

The Effectiveness of Contextual Play-Based Learning in Enhancing Language Skills of Early Childhood Learners with Learning Difficulties

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under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.**Abstract**

This study investigates the effectiveness of contextual Play-Based Learning in improving the expressive language skills of early childhood learners with identified learning difficulties. The research was conducted as a classroom action study at TK Negeri 1 Sandaran, East Kalimantan, involving 13 children aged 5–6 years, five of whom were diagnosed with language development delays. The intervention was conducted in two cycles, each comprising planning, implementation, observation, and reflection stages. Instructional activities were designed around the theme “Animals,” using role-play, guessing games, simulations, and peer collaboration to stimulate verbal engagement. Data were collected through structured observations, performance-based tasks, and anecdotal records, and analyzed descriptively. Results showed a progressive improvement in children’s expressive language abilities. In the pre-intervention phase, most participants were categorized as “Not Yet Developed.” Following Cycle I, all five targeted children reached the “Emerging Development” stage, while Cycle II saw 80% achieve the “Expected Development” level. Improvements were observed in vocabulary use, sentence construction, and peer interactions. The use of familiar, contextual themes combined with teacher scaffolding and strategic peer grouping significantly contributed to the success of the intervention. These findings underscore the potential of contextual Play-Based Learning as an inclusive instructional approach to support language development in early learners with verbal challenges. The study also emphasizes the importance of ongoing assessment, reflective teaching, and instructional adaptation to meet the diverse needs of learners.

INTRODUCTION

This study focuses on the development of language abilities in early childhood learners with learning difficulties through contextual Play-Based Learning. Language ability plays a crucial role in early development, functioning not only as a means of communication but also as a foundation for cognitive processing and social understanding (Al-Harbi, 2020). For children with learning difficulties, acquiring language is particularly challenging, with delays often affecting both expressive and receptive skills (Sylvestre et al., 2012). These difficulties are frequently associated with cognitive limitations, developmental delays, or insufficient environmental support (Liao et al., 2015), and may be further complicated by issues of misdiagnosis, especially among bilingual learners (Clifford et al., 2014; Kormos, 2020). If unaddressed, such barriers can hinder children’s participation, confidence, and preparedness for formal schooling (Graham et al., 2020; AlHammadi, 2017).

There is now considerable evidence that early childhood, particularly between ages five and six, is a critical period for language development (Visser-Bochane et al., 2020). Research has highlighted this phase as a sensitive developmental window, where adequate language exposure is crucial for long-term outcomes (Kuhl et al., 2005; Friedmann & Rusou, 2015). However, children at risk of learning difficulties often struggle to master basic language competencies such as object naming, sentence construction, and responsive communication (Moyle et al., 2011; Ryan et al., 2016). These delays are often exacerbated by rigid, teacher-centered pedagogy that limits opportunities for verbal interaction and active engagement (Dennis & Stockall, 2015). Without responsive instruction,

educational settings may unintentionally contribute to widening developmental gaps (Balıkcı & Melekoglu, 2020).

Preliminary observations in one kindergarten classroom revealed that many children demonstrated minimal verbal output and tended to remain silent, a phenomenon consistent with the "silent period" identified in language development literature (Kan et al., 2025). The instructional environment relied heavily on traditional, decontextualized methods, often neglecting the need for interactive and play-based strategies (Renau, 2016). In contrast, contextual learning theory promotes learning through activities that are relevant to the child's life experience, thereby increasing motivation and deepening engagement (Mooij, 2007a, 2007b). These findings underscore the urgent need for instructional models that are both developmentally appropriate and capable of promoting language growth in learners with developmental challenges (Qiu & Huang, 2024).

Contextual Play-Based Learning has emerged as a promising pedagogical approach to address these issues. This method combines the developmental benefits of play with real-life relevance, allowing children to explore language in familiar contexts (Veselinov et al., 2024; Violy, 2024). Empirical studies have demonstrated that play-based instruction enhances children's vocabulary, improves comprehension, and expands expressive language in supportive environments (Stagnitti et al., 2016; Nair et al., 2014). Scaffolded, child-directed play is also shown to strengthen oral language skills (Wasik & Jacobi-Vessels, 2017) while reducing anxiety and promoting communicative motivation (Holmes et al., 2015; Vahab et al., 2012; Cheep-Aranai et al., 2015; Tekman & Yeniasir, 2023).

