

Curriculum Innovation in Early Childhood Education: A Framework for Developmentally Appropriate Learning

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Abstract

Purpose	: Early Childhood Education (ECE) serves as a foundational stage for children's holistic development, yet many programs continue to rely on conventional curricula that inadequately address children's diverse developmental needs. This study examines curriculum innovation and pedagogical advancement in ECE settings, with the aim of proposing a framework for Developmentally Appropriate Practice (DAP) that integrates child-centered, progressive pedagogical approaches to support children's cognitive, social, and emotional development.
Methodology	: A qualitative case study design was employed across multiple early childhood education centers. Participants comprised early childhood teachers, curriculum coordinators, and school administrators directly involved in curriculum planning and implementation. Data were generated through semi-structured interviews, classroom observations, and document analysis of curriculum materials and lesson plans. Thematic analysis was used to identify patterns across curriculum innovation, pedagogical practices, and developmental appropriateness. Trustworthiness was established through data triangulation and member checking.
Results	: Findings reveal that curriculum innovation meaningfully enhances developmentally appropriate learning when grounded in child-centered pedagogical practices. Key innovative strategies identified include play-based learning, inquiry-based activities, and integrated thematic curriculum design. These approaches were associated with increased children's engagement, creativity, collaborative behavior, and problem-solving competencies. Teachers who adopted reflective practice and flexible curriculum adaptation demonstrated greater responsiveness to children's diverse developmental needs.
Conclusions	: Integrating curriculum innovation with progressive pedagogy offers a robust foundation for developmentally appropriate learning in early childhood settings. The proposed framework foregrounds child-centered environments, flexible curriculum structures, and reflective teaching as core principles. These findings carry practical implications for ECE educators, curriculum developers, and policymakers committed to improving the quality and responsiveness of early childhood education programs.

Keywords: curriculum innovation, Developmentally Appropriate Practice (DAP), Early Childhood Education (ECE), child-centered pedagogy

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1. Introduction

Early Childhood Education (ECE) plays a fundamental role in shaping children's cognitive, social, emotional, and physical development. During the early years of life, children experience rapid developmental growth that significantly influences their future learning trajectories and overall well-being. Therefore, educational practices implemented during this period must be carefully designed to support children's holistic development through learning experiences that are meaningful, engaging, and developmentally appropriate (Saracho, 2023). Contemporary educational research emphasizes that early childhood education should not only focus on early academic readiness but also foster creativity, curiosity, collaboration, and problem-solving skills. These competencies are essential for children's future success in an increasingly complex society (UNESCO, 2022).

Active, creative, and participatory learning approaches are essential in early childhood education. These approaches increase children's engagement and motivation in the learning process. They also allow children to actively participate in learning activities while promoting critical thinking, creativity, and social interaction. Designs such as integrated thematic learning, play-based learning, and inquiry-oriented activities can significantly enhance children's engagement and support their holistic development (Zosh et al., 2022; Flee, 2022; Kangas et

al., 2022). These innovative approaches allow children to actively participate in learning processes while promoting critical thinking, creativity, and social interaction.

Curriculum innovation in early childhood education is closely connected to the concept of Developmentally Appropriate Practice (DAP), which emphasizes the alignment of educational experiences with children's developmental characteristics, individual needs, and sociocultural contexts. Developmentally appropriate learning environments provide opportunities for children to learn through exploration, experimentation, and social interaction. According to recent research, the successful implementation of DAP requires flexible curriculum structures that allow teachers to adapt learning activities based on children's interests and developmental readiness (Friedman et al., 2022). Such flexibility enables educators to create inclusive learning environments that accommodate diverse learning styles and developmental levels among young learners. However, despite the recognized importance of DAP, many early childhood education settings still face challenges in effectively integrating developmentally appropriate strategies into curriculum innovation. Therefore, examining how DAP principles can support effective curriculum innovation in early childhood education becomes an important focus of this study (Yang & Li, 2022).

