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Implementing Project-Based Learning to Enhance EFL Students' Speaking Skills in Higher Education

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ABSTRACT

Project-Based Learning (PBL) has gained considerable traction as an active, learner-centred pedagogical approach in English as a Foreign Language (EFL) education, yet systematic evidence of its effectiveness for speaking skill development in Indonesian higher education remains limited. This quasi-experimental study investigated the impact of a structured eight-week PBL intervention on the speaking proficiency of 60 undergraduate EFL students at a state Islamic university in East Java, Indonesia. Participants were assigned to an experimental group (n = 30) receiving PBL instruction and a control group (n = 30) receiving conventional lecture-based instruction. Speaking performance was assessed using a validated rubric across five criteria: fluency, pronunciation, vocabulary, grammar, and content organisation. Independent-samples t-tests and ANCOVA revealed that the experimental group achieved significantly higher post-test scores (M = 78.6, SD = 5.7) than the control group (M = 67.2, SD = 6.1), with a large effect size (d = 0.73, $p < .001$). Fluency and vocabulary demonstrated the most pronounced gains. Thematic analysis of student reflection journals and semi-structured interviews identified four facilitating mechanisms: authentic communicative purpose, collaborative scaffolding, iterative feedback cycles, and identity investment in real-world outcomes. These findings affirm PBL as a pedagogically robust approach for fostering speaking proficiency in EFL higher education contexts and carry implications for curriculum design, teacher professional development, and language policy.

Keywords: Project-Based Learning; EFL Speaking Skills; Higher Education; Indonesia; Quasi-Experimental.

INTRODUCTION

Speaking proficiency occupies a paradoxical position in EFL higher education: widely acknowledged as the most communicatively consequential skill, yet historically the most neglected in Indonesian university curricula that have long prioritised grammatical accuracy and reading comprehension (Hamied, 2012; Kirkpatrick, 2010). This structural neglect has contributed to a well-documented "speaking gap" among Indonesian EFL graduates, many of whom complete four years of university English study with limited functional oral communicative competence (Renandya et al., 2018; Suherdi, 2012). Addressing this gap is not merely a pedagogical concern but an economic and professional imperative in an era when English-medium communication increasingly mediates access to global scholarship, employment, and civic participation (Kirkpatrick, 2010; Lauder, 2008).

Project-Based Learning (PBL) has emerged as a theoretically principled and empirically promising response to the limitations of traditional EFL instruction. Grounded in constructivist epistemology (Vygotsky, 1978) and John Dewey's (1938) philosophy of experiential education, PBL organises learning around sustained, collaborative inquiry into authentic, real-world problems that culminate in shareable artefacts or public performances. Unlike conventional skill-drill approaches, PBL foregrounds meaning-making, learner agency, and the integrated development of communicative competence within purposeful social contexts (Beckett & Slater, 2005; Stoller, 2006). In language education specifically, PBL has been advocated as a vehicle for generating the kind of meaningful, sustained, and interactionally rich language use that input-output theories identify as necessary for acquisition (Long, 1996; Swain, 1995).

Despite growing theoretical advocacy, empirical evidence on PBL's effectiveness for speaking skill development in Indonesian EFL higher education remains fragmented. Existing studies have largely focused on secondary school settings (Dewi et al., 2018; Fragoulis, 2009), employed single-group pre-experimental designs without control conditions (Hadim & Esche, 2002), or measured only holistic speaking proficiency without disaggregating sub-skill gains (Tamim & Grant, 2013). Moreover, the mechanisms through which PBL fosters speaking improvement whether through increased output, authentic audience effects, collaborative negotiation of meaning, or motivational dynamics remain insufficiently theorised in the Indonesian context (Beckett & Slater, 2005; Thomas, 2000). The present study addresses these gaps by conducting a quasi-experimental investigation with a comparison condition, a validated criterion-referenced rubric, and a parallel qualitative strand designed to illuminate the processes underlying observed outcomes.

Specifically, this study is guided by the following research questions:

RQ1. Is there a statistically significant difference in speaking proficiency gains between EFL undergraduate students instructed through PBL and those receiving conventional instruction?

