

Integration Of Local Wisdom-Based Project-Based Learning To Improve High School Students' English Speaking Skills In Buru Regency

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Abstract

Developing high school students' English speaking skills in EFL contexts like Buru Regency remains challenging due to low self-confidence, teacher-centered methods, and a lack of authentic communicative opportunities. Integrating Project-Based Learning (PjBL) with local wisdom presents a contextual approach to address these issues. This study aims to analyze the improvement in students' English speaking skills following the implementation of local wisdom-based PjBL, describe its instructional syntax, and identify the supporting and hindering factors during implementation. Employing a sequential explanatory mixed-methods design, the study involved 72 tenth-grade students divided equally into an experimental class (local wisdom-based PjBL) and a control class (conventional instruction). Quantitative data were collected via pre- and post-tests analyzed through inferential statistics (t-test), while qualitative data were gathered through observations, interviews, and documentation analyzed thematically. Quantitative results revealed a statistically significant improvement in the experimental class's speaking mean score, rising from 59.44 to 76.00, compared to the control class ($t = 17.825$, $p < 0.001$). Qualitatively, the seven-stage PjBL syntax successfully shifted students into active learners. Key supporting factors included prior schema activation, reduced language anxiety, and authentic speaking autonomy. Conversely, time constraints, initial linguistic deficits, first-language dominance in group work, and limited out-of-school exposure were identified as main obstacles. Integrating local wisdom

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into PjBL serves as an effective pedagogical strategy to enhance English speaking competence and student engagement in culturally rich regions.

Keywords: English speaking skills; Local wisdom; Project-Based Learning (PjBL); Secondary education; Buru Regency.

INTRODUCTION

English plays a strategic role as an international language, opening doors to knowledge, technology, education, and global communication. At the high school level, English instruction focuses not only on mastering grammar and reading comprehension but also on developing oral communication skills. Speaking ability is a crucial component of communicative competence, encompassing aspects such as fluency, pronunciation, vocabulary, grammar, and interaction skills. However, English as a Foreign Language (EFL) instruction in Indonesia still faces various challenges, particularly the limited opportunities for students to use English in authentic communicative contexts (Richards, 2008; Harmer, 2007).

This situation is evident in English classes for tenth-grade students at SMA Negeri 2 Buru. Preliminary observations and interviews with the English teacher indicate that speaking activities tend to focus on material explanations, vocabulary and sentence structure exercises, and limited speaking practice. The teacher reports that some students struggle to express ideas orally, primarily due to limited vocabulary, pronunciation issues, and a lack of self-confidence. Students also tend to use Indonesian during discussions, finding it easier to convey their ideas in their first language. These circumstances highlight the need for an instructional approach that provides students with greater opportunities to practice speaking in meaningful situations closely related to their lives.

One approach that can be employed to address this issue is Project-Based Learning (PjBL). PjBL offers students opportunities to learn through experience, inquiry, collaboration, problem-solving, product development, and presentations. In English language instruction, this approach creates more opportunities for students to use the language through discussions, interviews, storytelling, presentations, and product development. Consequently, students do not merely study language forms but also utilize them for authentic communicative purposes (Thomas, 2000; Bell, 2010). Several studies have also demonstrated the potential of PjBL to enhance students' English speaking skills (Ifwandi et al., 2024; Muzri & Sunra, 2024).



Beyond the instructional approach, the context of the materials used is also crucial for creating meaningful English learning experiences. Buru Regency possesses a wealth of local wisdom, including traditional foods (such as *hotong*), folklore, dances, songs, community traditions, the natural environment, and various cultural and tourism assets. Preliminary observations indicate that these cultural resources have not been optimally utilized as materials for English speaking instruction. Yet, using materials relevant to students' lives can help them generate ideas, grasp conversational contexts, and connect their learning to everyday experiences. Integrating local wisdom into instruction can also boost student engagement, collaboration, and communication skills (Shofyana et al., 2022; Widyaningrum & Prihastari, 2023).

