

Elementary students' voices: Project-based learning via Wayang media in speaking skills

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ABSTRACT

This study addresses the critical challenge of low speaking skills among elementary school students, particularly in articulating the intrinsic elements of a story. Traditional, teacher-centered methods and a lack of innovative cultural media leave students passive and unconfident. To bridge this gap, this study examines the implementation of the Project-Based Learning (PjBL) model integrated with traditional wayang puppets. Utilizing a descriptive qualitative approach, this research investigated 30 sixth-grade students at SDN 184 Palembang, a public elementary school in Palembang, South Sumatra, Indonesia, through purposive sampling. Data were gathered via semi-structured interviews, classroom observations, and documentation, and analyzed through the interactive qualitative framework of Miles, Huberman, and Saldaña. The qualitative results indicate that the integration of PjBL and wayang puppets significantly transforms the classroom dynamic by shifting students from passive listeners to active storytellers. Students demonstrated substantial growth in speaking fluency, narrative coherence, and structural clarity when explaining story elements like characters, plots, and moral values. Furthermore, the hands-on project creation process fostered deep emotional engagement, decreased performance anxiety, and enhanced conceptual understanding. The findings imply that integrating culturally responsive PjBL with traditional wayang puppets can provide an effective student-centered approach for strengthening elementary students' speaking skills, narrative understanding, and confidence in primary language education.

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1. Introduction

Elementary school students' speaking skills remain a major challenge in Indonesian language learning, particularly regarding the intrinsic elements of stories (Ho et al., 2021). Many students struggle to express their ideas coherently, lack confidence in speaking, and tend to be passive during learning activities. Yet speaking ability is a crucial competency for supporting learning success and social interaction (Wahyudin et al., 2022). This issue is supported by various empirical findings indicating that teacher-centered instruction is a primary factor in reducing students' speaking ability. States that students tend to be passive due to a lack of opportunities to actively participate in learning (Taylor et al., 2024). Furthermore, research indicates that a lack of methodological variety and minimal use of learning media lead to a decline in students' interest and confidence in speaking. This

is also supported who found low student engagement in oral communication activities (Martinez, 2022).

Theoretically, Indonesian language learning in the Merdeka Curriculum emphasizes the development of comprehensive language skills, including speaking. One relevant approach is PjBL, which is rooted in constructivist theory (Arsjad et al., 2023). Learning becomes more meaningful when students are actively involved in constructing their own knowledge. PjBL is effective in improving communication skills because students are required to present project results orally (Dos Santos et al., 2020). Furthermore, the use of learning media such as wayang is also supported by Paivio's dual-coding theory, which states that a combination of visual and verbal elements can enhance students' understanding. Visual media can clarify abstract concepts and improve students' memory (Cheng et al., 2025).

Several previous studies have confirmed the effectiveness of PjBL and wayang in learning. A study showed that PjBL can improve students' speaking skills through project activities that require active communication (Detgen et al., 2021). Muhammadiyeva (2020) reported that the integration of culture-based media, such as wayang, into learning can significantly increase student engagement and motivation. Furthermore, a study confirms that integrating wayang into learning can improve students' conceptual understanding and participation (Wang, 2023).

Despite these findings, a significant gap remains in the existing literature: most previous studies focus strictly on the quantitative outputs or the structural execution of PjBL and wayang media independently. There is a critical shortage of qualitative data exploring how students subjectively perceive this cultural integration and how it shapes their internal motivation to speak about complex narrative concepts like intrinsic story elements. This research provides novelty by intersecting culturally responsive pedagogy (wayang puppets) with a constructivist framework (PjBL) to qualitatively capture the voice, mindset, and behavioral evolution of upper-grade elementary students (Brog et al., 2022).