Alongside curriculum innovation, pedagogical advancement has emerged as another critical component in improving early childhood education practices. Pedagogical advancement refers to the adoption of innovative teaching strategies, reflective instructional practices, and interactive learning environments that enhance children's learning experiences. Recent studies indicate that child-centered pedagogical approaches, collaborative learning activities, and inquiry-based teaching strategies can significantly improve children's motivation and engagement in classroom learning (Edwards, 2021; Pramling Samuelsson & Johansson, 2022; Cade et al., 2022). These pedagogical innovations encourage children to become active participants in their own learning processes rather than passive recipients of information (Catalano et al., 2023).

Play-based learning has also gained increasing recognition as an essential pedagogical approach within innovative early childhood curricula. Play is widely regarded as a natural and effective learning medium for young children (Danniels & Pyle, 2023), enabling them to develop cognitive, social, emotional, and language skills simultaneously. Through structured and guided play activities, children are able to experiment, solve problems, communicate with peers, and develop creativity (Colliver et al., 2022). Empirical studies demonstrate that play-based learning environments significantly contribute to the development of children's executive functions, creativity, and social competence (Weisberg et al., 2016; Pramling Samuelsson, 2022). Consequently, many contemporary early childhood education frameworks advocate for the integration of play-based learning as a core component of developmentally appropriate curriculum design (Yin et al., 2022).

In addition to play-based learning, the integration of inquiry-based activities and collaborative learning has been widely discussed as a strategy for strengthening children's higher-order thinking skills. Inquiry-based learning encourages children to ask questions, explore ideas, and construct knowledge through investigation and experimentation (Zudaire et al., 2022). Research shows that when young children engage in inquiry-oriented learning activities, they demonstrate increased curiosity, problem-solving abilities, and deeper conceptual understanding (Eti & Sigirtmac, 2021). Such pedagogical practices highlight the importance of designing curricula that provide opportunities for active exploration and meaningful learning experiences.

Furthermore, existing research on early childhood curriculum innovation has predominantly focused on isolated pedagogical strategies such as play-based learning, inquiry-based activities, or the use of digital tools without sufficiently examining how these approaches are systematically integrated within a coherent curriculum framework in real educational settings. While prior studies have demonstrated the effectiveness of individual strategies in enhancing children's engagement and development, limited attention has been given to how educators practically align curriculum design, pedagogical practices, and digital integration within everyday classroom implementation.

This gap is particularly evident in the context of early childhood education in Indonesia, where institutions are increasingly adopting innovative and technology-supported curricula, yet empirical evidence on how these innovations are interpreted, adapted, and enacted by teachers remains scarce.

Therefore, this study aims to address this gap by investigating how curriculum innovation and pedagogical advancement are integrated in practice across selected early childhood education centers in Deli Serdang Regency. Specifically, this study explores how teachers, curriculum coordinators, and school administrators collaboratively implement child-centered and developmentally appropriate learning through flexible curriculum structures, reflective pedagogical practices, and digital-based curriculum management. By doing so, this research contributes to the development of a contextually grounded framework that explains the dynamic interaction between curriculum innovation and pedagogical implementation in early childhood education.

2. Methodology

2.1 Research Design

This study employed a qualitative research approach using a multiple case study design to explore how curriculum innovation and pedagogical advancement are implemented in early childhood education settings to support developmentally appropriate learning. A qualitative design was chosen because it enables researchers to gain a deeper understanding of complex educational processes, instructional practices, and contextual factors influencing curriculum implementation in early childhood education environments (Creswell & Creswell, 2022). Case study research is particularly appropriate for examining educational innovations in real-life contexts where multiple factors interact within a specific learning environment (Yin, 2021).