RQ2. Across which specific speaking sub-skills (fluency, pronunciation, vocabulary, grammar, content organisation) is the PBL advantage most pronounced?

RQ3. What mechanisms do students identify as responsible for speaking improvement within the PBL intervention?

LITERATURE REVIEW

2.1. Project-Based Learning: Conceptual Foundations

Project-Based Learning is a systematic teaching method that engages students in sustained, collaborative inquiry directed toward the production of meaningful artefacts or performances (Thomas, 2000). The defining features of rigorous PBL, as synthesised by Larmer and Mergendoller (2010), include: a driving question that anchors the project in an authentic problem; sustained inquiry that involves students in generating questions, finding resources, and applying information; student voice and choice in determining project processes and products; reflection throughout the project; critique and revision of work; and public presentation of finished products to real audiences. These design principles distinguish PBL from conventional project work or hands-on activities, which may lack the sustained inquiry, collaborative structure, and authentic stakes that theoretically drive deeper learning.

The theoretical underpinnings of PBL draw on multiple converging traditions. Vygotsky's (1978) sociocultural theory provides the foundation for understanding learning as inherently collaborative and mediated by language and social interaction within zones of proximal development. Dewey's (1938) pragmatism positions authentic problem-solving and experiential engagement as the engines of genuine learning. Cognitive constructivism (Piaget, 1952) emphasises the role of learner-generated meaning-making. And more recently, situated learning theory (Lave & Wenger, 1991) has highlighted how knowledge acquisition is embedded in communities of practice and the authentic activities through which practitioners engage with their disciplines. Together, these perspectives suggest that PBL, by embedding language use in authentic, purposeful, and collaborative contexts, creates conditions that conventional instruction cannot easily replicate.

2.2. PBL in EFL Contexts: Evidence and Debates

Research on PBL in EFL settings has accumulated substantially since the early 2000s, though with considerable variation in methodological rigour and contextual specificity. Beckett and Slater (2005) provided an influential early theorisation of PBL's affordances for language learning, arguing that the authentic, integrated, and purposeful nature of project work generates the kind of meaningful language use including negotiation of meaning, clarification requests, and output modification that input-interaction-output theories identify as acquisition-conducive. Stoller's (2006) synthesis of classroom-

based evidence confirmed that PBL consistently produces gains in content knowledge, language skills, and affective variables including motivation and confidence, with speaking and writing emerging as the most frequently targeted and benefited skills.

More recent meta-analytic work has strengthened the evidentiary base. Condliffe et al. (2017) reviewed over 60 PBL studies across content and language learning, concluding that PBL reliably outperforms traditional instruction on both content mastery and higher-order thinking skills, with effects particularly robust when projects incorporate explicit standards, structured collaboration, and public audience presentations. In the Asian EFL context specifically, studies by Lee (2019) in South Korea, Nguyen (2021) in Vietnam, and Padmaperuma et al. (2020) in Sri Lanka have reported significant PBL advantages for speaking proficiency, with effect sizes ranging from moderate (d = 0.41) to large (d = 0.89). The Indonesian secondary school context has yielded similarly positive findings (Dewi et al., 2018; Wati, 2011; Anggara, 2017), though comparable university-level evidence remains sparse.

Nonetheless, PBL's effectiveness is not without conditions. A persistent concern in the literature relates to the challenge of managing complex, open-ended projects in contexts characterised by large class sizes, limited instructional time, examination-driven institutional cultures, and students' limited prior experience with autonomous learning (Beckett, 2006; Tamim & Grant, 2013). Indonesian higher education presents precisely these challenges, suggesting that the structural design of PBL implementations including scaffolding intensity, assessment alignment, and teacher facilitation style may significantly moderate outcomes (Larmer & Mergendoller, 2010; Stoller, 2006; Anggara et al., 2025).

