

Learning Constraints in Early Childhood Education: A Descriptive Qualitative Study of Inadequate Facilities and Infrastructure at PAUD Ikhlas Sei Kera Hilir 1

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ABSTRACT

Early Childhood Education plays a crucial role in shaping children's character, moral values, and foundational abilities. However, PAUD IKHLAS Sei Kera Hilir 1 continues to face limitations in learning facilities and infrastructure, which affect the effectiveness of the learning process. This study aims to analyze the impact of inadequate facilities on children's learning experiences and to explore the roles of parents and the government in supporting the improvement of early childhood education quality. This research employed a descriptive qualitative approach involving five informants: two early childhood teachers as primary informants, two parents, and one village administrative officer as supporting informants. Data were collected through observation, in-depth interviews, and documentation. Data analysis followed the interactive model proposed by Miles and Huberman (1994), consisting of data reduction, data display, and conclusion drawing. Content analysis and thematic coding were also applied, and data trustworthiness was ensured through source and methodological triangulation. The findings reveal that limited classroom space, a lack of educational play materials, and a narrow learning environment negatively affect children's motivation to learn. Parental support remains limited due to economic constraints, while government assistance is primarily focused on children's nutrition and health rather than educational facilities. In conclusion, inadequate learning facilities and infrastructure hinder the learning process at PAUD IKHLAS Sei Kera Hilir 1, highlighting the need for collaborative efforts among teachers, parents, and the government to improve the quality of learning facilities in early childhood education.

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Introduction

PAUD Ikhlas Sei Kera Hilir 1 is an early childhood education institution located in Medan Perjuangan District, Medan City. Preliminary observations indicate that the institution faces significant limitations in learning facilities and infrastructure. The learning space is located on the second floor of a village administrative building with limited area, educational play equipment remains rudimentary, and there are no dedicated reading rooms or outdoor play areas. These conditions have negatively affected children's learning motivation and constrained teachers' creativity in developing engaging instructional media.

This situation constitutes an urgent educational issue, as an unsupportive learning environment may hinder children's holistic development. Early childhood learning relies heavily on play and exploration; when space and learning materials are limited, children tend to become easily bored, lose focus, and receive suboptimal stimulation (Fitriani, 2023; Santrock, 2023). Furthermore, early childhood teachers face difficulties in implementing varied instructional strategies due to the lack of teaching aids and interactive learning media (Indrawati, 2017). From a social perspective, parental involvement in supporting children's learning activities remains limited. Most parents work in the informal sector and have not prioritized early childhood education. Meanwhile, local government support has largely focused on nutrition and health programs, with little attention given to the provision of educational facilities (Mulia & Kurniati, 2023). This condition reflects a gap between policy intentions and actual practices in the field, which directly affects the quality of early childhood education services.

From a theoretical and policy standpoint, the Indonesian Ministry of Education Regulation (Permendikbud) No. 137 of 2014 stipulates that early childhood education institutions are required to provide learning facilities that are safe, comfortable, and developmentally appropriate (Aghnaita, 2017). Bafadal (2003) emphasizes that educational facilities and infrastructure play a strategic role in supporting the effectiveness of the learning process. Similarly, Wulandari and Rahmah (2023) found that adequate facilities, combined with competent educators, contribute significantly to the improvement of early childhood education service quality.

Despite the importance of adequate facilities, empirical studies examining limitations in early childhood education infrastructure in urban settings—particularly those operating within public facilities such as village administrative buildings—remain scarce. This study addresses this gap by focusing on the impact of inadequate learning facilities in an urban early childhood education institution and by incorporating perspectives from multiple stakeholders, including teachers, parents, and village officials. Previous studies have predominantly concentrated on early childhood education in rural contexts or on macro-level policy analyses (Amiliya & Susanti, 2024). Therefore, this research offers novel insights into how infrastructural constraints affect the effectiveness of early childhood learning in urban areas characterized by limited social and institutional support.

