of foreign language education, specifically in English language education. The articles used were selected on the grounds of their academic reliability, relevance to the research questions, and focus on PBL application in language teaching contexts. The selection criteria employed were stringent to warrant that the identified studies were of high academic integrity, mostly from peer-reviewed journals, conference proceedings, and scholarly books.

By (Braun & Clarke, 2006a) Guidelines, a procedure of thematic analysis, were followed, which involved that all stages of the process were systematically carried out: 1) Use strategic reading of literature (and research studies) over and over to familiarize oneself with the studies through reading, 2) Level of analysis (commentary, categorical, and thematic analysis): For this study, each transcript and the accompanying research notes were opened in a text editor and simultaneously read in a textual coding bubble for initial coding, 3) Theme Development: This involved consolidating the codes into overarching themes that represented common patterns throughout the literature, including themes like enhanced language proficiency, increased critical thinking, and technological integration, 4) Reflection on, and proper development of, themes: This ensures that identified themes are an accurate representation of the given data and that they speak to the research questions of the study, 5) Drawn Conclusions: Creating a story that threads the connection for themes and what it means for the field moving forward.

Theoretical Framework

Theoretical framework Constructivist learning theory Underpinning this research is a theoretical framework founded predominantly on theories of constructivist learning, which argues that learners build their understanding through their interactions with the world and with others. (Piaget, 1973);(Vygotsky, 1978). It is at odds with the traditional belief that they learn through a passive input of data. Paradoxically, constructivism claims that real learning occurs when learners participate in problem-solving and form knowledge from experience. (Schunk, 2019).

Problem-based learning (PBL) is one of the many educational approaches that align with constructivist principles. It invites students to solve authentic problems, promoting engagement through research, collaboration, and reflection, as opposed to memorization for the sake of an exam. (Hmelo-Silver, 2004). (Hmelo-Silver, 2004) Through PBL, the learning environment becomes one where the students engage with authentic, complex problems to grow higher-order cognitive skills.

Problem-Based Learning (PBL) is a student-centered approach in which students engage in activities that require them to think critically and solve problems, reflecting the 21st-century competencies embodied in 4Cs (Trilling & Fadel, 2009a): collaboration, communication, critical thinking, and creativity. These competencies lie at the heart of modern education, which tasks students with working through complex, real-world problems. Secondly, Project-Based Learning (PBL) bolsters the CLT methodologies that focus on meaningful communication rather than grammatical or rote memorization of the structures of a given language (Richards, 2006). Communicative Language Theory (CLT), on the other hand, concentrates the actual use of language in context, so that students participate in activities that necessitate meaning negotiation, information synthesis, and argument production across various tasks, all of which are elements essential to language development in Problem-Based Learning (PBL) realms.

Constructivism and CLT together in the context of PBL allow for language learning while deepening cognition in English language learners. Through language use in such authentic contexts, learners are scaffolded to address real-world problems and are thus more likely to achieve the fluency and accuracy that we hope for (Mckenzie, 2013).

Key Variables in the PBL Framework:

1. Learner-Centered Instruction

PBL puts the learner in the centre of the process and encourages student agency. They must take ownership of their learning by figuring out what they need to know, finding relevant resources, and using what they are learning in real-world scenarios. It goes with the port of self-motivated learning, which helps learners to build up analytic thinking and self-learning attitude. (Schunk, 2019).

2. Authentic Problem Situations

PBL is based on authentic tasks that represent the challenges our students will face in the real world. In the frame of Teaching English as Foreign Language, such task asks students to perform real communication, real problem solving, and real information processing, for which they must be in the target language. (Prabowo et al., 2021).

3. Collaborative Learning

PBL vision suggests a collaborative learning process that corresponds to the social constructive view of the learning as a socially mediated process (Vygotskij, 1978). Because students are working in teams, they share perspectives, negotiate meaning, and create knowledge together. Such a collaborative environment provides students with interactive and dynamic contexts within which to practice language and helps them build communication and other social skills critical to success in the workplace and academia. (Alghamdy, 2023).

4. Facilitative Teaching

This role is different from how teachers are typically viewed to deliver knowledge. They lead students through the process of learning, supporting them when appropriate, and encouraging them to reflect. Teachers guide students in developing problem-solving strategies, structuring learning experiences, and creating a climate in which mistakes are viewed as learning opportunities. (Kök & Duman, 2023).