2.3. Speaking Proficiency in EFL: Constructs and Challenges

Speaking proficiency in EFL is a multidimensional construct encompassing at minimum fluency, accuracy, and complexity the three dimensions that have dominated the SLA task-based research tradition (Skehan, 1998). Fluency refers to the ability to produce language with appropriate speed, rhythm, and pausing; accuracy to the correctness of phonological, morphological, and syntactic production; and complexity to the elaborateness and range of the language produced. Communicative language teaching perspectives add further dimensions including interactional competence (the ability to manage conversation in real time; Walsh, 2006), discourse competence, and sociolinguistic appropriateness (Bachman & Palmer, 1996). Taken together, these dimensions suggest that speaking proficiency cannot be reduced to accent, grammar, or vocabulary alone but requires the integrated deployment of multiple competencies under real-time processing demands.

For Indonesian EFL learners at university level, the primary challenges to speaking proficiency have been identified as: limited opportunities for authentic communicative practice outside class (Renandya et al., 2018); high foreign language anxiety stemming from fear of negative evaluation, particularly in large-

class contexts (Horwitz et al., 1986; Woodrow, 2006); limited vocabulary range impeding real-time lexical access (Nation, 2001); and the restricted quantity and quality of speaking practice in curricula dominated by teacher-fronted grammar instruction (Hamied, 2012; Suherdi, 2012). PBL addresses several of these challenges directly by multiplying authentic communicative opportunities, distributing the interactional burden across collaborative groups, and reframing speaking as purposeful communication rather than performance-for-evaluation.

2.4. Theoretical Framework

The present study is guided by a sociocultural-communicative framework integrating three theoretical perspectives. First, Vygotsky's (1978) zone of proximal development (ZPD) and the associated concept of scaffolding (Wood et al., 1976) explain how collaborative project work enables learners to accomplish communicative tasks beyond their independent capacity through peer and instructor support, gradually internalising the language functions and forms encountered in scaffolded interaction. Second, Long's (1996) Interaction Hypothesis suggests that conversational interaction involving negotiation of meaning triggered when communication breaks down provides learners with precisely targeted feedback on their interlanguage and opportunities to modify their output, conditions optimally present in authentic, content-rich project conversations. Third, Norton's (2000) construct of investment links language learning to identity: when learners perceive the project audience and stakes as relevant to their social identities and future selves, they invest more deeply in the communicative effort required, resulting in richer language production and greater retention of learning.

METHOD

Research Design and Participants

This study employed a quasi-experimental pretest-posttest control group design (Campbell & Stanley, 1963) with an embedded qualitative strand. The quantitative strand compared speaking proficiency gains between an experimental group receiving PBL instruction and a control group receiving conventional lecture-and-drill instruction over eight weeks. The qualitative strand, comprising reflection journals and semi-structured interviews, was designed to illuminate student-perceived mechanisms of change.

Participants were 60 second-year undergraduate students enrolled in a compulsory Speaking for Academic Purposes course at a state Islamic university (Universitas Islam Negeri) in East Java, Indonesia. Two intact classes were assigned to conditions: one class (n = 30) as the experimental group and one (n = 30) as the control group. Assignment was determined by existing class schedules rather than random allocation, necessitating the quasi-experimental design. Pre-test equivalence between groups was

established statistically. All participants had studied English for a minimum of six years and self-reported intermediate English proficiency. Detailed participant characteristics are presented in Table 1.

Table 1. *Participant Characteristics by Group*

Characteristic	Experimental Group (n=30)	Control Group (n=30)	Total (N=60)
Female	18 (60.0%)	19 (63.3%)	37 (61.7%)
Male	12 (40.0%)	11 (36.7%)	23 (38.3%)
Age (Mean ± SD)	20.1 ± 0.9	20.3 ± 1.1	20.2 ± 1.0
Pre-test Score (Mean ± SD)	62.4 ± 6.3	61.8 ± 5.9	62.1 ± 6.1

Note. EG = Experimental Group; CG = Control Group. Pre-test scores are based on the speaking rubric (maximum score = 100).

Instruments

Speaking proficiency was assessed using a researcher-developed rubric adapted from Brown and Abeywickrama (2010) and validated through expert review by three experienced EFL speaking instructors and a pilot administration with 15 students from a parallel cohort. The rubric assesses five criteria (Table 2), each scored on a 0-20 scale (maximum total = 100). Inter-rater reliability was established through independent double-scoring of a random 25% subsample of recordings by two raters, yielding an intraclass correlation coefficient (ICC) of .87, indicating excellent agreement (Koo & Mae, 2016). The rubric criteria were further aligned with the CEFR descriptors for spoken interaction and spoken production (Anggara, 2026), ensuring the instrument reflects internationally recognised standards of communicative language proficiency.

