Developing a Project-Based Learning Module to Enhance Oral Communication Skills of Fourth Grade Students

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ABSTRACT

Oral communication is a core competency in 21st-century education; however, instructional materials in elementary schools tend to emphasize reading and writing rather than structured speaking practice. This gap highlights the need for innovative learning resources that explicitly foster students' oral communication skills. This study aimed to develop and evaluate a Project-Based Learning (PjBL) module designed to enhance the oral communication skills of fourth-grade elementary school students. The research employed a Research and Development (R&D) approach using the ADDIE model, encompassing analysis, design, development, implementation, and evaluation stages. The participants were 30 fourth-grade students, and the developed module was validated by three experts in material, media, and language. Data were collected through validation sheets, teacher and student response questionnaires, and pretest–posttest performance assessments.The expert validation results indicated high feasibility, with scores of 95% (material), 94% (media), and 96% (language), yielding an overall average of 95%. Teacher and student responses demonstrated strong practicality (92% and 88%, respectively; average 90%). The effectiveness test revealed a significant improvement in students' oral communication performance, with mean scores increasing from 67 (pretest) to 86 (posttest), resulting in an N-Gain of 0.65, categorized as moderately high effectiveness. These findings suggest that the developed PjBL module is feasible, practical, and effective in improving elementary students' oral communication skills. The study contributes to the field of communication-oriented instructional design by demonstrating how structured project-based modules, supported by simple digital enhancements such as QR-linked instructional videos, can systematically integrate speaking practice into Indonesian language learning at the primary level.

Keywords: *Project-Based Learning, Module, Oral Communication, Elementary School*

INTRODUCTION

In the context of 21st-century education, the ability to master competencies known as the "4Cs" critical thinking, communication, collaboration, and creativity has become a global priority. Among these four, communication, particularly oral communication, is often emphasized as the cornerstone of effective learning because it enables students to articulate their thoughts, negotiate meaning, and participate actively in social interaction (Lyndgaard & Kanfer, 2024). Recent studies in Indonesia show that the integration of technology and innovative methods such as project-based learning has begun to transform the educational landscape. For example, Akhtar and Imleesh (2023) highlighted how technology-driven project-based approaches can foster deeper engagement and prepare students to meet the demands of a digital society. Similarly, Subiyantoro (2023) reported that learning systems enhanced by gamification can improve both teacher and student motivation, illustrating how digital and interactive methods can complement the development of 21st-century competencies. These findings collectively underscore that communication should not be treated merely as a linguistic skill, but as a core educational competency that is intertwined with the ways students learn, interact, and succeed in contemporary classrooms.

Beyond its broad value for the "4Cs," oral communication in primary education can be understood as a composite skill encompassing idea organization, clarity of expression, vocabulary choice, fluency, audience awareness, and appropriate prosody. In classroom practice, these aspects materialize through turn-taking, asking and answering questions, summarizing peers' ideas, and presenting short reports—forms of talk that link language to learning across subjects (Dobinson & Dockrell, 2021; Hadley, Barnes, & Hwang, 2023).

The implementation of the current curriculum emphasizes the development of competencies that are aligned with 21st-century demands, yet the procedures for curriculum innovation often face challenges in practice. As Cantika (2022) explains, curriculum development requires systematic planning and adaptation; however, instructional materials in primary schools still tend to emphasize reading and writing skills rather than oral communication. This misalignment creates a gap between the intended objectives of the curriculum and the actual learning experiences in the classroom.

In implementation, however, curriculum ambitions often meet constraints of time allocation, teacher workload, and uneven access to high-quality materials. This is where a well-designed module becomes strategically important: it translates curricular goals into sequenced tasks, success criteria, and assessment rubrics that teachers can enact with fidelity while still adapting to classroom realities (Cantika, 2022). By providing a shared structure, the module reduces variability in delivery and helps ensure that oral communication is taught explicitly rather than incidentally.

Furthermore, in the broader context of global education, digital literacy and smart learning paradigms have been recognized as transformative tools to achieve educational sustainability (Enyanto, Akbar, & Rachman, 2024; Makinde, Ajani, & Abdulrahman, 2024). While these approaches underscore the importance of preparing students for digital and collaborative futures, the lack of focus on oral communication within existing instructional resources indicates that students are not fully equipped with the communicative competence necessary to thrive in both academic and social domains.