In addition to language gains, contextual play supports social and emotional development. Through cooperative play, children develop essential social competencies, including turn-taking, interpreting nonverbal communication, and adjusting their speech in context-sensitive ways (Donnelly & Kidd, 2021; Gagnon & Nagle, 2004). These interactions promote verbal confidence and social competence (Veiga et al., 2017; Bainazarova et al., 2025) while increasing inclusion and peer interaction in diverse early education settings (Ekeh et al., 2022; Mwinsa & Dagada, 2025). As emphasized in previous research, play-based strategies are particularly effective in reducing communication anxiety and providing equitable opportunities for children with language delays (Thomas et al., 2011; Ali et al., 2018).

The current study examines the effectiveness of contextual Play-Based Learning as an intervention to enhance the language skills of children with learning difficulties in a kindergarten classroom. It focuses on learners with documented delays in language use and comprehension, employing structured cycles of planning, implementation, observation, and reflection. The aim is to evaluate how this instructional model can address specific linguistic deficits in a population underserved by conventional teaching practices. By examining classroom-based interventions in a real educational setting, this research offers practical insights into adapting child-centered learning approaches. It is hoped that the findings will inform both theoretical understanding and instructional practice in early childhood education, particularly in relation to inclusive, language-supportive pedagogies.

METHODS

This section presents a comprehensive account of the methodological framework adopted in this study. It includes the research design, setting, and participants, data collection procedures, instruments, variables, data analysis techniques, ethical considerations, and research timeline. The overall aim is to ensure transparency, replicability, and methodological rigor.

Research Design

This study employed a Classroom Action Research (CAR) design based on the model developed by Kemmis and McTaggart (1988). The research was implemented in two iterative cycles, each comprising four key stages: planning, acting, observing, and reflecting.



Figure 1. Play-Based Learning Cycle

This research was collaborative, with the classroom teacher serving as a co-researcher. The researcher was responsible for designing and facilitating contextual, play-based scenarios, while the teacher contributed by observing children's linguistic development and participating in cycle-based reflection. The study was conducted at TK Negeri 1 Sandaran, a public kindergarten located in Sandaran District, East Kutai Regency, East Kalimantan, Indonesia. The school is equipped with adequate facilities for early childhood education, including classrooms and educational play equipment. It supports innovative teaching approaches and was selected based on its openness to pedagogical experimentation, particularly contextual Play-Based Learning.

Participants

The participants were 13 children aged 5–6 years enrolled in Group B of TK Negeri 1 Sandaran during the second semester of the 2024/2025 academic year. Based on initial classroom observations, five children (approximately 40%) were identified as having language development difficulties. These were characterized by limited verbal output, difficulty naming objects, minimal sentence construction, and a tendency to remain silent or communicate through gestures. The focus of the intervention was on these five children who demonstrated below-average expressive and receptive language abilities. Identification was carried out in collaboration with the classroom teacher, and individualized and group-based interventions were tailored to suit their developmental needs.

Intervention Procedure

Two cycles of action research were implemented, utilizing contextual Play-Based Learning centered on the theme of "Animals." The following outlines the activities for each cycle:

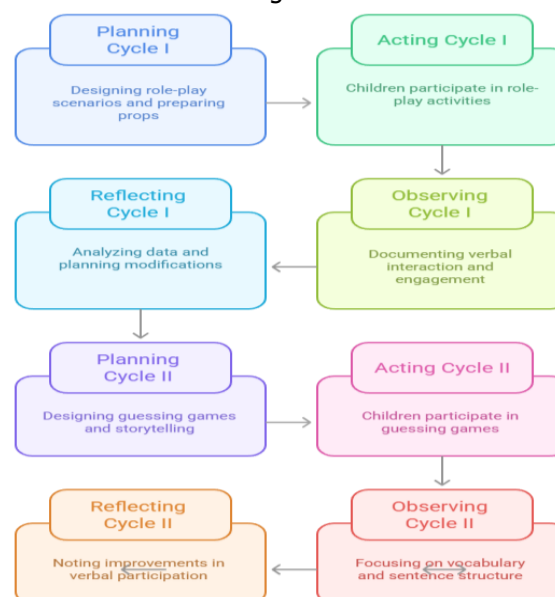


Figure 2. Educational Cycle for Animal Themes

Instruments

The following instruments were used to collect data:

1. Observation Sheets: Used to record indicators of verbal ability such as naming, responding to questions, sentence construction, and conversational participation.
2. Anecdotal Records & Documentation: Included teacher notes, photographs, and student artifacts related to contextual play activities.
3. Performance-Based Tasks: Children were asked to complete oral tasks such as recounting play activities or describing animals, to assess functional language use.

