



Comparative Analysis of Facilities and Infrastructure in Urban and Rural Early Childhood Education Centers (TPA) in Indonesia Toward Achieving Quality Early Childhood Education (PAUD)

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Article Info

Article history:

Received 28-01-2026

Revised 02-03-2026

Accepted 17-03-2026

Keyword:

Analysis; Infrastructure;
TPA; Quality Early
Childhood Education

ABSTRACT

Facilities and infrastructure are important elements in supporting early childhood learning in Child Care Parks (TPA) to create quality PAUD. Despite numerous policies regulating standards for Early Childhood Education (ECE) facilities in Indonesia, limited empirical studies have examined how the availability and management of such facilities at the institutional level contribute to children's holistic growth and development. This gap highlights the need for context-based analysis that connects regulatory standards with actual implementation practices in specific TPA settings. This research aims to analyze the availability and management of facilities and infrastructure at Ibnu Mas'ud TPA, with a focus on their contribution to children's growth and development. The approach used is descriptive qualitative, through interviews, observation, and documentation. The results of the research show that the facilities and infrastructure for early childhood learning at Ibnu Mas'ud TPA are generally classified as good, meaning that the provision of facilities is in accordance with the 2015 operational guidelines for the establishment of TPA. The facilities and infrastructure at Ibnu Mas'ud TPA include learning spaces such as the environment and buildings, learning infrastructure, supporting facilities, indoor and outdoor Educational Game Equipment (EGE), as well as maintenance and supervision mechanisms. This study contributes to the existing body of knowledge by providing empirical evidence on how compliance with national facility standards translates into practical support for early childhood learning quality at the institutional level. Furthermore, the findings offer practical implications for policymakers and TPA managers in strengthening facility planning, management, and service improvement strategies to enhance the overall quality of PAUD services. However, it is necessary to provide additional facilities to further improve the quality and services at the TPA.



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INTRODUCTION

Early Childhood Education (ECE) represents a crucial stage in fostering children's holistic development. The quality of learning at this level is closely linked to the availability and effective management of adequate facilities and infrastructure. Daycare Centers (Taman Penitipan Anak/TPA) are part of non-formal ECE services for children aged 0–6 years, providing both caregiving and educational support for working parents (Sum, 2023).

A needs analysis of facilities and infrastructure is an essential step to ensure that institutional resources effectively support learning processes (Gunawan & Benty, 2021). Idris (2021) emphasizes that systematic data collection enables institutions to evaluate and improve service quality (Mukhlis, Suradi, et al., 2023; Mukhlis, 2025b). In the context of ECE, facilities include learning materials, educational play equipment, and instructional media, while infrastructure refers to physical spaces such as classrooms, playgrounds, and sanitation facilities. Child-friendly environments have been shown to enhance cognitive, social, and motor development (Rohiyatun & Najwa, 2021).

However, not all ECE institutions in Indonesia meet established facility standards. Limitations are particularly evident in rural areas and community-managed daycare centers, where financial constraints, weak inventory management, and limited external support remain persistent challenges (Mahmud et al., 2020). Addressing these issues requires collaboration among stakeholders, including government agencies, communities, and parents (Rahmawati & Arif, 2021).

Beyond availability, effective management of facilities—through planning, maintenance, and evaluation—is equally critical to ensuring sustainability and optimal utilization (Mulyasa, 2021). Without proper management, even adequate resources may fail to support children’s developmental needs. Although budgetary limitations often hinder improvements in many institutions, some daycare centers have demonstrated adaptive strategies to maintain and optimize their facilities.

In this context, TPA Ibnu Mas’ud presents an interesting case, as it has maintained relatively adequate facilities and infrastructure despite broader systemic constraints (Mukhlis, Arifin, Ridwan, & Zulbaidah, 2025; Mukhlis, Arifin, Ridwan, Zulbaidah, et al., 2025). Therefore, this study aims to examine the availability and management of facilities and infrastructure at TPA Ibnu Mas’ud and their contribution to supporting children’s growth and development.