The Role of Technology in Supporting PBL

PBL is effective when it encompasses, among other concepts, constructivism, CLT, and technology integration. Technology can help extend PBL outside of the classroom to provide the possibilities of online collaboration, access to digital repositories, or incorporation of virtual simulations. (Apriani et al., 2024; Jaleniauskiene & Lisaite, 2023; Apriani et al., 2022). Digital tools enable students to collaborate across distance, tap diverse information sources, and present solutions in flexible, multimodal formats. Nevertheless, without digital literacy and the equitable access to technology that facilitates it, PBL can fail. (OECD, 2021).

Research Focus

Limiting the review of the literature helps to substantiate the analysis by sharing studies that explicitly investigate the employment of Problem-Based Learning (PBL) strategies for English Language Teaching (ELT) or English as a Foreign Language (EFL) settings. Moreover, the framework focuses on some research papers that indicate the effect of PBL on different language skills like speaking, writing, reading, and listening, as well as cognitive aspects such as critical thinking, problem-solving, and learner engagement. Additionally, it contains studies that examine the challenges and best practices of implementing PBL in language education contexts. This review excludes studies that do not support language development or do not focus on non-language disciplines. Theoretical Background of PBL in Languages Education

The merging of CLT with constructivist learning theory and the tools of technology integration places PBL within a broader framework that supports language development and helps students prepare for the 21st century. This interaction between theoretical perspectives illustrates the dynamic and interactive nature of PBL, in which students immerse in real-life problems, communicate in authentic contexts, and acquire skills that are cross-disciplinary and applicable in multiple contexts beyond language learning.

Material and Method

Through a qualitative library research design, this study aims to examine the existing literature of PBL in English language education objectively. However, by using library research, we can draw upon a diversity of theory, evidence, and application without field work, which often tends to restrict state-of-the-art information. Library research is of special help in tracing developments over time and constructing a more general picture of educational phenomena via existing scholarship. (Booth et al., 2016). To ensure the choice of pertinent, well-published, and academically accepted sources, a set of rigorous inclusion and exclusion criteria guided the selection of journal articles for this study. The major selection criteria were: Inclusion criteria, relevance: Studies that did not describe PBL in the context of English Language Teaching (ELT) or English as a Foreign Language (EFL) were excluded. Articles that did not specifically concern PBL or its effect on language learning were removed. Credibility: The papers chosen were mostly from peer-reviewed magazines, academic books, dissertations, and conference programs. These sources were selected because they provide credible, science-based information. Time Frame: Studies published between 1980 and 2024, with an emphasis on more recent publications (2019–2024). This was to ensure that the review included the most up-to-date trends, findings, and innovations in the use of PBL within the field of language education. Language Development Emphasis: These studies should talk about how PBL affected language skills like speaking, writing, reading, and listening. Studies that examined PBL with other disciplines or were not directly concerned with language development were excluded. Data were analyzed using thematic analysis, a qualitative method for identifying, analyzing, and reporting patterns (themes) within data. (Braun & Clarke, 2006). Thematic analysis is useful in identifying similarities and differences across a broad range of literature. In this study, analysis took place in different stages: 1) Familiarization with the Data: First, read and reread the articles and additional literature. This helped the researcher to become acquainted with each study's key findings, methodologies, and conclusions, 2) Initial Coding: Following familiarization, the data were coded by finding meaningful segments of text that refer to the chordal themes of the study. The codes emphasized categories like PBL context, language proficiency, critical thinking skills, student engagement, and technology in PBL contexts, 3) Development of themes: In the next step, similar codes were grouped into broader themes that captured common identifying ideas across all the studies. It resulted in drafting themes such as enrichment of language proficiency, higher-order thinking, learner engagement, and hindrances to the implementation of PBL, etc. This process assisted in separating the data into specific areas of concern and interest in the research, 4) Reviewing the Themes and Reducing Them: After that, the themes

were reviewed to identify whether they were indeed a good reflection of observation data. The themes were checked against the descriptions to ensure consistency in the development of a theme and their consideration of the research questions so that they would adequately answer the study objectives, 5) Synthesis: The last step was to synthesize the themes into a coherent narrative. The results were melded into an overall report that weaved the themes together and drew conclusions about the effect of PBL on students' language learning, but also the difficulties that teachers experienced in adequately implementing PBL. Thematic analysis enables a comparison of results from different studies and provides a broad overview of the range of influences on PBL implementation in English language education and its evolution. This approach enabled the study to pool results across diverse types of studies and provide a comprehensive picture of PBL's effectiveness and challenges to implementation.