A number of previous studies have examined PjBL and local wisdom in education. Shofyana et al. (2022) demonstrated that integrating local wisdom into PjBL can foster self-confidence, collaboration, problem-solving, and student engagement in English learning. Widyaningrum and Prihastari (2023) also found that PjBL integrated with local wisdom can enhance students' learning autonomy. Meanwhile, Ifwandi et al. (2024) demonstrates that PjBL can enhance English speaking skills; however, that study did not specifically center the project on local wisdom. Research by Yulianti et al. (2025) also integrates specific values into PjBL for speaking instruction, yet the context does not focus on the local wisdom of a particular region. Therefore, there remains scope for research specifically integrating PjBL with local wisdom in English speaking instruction within the context of secondary schools in culturally rich areas, such as Buru Regency.

Based on the research gap, this study integrates Project-Based Learning (PjBL) with the local wisdom of Buru Regency, utilizing it as an authentic learning resource for English speaking instruction. This integration involves incorporating various elements of local culture into project topics, discussion materials, product development, and presentation activities conducted in English. The approach aims to foster a learning experience that is more contextual, authentic, and relevant to the students' own experiences. The study seeks to analyze improvements in students' English speaking skills following the implementation of local wisdom-based PjBL, describe the implementation process within English instruction, and identify the factors that facilitate or hinder its application at SMA Negeri 2 Buru.



METHODS

Research Design and Approach

This study employs a mixed-methods approach with a quasi-experimental design drawing on the framework of Creswell and Plano Clark that integrates quantitative and qualitative approaches sequentially (specifically, a sequential explanatory design). This approach was selected to gain a comprehensive understanding of the integration of local wisdom-based English language instruction, encompassing the processes, experiences, and implementation contexts, as well as the instructional effectiveness regarding the improvement of students' speaking skills.

In the initial phase, the study utilizes a quantitative approach with a quasi-experimental design to empirically measure the effectiveness of local wisdom-based Project-Based Learning (PjBL) in enhancing students' English speaking abilities. This design involves two groups, an experimental class and a control class, whose performance is compared via pre-test and post-test results.

Subsequently, the study proceeds with a qualitative approach using phenomenology, aiming to explore in depth how local wisdom-based English instruction is implemented in a real-world learning context, as well as to identify students' learning experiences, the teacher's role, and classroom dynamics. The phenomenological approach is employed to directly understand the meaning of the research subjects' experiences, particularly regarding the factors that facilitate or hinder the implementation of local wisdom-based instruction.

Theoretically, this study is grounded in constructivism, which emphasizes that knowledge is actively constructed through meaningful learning experiences, social interaction, and learner engagement within real-world contexts. In language instruction, constructivism posits that speaking skills develop optimally when students use language as a tool for authentic communication. Therefore, integrating PjBL with local wisdom is highly relevant, as it provides students with opportunities to build language proficiency through projects that are contextual, collaborative, and rooted in their local culture.

Research Subjects and Location

The subjects of this study were students at SMA Negeri 2 Buru in Buru Regency who were at the same grade level, specifically classes X1 and X2 and were currently taking English lessons. The subjects were divided into two groups: the experimental group (Class X1) and the control group (Class X2). The experimental group received instruction using a Project-Based Learning



(PjBL) approach integrated with local wisdom, whereas the control group followed the conventional English teaching method typically used at the school.

The subjects were selected using purposive sampling a deliberate selection process based on specific criteria such as grade-level equivalence (with 36 students in both the experimental and control classes), relatively similar student characteristics, and comparable initial English proficiency. Initial proficiency equivalence was established through pre-test results regarding speaking skills, ensuring that any differences in learning outcomes at the end of the study could be more validly attributed to the instructional treatment provided.

This study was conducted at SMA Negeri 2 Buru. The school was selected because the Buru Regency region possesses a wealth of local wisdom relevant for integration as an authentic learning resource in English instruction. Furthermore, the school's location in an archipelagic region provided a strategic environment for developing an English learning model that is both contextual and adaptive.

Data Collection Techniques and Procedures

Data collection was conducted systematically using the following techniques:

a. Speaking Tests (Pre-test and Post-test).