2.2. Research Setting and Participants

The study was conducted in three early childhood education centers selected through purposive sampling based on their demonstrated implementation of innovative curriculum practices, including play-based learning, thematic instruction, inquiry-based activities, and digital-based curriculum management (Etikan & Bala, 2022). The selected institutions also represent variation in organizational characteristics, encompassing both public and private management structures, which enables a more comprehensive understanding of curriculum innovation across different educational contexts.

Participants consisted of fifteen individuals directly involved in curriculum design and implementation, comprising early childhood teachers, curriculum coordinators, and school administrators. Inclusion criteria required a minimum of two years of experience in early childhood education and direct involvement in curriculum planning and classroom implementation, ensuring that the data reflect practical and experiential insights from diverse institutional perspectives.

Table 1. Demographic Characteristics of Participants

Participant Role	Number of Participants	Teaching Experience (Years)	Educational Background
Early Childhood Teachers	10	2–12	Early Childhood Education
Curriculum Coordinators	3	5–15	Education / Curriculum Studies
School Administrators	2	8–20	Educational Management
Total	15	—	—

2.3. Data Collection Procedures

Data were collected through three complementary techniques: semi-structured interviews, classroom observations, and document analysis. Semi-structured interviews were conducted with all participants, each lasting approximately 40–60 minutes, and focused on

curriculum design, learning strategies, and developmentally appropriate teaching practices. Classroom observations examined how innovative strategies were enacted during learning activities, with particular attention to children's engagement, teacher facilitation, and interaction patterns, recorded through field notes and structured observation checklists. Curriculum documents, lesson plans, weekly learning programs, and instructional materials were further analyzed to identify how curriculum innovation was embedded in institutional practice. The use of multiple data sources strengthens the credibility and depth of qualitative findings (Merriam & Tisdell, 2023).

Participant and site selection followed purposive sampling criteria to ensure relevance and depth. The three ECE centers were selected based on their demonstrated implementation of innovative curriculum practices, including digital-based curriculum management, child-centered pedagogical approaches, and flexible instructional strategies. These institutions also represent variation in organizational characteristics, encompassing both public and private management structures, which enables a more comprehensive understanding of curriculum innovation across different educational contexts.

Participants, comprising teachers, curriculum coordinators, and school administrators, were directly involved in curriculum planning and classroom implementation, ensuring that data reflect practical and experiential insights. The triangulation of interviews, observations, and document analysis enhanced the trustworthiness and internal consistency of the collected data (Bowen, 2009).

2.4. Research Framework

The study is guided by a conceptual framework that emphasizes the dynamic and reciprocal relationship between curriculum innovation and pedagogical advancement in shaping developmentally appropriate learning environments. Rather than treating curriculum and pedagogy as linear or sequential processes, the framework conceptualizes them as mutually influential components that continuously interact in classroom practice: curriculum innovation informs pedagogical strategies, while pedagogical practices simultaneously shape how the curriculum is interpreted and enacted. Together, these interactions contribute to developmentally appropriate learning outcomes encompassing cognitive development, socio-emotional skills, and creativity. The framework further recognizes that classroom implementation is adaptive and iterative, allowing for ongoing refinement of both curriculum design and pedagogical approaches in response to children's evolving learning needs.

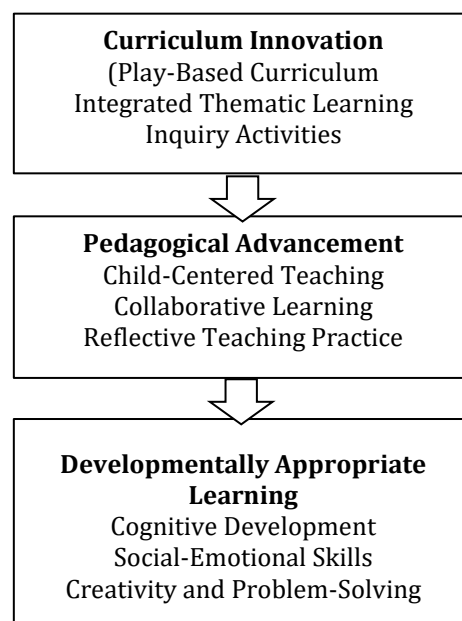


Figure 1. Conceptual Framework of Curriculum Innovation and Pedagogical Advancement in Early Childhood Education

As illustrated in Figure 1, curriculum innovation and pedagogical advancement operate as interdependent dimensions that collectively shape the quality of developmentally appropriate learning in early childhood education settings.

