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Exploration of the Application of Learning Models to Develop Collaborative Skills in Early Childhood

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ABSTRAK:
Background/purpose. Ideal learning is learning that is able to achieve goals effectively and encourage the development of children's potential as a whole. One of the important things needed by teachers in this process is the use of interesting learning models that are in accordance with the characteristics and needs of children. However, in reality, there are still many kindergarten teachers who have not been able to apply various learning models. Most still rely on a classical approach that is individual in every learning activity. **Materials/methods**. This study aims to identify the learning models used to stimulate early childhood collaboration skills in Palembang City. The method used is descriptive qualitative with data collection techniques through observation, interviews, and documentation. **Results**. The results of the study showed that the application of learning models in PAUD units is still limited and not varied. Only one participant was known to have applied a variety of learning models, such as project-based learning and STEAM. However, children's collaboration skills have only been developed in certain activities. **Conclusion.**The obstacles faced include limited teacher ability, time, and classroom settings. Therefore, innovation is needed in designing, selecting, and implementing learning models that can optimally stimulate collaboration skills in early childhood

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1. Introduction

Early childhood education serves as the foundation for holistic development in children, including cognitive, social, emotional, and physical aspects (Bredekamp, 2016). Among these crucial developmental domains, collaborative skills have gained significant attention in recent years due to their importance in preparing children for future academic and life success (Howes & Matheson, 1992). Collaboration enables children to work effectively with others, share ideas, negotiate solutions, and develop interpersonal relationships that are essential for their overall development. Collaboration in early childhood education is increasingly recognized as a vital component for fostering holistic development in children. This collaborative approach not only enhances cognitive, social, emotional, and physical growth but also prepares children for future academic and life success. The integration of collaborative skills in early childhood education enables children to work effectively with others, share ideas, negotiate solutions, and develop essential interpersonal relationships. This discussion will explore the significance of collaboration in early childhood education, the roles of parents and teachers, and innovative learning methods that promote collaborative skills.

Importance of Collaboration in Early Childhood Education is collaboration in early childhood education is crucial for leveraging resources and providing comprehensive services to meet diverse family needs. It maximizes professional development and enhances the quality of education provided to young children (Connors-Tadros, 2019). Collaborative learning environments encourage children to engage in group activities, fostering skills such as communication, problem-solving, and teamwork, which are essential for their overall development (Adi et al., 2023). The development of emotional and social skills through collaboration has significant benefits, including improved academic performance and reduced behavioral problems (Syakhrani, 2024).

The collaboration between parents and teachers is fundamental in supporting the holistic development of children. Parents provide emotional stability and educational values at home, while teachers design activities that cater to children's developmental needs (Afia & Malik, 2024). Teachers act as facilitators in collaborative learning environments, guiding children through activities that promote creativity, independence, and teamwork (Zulfa et al., 2024). Family-centered education models that position families as key partners in education have proven effective in enhancing children's motivation to learn and strengthening emotional connections between children, parents, and teachers (Afia & Malik, 2024). Project-Based Learning (PjBL) is an innovative approach that enhances children's creativity and collaborative skills. It involves thematic, partial, and occasional approaches that engage children actively in the learning process (Zulfa et al., 2024). Holistic learning models, such as Reggio Emilia, Montessori, and HighScope, integrate various aspects of child development, encouraging children to learn through direct experience, active play, and positive emotional involvement (Permatasari et al., 2025). These innovative methods not only support cognitive development but also promote social and emotional growth, preparing children for the challenges of the 21st century (Zulfa et al., 2024) (Permatasari et al., 2025).

While collaboration in early childhood education offers numerous benefits, it also presents challenges. Differing perceptions, time limitations, and economic backgrounds can hinder effective collaboration between parents and teachers. Inclusive strategies, such as family-centered education models, are necessary to overcome these challenges and create a harmonious and sustainable educational ecosystem (Afia & Malik, 2024). Additionally, the successful implementation of collaborative programs requires a strong commitment from all community members, including educators, parents, and policymakers (Syakhrani, 2024).

Ideal learning environments should effectively achieve educational goals while encouraging the comprehensive development of children's potential (National Association for the Education of Young Children [NAEYC], 2020). Teachers play a pivotal role in this process by implementing appropriate learning models that align with children's characteristics and developmental needs (Copple & Bredekamp, 2009). However, research indicates that many early childhood educators continue to rely predominantly on traditional, teacher-centered approaches rather than utilizing diverse learning models that promote active engagement and collaboration (Isbell et al., 2013).

In Palembang City, preliminary observations suggest that kindergarten teachers often implement classical, individualistic approaches to learning activities, which may limit opportunities for children to develop collaborative skills. This situation highlights a significant gap between theoretical understanding of effective early childhood education practices and their practical implementation in the classroom setting.