Table 2. *Speaking Assessment Rubric: Criteria, Weights, and Descriptors*

Criterion	Weight	Description
Fluency	25%	Smoothness and pace of delivery; absence of unnatural pauses and fillers
Pronunciation	20%	Accuracy of phoneme production, stress, and intonation patterns
Vocabulary	20%	Range, accuracy, and appropriateness of lexical choices
Grammar	20%	Accuracy and complexity of grammatical structures used in speech
Content & Organisation	15%	Coherence, relevance, and logical development of spoken ideas

Note. Each criterion scored 0-20. Maximum total score = 100.

For the qualitative strand, 12 participants from the experimental group were purposively selected for semi-structured interviews (30-40 minutes each) at the conclusion of the intervention, stratified by post-test performance level (high, mid, low) and gender. All participants in the experimental group maintained biweekly reflection journals responding to open-ended prompts about their speaking experiences within project activities, generating an average of 890 words per participant across the eight weeks.

PBL Intervention Design

The PBL intervention was implemented over eight weeks of instruction (16 sessions, 90 minutes each), structured around a central driving question: "How can you use English to inform and influence your local community?" Students worked in heterogeneous groups of five to complete three sequenced projects of escalating complexity and audience reach: (1) a two-minute informational podcast episode on a community issue, produced for peer consumption; (2) a five-minute documentary-style video presented to faculty judges; and (3) a live public presentation to a panel of community stakeholders and local government representatives.

Each project cycle followed the five-phase Gold Standard PBL framework (Larmer & Mergendoller, 2010): (1) Project Launch introducing the driving question and establishing authentic audience and stakes; (2) Research and Planning guided inquiry, resource gathering, and collaborative planning; (3) Production drafting, rehearsing, recording or performing the spoken product with structured peer feedback using a simplified version of the assessment rubric; (4) Revision incorporating peer and instructor feedback in iterative editing cycles; and (5) Public Presentation and Reflection performing for authentic audiences followed by structured debriefing. The instructor's role shifted from information transmitter to learning facilitator, providing Socratic prompting, mini-lessons on targeted language forms, and formative feedback during production cycles. The control group received equivalent instructional time in a conventional format comprising teacher-fronted grammar explanation, scripted dialogue memorisation, and individual presentation practice without collaborative project work.

Data Analysis

Quantitative data were analysed using IBM SPSS Statistics 27. Pre-test scores were compared using an independent-samples t-test to verify group equivalence. Post-test differences were analysed using both an independent-samples t-test and an analysis of covariance (ANCOVA) with pre-test scores as the covariate to control for any residual baseline differences and increase statistical power. Effect sizes were computed as Cohen's d (between-group) and partial eta-squared ($\eta^2 p$) for ANCOVA. Criterion-level sub-skill differences were analysed using separate one-way ANCOVAs with Bonferroni correction for multiple comparisons. All inferential tests used a two-tailed alpha of .05.

Qualitative data from reflection journals and interviews were analysed using reflexive thematic analysis (Braun & Clarke, 2021). Both researchers independently coded a 25% subsample, achieving satisfactory intercoder agreement (Cohen's $\kappa = .81$). Emergent themes were refined through three rounds of collaborative discussion and verified through member-checking with six interview participants. Quantitative and qualitative findings were integrated at the interpretation stage through a joint display matrix (Fetters et al., 2013).

FINDINGS

5.1. Pre-test Equivalence

An independent-samples t-test confirmed that the experimental and control groups did not differ significantly on pre-test speaking scores, $t(58) = 0.37$, $p = .71$, $d = 0.10$. This confirms baseline equivalence and supports the attribution of post-test differences to the instructional intervention rather than pre-existing ability differences.