Based on this gap, the objective of this study is to qualitatively describe students' perceptions regarding the implementation of PjBL using wayang puppets, analyze the descriptive improvements in their speaking skills when conveying intrinsic story elements, and identify the supporting and hindering environmental factors during implementation (Zulkepli et al., 2024). Wayang puppetry, as a medium rooted in local culture, can support a more engaging and contextually relevant learning process. Visual media helps clarify students' understanding, and the use of wayang in Indonesian language instruction can develop students' storytelling skills (Kustandi et al., 2025). Kelmendi (2025) also emphasizes that culturally-based media can enhance student engagement. Thus, the implementation of PjBL supported by wayang media has the potential to improve students' speaking skills more effectively and meaningfully (Truong et al., 2023).

2. Method

2.1. Research design

This study employs a descriptive qualitative approach. This approach was chosen to gain a deep, natural, and contextual understanding of students' authentic perceptions and behavioral changes during the implementation of PjBL using wayang media without manipulating the classroom setting (Khan et al., 2022). The research was conducted at SDN 184 Palembang during the second semester of the 2025/2026 academic year, in March. The participants consisted of 30 sixth-grade students selected via purposive sampling, chosen because they were actively undergoing the PjBL intervention focused on intrinsic narrative elements. The classroom teacher also participated as a key informant to triangulate the findings.

2.2. Instruments and validation

Data collection tools included direct classroom observations, semi-structured interviews, and documentation. To ensure academic rigor, all data collection tools, including the observation rubrics and interview protocols, underwent an expert judgment validation process by two senior education faculty members from Universitas PGRI Palembang. The interview protocol consisted of open-ended questions targeting students' emotional engagement, perceived conceptual clarity of story elements, and logistical difficulties faced during puppet preparation (Rzemieniak & Wawer, 2021). In addition,

documentation—including activity photos, the Wayang creations, and learning notes—served as supporting data to reinforce the research findings. Triangulation across data sources was employed to enhance the credibility and consistency of the analysis results.

2.3. Assessment of speaking skills development

Instead of measuring speaking skills through quantitative pre-tests and post-tests, students' improvement in this study was evaluated qualitatively using a descriptive criteria matrix adapted from speaking skill guidelines. Students' oral skills were observed and tracked through four developmental aspects during the activity stages: planning, practice, and performance. The first aspect is fluency, demonstrated by the reduction of unnatural pauses and hesitations when telling a story; the second aspect is structural clarity, demonstrated by students' ability to construct a logical storyline, including character introduction, setting, conflict, and resolution; the third aspect is vocabulary and coherence, demonstrated by the appropriate choice of words to describe character traits and moral values; and the fourth aspect is communicative confidence, observed through eye contact, voice volume, and the use of expressive gestures when acting out wayang puppets.

2.4. Trustworthiness procedures

To ensure the credibility and integrity of the data, this study systematically implemented several trustworthiness procedures. Data triangulation was conducted in two ways: technical triangulation and source triangulation. Technical triangulation was conducted by comparing classroom observation notes with transcribed interview data and documentation of student work, while source triangulation was conducted by comparing subjective student feedback with evaluative reflections provided by the classroom teacher. Furthermore, member checking was conducted after the transcription process by reading back the interview results to the students and teacher concerned to ensure that the transcription accurately represented their experiences and perspectives and minimized the possibility of researcher bias.

2.5. Data analysis

The data analysis technique used the interactive model of Miles, Huberman, and Saldaña, which includes three main stages: data reduction, data presentation, and drawing and verifying conclusions. During the reduction stage, data from observations, interviews, and documentation were selected, focused, and grouped based on predetermined aspects of speaking ability. Next, the reduced data were presented in descriptive and matrix form to facilitate the identification of patterns, developments, and interrelationships among the findings. The final stage is carried out by drawing conclusions based on emerging patterns and themes, then continuously verified by comparing findings from various data sources to ensure consistency and validity of interpretation.

3. Results and Discussion

The descriptive findings reveal that the implementation of PjBL supported by Wayang puppets fundamentally shifted the speaking dynamics of sixth-grade students. Based on the qualitative tracking matrix applied from the initial planning sessions to the final puppet performances, students exhibited a progressive evolution in oral performance rather than a static numerical gain. Before the study, the classroom environment was dominated by teacher-centered instruction, leaving students hesitant, anxious, and monotone when asked to speak. Following the integration of PjBL and puppet craftwork, the classroom observation data highlighted a profound behavioral turnaround. Students actively initiated dialogue within their groups, collaborated on script outlines, and took creative ownership of their story performances.