Therefore, this study aims to explore the application of learning models to develop collaborative skills in early childhood education settings in Palembang City. Specifically, the research seeks to identify the learning models currently being used by teachers, examine how these models stimulate collaborative skills, and investigate the challenges faced in implementing diverse learning approaches. The findings of this study will contribute to the broader understanding of effective pedagogical practices in early childhood education and provide insights for improving teacher professional development programs.

2. Methodology

This study employed a descriptive qualitative approach to explore the application of learning models in developing collaborative skills among early childhood learners in Palembang City. Descriptive qualitative research was chosen as it allows for an in-depth understanding of phenomena within their natural context, capturing the complexity and richness of educational practices (Creswell, 2014).

The study was conducted in several early childhood education units (PAUD) across Palembang City. Purposive sampling was used to select participating kindergartens based on their representation of different educational approaches and willingness to participate in the research. A total of 15 kindergarten teachers from 10 PAUD units participated in this study.

Data collection was conducted through multiple methods to ensure triangulation and enhance the credibility of findings. These methods included:

1. Observation: Researchers conducted structured observations of classroom activities to document the implementation of learning models and children's collaborative behaviors. Each observation lasted for approximately 2-3 hours and was conducted across different days to capture various learning activities.
2. Interviews: Semi-structured interviews were conducted with participating teachers to explore their understanding of collaborative skills, learning models they employ, challenges faced, and their perceptions of effective practices. Interviews were audio-recorded with permission and transcribed verbatim for analysis.
3. Documentation: Collection of relevant documents including lesson plans, teaching materials, and samples of children's work that provided additional context regarding the implementation of learning models.

Data analysis followed the thematic analysis procedure outlined by Braun and Clarke (2006). This involved familiarization with the data through repeated reading, generating initial codes, searching for themes, reviewing themes, and defining and naming themes. The analysis process was supported by NVivo 12 software to manage and organize the data systematically.

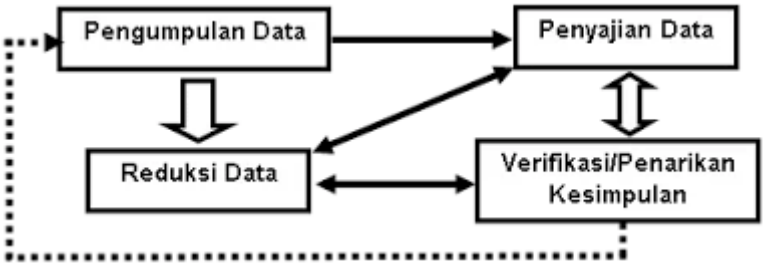


Figure 1. Analysis data technique

To ensure trustworthiness, several strategies were employed. Member checking was conducted by sharing preliminary findings with participants for verification. Additionally, peer debriefing with experienced qualitative researchers provided external validation of the emerging themes. Finally, detailed descriptions of the research process and findings were maintained to allow for auditability.

3. Result/Findings

The analysis of data revealed several key findings regarding the application of learning models to develop collaborative skills in early childhood education settings in Palembang City.

Limited and Varied Application of Learning Models

The study found that the application of learning models in PAUD units was generally limited and lacked variation. Most teachers (14 out of 15 participants) predominantly utilized a classical, teacher-centered approach in their daily teaching practices. This approach typically involved whole-group instruction where the teacher directed activities and children worked individually on tasks. As one teacher explained:

> "*I usually teach the whole class together. I explain the materials, demonstrate activities, and then ask children to do similar tasks individually. This way, I can ensure all children understand the material and complete their work.*" (Teacher Interview, March 2025)

Observations confirmed this approach, with limited opportunities for children to engage in collaborative activities or work together on shared tasks.

Implementation of Diverse Learning Models

Only one participant out of fifteen demonstrated the application of various learning models, specifically project-based learning and STEAM (Science, Technology, Engineering, Arts, and Mathematics) approaches. This teacher had received specialized training in these methodologies and actively implemented them in classroom activities. During observations, children in this classroom were observed working in small groups on extended projects that required planning, problem-solving, and collective decision-making. For instance, a "building a bridge" project involved groups of children designing and constructing bridges using various materials, which required extensive communication and cooperation among team members.