Research Tools Indicators

The study was informed by specific indicators identified for measuring the effectiveness of PBL in English language education through thematic analysis (Braun & Clarke, 2016). These indicators include: 1) Data Language Expansion: This indicator measures the effect of PBL on students' ability to speak, write, read, and listen. Attention was given to developing these skills through participation with authentic activity and issues in the real world, 2) This indicator assesses how PBL promotes critical thinking and problem-solving skills. The analysis included whether PBL fostered higher-order thinking by allowing students to critically analyze problems, identify varied viewpoints, and formulate justifiable solutions, 3) Student engagement: This indicator analyzes the impact of PBL on student engagement and motivation. The learning environment involved PBL in semester-long small groups working on collaborative problem-solving cases to encourage active learning and engagement in one's learning process (10), 4) Integration of Technology: This indicator delves into the use of technology to promote PBL. It explores how online platforms, digital tools, and multimedia resources encourage collaboration, provide access to varying types of information, and allow for the use of language in real life in PBL spaces, 5) Challenges in PBL Implementation: This indicator highlights the barriers to the effective implementation of PBL in the Language Classroom. A survey was also carried out to elaborate on the challenges teachers face in the widespread adoption of PBL, like teacher preparedness, curricular rigidity and limitations in resources, 6) These indicators served as the framework for organizing the analysis and for evaluating that the results addressed the research goals. They formed the basis for the PBL-based conclusion that was relevant in terms of language development, as well as barriers to PBL-based adoption.

Results and Discussion

Results

The analysis of the identified literature was thematic through the development and implementation of PBL in EFL education, and our primary themes were four. These themes were derived from the research instruments and indicators employed in measuring effects on language mastery, critical thinking, and student engagement. The four key themes are:

Enhancement of Language Proficiency

Through a systematic review of the literature on this topic, one of the most consistent findings regarding PBL is that it positively affects language proficiency, especially in its productive skills of speaking and writing. Through tasks that revolve around problems, students must communicate in meaningful ways, not merely parroting. The tasks require students to negotiate the meaning, construct arguments, and communicate in real time, all of which result in improved language skills. For instance, (Prabowo et al., 2021) Found that students who participated in PBL experienced significant growth in oral fluency and accuracy, particularly in presentations and group discussions. PBL is highly interactive by nature, which

creates plenty of opportunities for peer-to-peer communication and increases language output even more.

Table 1.

Enhancement of Language Proficiency in PBL

Study	Skill Improved	Method of Assessment	Findings
(Prabowo et al., 2021)	Speaking, writing	Oral fluency, written tasks	Significant improvement in fluency and accuracy
(Orhan, 2025)	Speaking, writing, listening	Evaluative tests, presentations	Higher language proficiency through collaborative tasks

Development of Critical Thinking and Problem-Solving Skills

A second theme to emerge from the literature is that PBL promotes critical thinking and problem-solving skills. Whereas traditional teaching emphasizes rote memorization and passive repetition, PBL pushes students to examine complex issues, weigh conflicting points of view, and develop sound solutions. It encourages higher-order thinking that is vital for accomplishment in academia and industry. (Orhan, 2025) PBL students demonstrated improved skills in evaluating evidence, developing arguments, and generating solutions. Likewise, this theme also serves the cognitive growth part of PBL, where students immerse themselves more into the subject and develop their analytical thinking.

Table 2.