2.5. Trustworthiness and Ethical Considerations

To ensure trustworthiness, this study applied data triangulation, member checking, and peer debriefing. Triangulation involved cross-referencing information from interviews, observations, and documents to identify consistent patterns, while member checking was conducted by sharing interpretive summaries with selected participants to verify accuracy (Lincoln & Guba, 2021). Ethical considerations were carefully observed throughout the research process. All participants provided informed consent after being briefed on the study's purpose, and their identities and institutional affiliations were kept confidential to protect privacy and uphold research integrity (UNESCO, 2023).

2.6. Data Analysis

Thematic analysis was conducted following the procedure proposed by Braun and Clarke (2022), proceeding through four systematic stages: data familiarization through repeated reading of transcripts and observation notes; initial coding of meaningful segments related to curriculum innovation and pedagogical practices; theme development by grouping codes into broader categories such as innovative curriculum strategies, teacher pedagogical adaptation, and developmentally appropriate learning outcomes; and theme interpretation to examine relationships across cases and generate conceptual understanding. Qualitative data management was supported using NVivo software, which enhanced coding transparency, facilitated retrieval of related excerpts, and strengthened analytical credibility throughout the analysis process.

3. Results

3.1. Implementation of Curriculum Innovation

The findings indicate that curriculum innovation in early childhood education settings was primarily implemented through play-based learning, integrated thematic instruction, and inquiry-oriented activities. Teachers explained that these approaches enabled them to create more flexible classroom environments that responded to children's developmental needs and interests. One teacher stated, "Children become more enthusiastic when learning activities are connected to play because they feel free to explore and express their ideas during class activities." Another participant emphasized the importance of thematic integration in daily teaching practice: "When we use one theme for several activities, children understand the connection more easily because they learn through stories, drawing, and group discussion at the same time."

Classroom observations also confirmed that children actively engaged in exploratory learning activities such as storytelling, creative play, collaborative problem-solving tasks, and thematic projects. A curriculum coordinator explained that inquiry-oriented activities were intentionally designed to stimulate curiosity: "We encourage teachers to ask open-ended questions so children can think, answer, and discover concepts by themselves rather than only receiving explanations." These findings suggest that curriculum innovation was not limited to curriculum documents but was reflected in everyday classroom interactions, where teachers continuously adapted instructional strategies to support active participation and meaningful learning experiences (Grieshaber et al., 2021; Keary et al., 2023; Alderson et al., 2023).

3.2. Pedagogical Advancement in Classroom Practices

The analysis of interview and observation data revealed significant pedagogical advancement among teachers implementing innovative curricula. Teachers reported adopting child-centered teaching strategies, collaborative learning activities, and reflective teaching practices to support developmentally appropriate learning. These pedagogical approaches

enabled teachers to facilitate active learning experiences while providing guidance and scaffolding during children's exploratory activities.

Classroom observations provided concrete examples of these practices. During one observed literacy session, children were grouped in small circles and asked to retell a story using picture cards, while the teacher guided discussion by asking open-ended questions such as “What do you think happened next?” and “Why did the character choose that action?” In another classroom, during a thematic science activity on plants, children worked in pairs planting seeds in small containers and recording daily changes through drawings, while the teacher encouraged prediction and discussion about plant growth.

