

# IMPLEMENTATION OF EARLY CHILDHOOD EDUCATION MANAGEMENT IN FACILITIES AND INFRASTRUCTURE GOVERNANCE TO IMPROVE CHILDREN'S LEARNING OUTCOMES AT PAUD SAUNG

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| ARTICLE<br>INFORMATION                                                                                                                                                                                    | ABSTRACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <p><b>Keywords:</b><br/>Early Childhood<br/>Education Management;<br/>Facilities and<br/>Infrastructure; Children's<br/>Learning Outcomes; Early<br/>Childhood Education;<br/>Educational Management.</p> | <p><i>Management of facilities and infrastructure is an important aspect in the implementation of Early Childhood Education (PAUD) because it plays a role in creating a safe, comfortable, and conducive learning environment for child development. Management of facilities and infrastructure that is carried out in a planned, organized, and sustainable manner can support the effectiveness of the learning process and improve student learning outcomes. This study aims to describe the implementation of early childhood education management in the governance of facilities and infrastructure to improve children's learning outcomes at the Saung PAUD Institution. The study uses a qualitative approach with a descriptive research type. Research informants consisted of the principal, teachers, education staff, and parents of students who were selected using a purposive sampling technique. Data were collected through semi-structured interviews, observation, and documentation. Data validity was tested using source triangulation, technical triangulation, and member checking, while data analysis refers to the Miles, Huberman, and Saldaña model which includes data condensation, data presentation, and conclusion drawing. The results of the study indicate that the implementation of facility and infrastructure management at PAUD Saung has been carried out through the stages of systematic planning, procurement, inventory, utilization, maintenance, supervision, and evaluation. This management involves the principal, teachers, education staff, and parental support so that all facilities can be utilized optimally in the learning process. The use of facilities and infrastructure that are appropriate to the needs of children's development creates an active, safe, and enjoyable learning environment that increases children's participation, creativity, independence, as well as cognitive, motor, language, and social-emotional abilities. Thus, the implementation of effective facility and infrastructure management contributes to improving the quality of educational services and children's learning outcomes at PAUD Saung.</i></p> |

## A. Introduction

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*Early Childhood Education (ECE) serves as the fundamental foundation for fostering children's optimal development. During the early years, children experience rapid physical, cognitive, emotional, and social growth, making it essential to provide a learning environment that is safe, comfortable, and supported by professional institutional management. Early Childhood Education Management refers to a structured approach designed to organize educational institutions that focus on early childhood development. This concept encompasses various aspects, including curriculum management, learning implementation, human resource management, and comprehensive evaluation of educational processes (Argilia et al., 2025). Facility and infrastructure management constitutes an integral component of educational management because it ensures the availability of learning resources and educational facilities that meet children's developmental needs. This management process includes several essential stages, such as needs assessment and planning, procurement, inventory management, maintenance, and disposal of facilities. This view is consistent with the argument that educational facility and infrastructure management comprises planning, procurement, distribution, maintenance, disposal, and supervision within educational administration. When these stages are implemented systematically, educational facilities can be utilized optimally to support the learning process (E-issn & Perencanaan, 2026) in (Putri et al., 2024).*

*The effectiveness of facility and infrastructure management is determined not only by the availability of adequate educational resources but also by the institution's ability to optimize their utilization according to the developmental needs of young children. Well-managed facilities contribute significantly to the creation of a conducive learning environment, thereby enhancing the effectiveness of teaching and learning activities. The findings of (Ramdhiani, n.d.) indicate that facility and infrastructure management has a substantial influence on the teaching and learning process. Learning objectives are more likely to be achieved when educational facilities are adequate, properly managed, and capable of supporting teachers in implementing active and enjoyable learning experiences. These findings suggest that the quality of learning is influenced not only by teachers' professional competence but also by the availability and effective management of appropriate learning facilities.*

*Consistent with these findings, (Harapan et al., 2025) in (Fitria et al., 2024) explain that facility and infrastructure management should be implemented through systematic planning and sustainable practices involving multiple stakeholders, including ECE administrators, teachers, parents, and the government in terms of funding and supervision. Planning educational facilities based on children's developmental characteristics enables teachers to provide more meaningful learning experiences. Furthermore, (E-issn & Perencanaan, 2026) emphasizes that facility and infrastructure management plays a strategic role in improving learning quality, particularly in early childhood education institutions located in rural areas. Effective facility management enables institutions to maximize available resources despite financial constraints that may limit maintenance activities.*

*Optimizing facility and infrastructure management requires the active involvement of school principals, teachers, educational staff, and the wider community. Such collaboration ensures that all educational facilities are effectively utilized and maintained sustainably, thereby supporting the overall quality of educational services. The role of the principal as an educational manager is particularly crucial in ensuring successful facility governance. (Ayibab & Andari, 2022) demonstrate that principals implement facility and infrastructure management by collecting information from all members of the school community. Community participation, represented by the school committee, also contributes to this process. Principals are responsible for developing facility plans, supervising the utilization of educational resources, and establishing maintenance strategies to ensure that facilities remain suitable for learning activities.*

Nevertheless, numerous studies have reported that many early childhood education institutions continue to encounter challenges in managing facilities and infrastructure, including limited financial resources, inadequate asset inventory systems, and insufficient maintenance of learning facilities. Therefore, the management of educational facilities and infrastructure requires systematic managerial processes and professional expertise to improve educational quality (Febrianti et al., 2025). These challenges may hinder the effectiveness of learning and negatively affect children's learning outcomes. As one of the early childhood education institutions, PAUD Saung is expected to implement educational management effectively, particularly in the governance of facilities and infrastructure. Effective facility management is anticipated to create a learning environment that is safe, comfortable, engaging, and appropriate for children's developmental characteristics. Therefore, this study aims to analyze the implementation of early childhood education management in facility and infrastructure governance to improve children's learning outcomes at PAUD Saung.