Speaking tests served as the primary instrument to measure students' English speaking proficiency before and after the implementation of local wisdom-based Project-Based Learning (PjBL). The pre-test was administered at the beginning of the study to assess the initial speaking abilities of students in both the experimental and control groups, while the post-test was conducted after the entire instructional sequence concluded to measure improvements resulting from the intervention. Speaking test assessments utilized an analytic rubric, enabling a more objective and detailed evaluation of students' speaking skills. The assessment rubric covered five key aspects:

- (1) fluency: assessing the smoothness and continuity of students' speech;
- (2) pronunciation: assessing clarity of articulation and accuracy of pronunciation;
- (3) vocabulary assessing the accuracy and variety of vocabulary usage;
- (4) language structure (grammar) assessing the accuracy of sentence structure usage; and



(5) interaction skills assessing students' ability to respond, maintain conversation, and convey ideas communicatively.

b. Classroom Observation.

Observations were conducted during the learning process to monitor student engagement, interaction patterns, and the implementation of the local wisdom-based PjBL syntax. A structured observation sheet was used, focusing on indicators such as active participation, collaboration, and English language usage during project activities.

c. Interviews

Semi-structured interviews were conducted with the English teacher and selected students from the experimental class. The interviews aimed to explore perceptions of the instruction, students' learning experiences, and the factors facilitating or hindering the implementation of local wisdom-based PjBL.

d. Documentation.

Documentation included student project outcomes, photographs and videos of learning activities, and supporting documents such as lesson plans (RPP) and instructional materials. This documentation served to support and reinforce the findings from observations and interviews.

Data Analysis Techniques

a. Quantitative Data Analysis.

Quantitative data in the form of speaking test scores were analyzed using inferential statistical tests. The analysis stages included: (1) calculation of pre-test and post-test scores; (2) analysis prerequisite tests (normality and homogeneity tests); and (3) mean difference tests (independent-samples t-test) to determine significant improvement in students' speaking skills. The results of this analysis were used to determine the effectiveness of implementing local wisdom-based PjBL.

b. Qualitative Data Analysis.

Qualitative data derived from observations, interviews, and documentation were analyzed thematically through the stages of data reduction, data presentation, and conclusion drawing. This analysis aimed to describe the learning process, student



responses, and factors influencing the success of or obstacles to the model's implementation.

c. Data Validity and Credibility.

The validity of quantitative data was ensured through the use of valid and reliable assessment instruments. The credibility of qualitative data was reinforced through technique triangulation (tests, observations, interviews, and documentation) and source triangulation (teachers and students), thereby ensuring a high level of trustworthiness in the research findings.

FINDINGS

This section presents the research results obtained from the data collected during the research process. The data were then analyzed to provide an overview of the findings in relation to the research objectives.

Integrating Project-Based Learning Based on Local Wisdom Can Improve Students' English Speaking Skills

A. Pre-test Descriptive Statistics

Table 1. Pre-test Descriptive Statistics

Statistics	Experimental Class	Control Class
N	36	36
Minimum Score	48	48
Maximum Score	72	72
Mean	59.44	59.22
Median	60.00	60.00
Standard Deviation	5.91	6.33

Descriptive statistics indicate that the mean pre-test score for the experimental class was 59.44, while that of the control class was 59.22. The difference in means between the two classes was only 0.22 points; thus, the initial proficiency of both groups can be considered relatively equivalent in descriptive terms.



The minimum score in both classes was 48, while the maximum score was 72. The standard deviation was recorded at 5.91 for the experimental class and 6.33 for the control class, indicating that the dispersion of scores in both groups did not differ significantly.

B. Normality Test

Table 2. Normality Test (Pre-test)

Class	N	Shapiro-Wilk Statistic	Sig.	Decision
Experimental	36	0.923	0.016	Non-normal
Control	36	0.947	0.087	Normal

Decision-making criteria: Sig. > 0.05 indicates the data is normally distributed; Sig. < 0.05 indicates the data is not normally distributed.

Based on the Shapiro-Wilk test results, the significance value for the experimental class was 0.016, while for the control class it was 0.087. At a significance level of 0.05, the experimental class data did not meet the normality assumption, whereas the control class data did. Because the pre-test data for the experimental class deviated from normality, the subsequent group-comparison results were interpreted with appropriate caution alongside the parametric test.

C. Homogeneity Test

Homogeneity testing was conducted using Levene's Test.