In terms of specific speaking skills, students exhibited marked progress in descriptive fluency and narrative sequencing. When showcasing their Wayang project in front of the class, they no longer read blindly from text; instead, they used the physical puppet as a visual anchor to explain intrinsic story elements such as character motives, narrative settings, and moral values with coherent structures and clear intonation. This practice supports the concept that speaking skills develop optimally through sustained, experiential practice and practical, direct communication opportunities.

From the student interviews, a strong thematic consensus emerged regarding positive perception. Students consistently described the Wayang-infused lessons as “exciting,” “less intimidating,” and “highly interactive”. For instance, one student remarked during the interview that

learning with Wayang made stories easier to understand and retell because moving the character allowed them to forget stage fright. This qualitative insight indicates that incorporating tactile, culturally familiar props transfers the student's cognitive focus from anxiety management to narrative expression. Consequently, project-based tasks effectively lower affective barriers, boost intrinsic motivation, and build a safe, stimulating space for expressive oral communication.

Furthermore, teacher interviews corroborated these shifts, noting that the physical medium of local culture sparked immediate interest, allowing students to map abstract story structures onto concrete puppet performances. Documentation analyses (scripts and puppet artifacts) confirmed that almost all students participated deeply in every project layer from structural planning to oral execution.

The main challenges identified were time limitations for script building and varied baseline collaborative skills among students (Mario et al., 2023). However, these obstacles were successfully minimized through regular guidance from teachers and strong group collaboration (Krutty et al., 2024). Qualitative observations revealed that stronger speakers naturally assumed mentoring roles, assisting peers with phrasing and puppet movements. This social interaction within groups provided scaffolding, enabling lower-performing students to gain confidence before presenting publicly. To supplement the descriptive data above, the qualitative indicators of behavioral changes observed during the study are synthesized in Table 1.

Table 1. Qualitative indicators of PjBL using Wayang

Data source	Indicators under review	Qualitative description
Observation	Active participation before PjBL	Students tend to be passive; only a small number are active
Observation	Active engagement after PjBL	Students actively participate in discussions, media production, and performances
Observation	Improving speaking skills	Students are more confident, and their speech is clearer and more coherent
Student Interview	Positive perceptions of learning	Students find it more interesting, enjoyable, and easy to understand
Teacher Interview	Enthusiasm and creativity	Teachers find that students are more active and creative in storytelling
Documentation	Student Artifacts & Works	Scripts and puppets demonstrate deep involvement in planning and presentation
Challenges	Learning constraints	Individual pacing differences; successfully overcome with teacher guidance

Based on Table 1, the implementation of Wayang-assisted PjBL demonstrates positive changes in student engagement and speaking skills throughout the learning process. Before the implementation of PjBL, students tended to be passive, with only a small number actively involved in learning activities; however, following the implementation, students exhibited higher levels of engagement through discussions, media creation, and performance activities. These changes were also evident in speaking skills, characterized by increased self-confidence and an improved ability to convey stories clearly and coherently. Interview results indicate that students found the learning experience more engaging, enjoyable, and accessible, while teachers observed heightened student enthusiasm and creativity in storytelling. Documentation—including scripts and Wayang figures produced by the students—further reflects deep engagement across all stages, from planning to presentation. Although challenges arose regarding varying learning paces and initial student abilities, these obstacles were overcome through teacher guidance and group collaboration; consequently, the implementation of Wayang-assisted PjBL successfully fostered a more active and participatory learning environment that supported the development of students' speaking skills.