RESEARCH METHODS

This study employs a qualitative research design with a descriptive approach. Qualitative research produces descriptive data in the form of written narratives and seeks to understand phenomena within their natural context. Descriptive research aims to portray actual conditions without manipulation or intervention by the researcher. Sugiyono (2020) states that a descriptive approach in qualitative research provides detailed explanations of specific phenomena, enabling the findings to serve as a basis for policy recommendations.

The study was conducted at TPA Ibnu Mas'ud using a purposive sampling technique to select participants who possessed direct knowledge and involvement in the management of facilities and infrastructure. The criteria for participant selection included: (1) individuals holding managerial or administrative responsibilities at the TPA; (2) educators directly involved in daily learning activities; and (3) staff members responsible for the maintenance or supervision of facilities. Based on these criteria, key informants consisted of the head of the TPA, teachers, and administrative personnel. This sampling strategy ensured that the data obtained were rich, relevant, and aligned with the research objectives.

In the context of this study, a comprehensive description of facilities and infrastructure constituted the primary data for formulating development strategies. Data collection was conducted through observation, interviews, and documentation. Observations were carried out directly in the TPA environment using a structured observation guide focusing on physical infrastructure (classrooms, playgrounds, sanitation facilities), learning equipment (indoor and outdoor Educational Game Equipment), and supporting facilities. Field notes and photographs were used to systematically record findings.

Semi-structured interviews were conducted face-to-face with selected informants using an interview guide designed to explore planning, procurement, maintenance, and supervision processes related to facilities and infrastructure. Each interview lasted approximately 30–60 minutes and was audio-recorded with participants’ consent to ensure data accuracy.

Documentation techniques involved reviewing institutional records, inventory lists, maintenance logs, photographs, and relevant policy documents, including the 2015 operational guidelines for TPA establishment. These documents were analyzed to triangulate and validate data obtained from observations and interviews.

The findings of this study were derived from information provided by informants and triangulated across the three data sources to ensure credibility and trustworthiness. Data analysis followed qualitative procedures, including data reduction, data display, and conclusion drawing, as suggested by Miles and Huberman, to systematically interpret the findings.

RESULTS AND DISCUSSION

Based on the 2015 Technical Guidelines for the Implementation of Child Care Centers, TPA Ibnu Mas'ud generally meets the required standards concerning learning spaces, infrastructure, educational play equipment, and maintenance procedures (Kebudayaan, 2015). The findings indicate that compliance with these standards is not merely administrative but functionally supports children's daily learning experiences and developmental processes (Mukhlis et al., 2024; Mukhlis, Maryam, et al., 2023). The classrooms are equipped with proper ventilation and natural lighting, fulfilling health and safety requirements. A physically comfortable learning environment contributes to children's concentration, emotional stability, and engagement in structured and play-based activities.

The available infrastructure includes a classroom divided into two learning areas, an administrative office, a school health unit (UKS), a kitchen, separate bathrooms for teachers and children, handwashing stations, and a storage room. The presence of sanitation facilities and health services plays a direct role in fostering healthy habits and ensuring children's physical well-being, which form the foundation of optimal early childhood development. Although the daycare does not have a garden area, the surrounding fence ensures safety and controlled movement, thereby minimizing potential risks during outdoor activities.

In terms of educational play equipment, outdoor facilities such as swings, a slide, a balance beam, a climbing ladder, and a seesaw are available. These facilities contribute significantly to the stimulation of gross motor skills, body coordination, balance, and controlled risk-taking abilities. Indoor learning media—including puzzles, blocks, loose parts materials, toy sets, scissors, and craft materials—support fine motor development, creativity, symbolic thinking, and early problem-solving skills. The use of loose parts media, in particular, encourages exploratory learning and imaginative play, which are closely associated with cognitive flexibility and higher-order thinking in early childhood.