Method

This study employed a qualitative approach with a descriptive case study design, aiming to provide an in-depth description of the phenomenon of limited learning facilities and infrastructure at PAUD Ikhlas Sei Kera Hilir 1 without manipulating any variables. The research was conducted from June to October 2025 at PAUD Ikhlas, located in Sei Kera Hilir 1, Medan Perjuangan District, Medan City. The focus of the study was to examine the condition of learning facilities, analyze the impact of infrastructural limitations on early childhood learning processes, and explore the roles of parents and the government in supporting the improvement of educational service quality.

Data sources in this study consisted of both primary and secondary data. Primary data were obtained through direct observation of the school environment and in-depth interviews with five informants selected purposively based on their relevance to the research objectives. The primary informants included two teachers: the head of the early childhood education center, who had more than ten years of professional experience, and a classroom teacher with five years of teaching experience. Secondary informants comprised two parents who were actively involved in accompanying their children during learning activities, as well as one village administrative officer familiar with local policies related to support for early childhood education institutions. Secondary data were collected from institutional documents, including facility inventory lists, photographs of learning activities, and records of assistance provided by the local government.

Data collection was conducted using three main techniques: observation, in-depth interviews, and documentation. Data analysis followed an interactive qualitative model as proposed by Miles and Huberman, which includes data reduction, data display, and conclusion drawing. The data processing involved thematic coding to categorize information into key themes, such as facility conditions, the impact of infrastructural limitations on learning effectiveness, and social support from the surrounding environment. Data trustworthiness was ensured through source and methodological triangulation by comparing interview data with field observations and supporting documents to confirm consistency and validity of the research findings.

Result and Discussion

Results

1. Condition of Learning Facilities and Infrastructure at PAUD Ikhlas Sei Kera Hilir 1

Based on observational data and interview findings, PAUD Ikhlas Sei Kera Hilir 1 continues to experience limitations in the provision of learning facilities and infrastructure. The classroom measures approximately 4 × 6 meters and accommodates 18 children. The available educational play materials are limited to wooden blocks, a whiteboard, and a small number of illustrated storybooks. There are no dedicated reading rooms, outdoor play areas, or digital learning media such as projectors or televisions. As a result, learning activities tend to be monotonous and less

engaging for children.

Table 1. Presents an overview of the condition of learning facilities and infrastructure at PAUD IKHLAS Sei Kera Hilir 1, highlighting the disparity between existing resources and the ideal standards for early childhood education.

No.	Facility	Keterangan		Brief Description
		Availability	Condition	
1	Classroom	1 unit	Poor	Limited space and inadequate ventilation
2	Educational Play Equipment (EPE)	Limited	Fair	Simple and not varied
3	Reading Room / Library	Not available	–	Children do not have access to additional reading materials
4	Outdoor Play Area	Not available	–	Children play in the second-floor corridor
5	Digital Learning Media	Not available	–	Learning activities are conducted manually

2. The Impact of Limited Facilities and Infrastructure on the Learning Process

Based on interviews with the primary informants (two teachers), the findings indicate that limited classroom space and learning resources directly affect children's learning motivation. Teachers reported that children tend to become easily bored, frequently lose focus, and show reduced levels of participation during learning activities. Learning sessions are often interrupted due to children's difficulty in maintaining attention within the confined space.

In addition, play-based learning activities could not be implemented optimally because of insufficient space for movement. Teachers stated that children's opportunities to engage in physical play and exploratory activities were limited, as the classroom size did not allow for flexible learning arrangements. As a result, learning activities were predominantly conducted in a seated position and relied on verbal instruction rather than interactive play.

3. Parental and Government Support for Learning Facilities

Interview findings indicate that most parents are unable to provide financial support for the procurement of learning facilities due to economic constraints. Parental involvement is primarily manifested in the form of moral support, such as assisting with daily school activities and accompanying children during learning sessions. Financial contributions toward improving learning facilities remain limited.

In addition, the village administrative officer reported that government assistance provided to PAUD Ikhlas Sei Kera Hilir 1 is restricted to supplementary feeding programs and periodic health check-ups. Support aimed at improving learning facilities or educational infrastructure has not yet been implemented.