Table 3. Homogeneity Test (Pre-test)

Test	Levene Statistic	Sig.	Decision
Homogeneity of Variance	1.460	0.231	Homogeneous

Criteria: Sig. > 0.05 indicates the variances are homogeneous; Sig. < 0.05 indicates the variances are not homogeneous. The Levene's Test results show a significance value of 0.231, which is greater than 0.05. Thus, the variances of the pre-test scores for the experimental and control classes can be considered homogeneous.



D. Independent-Samples t-Test (Pre-test)**Table 4. Independent-Samples t-Test (Pre-test)**

Group	Mean	t	df	Sig. (2-tailed)	Remark
Experimental vs Control	59.44 vs 59.22	0.154	70	0.878	Not significant

The independent-samples t-test results show a t-value of 0.154 with a significance value of 0.878 (> 0.05). Thus, there is no significant difference in initial speaking ability between the experimental class and the control class.

E. Post-test Descriptive Statistics**Table 5. Post-test Descriptive Statistics**

Statistics	Experimental	Control
N	36	36
Minimum	64	36
Maximum	84	68
Mean	76.00	46.78
Std. Deviation	5.82	7.93
Median	76	44

Descriptive statistics indicate that the mean English speaking ability of students in the experimental group was 76.00, whereas the mean for the control group was 46.78, representing a difference of 29.22 points.

The minimum and maximum scores in the experimental group were 64 and 84, respectively, while the control group recorded a minimum score of 36 and a maximum of 68. Descriptively, the speaking ability of students in the experimental group following the implementation of local wisdom-based Project-Based Learning (PjBL) appeared higher than that of the control group.



F. Normality Test**Table 6. Normality Test (Post-test)**

Class	Statistic	df	Sig.	Decision
Experimental	0.895	36	0.003	Not normal
Control	0.928	36	0.022	Not normal

The Shapiro-Wilk results show a significance value of 0.003 (< 0.05) for the experimental group and 0.022 (< 0.05) for the control group. Consequently, the post-test data for both groups are not normally distributed. Given this violation of the normality assumption, the independent-samples t-test results reported below were corroborated with a non-parametric Mann-Whitney U comparison, which confirmed the same pattern of a statistically significant difference between groups.

G. Homogeneity Test

The homogeneity test was conducted using Levene's Test.

Table 7. Homogeneity Test (Post-test)

Test	Levene Statistic	Sig.	Decision
Based on Mean	1.626	0.206	Homogeneous

The significance value of Levene's Test is 0.206 (> 0.05). Therefore, the variance in English speaking ability between the experimental and control groups can be considered homogeneous. This indicates that the assumption of homogeneity of variance for the independent-samples t-test has been met.

H. Independent-Samples t-Test (Post-test)

An independent-samples t-test was used to determine whether a difference exists in English speaking ability between the experimental and control groups.

Table 8. Group Statistics (Post-test)

Group	N	Mean	Std. Deviation
Experimental	36	76.00	5.82
Control	36	46.78	7.93



Table 9. Independent-Samples t-Test Results (Post-test)

T	df	Sig. (2-tailed)	Mean Difference
17.825	70	< 0.001	29.222

Since the Sig. (2-tailed) value is smaller than 0.05, H_0 is rejected and H_a is accepted. This means there is a highly significant difference in post-test English speaking ability between students in the experimental group and the control group.

The experimental group's mean score of 76.00 compared to the control group's mean score of 46.78, yielding a mean difference of 29.22 points, indicates that the class receiving local wisdom-based Project-Based Learning achieved significantly higher speaking performance than the control class.

Project-Based Learning Based on Local Wisdom Implemented in English Language Instruction at Senior High Schools in Buru Regency

The implementation of Project-Based Learning (PjBL) grounded in local wisdom in the experimental class was carried out through seven stages: introduction to local wisdom, project planning, information gathering and processing, product development, project monitoring and revision, project presentation, and reflection and evaluation. These activities positioned students as active participants in the learning process, while the teacher acted as a facilitator, providing guidance, assistance, and feedback throughout the project completion process.

In the introduction stage, students were introduced to various forms of local wisdom in Buru Regency, including traditional foods, dances, songs, folklore, and local cultural practices. Students were then guided to introduce these cultural elements using simple English. Observations indicated that using topics closely related to the students' daily lives helped spark their initial interest in the learning process and provided a more familiar context for using English.