Development of Collaboration Skills in Specific Activities

The study revealed that children's collaboration skills were predominantly developed only in certain activities, primarily during free play sessions and special events. During these times, children naturally engaged in more interactive and cooperative behaviors. However, during structured learning activities, opportunities for collaboration were limited. As documented in field notes:

> "*During free play, children were observed sharing materials, taking turns, and helping each other complete tasks. However, during structured lessons, interactions were minimal, with most children working individually on teacher-assigned tasks.*" (Observation Notes, April 2024)

Obstacles Faced by Teachers

Several obstacles were identified as hindering the implementation of diverse learning models and the development of collaborative skills:

1. Limited Teacher Ability: Many teachers expressed limited knowledge and skills in implementing various learning models beyond the traditional approach. They reported insufficient training in innovative teaching methodologies that promote collaboration.
2. Time Constraints: Teachers indicated that the structured curriculum and time pressure to cover specific content areas limited their ability to implement more time-consuming collaborative activities.
3. Classroom Settings: Physical classroom environments were often not conducive to collaborative learning, with fixed furniture arrangements that limited group work and insufficient space for movement and interaction.
4. Large Class Sizes: Most classrooms had high student-teacher ratios, making it challenging for teachers to facilitate and monitor collaborative activities effectively.
5. Parental Expectations: Some teachers mentioned pressure from parents who prioritized academic outcomes over social skill development, influencing their teaching approaches.

4. Discussion

The findings of this study highlight a significant gap between theoretical understanding of effective early childhood education practices and their implementation in Palembang City. The predominant use of teacher-centered, individualistic approaches contradicts established principles of developmentally appropriate practice that emphasize active learning and social interaction (NAEYC, 2020).

The limited application of diverse learning models observed in this study is concerning given the well-documented benefits of approaches such as project-based learning and STEAM in promoting collaborative skills. Research has consistently shown that these methodologies provide authentic contexts for children to develop negotiation, communication, and teamwork skills (Katz & Chard, 2000; Liao, 2016). The fact that only one teacher implemented these approaches suggests a need for more comprehensive professional development opportunities for early childhood educators in Palembang.

The development of collaboration skills primarily during free play rather than structured learning activities indicates a missed opportunity for intentional skill development. While free play naturally fosters social interaction, Vygotsky's sociocultural theory emphasizes the importance of structured, guided learning experiences in developing higher-order

skills (Vygotsky, 1978). Teachers could leverage structured activities to purposefully scaffold and enhance children's collaborative abilities.

The obstacles identified in this study align with challenges reported in other research on early childhood education in various contexts. Limited teacher capacity and knowledge have been consistently identified as barriers to implementing innovative practices (Hong, 2018). Additionally, structural constraints such as large class sizes and inadequate physical environments are common issues in early childhood settings globally (Litjens & Taguma, 2010).

The findings also raise questions about teacher preparation programs and ongoing professional development in Palembang City. If most teachers lack the knowledge and skills to implement diverse learning models, there may be a need to revise pre-service education and in-service training to emphasize practical applications of collaborative learning approaches.

Furthermore, the influence of parental expectations on teaching practices suggests a need for greater parent education regarding the importance of collaborative skills in early childhood development. Research indicates that when parents understand the value of social-emotional skills alongside academic outcomes, they are more likely to support innovative teaching approaches (Harkness & Super, 2006).

5. Conclusion

This study explored the application of learning models to develop collaborative skills in early childhood education settings in Palembang City. The findings revealed that most kindergarten teachers predominantly utilize classical, individualistic approaches, with limited implementation of diverse learning models that promote collaboration. Only one teacher demonstrated the application of project-based learning and STEAM approaches, which are known to foster collaborative skills. Furthermore, children's collaboration skills were primarily developed during free play rather than structured learning activities, indicating a missed opportunity for intentional skill development.

The obstacles identified in this study including limited teacher capacity, time constraints, inadequate classroom settings, large class sizes, and parental expectations highlight the complex interplay of factors that influence teaching practices. Addressing these challenges requires a multifaceted approach involving teacher education, policy support, and parental engagement.

Based on these findings, several recommendations can be made. First, there is a need for comprehensive professional development programs that enhance teachers' knowledge and skills in implementing diverse learning models that promote collaboration. Second, educational authorities should consider policies that support more flexible curricula and appropriate teacher-student ratios to facilitate collaborative learning. Third, early childhood education settings should be designed with flexible physical environments that accommodate various learning models and group activities. Finally, parent education initiatives should emphasize the importance of collaborative skills in early childhood development.

This study has some limitations that should be acknowledged. The research was conducted in a specific urban context (Palembang City), and the findings may not be generalizable to rural areas or other regions. Additionally, the study focused on teacher perspectives and practices; future research could include direct assessment of children's collaborative skills to provide a more comprehensive understanding of the impact of different learning models.

Future research could explore the effectiveness of specific interventions aimed at improving teachers' implementation of collaborative learning models. Additionally, longitudinal studies could examine the long-term impact of early collaborative skill development on children's academic and social outcomes.

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