At the same time, schools require solutions that are accessible for young learners and feasible for teachers with diverse technological readiness. Instead of relying on complex

platforms, elementary-level designs should foreground age-appropriate tasks, clear prompts, and manageable artifacts that elicit purposeful talk. Prior work indicates that when media choices support interpersonal interaction and teacher mediation, students' communicative engagement increases in both frequency and quality (Arnesti & Hamid, 2015).

Elementary school students today grow up in a digital environment where visual and interactive media are an integral part of their daily experiences. Consequently, traditional approaches to teaching often fail to capture their interest and limit opportunities for authentic interaction. Arnesti and Hamid (2015) emphasized that effective learning is not only influenced by the medium of instruction but also by the quality of interpersonal communication facilitated through those media. This suggests that media innovation should support both content delivery and communicative engagement.

Recent studies in the Indonesian elementary school context also demonstrate the potential of interactive learning tools to enhance student participation. For example, Dewi and Kristiantari (2022) found that interactive multimedia designed for fourth graders encouraged enthusiasm and fostered active involvement in learning. Similarly, Junia and Sujana (2023) highlighted how e-modules integrated with the *Profil Pelajar Pancasila* framework enabled students to explore cultural themes in engaging ways. These findings underscore that elementary students require learning designs that are not only aligned with curricular objectives but also resonate with their digital-native characteristics, thus offering meaningful opportunities to practice oral communication in a relevant context. Consistent with these observations, project tasks for fourth graders benefit from structured "talk moves" such as think-pair-share, gallery walks with peer feedback, and brief stand-up presentations. Such routines multiply opportunities for student voice while lowering the performance pressure of long monologues. When embedded cyclically plan, rehearse, speak, reflect these routines cultivate confidence and fluency over successive lessons, aligning learning activities with communication outcomes.

One promising pedagogical approach that addresses the limitations of conventional instruction is Project-Based Learning (PjBL). By encouraging learners to investigate real problems, collaborate with peers, and communicate their ideas through presentations, PjBL naturally cultivates oral communication skills while maintaining student engagement. In practice, the effectiveness of this approach has often been reinforced when combined with digital or game-based elements that sustain students' motivation, such as interactive platforms used during distance learning (Djannah, Zulherman, & Nurafni, 2021) or instructional designs developed with the ADDIE framework (Alfah, 2020).

Within elementary classrooms, PjBL has been closely associated with improved academic outcomes and broader life skills. Its emphasis on inquiry and collaboration resonates strongly with contemporary expectations of active learning, a view supported by literature in both science and language education (Nurhidayah, Wibowo, & Astra, 2021; Puspita, 2022). More recent analyses even situate PjBL as a pathway for developing communication, collaboration, and problem-solving simultaneously, aligning it with the competencies required in the 21st century (Hizqiyah et al., 2023). In this way, PjBL does not merely represent a methodological alternative, but an integrative framework that directly supports the enhancement of oral communication in elementary schools. This alignment is not accidental: PjBL's inquiry cycles require learners to negotiate meaning, justify decisions, and synthesize perspectives for an audience, thereby making oral communication both a means and an end. Evidence from classroom syntheses shows that designs emphasizing collaborative problem-solving and public sharing are associated with measurable gains in students' communicative competence (Putri &

Ardi, 2023; Hizqiyah et al., 2023). Consequently, a PjBL-oriented module provides a coherent pathway to integrate speaking goals with content learning.

In addition to the learning model itself, the medium through which PjBL is implemented plays an equally important role. The development of learning modules offers a structured yet flexible format that supports independent learning while ensuring alignment with curricular goals. Recent discussions in higher education note that electronic modules have become increasingly valued for their ability to facilitate self-paced study and personalized engagement (Holisoh, Pahamzah, & Hidayat, 2025). Within the PjBL framework, such modules can integrate project instructions, reflection activities, and evaluation components in ways that encourage active participation and sustained communication. Moreover, the use of modules ensures standardization of learning while still allowing flexibility in classroom practice, which is particularly relevant for schools with varying resources and teacher capacities. As a printed or digital resource, modules can bridge the gap between centralized curriculum design and localized classroom needs, making them an effective medium for scaling innovative learning practices.