The next stage was project planning. Students worked in groups to select a local wisdom topic, determine the product to be developed, assign tasks, and draft a project activity plan under the teacher's guidance. This process demonstrated student involvement in decision-making and the distribution of responsibilities during learning. Consequently, the learning activities were not solely centered on teacher-led instruction but also offered students the opportunity to plan and manage their learning activities collaboratively.



During the information gathering and processing stage, students collected information on their chosen local wisdom, identified relevant vocabulary, constructed English sentences, and practiced describing cultural elements orally. The teacher provided guidance regarding vocabulary, grammar, pronunciation, and sentence construction. These findings demonstrate that local wisdom was not merely used as a contextual backdrop for learning but was directly integrated into language learning materials and speaking activities. During the product development stage, students produced various project outputs — such as promotional videos, digital posters, brochures, and digital stories — centered on the local wisdom of Buru Regency. This development process involved group discussions and speaking exercises, during which students began using English more actively. These activities also offered students opportunities to use English in communicative contexts directly related to the products they were creating.

Project monitoring and revision served to track progress while allowing students to improve their language skills. Students presented their project updates to the teacher and received feedback on content, pronunciation, grammar, vocabulary, and speaking fluency. Observations revealed that some students still required guidance, particularly regarding pronunciation and fluency; however, the revision process enabled them to make gradual improvements before the final presentation stage.

Findings from the experimental class were then compared with the learning conditions in the control class. Observations showed that the control class engaged in speaking lessons involving teacher explanations, sample dialogues, vocabulary and sentence drills, dialogue practice, and speaking performance evaluations. Although students in the control class also had opportunities to practice speaking and receive teacher feedback, their learning activities did not utilize local wisdom-based projects as the primary instructional framework.

Overall, the implementation of local wisdom-based Project-Based Learning (PjBL) in the experimental class demonstrated a learning pattern emphasizing active student engagement, collaboration, repeated English usage, and the completion of meaningful products. During the presentation stage, students presented their projects in English, explained the chosen local wisdom, and responded to questions from the teacher and other groups. These presentations were evaluated based on fluency, pronunciation, vocabulary, grammar, and interaction. Thus, the findings indicate that integrating local wisdom into PjBL creates a learning context relevant to students' experiences and provides broader opportunities for practicing English communication.



Factors Supporting and Hindering the Implementation of Local Wisdom-Based PjBL

A. Supporting Factors

1. Contextual Relevance and Familiarity with Local Topics (Contextual Schema Activation).

The primary supporting factor in the implementation of PjBL is the utilization of materials rooted in the local wisdom of Buru Regency such as traditional food (hotong), folklore, dances, and the local geographical environment. Pedagogically, local wisdom functions as cognitive scaffolding that activates students' prior knowledge (schemata). Teachers confirmed that students no longer experienced "speaker's block" because the objects being described were already part of their daily lives. Furthermore, students emphasized that local cultural topics were easier to comprehend and sparked learning interest due to their familiar nature (schematic familiarity).

2. Group Collaboration Reducing Language Anxiety (Affective Filter Reduction).

The collaborative nature of PjBL proved effective in creating a low-anxiety learning environment. Through group discussions, division of tasks, and joint rehearsals prior to presentations, students' foreign language anxiety was significantly reduced. Interview results revealed that students' fear of making grammatical or pronunciation errors diminished when interacting in small groups before performing publicly. This collaborative setup provided a safe peer-support system and stimulated meaningful interactions among peers.

3. Increased Active Engagement and Learning Authenticity (Authentic Output Production).

The local wisdom-based PjBL model fostered a shift in the students' role from passive recipients to active learners. The requirement to generate a final product (such as cultural presentation materials) and present it orally compelled students to independently seek new vocabulary, practice pronunciation, and construct English sentence structures. Teachers noted an accumulation of new vocabulary, along with improvements in fluency and confidence when students presented their projects.

4. Text-Free Learning Orientation and Enhanced Confidence (Speaking Autonomy).

The integration of cultural projects facilitated the students' transition from text-bound speaking to more spontaneous language production. At the onset of instruction, the majority of students relied heavily on scripts. However, through continuous project planning and rehearsal stages, students gradually developed the confidence to speak before the class. This self-confidence grew alongside a deeper comprehension of the material and thorough preparation throughout the project development process.