All instruments were designed to ensure construct validity and practical relevance to the play-based learning context.

Variables and Indicators

The primary variable in this study was children's language ability, measured through the following indicators:

1. Ability to name objects/animals spontaneously.
2. Ability to verbally respond to questions.
3. Ability to construct simple sentences.
4. Willingness to engage in verbal interaction with peers or teachers.
5. Verbal participation during play activities.

Data Analysis Techniques

Data were analyzed using descriptive quantitative methods. Scores were assigned using a 4-point scale for each language indicator. The following procedures were followed:

1. Scoring each child's performance across indicators.
2. Calculating mean scores per child and per indicator.
3. Computing the percentage of children who reached a minimum score of 3 (developing as expected).
4. Comparing improvements between Cycle I and Cycle II.

Formula used:

$$\text{Child's Final Score} = \left(\frac{\text{Observed Score}}{\text{Maximum Score}} \right) \times 10$$

The intervention was considered successful if at least 75% of participants achieved a minimum score of 3 on four out of five indicators.

Ethical Considerations

This study adhered to ethical standards for research involving children. Ethical clearance was obtained from the relevant institutional review board. Informed consent was secured from parents and guardians prior to participation. Anonymity and confidentiality of participant data were maintained throughout the study. All activities were designed to minimize psychological or emotional risk to participants.

Timeline

The research was conducted over three months (April to June 2025), covering preparation, implementation of action cycles, and reporting. The detailed schedule is presented below:

Table 1. Timeline

Month	Activities
April 2025	Cycle I: Planning, Implementation, Observation, Initial Reflection
May 2025	Cycle II: Planning, Implementation, Final Reflection, Collaborative Review
June 2025	Report Finalization, Thesis Revision, Oral Examination Preparation

RESULTS AND DISCUSSION

Results

Pre-Intervention Phase

The preliminary phase was conducted in April 2025 to establish baseline data on the language abilities of early childhood learners with learning difficulties in Group B of TK Negeri 1 Sandaran. Initial observations focused on four core language indicators: (1) the ability to name objects, (2) verbal responses to teacher prompts, (3) the ability to construct simple sentences, and (4) participation in verbal interaction. Findings revealed that 5 out of 13 children (approximately 40%) demonstrated noticeable language delays. Common behaviors among these children included prolonged silence when prompted, reliance on pointing instead of verbal labeling, difficulty in forming coherent sentences, and minimal participation in peer or teacher-directed conversation. Based on observational findings and preliminary interviews, an intervention plan was formulated using a contextual Play-Based Learning approach. The instructional theme selected was "Animals," divided into two sub-themes: "Wild Animals" and "Farm Animals." Observation instruments were developed to monitor individual progress in language development, specifically targeting expressive and receptive skills within play scenarios. A structured pre-test was administered to the five children identified as having language difficulties; the test comprised activities designed to assess their initial verbal capabilities across multiple indicators.

Table 1. Pre-Test Results of Children's Language Ability

No	Name	Total Score (Max. 20)	Mean Score	Proficiency Category
1	AH	9	1.8	Not Yet Developed
2	MR	8	1.6	Not Yet Developed
3	AK	7	1.4	Not Yet Developed
4	KI	10	2.0	Beginning to Develop
5	NA	9	1.8	Not Yet Developed

The mean scores for the five subjects ranged from 1.4 to 2.0, indicating an overall low level of language competence. Only one child (KI) achieved a score placing them in the "Beginning to Develop" category, suggesting emerging verbal skills, albeit inconsistently applied. The remaining children fell into the "Not Yet Developed" category, characterized by limited vocabulary, non-verbal responses, and difficulty expressing ideas in complete sentences. These findings underscore the urgent need for a more engaging and developmentally appropriate instructional strategy to stimulate verbal participation and improve oral communication among children with learning challenges.