The potential of modules becomes even more evident when combined with digital enhancements. Reviews have shown that technology-supported PjBL designs, such as web-based learning media or e-modules, effectively foster critical thinking and creativity (Doyan et al., 2025; Wulandari, Handoyo, Wardani, Subali, & Widiarti, 2025). Even studies that examine the role of social platforms point to their contribution in amplifying collaboration and communication within project-based tasks (Wang, Abdullah, & Hu, 2025). In primary education, however, the integration of such features should be carried out cautiously, ensuring that technological enhancements remain accessible and age-appropriate. Rather than overloading students with complex digital platforms, modules should emphasize simple but meaningful features that reinforce communication practice, reflection, and peer interaction.

Despite the growing body of research on oral communication, most studies have primarily focused on early childhood education and general classroom language practices. For instance, Anzai, Knowles, Cloney, Munro-Smith, and Mitchell (2021) reviewed approaches to assessing oral language and early literacy in early years, while Hadley, Barnes, and Hwang (2023) examined teacher language practices that shape children's oral language outcomes in classroom contexts. At the primary school level, universal strategies to strengthen expressive language skills have also been highlighted as critical for supporting literacy and social development (Dobinson & Dockrell, 2021).

However, much of this literature has emphasized early language development or English-speaking skills, with challenges ranging from limited vocabulary to lack of confidence in using the target language (Ork, Chin, Ban, & Em, 2024). Few studies, particularly in the Indonesian context, have considered the design of structured learning modules that combine the principles of Project-Based Learning with the explicit goal of improving oral communication in elementary school students. This absence points to an important research gap, as it shows that while many innovations have targeted academic achievement or digital literacy, fewer have explicitly addressed communication in the students' mother tongue, which is fundamental for building a strong foundation for lifelong learning.

Operationally, this study defines oral communication outcomes through analytic rubrics covering idea organization, clarity and diction, fluency, interactional skills (listening/turn-taking), and delivery (intonation, volume, posture). These criteria guide task design and assessment, ensuring that improvements are attributable to repeated, authentic speaking

opportunities rather than isolated drills. Accordingly, the study addresses three questions: (1) What needs do teachers and students identify regarding oral communication learning in grade four? (2) How feasible and practical is the developed PjBL module based on expert, teacher, and student judgments? (3) To what extent does the module improve students' oral communication performance as indicated by pre- to post-test gains?

Building on these considerations, the present study aims to develop a project-based learning module specifically designed to enhance the oral communication skills of fourth-grade elementary school students. The objectives of this research are threefold: first, to identify the needs of teachers and students in oral communication learning; second, to produce a feasible and practical PjBL module validated by experts, teachers, and students; and third, to evaluate the module's effectiveness in improving oral communication skills through empirical testing. By pursuing these objectives, the study seeks to contribute both theoretically, by extending the literature on communication-focused learning innovations, and practically, by providing teachers with a structured and innovative instructional resource for elementary education.

METHODS

Research Design

This study employed research and development (R&D) with the ADDIE model, consisting of five stages: Analysis, Design, Development, Implementation, and Evaluation. The ADDIE framework was chosen because of its structured process for designing and validating instructional materials, ensuring that the resulting product meets both pedagogical and practical demands (Branch, 2009). R&D in education is widely recognized as an effective approach to generate and refine innovative teaching materials before they are implemented in real classroom contexts (Gall, Gall, & Borg, 2003; Sugiyono, 2015).

The subjects of this study were 30 fourth-grade elementary school students, along with three expert validators who assessed the module in terms of content, media, and language. Data were collected through expert validation sheets, student and teacher response questionnaires, and oral communication pretest and posttest instruments. The research procedure followed the five stages of ADDIE: conducting a needs analysis, designing the module structure, developing draft materials, implementing the module in the classroom, and evaluating its effectiveness through expert judgment and student performance.

The data analysis was conducted quantitatively using descriptive statistics. Expert validation results were interpreted in percentage scores to determine feasibility categories, while student and teacher responses were analyzed to assess practicality. To measure effectiveness, pretest and posttest results of students' oral communication skills were compared, and the normalized gain (N-Gain) score was calculated to evaluate the level of improvement. This combination of validation, practicality, and effectiveness tests provided comprehensive evidence for the feasibility of the developed module

RESULTS AND DISCUSSION

1. Expert Validation

The feasibility of the developed module was examined by three expert validators in the domains of material, media, and language. The results are presented in Table 1.