Observational data also showed that during collaborative play activities, children negotiated roles, shared materials, and solved simple problems together. For example, during a block-building activity, several children discussed how to construct a bridge, while the teacher intervened only when needed by asking, “How can you make it stronger so it does not fall?” This facilitative role allowed children to develop creativity, communication skills, and critical thinking through direct experience.

These findings support previous research demonstrating that child-centered pedagogical approaches improve children's learning engagement, social interaction, and problem-solving abilities in early childhood education contexts (Pramling Samuelsson & Johansson, 2022). Furthermore, reflective teaching practices were identified as a key factor enabling educators to adapt learning activities based on children's responses and developmental progress (Edwards, 2021; Chen, 2023).

Teachers also emphasized the importance of professional collaboration and ongoing reflective dialogue among educators in improving pedagogical effectiveness (Ruming & McFarland, 2022). One teacher explained, “After class, we often discuss which activities worked well and which children needed more support, so the next lesson can be adjusted.” Such collaborative professional practices have been widely recognized as essential for sustaining curriculum innovation in early childhood education institutions (OECD, 2022).

3.3. Developmentally Appropriate Learning Outcomes

The findings demonstrate that the integration of innovative curriculum design and progressive pedagogical practices contributes to improved developmentally appropriate learning outcomes. Children participating in innovative learning environments displayed higher levels of engagement, creativity, and collaborative interaction compared to those in conventional teacher-centered classrooms. Teachers reported noticeable improvements in children's cognitive development, socio-emotional competence, and creative problem-solving skills, particularly evident during play-based and inquiry-based learning activities where children were encouraged to explore ideas, experiment with materials, and communicate their thoughts with peers. These observations are consistent with empirical research suggesting that developmentally appropriate learning environments significantly enhance children's executive functions, social competence, and creative thinking abilities (Weisberg et al., 2016; Eti & Sigirtmac, 2021). To document these outcomes systematically, teachers conducted periodic developmental observations focusing on three key indicators: cognitive engagement, social interaction, and creative problem-solving. The observational data were recorded and summarized as presented in Table 2.

Table 2. Developmental Learning Outcomes Observed in Innovative Classrooms

Learning Indicator	Evidence from Observations	Frequency of Occurrence
Cognitive Engagement	Children actively posed questions and explored materials independently	High (all 3 centers)
Social Interaction	Peer collaboration observed in group play and thematic tasks	Moderate–High
Creative Problem-Solving	Block-building, seed-planting, and storytelling activities	High

As shown in Table 2, cognitive engagement and creative problem-solving were consistently observed at high frequency across all participating centers, while social interaction was noted at moderate to high levels depending on the nature of the activity. These findings suggest that innovative curriculum practices effectively support multiple dimensions of children's developmental growth, affirming the value of child-centered and inquiry-driven learning environments in early childhood education settings.

4. Discussion

The findings of this study demonstrate that curriculum innovation, when integrated with pedagogical advancement, plays a significant role in fostering developmentally appropriate learning environments in early childhood education. The results confirm that play-based learning, integrated thematic instruction, and inquiry-oriented activities meaningfully enhance children's engagement, creativity, and social interaction across all three participating centers. A deeper interpretation of these findings suggests that such approaches are effective primarily because they align with children's natural learning processes, allowing knowledge to be constructed through direct experience, exploration, and peer interaction rather than passive reception of information. This observation is consistent with the theoretical foundations of developmentally appropriate practice, which emphasizes the alignment of educational experiences with children's developmental characteristics, individual needs, and sociocultural contexts (Friedman et al., 2022). The coherence between curriculum design and pedagogical implementation observed in this study therefore represents a key condition for the meaningful realization of DAP principles in everyday classroom practice (Saracho, 2023).