Results of Cycle I Intervention

Based on the findings from the preliminary observation and pre-test, the first intervention cycle was designed to address the specific language development challenges experienced by early childhood learners in Group B of TK Negeri 1 Sandaran. The Cycle I planning emphasized five core language indicators: (1) naming animals, (2) responding to questions, (3) constructing simple sentences, (4) expressing ideas during play, and (5) engaging in verbal interaction with peers. A series of contextual Play-Based Learning activities was prepared using the theme "Animals," with subthemes "Wild Animals" and "Farm Animals." The activities included role-playing a pet market, animal image guessing games, animal puppet storytelling, and farm simulation using tangible props. These activities were designed to reflect children's real-life contexts, ensuring meaningful engagement and language practice. To support assessment, structured observation sheets and qualitative rating scales were developed. Coordination meetings with the classroom teacher were held to ensure clarity in instructional flow, adult roles during play, and differentiated guidance for children who face communication barriers. Preparations also included assembling visual media, vocabulary cards, and contextual play materials to facilitate smooth implementation.

Implementation of Cycle I

The intervention in Cycle I was conducted over three sessions within a one-week period, each lasting approximately 60 minutes. The thematic focus, "Animals," was delivered through contextualized play-based activities designed to stimulate verbal expression naturally and engagingly. The instructional strategy involved:

1. Role-playing an animal market: Children acted as vendors and buyers, engaging in dialogue using toy money and animal puppets.
2. Animal guessing game: Using illustrated cards, children practiced naming and describing animals.
3. Mini-farm simulation: Children discussed animal habitats, feeding routines, and sounds, reinforcing contextual vocabulary use.
4. Guided peer dialogue: Facilitated by the teacher, children were encouraged to engage in structured and spontaneous verbal exchanges.

Throughout the sessions, teachers acted as facilitators, providing verbal scaffolding through open-ended questions and praise. Observational data were gathered during play using structured observation forms and anecdotal records. Immediate post-session reflections were conducted to evaluate learning progress and instructional effectiveness.

Observation Results of Cycle I

Cycle I was implemented over three weeks, focusing on the integration of contextual play to enhance language skills. Five children previously identified as having language development difficulties were systematically observed across the sessions. Results showed early signs of improvement in verbal engagement. Children became more attentive during storytelling and games, and some began to spontaneously name animals using visual aids. Activities such as the animal guessing game and farm simulation appeared particularly effective in eliciting verbal responses. However, two children (AK and NA) remained relatively passive during dialogues and required repeated prompting to initiate sentence construction. Children tended to speak more confidently in peer group settings than in one-on-one questioning sessions. Verbal participation was notably higher when tasks involved role play and cooperative interaction. Teacher feedback and modeling, as well as encouraging classroom environments, helped reduce children's hesitation in speaking.

Table 2. Language Skill Scores – Cycle I

No	Child Initials	Total Score (Max. 20)	Mean Score	Proficiency Category
1	AH	13	2.6	Emerging Development
2	MR	12	2.4	Emerging Development
3	AK	11	2.2	Emerging Development
4	KI	14	2.8	Emerging Development
5	NA	12	2.4	Emerging Development

Compared to the pre-test results, there was a consistent increase in the average scores of all children. The transition from the "Not Yet Developing" to the "Emerging Development" category was evident across all participants. The most noticeable gains were observed in the ability to name animals using visual cues, participate in peer dialogue during role-play, and respond to teacher prompts with greater confidence and fluency. Despite these gains, sentence construction remained underdeveloped among some children. Therefore, while Cycle I demonstrated the potential of contextual Play-Based Learning to improve language engagement, further refinement and support strategies were deemed necessary to elevate verbal interaction to the "Expected Development" level.

Reflection on Cycle I

A reflective analysis was conducted through collaborative discussions between the researcher and the classroom teacher. Overall, the intervention showed promising outcomes, as all participants progressed from "Not Yet Developing" to "Emerging Development" in their language proficiency. Mean

scores ranged from 2.2 to 2.8, indicating a positive trajectory in early verbal skills. However, several challenges persisted. Some children remained hesitant in initiating communication and required greater encouragement. These limitations were attributed to limited adaptation time, varying learning preferences, and the need for more dynamic instructional tools. The reflection concluded that enhancements were needed in three key areas: (1) expanding the variety of games and play scenarios, (2) strengthening teacher verbal scaffolding techniques, and (3) grouping children more strategically to encourage language modeling through peer interaction. These insights informed the refinement of the instructional design for Cycle II, enabling children to progress from "Emerging Development" to "Expected Development" in their language acquisition journey. The baseline mean score for Cycle II was set at 2.4, serving as the benchmark for subsequent progress in the intervention.

Results of Cycle II Intervention

Building on the observations and reflections from Cycle I, it was evident that the contextual Play-Based Learning approach had a positive impact on children's language development. However, most participants remained within the "Emerging Development" category. Therefore, Cycle II was designed to address the limitations encountered in Cycle I and to improve the achievement of language development indicators toward the "Expected Development" level.