Discussion

The findings of this study demonstrate that limitations in learning facilities and infrastructure at PAUD IKHLAS Sei Kera Hilir 1 have a substantial influence on the effectiveness of early childhood learning. The restricted classroom space, lack of educational play equipment, and absence of supporting facilities such as reading rooms, outdoor play areas, and digital media indicate a learning environment that does not fully support developmentally appropriate practices. This condition is inconsistent with international perspectives on early childhood education, which emphasize that a well-designed physical environment is a critical component of children's cognitive, social, and emotional development (Santrock, 2023).

The results further reveal that limited facilities directly affect children's learning motivation and engagement. Children were observed to become easily bored, lose focus, and participate less actively in learning activities. These findings align with constructivist and play-based learning theories, which posit that young children learn most effectively through active exploration, movement, and interaction with their environment. Previous international studies have consistently shown that inadequate learning spaces and limited instructional materials reduce opportunities for exploratory play and experiential learning, thereby constraining optimal developmental outcomes (Fitriani, 2023). In this context, the dominance of seated and teacher-centered activities observed in this study reflects structural constraints rather than pedagogical preferences.

From the teachers' perspective, the lack of adequate facilities also limits instructional innovation. Although teachers demonstrated creativity by developing simple teaching aids from recycled materials, such efforts were insufficient to compensate for the absence of standardized educational resources. This finding supports Bafadal's (2003) argument that educational facilities and infrastructure play a strategic role in enabling effective and innovative teaching practices. Without adequate material support, teachers face difficulties in implementing varied and interactive learning strategies that are essential in early childhood education.

The study also highlights limited parental and governmental support in strengthening learning facilities. Parental involvement was largely confined to moral support and participation in daily school activities, while financial contributions remained minimal due to economic constraints. Similar patterns have been reported in previous studies, which suggest that families from lower socioeconomic backgrounds often prioritize basic needs over educational investments, particularly in early childhood settings (Wulandari & Rahmah, 2023). Meanwhile, government support was primarily focused on nutrition and health programs, with little emphasis on improving educational infrastructure. Although such programs are important for children's well-being, the absence of infrastructural support creates an imbalance in service provision.

From a policy perspective, these findings indicate a gap between regulatory frameworks and their implementation at the institutional level. Indonesian education policy, as outlined in the Regulation of the Ministry of Education No. 137 of 2014, mandates that early childhood education institutions provide safe, comfortable, and developmentally appropriate learning facilities. However, the conditions observed in this study suggest that compliance with these standards remains uneven, particularly in urban early childhood education institutions operating within public facilities such as village administrative buildings. This gap reflects broader challenges in translating policy mandates into concrete support mechanisms at the local level.

Overall, this study contributes to the existing literature by providing empirical evidence from an urban early childhood education context that is often underrepresented in previous research. While earlier studies have predominantly focused on rural settings or macro-level policy analyses, this research underscores the importance of cross-sector collaboration among educators, parents, and local governments to ensure that early childhood education policies are effectively implemented. Strengthening learning facilities should therefore be viewed not merely as a technical issue but as a shared responsibility essential for improving the quality and equity of early childhood education services.

Conclusion

This study concludes that limitations in learning facilities and infrastructure at PAUD Ikhlas Sei Kera Hilir 1 significantly hinder the effectiveness of early childhood learning. Restricted classroom space, insufficient educational play equipment, and the absence of supporting facilities such as reading rooms, outdoor play areas, and digital learning media reduce children's learning motivation and limit opportunities for active and play-based learning. These conditions also constrain teachers' ability to implement varied and innovative instructional strategies.

Furthermore, the findings reveal that support from parents and local government remains limited. Parental involvement is largely confined to moral support due to economic constraints, while government assistance primarily focuses on nutrition and health programs rather than the improvement of educational infrastructure. This situation reflects a gap between early childhood education policy standards and their implementation at the institutional level.

Overall, the study highlights the need for stronger collaboration among educators, parents, and government stakeholders to improve learning facilities and ensure the provision of developmentally appropriate learning environments. Addressing infrastructural limitations is essential not only for enhancing learning effectiveness but also for promoting equitable access to quality early childhood education in urban contexts.

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