A central finding of this study is the prominent role of play-based learning as the primary vehicle through which curriculum innovation was enacted in ECE classrooms. Teachers consistently reported that play-based environments created conditions for children to experiment, negotiate roles, and solve problems collaboratively, which in turn supported the development of executive functions, creativity, and social competence. These observations are strongly consistent with empirical evidence demonstrating that guided play environments produce superior learning outcomes compared to purely teacher-directed instructional approaches (Weisberg et al., 2016). Furthermore, the longitudinal significance of play is underscored by evidence indicating that free play in early childhood predicts self-regulation capacities years later (Colliver et al., 2022), suggesting that curriculum innovation grounded in play-based pedagogy carries developmental benefits that extend well beyond the early years classroom. The present study extends this body of knowledge by illustrating how play-based learning is not merely adopted as an isolated strategy but is embedded within a broader thematic curriculum architecture that reinforces its developmental impact (Pramling Samuelsson, 2022; Danniels & Pyle, 2023).

The integration of inquiry-based activities into the curriculum framework further contributed to children's higher-order thinking and intrinsic motivation. Teachers' deliberate use of open-ended questioning and investigative tasks created conditions in which children actively constructed conceptual understanding through exploration and discovery. These findings align with Eti and Sigirtmac's (2021) action research demonstrating that structured inquiry-based science activities in ECE settings effectively stimulate children's curiosity and promote scientific reasoning. Similarly, Zudaire et al. (2022) found that project-based inquiry learning in preschool contexts fosters the development of basic and integrated scientific skills when teachers provide appropriate scaffolding. The present findings extend these insights by revealing that inquiry-based approaches are most effective when coherently woven into a thematic curriculum design that provides contextual meaning for children's investigations, rather than being implemented as episodic or decontextualized activities (Fleer, 2022; Kangas et al., 2022).

Pedagogical advancement, as observed in this study, was characterized by teachers' adoption of child-centered instructional strategies, reflective practice, and flexible curriculum adaptation. Teachers who demonstrated strong pedagogical competence were able to interpret

children's responses in real time and adjust their facilitation accordingly, creating highly responsive learning environments. This finding resonates with Cade et al.'s (2022) qualitative multi-case study, which identified child-centered pedagogy as the defining feature of quality early care and learning, particularly in contexts where educators actively prioritize children's agency and developmental individuality. The importance of pedagogical responsiveness is further affirmed by Catalano et al. (2023), whose work on child-centered slow education principles highlights the relationship between flexible instructional design and the cultivation of children's autonomy and personality development. Crucially, the present study demonstrates that pedagogical advancement is not an inherent attribute of individual teachers but is substantially shaped by institutional cultures that value collaborative reflection and professional inquiry (Ruming & McFarland, 2022; OECD, 2022).

Reflective teaching practice emerged as a particularly significant dimension of pedagogical advancement in this study. Teachers' engagement in post-lesson collaborative dialogue enabled continuous refinement of instructional strategies and contributed to a cycle of iterative curriculum improvement. Chen's (2023) framework for reflection in early childhood education distinguishes between reflection for, in, and on action, and the present findings illustrate how all three forms manifested in the professional practices of participating teachers. Reflection-on-action was evidenced through post-lesson discussions among teaching teams, while reflection-in-action was observable in real-time adjustments teachers made during classroom interactions. These practices are consistent with Keary et al.'s (2023) case study analysis of ECE curriculum frameworks, which found that teachers who selectively adapt curriculum frameworks in response to local contextual conditions demonstrate stronger alignment between curriculum intent and classroom practice. The role of reflective practice in sustaining curriculum innovation is thus not merely supplementary but constitutes a core mechanism through which pedagogical quality is maintained and developed over time (Edwards, 2021; Chen, 2023).