The improvements in Cycle II planning included:

1. Increased activity variation, such as animal-themed word puzzles, small group dramas, and interactive quizzes involving both wild and domestic animals. These were designed to be more stimulating while maintaining enjoyment.
2. Strengthened teacher scaffolding, including prompting questions, modeling complete responses, and providing individual support for passive children.
3. Use of more engaging and contextual learning aids, including three-dimensional animal visuals and interactive props.
4. Strategic peer grouping, pairing more verbally active children with those needing language modeling.
5. Extended peer interaction duration, primarily through guessing games and dramatized dialogue.

The primary objective was to encourage children to speak more confidently, construct more complete responses, and engage in meaningful verbal interaction during play. Observations used the same assessment instruments from Cycle I to ensure comparability of results.

Implementation of Cycle II

Cycle II was conducted over two weeks and centered on the theme "Animals," focusing on the subtheme "Farm Animals." The Play-Based Learning approach was maintained, with improved strategies and media based on Cycle I reflections. Sessions began with a short video about animal habitats to activate prior knowledge and attract interest. Children were then guided into contextualized games, such as "Finding Farm Animal Food," where they were required to identify animals, their functions, food sources, and habitats. To enrich the learning context, concrete materials were used, including animal puppets, three-dimensional illustrations, and toy money. The teacher used verbal scaffolding such as open-ended questions (e.g., "What do chickens eat?" or "What do chickens produce?") and modeled full sentence structures to support verbal output. Each session lasted 30 to 40 minutes. During the activities, teachers observed five language indicators: naming animals, responding to questions, constructing sentences, expressing ideas, and engaging in peer verbal interaction. This intervention was designed to provide children with language-rich, engaging, and meaningful contexts to naturally accelerate expressive language development.

Observation Results of Cycle II

Observations from Cycle II revealed significant improvements in the expressive language abilities of the children in Group B at TK Negeri 1 Sandaran who were previously identified as having verbal difficulties. All five language indicators showed notable enhancement across the study

participants. Children who were previously passive began to participate more actively, especially during role-play activities such as the “Animal Market.” They accurately named animals, answered teacher questions using complete sentences, and engaged in peer conversations in play contexts. Teachers also noted the emergence of spontaneous idea expression and simple sentence construction.

Table 3. Language Skill Scores – Cycle II

No	Child Initials	Total Score (Max. 20)	Mean Score	Proficiency Category
1	AH	15	3.0	Expected Development
2	MR	14	2.8	Expected Development
3	AK	13	2.6	Emerging Development
4	KI	16	3.2	Expected Development
5	NA	15	3.0	Expected Development

From the table above, it can be observed that four out of five children (80%) reached the “Expected Development” level. One child (AK) remained at “Emerging Development” but demonstrated a noticeable improvement compared to Cycle I. These findings confirm that the contextual Play-Based Learning approach is not only enjoyable for children but also effective in improving expressive language skills, particularly for those with initial verbal challenges.

Reflection on Cycle II

Reflections after Cycle II confirmed that the contextual Play-Based Learning approach had become more effective in enhancing language development among children with learning difficulties. Both observational and scoring data showed a substantial increase in the children’s average scores, particularly in verbal fluency, vocabulary accuracy, sentence structure, and responsiveness. Most children demonstrated improved communication behaviors, including increased confidence when speaking in front of peers, more appropriate vocabulary usage, and greater participation in peer interactions. Activities such as the “Animal Market” proved especially useful in creating enjoyable and meaningful speaking opportunities tied to real-life experiences.

The refinements made in Cycle II, particularly enhanced teacher scaffolding, diversified learning materials, and strategic grouping, significantly contributed to the success of the intervention. Consequently, Cycle II was deemed successful, as it met the action success criteria with at least 75% of participants achieving the “Expected Development” category. Final reflections confirmed that all subjects showed significant improvement in their language abilities. The overall average score rose to 2.9, with the majority of children categorized as having reached “Expected Development.” Language behavior changes included better sentence formulation, responsive speaking, and increased speaking confidence. As the research objectives had been successfully achieved, a subsequent cycle was deemed unnecessary. The classroom teacher also expressed a commitment to continuing to apply and refine this approach in daily teaching practice.

Discussion

The present study aimed to investigate the effectiveness of a contextual Play-Based Learning approach in enhancing the expressive language skills of early childhood learners with identified language difficulties. The findings across the pre-intervention, Cycle I, and Cycle II phases collectively demonstrate that structured, theme-based play activities—supported by teacher scaffolding and contextual materials—have a measurable and positive impact on the verbal development of young children.