B. Hindering Factors

1. Time Constraints and Classroom Management Complexity.

The most dominant structural obstacle was the limited class time coupled with large class sizes. Teachers reported that the PjBL syntax, encompassing planning, investigation, product creation, and presentation demands significant time. Consequently, teachers had to exert extra effort in supervising and monitoring group dynamics to ensure project activities remained focused on the academic objective of speaking skill development, rather than mere product completion.

2. Initial Linguistic Deficits: Vocabulary, Pronunciation, and Grammar.

The most prominent internal obstacle among students was their limited initial English proficiency. Both teachers and students acknowledged that vocabulary limitations, fear of grammatical errors, and pronunciation weaknesses remained significant hurdles. Students frequently exhibited hesitation or paused excessively due to difficulties in translating local wisdom concepts from Indonesian into English.

3. Dominance of the Mother Tongue in Group Discussions.

During the project discussion phase, observations and interviews indicated a tendency among students to revert to their native language (Indonesian or local dialects). This occurred because students found it faster and easier to express complex ideas regarding local culture using their first language. This barrier restricted the full potential of PjBL as an intensive English immersion platform during the project design phase.

4. Limited English Exposure Outside the School Environment.

An external factor hindering the model's effectiveness was the lack of a supportive English-speaking ecosystem beyond school hours. Students lacked an out-of-class environment to practice speaking, preventing the skills practiced during project work from being continuously reinforced. This lack of exposure resulted in slow language habituation, necessitating continuous practice repetitions within the classroom.

DISCUSSION

This section discusses the effectiveness of Project-Based Learning (PjBL) integrated with local wisdom in enhancing high school students' English speaking skills in Buru Regency. The discussion is elaborated based on the statistical outcomes, the instructional syntax implemented, and the supporting and hindering factors encountered during the study.

The Enhancement of Students' English Speaking Skills via Local Wisdom-Based PjBL

The statistical analysis demonstrates a significant contrast in the speaking performances between the experimental and control groups after the intervention. Initially, the pre-test results confirmed that both classes started from an equivalent baseline of speaking proficiency, with mean scores of 59.44 (experimental) and 59.22 (control), yielding no statistically significant difference ($t = 0.154$, $p = 0.878$). However, post-intervention data revealed a dramatic divergence: the experimental class achieved a post-test mean score of 76.00, whereas the control class reached only 46.78. The independent-samples t-test confirmed that this mean difference of 29.22 points was highly significant ($t = 17.825$, $p < 0.001$).

This substantial improvement aligns with the foundational tenets of Vygotsky's Social Constructivism Theory and Dewey's Experiential Learning Theory, which posit that learning is most effective when students actively construct knowledge through social interactions and hands-on, meaningful tasks. Rather than absorbing abstract linguistic rules passively, students in the experimental group applied English communicatively to create concrete cultural products.

Furthermore, these quantitative findings resonate with previous research by Ifwandi et al. (2024), who confirmed that PjBL significantly elevates EFL students' oral communicative competence by providing structured opportunities for functional language use. Similarly, Shofyana et al. (2022) demonstrated that integrating local cultural contexts into PjBL frameworks accelerates post-pandemic English language acquisition by bridging academic content with students' lived experiences.

Pedagogical Implementation and Cognitive Scaffolding through Local Wisdom

The successful execution of the seven-stage PjBL model ranging from local wisdom introduction to final reflection, demonstrates how contextualized instruction acts as cognitive scaffolding. By embedding Buru Regency's indigenous assets (e.g., hotong traditional food, folk dances, regional legends, and local geography) into the curriculum, the learning process effectively leveraged Piaget's Schema Theory.

Under Schema Theory, when instructional materials align with learners' pre-existing cognitive structures (schemata), cognitive load is minimized. In this study, because students were already intimately familiar with the socio-cultural background of the topics, they did not have to struggle with ideation ("what to say"). Instead, their cognitive resources were fully liberated to focus on linguistic encoding ("how to say it in English").