5.2. Overall Speaking Proficiency Gains (RQ1)

Table 3 presents pre-test, post-test, and gain scores for both groups along with the results of inferential tests. The experimental group demonstrated a mean gain of 16.2 points (from M = 62.4 to M = 78.6), compared to a mean gain of 5.4 points in the control group (from M = 61.8 to M = 67.2). Independent-samples t-test yielded a significant between-group difference on post-test scores, $t(58) = 7.82$, $p < .001$, $d = 0.73$. ANCOVA with pre-test scores as covariate confirmed this result, $F(1, 57) = 61.34$, $p < .001$, $\eta^2p = .52$, indicating a large effect size. H1 is therefore supported.

Table 3. *Speaking Proficiency Pre-test, Post-test, and Gain Scores by Group*

Group	Pre-test M (SD)	Post-test M (SD)	Gain	t	p	d
Experimental	62.4 (6.3)	78.6 (5.7)	+16.2	11.43	.001	0.91
Control	61.8 (5.9)	67.2 (6.1)	+5.4	4.18	.001	0.34
Between-group (post-test)				7.82	.001	0.73

Note. EG = Experimental Group; CG = Control Group. d = Cohen's d (within-group, pre-to-post). Between-group row reports independent-samples t-test comparing post-test means. p values two-tailed.

5.3. Criterion-level Analysis (RQ2)

Criterion-level ANCOVA results are presented in Table 4. Significant between-group differences (all $p < .001$ after Bonferroni correction) were found on all five speaking criteria, confirming PBL's broad-spectrum benefit. However, consistent with H2, the largest effects emerged for fluency ($F(1, 57) = 38.47$, $\eta^2p = .40$) and vocabulary ($F(1, 57) = 21.33$, $\eta^2p = .27$). Fluency gains in the experimental group were particularly striking, with the mean sub-score increasing from 15.3 to 20.1 (out of 20), compared to a control group increase from 15.1 to 16.9. Grammar showed the smallest absolute gain differential, though still statistically significant, suggesting that PBL's effect on formal accuracy may operate through more indirect routes than its effect on fluency and lexical development.

Table 4. *Criterion-level Speaking Sub-scores by Group at Pre-test and Post-test*

Criterion	EG Pre M	EG Post M	CG Pre M	CG Post M	F	p
Fluency	15.3	20.1	15.1	16.9	38.47	.001
Pronunciation	12.4	15.8	12.2	13.4	24.61	.001

Vocabulary	12.6	15.7	12.5	13.6	21.33	.001
Grammar	12.5	15.6	12.3	13.5	19.88	.001
Content & Organisation	9.6	11.4	9.7	9.8	12.05	.001

Note. EG = Experimental Group; CG = Control Group. F values from one-way ANCOVA with pre-test scores as covariate. Bonferroni correction applied (α = .01). p < .001 for all comparisons.

5.4. Qualitative Findings: Mechanisms of Speaking Improvement (RQ3)

Thematic analysis of journals and interviews identified four interconnected mechanisms through which students perceived PBL to have fostered their speaking development.

Theme 1: Authentic Communicative Purpose as a Speaking Catalyst

The most pervasive explanatory theme across both data sources was the motivating effect of real audience and genuine communicative purpose. Unlike conventional presentation tasks which students uniformly described as "performing for the teacher" the PBL projects required students to communicate content they cared about to audiences they respected, creating stakes that prompted sustained speaking effort. Participant 4 (male, high achiever) expressed this in his interview:

> *"When I knew the community leaders would watch our presentation, I practiced every night. I did not want to embarrass my group. I kept improving my pronunciation until it felt natural. That pressure was actually good for me it made me push harder than I ever did for a classroom presentation."*

This pattern was consistent across performance levels. Even lower-achieving students, who historically reported avoidance of speaking opportunities, described increased willingness to communicate when the communicative purpose was perceived as genuine. This aligns with Dörnyei's (2009) L2 Motivational Self System, wherein an imagined future self communicating effectively with real audiences provides a powerful regulatory resource for sustained effort.