A comparison of results across the three phases highlights a clear upward trend in language proficiency. Initially, most participants were classified as “Not Yet Developed,” exhibiting limited verbal output and a heavy reliance on non-verbal cues. These baseline characteristics align with prior studies on language-based learning difficulties, particularly in multilingual contexts where second-language

acquisition further complicates early literacy and academic engagement (Droop & Verhoeven, 2003; Whiteside et al., 2017; Uchikoshi & Marinova-Todd, 2012). However, by the end of Cycle I, all participants had progressed to the “Emerging Development” category, suggesting that integrating structured, meaningful play (e.g., role-play, simulations, and guessing games) effectively stimulated verbal interaction (Lee et al., 1997; Manditereza, 2025). This was further supported by the teacher’s role as a verbal model, whose use of open-ended questions, sentence modeling, and praise reduced speaking anxiety and enhanced expression (Fatimah & Widhiasi, 2025; Chen et al., 2025). Still, persistent difficulties in sentence construction and spontaneous expression highlighted the need for more targeted and scaffolded interventions (Rotschild, 2025; Katsarou et al., 2025).

Building on these results, Cycle II introduced improved instructional design, incorporating varied game formats, enhanced scaffolding, and strategic peer pairing. These enhancements yielded further progress, with 80% of participants reaching the “Expected Development” category. The effectiveness of these elements is supported by literature on differentiated instruction and collaborative learning, which emphasize the role of metacognitive scaffolding and peer support in fostering engagement and individual progress (Ataş & Yıldırım, 2025; Kan et al., 2012). Game-based learning, when aligned with pedagogical goals, has also been shown to encourage participation and facilitate deeper language processing (Hung et al., 2018; Escudeiro & de Carvalho, 2013; Yukselturk et al., 2018).

Moreover, qualitative observations affirmed the value of contextual learning environments, where familiar themes allowed children to connect prior knowledge with new vocabulary. Peer-to-peer interactions—particularly in role-play settings—became more frequent and elaborate, while teacher facilitation further enriched the language-learning context. These findings underscore the potential of contextual Play-Based Learning as an inclusive instructional approach, especially for learners with verbal delays. Importantly, they also highlight the need for ongoing formative assessment, reflective teaching, and instructional flexibility as key components in sustaining language development gains.

Despite these promising outcomes, limitations must be noted. The study involved a small sample size within a single institutional context, which may restrict generalizability. Furthermore, the primary focus was on expressive language, while receptive abilities were not systematically explored. Future research should aim to include larger, more diverse samples and examine the long-term effects of play-based interventions across both expressive and receptive language domains.

CONCLUSION

This study aimed to investigate the effectiveness of a contextual Play-Based Learning approach in enhancing the expressive language abilities of early childhood learners with diagnosed language difficulties. Implemented through a Classroom Action Research design in two iterative cycles, the intervention involved structured thematic play activities scaffolded by teacher facilitation, peer interaction, and contextual materials. The findings demonstrated a clear upward trend in language development across all participants, with observable improvements in vocabulary use, sentence construction, and verbal interaction. While participants initially exhibited limited verbal output and heavy reliance on non-verbal cues, the structured play interventions in Cycle I and the improved instructional strategies in Cycle II—such as varied game formats and strategic peer grouping—proved effective in supporting verbal engagement. By the end of Cycle II, 80% of children had achieved the “Expected Development” level, confirming the approach’s potential for learners with early language delays. This research contributes to the growing body of knowledge supporting contextualized, play-based pedagogy as a viable intervention for addressing expressive language challenges in early childhood education. It offers practical insights into how developmentally appropriate, engaging, and inclusive strategies can be applied to stimulate language growth among children with diverse needs. The implications of these findings suggest that early childhood educators should adopt flexible, play-centered approaches that integrate real-life themes, teacher scaffolding, and collaborative peer learning. Additionally, classroom-based action research should be encouraged as a reflective practice to inform ongoing instructional improvements. Given the study’s limitations, namely, its small sample

size and focus on expressive language, future research should aim to explore long-term effects across broader contexts, include receptive language dimensions, and evaluate the sustainability of language gains over time. Ultimately, this study reaffirms that when language learning is made meaningful, contextual, and socially interactive, it can unlock communicative potential even among children facing significant learning barriers.

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