This finding is strongly supported by Sujarwo et al. (2024), who emphasized that exploring local wisdom in vocational English instruction provides a relatable context that transforms abstract vocabulary into familiar, usable language. Moreover, Retnowati et al. (2020) and Widyaningrum and Prihastari (2023) highlighted that local wisdom-integrated PjBL fosters contextual problem-solving and self-regulated learning, making learning tasks far more meaningful and authentic than traditional drill-based methods. In contrast, the control group relied on conventional dialogue drills and teacher-centered explanations, which led to lower engagement and limited spontaneous language production.

Analysis of Supporting Factors: Affective and Authentic Dynamics

The qualitative findings regarding supporting factors provide deeper insight into why the intervention succeeded. First, contextual schema activation and authentic output: incorporating indigenous culture served as a bridge between home and school literacy. As noted by Zuhra et al. (2024) and Eripuddin et al. (2025), integrating local cultural heritage into language teaching enhances cross-cultural awareness while providing authentic material for real-world communication.

Second, reduction of the affective filter: Krashen's Affective Filter Hypothesis posits that high anxiety, low self-confidence, and fear of negative evaluation block language acquisition. The collaborative group work in PjBL created a supportive peer ecosystem (peer scaffolding). Rehearsing presentations within small, friendly groups significantly lowered students' anxiety, allowing them to risk making mistakes without shame. This mirrors the findings of Papilaya and Tuapattinaya (2022) and Suci et al. (2022), who observed that contextual, group-oriented models alleviate student hesitation and boost communicative confidence.

Third, transition to autonomous speaking: by moving away from rote memorization of scripts toward project presentations (e.g., digital posters, brochures, promotional videos), students developed oral autonomy. This progression supports the conclusions of Sari et al. (2025) and Yulianti and Suryaman (2025), who noted that project production drives higher-order thinking, active engagement, and communicative spontaneity in language learners.

Analysis of Hindering Factors and Methodological Realities

Despite its empirical success, the implementation of local wisdom-based PjBL faced several systemic and linguistic obstacles. First, time constraints and classroom management: the



multi-step PjBL syntax is naturally time-intensive. Teachers struggled to balance facilitating deep project development with staying within strict curriculum schedules, a challenge frequently documented in PjBL literature (Arifin and Rohmawati, 2025).

Second, linguistic barriers and first-language (L1) interference: students' initial low proficiency in vocabulary, grammar, and pronunciation often caused hesitation. During group planning, students frequently defaulted to their native language (Indonesian or local Buru dialects) to express complex cultural concepts quickly. While L1 can serve as a temporary scaffolding tool, over-reliance on it reduces target language immersion.

Third, lack of out-of-class exposure: the absence of an English-speaking ecosystem outside the classroom hindered immediate habituation, requiring continuous, intensive practice during school hours.

CONCLUSION

Based on the quantitative and qualitative data analysis, this study concludes three main points.

1. Improvement in English Speaking Skills. The implementation of the local wisdom-based Project-Based Learning (PjBL) model proved to significantly improve the speaking skills of tenth-grade students in Buru Regency. This is evidenced by the increase in the experimental group's mean post-test score from 59.44 to 76.00, substantially outperforming the control group, which achieved a mean score of only 46.78. The independent-samples t-test confirmed a highly significant difference ($t = 17.825$, $p < 0.001$) with a mean score difference of 29.22 points.
2. Instructional Implementation Syntax. The implementation of local wisdom-based PjBL structured through seven stages: introduction to Buru local wisdom (such as hotong traditional food, dances, folklore, and geographical environment), project planning, information gathering, digital product creation (such as promotional videos, posters, and brochures), project monitoring, presentation, and reflection effectively shifted students' roles from passive recipients to active learners. This approach successfully linked academic English content with the students' real-world contexts.
3. Supporting and Hindering Factors. The success of this model was driven by the activation of students' prior knowledge (contextual schema activation), which facilitated ideation; the reduction of foreign language anxiety (affective filter reduction) through collaborative



group work; and the development of script-free speaking independence (speaking autonomy). The primary obstacles encountered included time constraints and managing large classes, initial linguistic deficits (vocabulary, pronunciation, grammar), the dominance of the mother tongue (L1) during group discussions, and the lack of an English-speaking environment and exposure outside of school.

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