The institutional and cultural dimensions of curriculum innovation warrant particular attention in interpreting the present findings. Alderson et al. (2023) identified institutional culture, self-belief, and relational contexts as the primary factors shaping how teachers enact curriculum innovation in ECE settings, a finding that resonates strongly with the collaborative professional practices observed across the three participating centers in this study. Teachers who perceived strong institutional support and collegial trust demonstrated greater confidence in implementing non-conventional pedagogical strategies and were more willing to deviate from scripted curricular approaches. This finding extends Yang and Li's (2022) study on curriculum innovations in Hong Kong kindergartens, which demonstrated that cultural context significantly mediates the ways in which curriculum innovation is interpreted and enacted by educators. Taken together, these insights suggest that sustainable curriculum innovation in ECE requires not only well-designed frameworks but also institutional investments in professional community building and teacher agency (Pramling Samuelsson & Johansson, 2022; Yin et al., 2022).

The thematic curriculum design observed in this study represents a particularly promising model for achieving coherent integration of innovative pedagogical strategies within developmentally appropriate learning environments. By organizing learning experiences around shared themes, teachers were able to create meaningful connections across literacy, science, creative arts, and social learning domains, enabling children to encounter concepts in multiple relational contexts rather than in disciplinary isolation. This integrated approach is theoretically grounded in the principles of developmentally appropriate practice, which emphasizes the importance of curriculum coherence, contextual relevance, and cross-domain learning (Friedman et al., 2022). Grieshaber et al. (2021) have further argued that multimodal play constitutes a threshold concept in ECE curriculum thinking, suggesting that when curricula afford children opportunities to engage with meaning through multiple modes — gesture, image, movement, and language — the learning potential of any given activity is substantially deepened. The findings of the present study affirm this perspective and contribute empirical evidence from an Indonesian ECE context, where integrated thematic approaches have been

shown to enhance children's engagement across cognitive, socio-emotional, and creative dimensions (UNESCO, 2022; UNESCO, 2023).

Despite these contributions, several limitations of the present study must be acknowledged. The qualitative case study design, while enabling rich contextual understanding, limits the generalizability of findings beyond the three participating centers in Deli Serdang Regency (Yin, 2021; Creswell & Creswell, 2022). The reliance on teacher self-report through semi-structured interviews introduces the possibility of social desirability bias, and the cross-sectional nature of data collection does not allow for the assessment of longitudinal developmental outcomes among children (Merriam & Tisdell, 2023). Furthermore, the study did not systematically examine the role of digital technologies in curriculum implementation, despite their increasing integration in Indonesian ECE settings, representing a gap that future research should address (Edwards, 2021; Zosh et al., 2022). Future studies employing larger and more diverse samples, mixed-methods designs, and longitudinal data collection would substantially strengthen the evidence base for the framework proposed in this study. Comparative cross-cultural investigations, particularly in contexts where DAP-aligned curriculum innovation is at different stages of institutional adoption, would also enrich theoretical understanding of the conditions under which the relationship between curriculum innovation, pedagogical advancement, and developmentally appropriate learning outcomes is most robustly realized (Yang & Li, 2022; Alderson et al., 2023).

5. Conclusion

This study set out to examine how curriculum innovation and pedagogical advancement are integrated in early childhood education to support developmentally appropriate learning. The findings indicate that the effective alignment between innovative curriculum design and child-centered pedagogical practices plays a critical role in enhancing children's cognitive engagement, creativity, and social interaction.

Theoretically, this study contributes to the existing literature by proposing a conceptual framework that emphasizes the dynamic and reciprocal relationship between curriculum innovation and pedagogical practices. Unlike previous studies that often examine these elements separately, this research highlights their integrated role in shaping developmentally appropriate learning environments within real classroom contexts.

Practically, the findings suggest that successful curriculum innovation requires not only well-designed curriculum structures but also strong teacher capacity in implementing reflective and adaptive pedagogical strategies. Therefore, professional development programs and institutional support systems are essential to ensure the effective translation of curriculum innovation into classroom practice.

Despite these contributions, this study is limited by its focus on a small number of early childhood education centers within a specific regional context. Future research is recommended to involve larger and more diverse samples, as well as to explore longitudinal impacts and the integration of digital learning technologies in early childhood curriculum innovation.

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