The qualitative success of this intervention stems directly from the alignment between PjBL characteristics and constructivist principles (Krumphals & Haagen-schützenhöfer, 2021). PjBL transforms the classroom from a passive space into a student-driven workshop where language is practiced naturally rather than forced through rote drills (Alves et al., 2025; Doni et al., 2022; Peny

et al., 2022). By assigning a tangible project (creating and performing a Wayang show), language instruction achieves contextual utility (Octaviani & Mujimin, 2025; Wulansari et al., 2025).

The integration of Wayang puppets as a localized visual medium plays an essential psychological role (Chen et al., 2023). According to dual-coding and constructivist theories, combining verbal narration with physical manipulation helps bridge abstract literary elements (such as themes and plot arcs) with concrete visual actions. This makes it easier for young learners to synthesize ideas and project them clearly through spoken language. This is highly consistent with recent literature showing that PjBL significantly builds student communication competencies and communicative confidence during presentation stages (Wen et al., 2022).

Additionally, embedding familiar cultural artifacts like Wayang fosters strong emotional engagement, creating meaningful, context-rich learning experiences that increase student interest and reduce communicative resistance (Hasan et al., 2025; Wang et al., 2024). Culturally responsive elements validate students' background knowledge, enabling them to connect classroom assignments with real-world cultural expressions. This cultural familiarization creates a psychologically safe learning environment where mistakes during oral performance are viewed as playful creative iterations rather than academic failures. While logistical barriers such as rigid schedules and uneven group dynamics require careful teacher management, the overall pedagogical implications suggest that this integrated framework serves as an excellent model for modern primary school language instruction (Lynch & Gonzalez, 2025).

This study was conducted within a specific learning context—involving 30 sixth-grade students at SDN 184 Palembang—meaning the findings primarily reflect the experiences and learning dynamics unique to that setting. The qualitative descriptive approach employed allowed for an in-depth portrayal of students' perceptions, the development of their speaking skills, and interaction dynamics during the implementation of Wayang-assisted PjBL. Assessments of speaking skill development focused on fluency, structural clarity, vocabulary and coherence, and communicative confidence within a naturalistic learning environment. Furthermore, the implementation process revealed contextual characteristics such as time constraints during script development and disparities in initial proficiency levels during group work; in this study, these factors proved crucial for understanding the processes of adaptation and guidance throughout the learning experience. Consequently, this study offers a rich, context-specific account of implementing PjBL supported by local cultural media, while future applications in more diverse school settings and with varied student populations could provide additional perspectives on the research findings.

Future research is advised to broaden the scope of participants by including multiple schools, grade levels, and a more diverse range of student characteristics to gain a comprehensive understanding of the implementation of Wayang-assisted PjBL in language learning. Studies could also employ mixed-methods or quasi-experimental approaches—incorporating pre-tests, post-tests, and comparison groups—to obtain more robust evidence regarding changes in students' speaking skills. Beyond speaking skills, future research might examine the model's impact on reading comprehension, creative writing, learning motivation, self-confidence, and collaborative skills. Longitudinal studies are also recommended to assess the sustainability of language skill development after instruction concludes and to explore how the use of local cultural media, such as Wayang, can be adapted to different learning contexts.

4. Conclusion

Based on the qualitative analysis, this study concludes that integrating PjBL with Wayang puppets significantly improves the speaking skills of sixth-grade students at SDN 184 Palembang. This framework transforms learning from a passive, teacher-led monologue into an active, collaborative student experience. The descriptive data highlight growth in students' speaking fluency, structural clarity, and expressive confidence when explaining the intrinsic elements of a story. Using cultural media reduces performance anxiety, anchors abstract concepts, and deepens motivation to learn. Despite time constraints, the model shows significant potential for student-centered language development in elementary education. A limitation of this study is its focus on a single class using a qualitative approach; consequently, the findings primarily reflect the learning context of the specific group of students studied. Future research could expand the scope to encompass a wider range of school settings and educational levels, employing broader research designs to gain a more

comprehensive understanding of the sustainability of implementing Wayang-assisted PjBL for developing speaking skills. Future research also should explore the longitudinal impact of this model on reading comprehension and creative writing across diverse primary student groups.

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