These findings align with previous research emphasizing that child-friendly environments and adequate play facilities enhance children's cognitive, social, and motor development (Rohiyatun & Najwa, 2021; Nur et al., 2023). However, this study extends existing literature by demonstrating how national facility standards are translated into concrete developmental stimulation at the institutional level (Mukhlis, 2025a; Mukhlis & Saidah, 2025). While earlier studies have highlighted the conceptual importance of facilities (Romlah & Sagala, 2022), the present findings show the specific pathways through which infrastructure and educational equipment directly influence multiple developmental domains.

Maintenance and supervision practices at TPA Ibnu Mas'ud further strengthen the effectiveness of these facilities. Routine cleaning, periodic inspection of play equipment, and active supervision by teachers ensure safety and sustainability. Effective maintenance not only preserves physical infrastructure but also guarantees uninterrupted learning experiences, reducing potential hazards that could disrupt children's developmental processes. This management practice reflects Mulyasa's (2021) emphasis on integrating planning, evaluation, and sustainability in educational facility management.

Despite meeting minimum standards, the findings reveal that the diversity and quantity of educational teaching aids remain relatively limited. While compliance with technical guidelines ensures adequacy, it does not automatically guarantee optimal developmental enrichment, particularly in contexts where resource variation is constrained. This condition is commonly observed in rural or community-managed daycare centers facing financial limitations (Mahmud et al., 2020). Therefore, strengthening the variety of learning media and expanding play equipment should be considered strategic priorities to enhance developmental quality beyond basic compliance.

From a policy perspective, these findings suggest that improving daycare quality in underfunded settings requires more than infrastructure provision alone (Mukhlis, Janwari, et al., 2023; Mukhlis & Abdullah, 2025). Targeted funding schemes, strategic resource planning, and collaborative partnerships between government, communities, and private sectors are necessary to reduce

disparities in facility quality across regions. Operational Assistance Funds (BOP) and other funding mechanisms may be optimized not only to meet minimum standards but also to support innovation and diversification of educational resources.

Overall, TPA Ibnu Mas'ud demonstrates that structured management, adherence to national technical standards, and consistent maintenance can create a supportive environment for children's holistic growth and development. However, advancing from standard compliance toward developmental excellence requires continuous resource diversification, stronger institutional capacity, and supportive policy interventions, particularly for daycare centers operating in rural or financially constrained contexts.

CONCLUSION

This study examined the availability and management of facilities and infrastructure at TPA Ibnu Mas'ud and their contribution to supporting children's holistic growth and development. The findings demonstrate that the institution generally complies with the 2015 Technical Guidelines for the Implementation of Child Care Centers, particularly in terms of learning spaces, sanitation facilities, educational play equipment, and maintenance mechanisms. Such compliance is not merely administrative in nature but functionally supports daily learning activities and children's developmental needs. The availability of well-ventilated classrooms, adequate sanitation facilities, health units, and structured indoor and outdoor play equipment creates a safe, healthy, and child-friendly environment. These conditions positively contribute to children's cognitive, social, emotional, and motor development. Furthermore, the integration of structured maintenance routines and active supervision practices strengthens the sustainability and effectiveness of facility utilization. This indicates that effective management—through planning, procurement, maintenance, and evaluation—plays a decisive role in ensuring that infrastructure meaningfully enhances educational quality. However, while the facilities meet minimum national standards, the diversity and quantity of educational teaching aids remain relatively limited. Compliance with technical standards ensures adequacy but does not automatically guarantee optimal developmental enrichment. Therefore, future improvement efforts should prioritize expanding and diversifying learning media and educational play equipment to move beyond basic compliance toward excellence in service quality. Overall, TPA Ibnu Mas'ud illustrates that structured management, adherence to regulatory standards, and consistent maintenance can create a supportive environment for quality Early Childhood Education (PAUD). Strengthening institutional capacity, optimizing funding mechanisms, and fostering collaboration among stakeholders are essential strategies to sustain and enhance the quality of daycare services, particularly in contexts facing financial and infrastructural constraints.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article. The research was conducted independently without any commercial or financial relationships that could be construed as a potential conflict of interest.

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