Development of Critical Thinking and Problem-Solving

Study	Skill Improved	Method of Assessment	Findings
(Orhan, 2025)	Critical Thinking, Problem Solving	Analysis of solutions, peer discussions	Significant enhancement of critical thinking abilities
(Kök & Duman, 2023)	Critical Thinking	Problem-solving activities	Development of higher-order cognitive skills

Challenges in PBL Implementation

While the reported outcomes were encouraging, some challenges in the implementation of PBL in English language education were discussed. A chief obstacle involves teacher readiness. Teachers who were primarily trained in traditional learning will struggle to shape the mindset needed for the student-centered approach required for PBL. According to Kök & Duman (2023), Teachers find it more difficult to balance facilitation and guidance in these types of activities (PBL) and, therefore, its overall learning process effectiveness. Furthermore, curricular constraints, standardized testing, and time constraints can pose barriers to the integration of PBL in the same education systems. Also, be aware that passive learners may need scaffolds to develop ownership of their learning and may resist self-directed learning or teamwork initially.

Table 3.

Challenges in PBL Implementation

Challenge	Description	Impact on PBL Implementation
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Teacher Preparedness	Lack of training in facilitating PBL	Difficulty in balancing guidance and student exploration
Curriculum Rigidity	Fixed curriculum and standardized assessments	Limited space for open-ended tasks
Student Adaptation	Struggles with self-directed learning and team activities	Need for scaffolding and gradual adaptation

Role of Technological Integration

Collaboration is an essential part, and technology integration in PBL environments was identified as a key to supporting collaboration and achieving wider reach while boosting learning activities. As (Jaleniauskiene & Lisaite, 2023) Have stated, technology facilitates group collaboration online, the accessibility of access to digital resources, and multimedia use, which enrich the PBL experience. Nonetheless, as pointed out in the literature, the successful integration of technology remains dependent on adequate planning and sufficient levels of digital literacy, as access to technology and levels of skills can create an inequitable environment for the implementation of PBL. The challenge is to make sure technology is an enabler, not a distraction, especially in under-resourced settings.

Table 4.
Role of Technology in PBL

Study	Technology Used	Role in PBL	Findings
(Jaleniauskiene & Lisaite, 2023)	Collaborative tools, digital repositories	Enhancing communication, collaboration, and resource access	Improved student collaboration and resource access

Discussion

The thematic analysis results overwhelmingly suggest that PBL is an effective pedagogical strategy that facilitates both language and cognitive development. It provides active learning through authentic activities that require students to use language in new, relevant contexts. Such an approach would connect with modern theories of teaching and learning, notably those that have evolved around the necessary skills on which formal education ought to be centered in the current era, such as critical thinking, creativity, collaboration, and communication. (Trilling & Fadel, 2009a);(World Economic Forum, 2020).

Language proficiency was improved through PBL, especially productive skills such as speaking and writing, as students performing real-world problem-solving tasks had authentic communication. Thus, this finding is in line with the philosophy of Communicative Language Teaching (CLT), which emphasizes using language in context as opposed to mindlessly constructing linguistic forms. (Richards, 2006). The focus on critical thinking and problem-solving also aligns with the cognitive development aspect of constructivism, as students tackle intricate problems and build higher-order thinking skills. (Hmelo-Silver, 2004).

That said, the challenges in PBL implementation should not be ignored. Significant barriers to the successful integration of PBL identified were teacher readiness and curricular flexibility. These challenges lend further credence (Kök & Duman's (2023) claim that teacher training is key to ensuring effective PBL implementation. Likewise, the problems concerning students' adaptation align with Alghamdy's, (2023) study, which also states that students who

are used to being taught using conventional methods require a prescription on how to embark on self-directed learning, and gradually help to enable them to embark on collaborative tasks.

The findings highlight the importance of techno-activity integration supporting PBL. Also, technology offers tools that can promote collaboration, enable access to relevant information, and facilitate multimodal channels of communication, which are essential for proper PBL implementation. Such aspects supplement (Jaleniauskiene & Lisaite, 2023) Results regarding the positive influence of digital tools on PBL settings. Yet, the need for equitable learning experiences is paramount when considering differences in digital literacy and access to technology across diverse populations.

Conclusion

To summarize, PBL has shown great promise for improving language skills, developing critical thinking, and increasing student engagement. However, successful implementation is contingent upon overcoming challenges, including a lack of preparedness among teachers, a lack of curricular flexibility, and a lack of resources. Furthermore, access to technology and digital literacy are critical in promoting effective technology integration within PBL environments, presenting both opportunities and challenges. While the findings of this study indicate that PBL can be an effective way of 21st-century skill development in learners, it requires proper utilization and should be understood as an effective educational tool in context, with consideration of teacher resources and availability.

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