Table 1. Material Design Validation

Aspect	Score (%)	Category
Material	95	Very Feasible
Media	94	Very Feasible
Language	96	Very Feasible
Average	95	Very Feasible

Table 2. Project-Based Learning Module Design

| No	Structure	Description
1	Cover	Title and illustration of module; equipped with QR code symbol
2	Foreword	Introductory remarks and acknowledgements
3	Table of Contents	List of module content systematically
4	Instructions	Guidance for students on how to use the module
5	Project Activities	Series of project-based learning tasks focusing on oral communication
6	Reflection	Space for students to reflect on their communication experience
7	Evaluation	Tasks and oral communication performance assessments
8	Bibliography	References used in the module
9	Author Biography	Short profile of the author
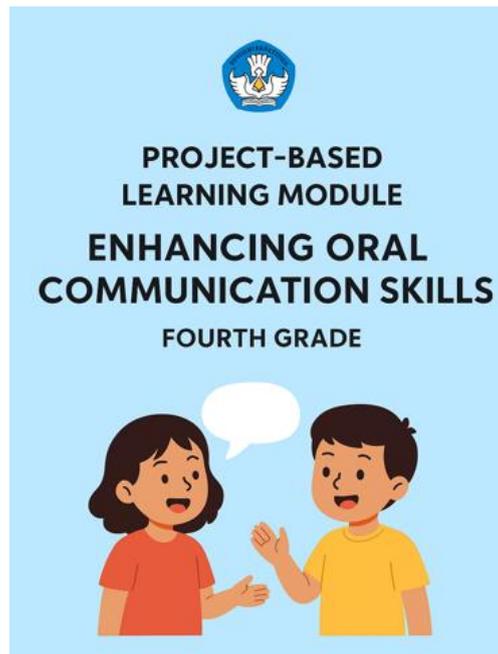
Figure 1. Cover of the Developed PjBL Module

The validation results indicate that the module is categorized as "very feasible" across all aspects, with an average score of 95%. This demonstrates that the module is accurate, clear, and suitable for use in elementary classrooms.

2. Implementation

The practicality of the module was assessed through teacher and student questionnaires. The results are shown in Table 3.

Table 3. Implementation (Teacher and Student Responses)

Respondent	Score (%)	Category
Teacher	92	Very Good
Student	88	Very Good
Average	**90**	**Very Good**

The results show that the module is practical and well-received. Teachers reported that the structured design supported classroom management and project implementation, while students appreciated the clarity of instructions and engaging activities that motivated them to participate. This finding is in line with the view that mobile learning innovations and interactive multimedia can significantly enhance student involvement in the learning process (Sholikah & Dwi, 2021).

3. Effectiveness Test (Pretest–Posttest)

The effectiveness of the module was evaluated through students' oral communication pretest and posttest results.

Table 4. Pretest and Posttest Results

Indicator	Pretest	Posttest	N-Gain	Category
Minimum	55	80	–	–
Maximum	78	95	–	–
Average	67	86	0.65	Effective

The average student score increased from 67 in the pretest to 86 in the posttest. The N-Gain value of 0.65 indicates a medium-to-high level of effectiveness. This result demonstrates that the developed module can significantly improve oral communication skills of elementary school students.

Discussion

The results of this study highlight three important findings: the feasibility of the developed module as confirmed by experts, its practicality as indicated by teacher and student responses, and its effectiveness in improving oral communication skills. Each of these findings requires deeper discussion in light of existing literature. These three findings are interrelated: a feasible module has little value unless it is also practical for daily use and effective in achieving learning outcomes. Hence, the strength of this research lies not only in individual indicators but in their convergence as evidence of product quality.

First, regarding feasibility, expert validation results showed consistently high scores in material, media, and language aspects. This indicates that the developed module adheres to standards of instructional design and educational media development. High material scores suggest that the content aligns with curricular demands and supports the learning objectives of oral communication. Similarly, the high language validation confirms clarity, appropriateness, and accessibility for fourth-grade students. According to Branch (2009) and Gall, Gall, & Borg (2003), expert validation is a critical stage in instructional design research, ensuring that learning materials are pedagogically sound before implementation. Thus, the validation results strengthen confidence in the quality of the developed product.