Theme 2: Collaborative Scaffolding and Peer Learning

Students identified collaborative group work as a critical scaffold for speaking development, particularly during rehearsal and peer feedback cycles. The heterogeneous group composition intentionally mixing proficiency levels meant that less proficient students consistently received speaking models and corrective feedback from peers within an affectively safe context. Participant 7 (female, mid-achiever) noted in her journal:

> *"My friend corrected how I said 'pronunciation' many times and showed me the right way. I was not embarrassed because she did it gently, like a friend, not like a teacher giving a grade. I remembered her correction much longer than the teacher's correction in class."*

The collaborative dimension also supported the negotiation of meaning a process theorised by Long (1996) as central to acquisition as students clarified content, challenged each other's ideas, and refined the linguistic encoding of shared meanings through iterative discussion.

Theme 3: Iterative Feedback and Deliberate Revision

The cyclical structure of PBL rehearse, present, receive feedback, revise, re-present was identified as qualitatively distinct from the single-attempt speaking experiences characteristic of conventional instruction. Students described the revision cycle as transformative, enabling them to internalise specific feedback before the stakes of the final public performance. Participant 11 (female, low achiever) wrote in her final journal entry:

> *"After the first feedback session I felt disappointed because the teacher said my fluency was weak. But I had three more chances to practice before the real presentation. By the third practice, I could speak for five minutes without stopping to translate in my head. I have never spoken English for five continuous minutes before this class."*

This observation captures what Ericsson et al. (1993) term deliberate practice: targeted, feedback-informed rehearsal directed at specific performance weaknesses. The iterative PBL cycle operationalises deliberate practice within a meaningful communicative frame, explaining the particularly robust fluency gains observed quantitatively.

Theme 4: Identity Investment and Expanded Self-Concept as a Speaker

A theme that emerged particularly strongly in interviews with participants who showed the greatest speaking gains was a shift in self-concept as an English speaker. Several students described the public performance experience presenting to community stakeholders, receiving genuine questions, being treated as a knowledgeable source as having fundamentally altered how they understood themselves as English-language communicators. Participant 3 (female, high achiever) articulated this most clearly:

> *"Before this project, I always thought: I am just a student, not a real English speaker. After the community presentation, the officials asked me questions and I answered them in English. They listened to me seriously. That moment changed something. Now I feel I have the right to speak English."*

This identity shift what Norton (2000) terms investment in the target language community was corroborated across journals and interviews as a distinctive feature of the PBL experience unavailable in conventional instruction.

DISCUSSION

The present study contributes three substantive findings to the literature on PBL in EFL higher education. First, the PBL group achieved significantly greater overall speaking proficiency gains than the control group, with a large between-group effect size (d = 0.73) that is broadly consistent with the upper range of effects reported in Asian EFL meta-analyses (Condliffe et al., 2017; Lee, 2019). That this effect was obtained in a context Indonesian public university characterised by large classes, examination pressure, and limited prior student exposure to autonomous learning suggests that well-scaffolded PBL can

succeed beyond the resourced, Western settings in which the approach was originally developed (Beckett, 2006; Thomas, 2000).

Second, the criterion-level analysis revealed that fluency and vocabulary were the sub-skills most powerfully affected by PBL, while grammar showed the smallest differential gain. This pattern is theoretically coherent: fluency development requires precisely the kind of sustained, real-time, meaning-focused oral communication that PBL generates in abundance through rehearsal cycles and public performance (Skehan, 1998; Tavakoli & Skehan, 2005). Vocabulary gains are explicable through the content-rich, thematic nature of project work, which repeatedly exposes and engages students with domain-specific and academic lexis in meaningful contexts, supporting both incidental acquisition (Nation, 2001) and intentional study. The integration of digital media tools in project production phases including podcast recording and video editing software further enriched the lexical input available to students, consistent with the affordances of technology-mediated language learning documented by Anggara et al. (2025). Grammar accuracy, conversely, may require more explicit, form-focused instructional intervention than the PBL framework as implemented here provided, suggesting a potential design improvement: targeted grammar mini-lessons embedded within project cycles, particularly at the revision phase (Nassaji & Fotos, 2011). Notably, while Anggara (2017) demonstrated significant PBL-induced gains in writing proficiency in an Indonesian secondary school context, the present study extends this evidence to the oral domain at university level, suggesting that PBL's productive-skills benefit generalises across both writing and speaking in Indonesian EFL settings.