Second, teacher and student responses confirmed the practicality of the module. Teachers noted that the structured format facilitated classroom management, while students reported that the activities were engaging and motivating. These findings resonate with Sholikah and Dwi (2021), who argued that the adoption of interactive media increases student involvement. The design of project-based activities within the module allowed students to participate actively and reflect on their experiences, fostering authentic learning contexts. In line with Dewi and Kristiantari (2022), interactive and student-centered approaches have been shown to significantly improve classroom dynamics by promoting active participation and enthusiasm. The positive responses thus validate the module's practicality in real classroom contexts. Similar observations were made during the COVID-19 period, when interactive strategies became essential to maintain student attention (Djannah, Zulherman, & Nurafni, 2021). The present findings confirm that even in post-pandemic contexts, students continue to

value designs that combine structure with opportunities for interaction

Third, the effectiveness test showed a notable improvement in students' oral communication skills. The increase in average scores from 67 to 86 and the N-Gain of 0.65 demonstrate medium-to-high effectiveness. This finding aligns with Putri and Ardi (2023), who found that discovery, problem-based, and project-based learning consistently lead to improvements in communication skills. By situating communication practice in authentic projects, the module provided opportunities for students to articulate ideas, collaborate with peers, and engage in structured discussions. Such contexts are essential for building confidence and fluency in oral communication. An N-Gain of 0.65 positions the module in the medium-to-high category. This result is notable because interventions in language skills often yield lower gains compared to cognitive subjects such as mathematics or science (Hake, 1998). Thus, the observed improvement demonstrates that oral communication can be significantly enhanced when instruction is embedded in authentic project work.

When compared to existing research, the results of this study are consistent with broader findings that oral language interventions improve language outcomes in children across diverse contexts (Donolato et al., 2023). The integration of structured learning designs with oral practice mirrors strategies found effective in systematic reviews of oral language programs. Similarly, the practical dimension of the module corresponds to recent innovations in technology-based language tools, such as automated assessments that emphasize clarity, engagement, and structured feedback (Hulme et al., 2024). These parallels suggest that even without extensive technological integration, well-structured project-based modules can achieve comparable improvements in communication outcomes. Comparable improvements have also been reported in Southeast Asian classrooms, where project-based approaches promoted both academic outcomes and communication confidence (Hizqiyah et al., 2023). The consistency of results across contexts highlights the adaptability of PjBL as a pedagogical model.

From a theoretical perspective, this study contributes to the growing body of knowledge on communication-centered instructional design. While much of the literature has focused on early childhood oral language or English as a foreign language (Anzai et al., 2021; Ork et al., 2024), this research emphasizes oral communication in the context of Bahasa Indonesia for elementary school students. It demonstrates that PjBL can serve as an effective framework not only for content learning but also for language skill development, thus extending the applicability of PjBL in communication-focused research. In instructional design terms, this study illustrates how the ADDIE model can be adapted not only for cognitive domains but also for skill-based outcomes like communication, thereby broadening the scope of design research.

From a practical perspective, the developed module provides teachers with a ready-to-use instructional resource that addresses curricular gaps. Teachers can adapt the project activities to different topics, while the reflection and evaluation components ensure that oral communication skills are systematically nurtured. As emphasized by classroom practitioners in this study, the structured design allows for smoother lesson delivery and more meaningful student participation. These practical implications support broader recommendations for schools to integrate communication-focused modules into their instructional repertoire. For instance, the module's reflection sheets encouraged students to evaluate their own performance after presentations, a practice that teachers reported as effective in building metacognitive awareness of communication skills.

Finally, limitations and recommendations must be acknowledged. The study involved only 30 students from one grade level in a single school, which limits generalizability.

Additionally, the module was tested over a relatively short period, meaning long-term impacts remain unknown. Future research should replicate this study across multiple schools, expand the sample size, and explore integration with digital platforms to enhance scalability. Despite these limitations, the findings provide strong evidence that project-based learning modules are an effective means of developing oral communication skills in elementary education. Another limitation concerns the absence of longitudinal tracking. Without follow-up data, it remains uncertain whether the observed gains persist beyond the intervention period. Addressing this issue would provide insights into the sustainability of oral communication improvements.

CONCLUSION

This study developed a project-based learning module aimed at enhancing the oral communication skills of fourth-grade elementary school students. The results demonstrate that the module is highly feasible according to expert validation, practical as indicated by positive responses from teachers and students, and effective in improving oral communication skills as shown by the increase in posttest scores with an N-Gain value of 0.65. Theoretically, this research contributes to the literature on instructional design and communication-focused learning innovations. Practically, the developed module provides teachers with a structured and interactive resource that can be directly implemented in the classroom. Future studies may expand the scope by testing the module in different grade levels or integrating additional features to further support independent learning.

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