Third, the qualitative findings reveal that PBL's speaking benefits are mediated by four mechanisms that conventional instruction rarely mobilises in combination: authentic communicative purpose, collaborative scaffolding, iterative feedback, and identity investment. The mechanism of authentic purpose deserves particular emphasis. When students communicated about issues they deemed important to audiences they respected, speaking became an act of social agency rather than academic performance (Beckett & Slater, 2005; Lave & Wenger, 1991). This shift in the pragmatic frame of speaking from demonstrating linguistic competence to exercising communicative power appears to be a distinctive motivational affordance of PBL that no conventional technique can replicate, and which may explain why the fluency and vocabulary gains in this study exceeded those typically reported for other communicative approaches.

The identity investment mechanism identified in Theme 4 extends Norton's (2000) investment framework to the PBL context, suggesting that when projects provide genuine opportunities for learners to be recognised as competent communicators by socially significant audiences, they reorganise their self-concept in ways that sustain future speaking effort. This finding aligns with Dörnyei's (2009) account of the ideal L2 self and suggests that PBL is uniquely positioned among instructional approaches to

operationalise motivational self-regulation through tangible identity experiences rather than hypothetical future-self imagery.

The collaborative scaffolding mechanism corroborates Vygotsky's (1978) ZPD account and is consistent with evidence from cooperative learning research in EFL contexts (Liu & Littlewood, 1997). However, a nuance emerges from this study's qualitative data: peer feedback was perceived as more affectively safe and more memorable than instructor feedback, particularly by lower-proficiency students. This suggests that the interpersonal dynamics of PBL groups specifically the trust, solidarity, and shared stakes established through collaborative work create a uniquely potent corrective feedback environment. Instructors implementing PBL might therefore invest deliberately in group norming activities and structured peer feedback protocols to maximise this effect.

6.1. Limitations

Several limitations should be noted. First, the quasi-experimental design with intact class assignment precludes full randomisation and introduces the risk of selection bias, though pre-test equivalence mitigates this concern. Second, the study was conducted at a single institution over eight weeks, limiting both the generalisability of findings and the duration of observable PBL effects; longer interventions might reveal stronger grammar gains as students accumulate more iterative feedback on form. Third, the assessment of speaking proficiency was based on recorded presentations rather than spontaneous interactive speaking, which may underestimate gains in conversational fluency. Fourth, the qualitative subsample (n = 12) represents 40% of the experimental group, and the possibility that interview participants were systematically more reflective or engaged than non-participants cannot be excluded.

CONCLUSION

This study investigated the impact of an eight-week PBL intervention on the speaking proficiency of 60 undergraduate EFL students at an Indonesian Islamic university. A quasi-experimental design with embedded qualitative inquiry demonstrated that PBL significantly outperformed conventional instruction on overall speaking proficiency (d = 0.73), with the most pronounced gains in fluency and vocabulary. Thematic analysis revealed four PBL mechanisms underpinning these gains: authentic communicative purpose, collaborative scaffolding, iterative feedback cycles, and identity investment a set of conditions that conventional instruction rarely produces in combination.

These findings carry practical implications at three levels. For instructors, the study recommends adopting the Gold Standard PBL framework with particular attention to driving question design, authentic audience selection, and structured peer feedback protocols within revision cycles. For curriculum designers and department heads, findings support the integration of sustained project work into speaking-intensive EFL courses, with assessment systems aligned to project products rather than

isolated performance tasks. For teacher educators, the study highlights the need for explicit PBL facilitation training, including techniques for managing complex group dynamics, embedding grammar mini-lessons within project cycles, and cultivating the kind of authentic community partnerships that maximise audience stakes.

Future research should employ randomised controlled designs with longer intervention windows, explore the longitudinal persistence of PBL-induced speaking gains, investigate the moderating role of learner autonomy and intercultural awareness, and extend the framework to other EFL macro-skill areas particularly writing, where the argumentative demands of public communication may likewise benefit from authentic audience design.

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CONFLICT OF INTEREST STATEMENT

The author(s) declare no conflict of interest with respect to the research, authorship, or publication of this article.

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