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## B. Method

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This study employed a qualitative approach using a descriptive research design (Sugiyono, 2013). This approach was selected to obtain an in-depth understanding of facility and infrastructure management in Early Childhood Education (ECE) at PAUD Saung based on the experiences, perspectives, and practices of individuals involved in the institution's educational management. A qualitative approach enables researchers to investigate phenomena within their natural settings, thereby providing a comprehensive description of the actual conditions observed in the field.

The study was conducted at PAUD Saung. The research site was selected because the institution has implemented facility and infrastructure management as part of its efforts to improve the quality of early childhood education services. The research was carried out from September to November 2026 and consisted of four stages: preparation, data collection, data analysis, and report writing.

Research participants were selected using a purposive sampling technique, whereby informants were chosen based on their knowledge and experience regarding the implementation of educational management within the institution. The participants included the principal, who was responsible for the overall institutional management; classroom teachers, who were directly involved in utilizing learning facilities and infrastructure; educational staff responsible for supporting facility management; and several parents of students who served as supporting informants to provide information regarding the impact of facility management on children's learning processes.

The study utilized both primary and secondary data. Primary data were collected through in-depth interviews, direct observations, and documentation. Semi-structured interviews were conducted with all research participants using an interview guide developed prior to the data collection process. Observations were carried out to examine the physical condition of educational facilities and infrastructure, the utilization of learning resources during classroom activities, and the interactions between teachers and children throughout the learning process. Documentation was used to complement the collected data, including the institutional profile, facility and infrastructure inventory records, photographs of learning activities, facility maintenance schedules, and other administrative documents related to facility and infrastructure management.

In qualitative research, the researcher served as the primary research instrument (human instrument). To support the data collection process, several supporting instruments were employed, including interview guidelines, observation sheets, documentation guidelines, audio recording devices, cameras, and field notes. Before

*implementation, the interview guidelines were developed based on the key indicators of facility and infrastructure management, namely planning, procurement, inventory management, utilization, maintenance, supervision, and evaluation.*

*To ensure the trustworthiness of the data, credibility was established through source triangulation, methodological triangulation, and member checking. Source triangulation involved comparing information obtained from the principal, teachers, educational staff, and parents. Methodological triangulation was conducted by comparing findings derived from interviews, observations, and documentation. Subsequently, interview findings were verified through member checking by asking participants to confirm that the collected information accurately reflected the actual conditions within the institution.*

*Data analysis followed the interactive model proposed by Miles, Huberman, and Saldaña (2014), which consists of three stages: data condensation, data display, and conclusion drawing/verification. During the data condensation stage, the researcher selected, focused, organized, and simplified the information collected from the field. The data were then presented in the form of narrative descriptions, matrices, and tables to facilitate interpretation. Finally, conclusions were drawn and continuously verified throughout the research process to ensure their credibility. The findings were subsequently interpreted by relating them to theories of early childhood education management and previous studies on facility and infrastructure governance in early childhood education institutions. Through this process, the study is expected to provide a comprehensive understanding of the implementation of educational management in facility and infrastructure governance and its contribution to improving children's learning outcomes at PAUD Saung.*

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## C. Result and Discussion

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Picture 1.1 Interview Documentation at PAUD Saung

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Picture 1.2 Documentation of Facilities and Infrastructure at PAUD Saung

Based on the findings obtained through observations, interviews, and documentation conducted at PAUD Saung, the implementation of facilities and infrastructure management has been carried out systematically through the stages of planning, procurement, inventory management, utilization, maintenance, supervision, and evaluation. These processes are implemented collaboratively by the principal, teachers, educational staff, and parents of the students.

### **1. Facilities and Infrastructure Planning**

Planning activities are conducted at the beginning of each academic year through a staff meeting attended by the principal and all teachers. During the meeting, facility needs are identified based on the number of enrolled children, learning themes, the condition of existing facilities, and the National Standards for Early Childhood Education. The principal explained that all proposals for procuring educational facilities are prioritized according to the institution's most urgent needs, allowing the available budget to be utilized

efficiently. Teachers are also encouraged to propose instructional media that correspond to children's developmental stages. Observation results indicate that classrooms have been designed according to the characteristics of early childhood learners by providing play corners, reading corners, art areas, and learning media that are easily accessible to children.

## **2. Facilities and Infrastructure Procurement**

The procurement of educational facilities is financed through several sources, including school operational funds, government assistance, and support from the school committee and parents. Procurement priorities focus primarily on instructional media, Educational Play Equipment (APE), children's storybooks, art materials, and outdoor learning resources. Teachers stated that every newly acquired facility is carefully aligned with learning objectives to ensure that it is effectively integrated into daily classroom activities.

## **3. Facilities Inventory Management**

Documentation revealed that all educational facilities have been systematically recorded in the school's inventory register. Each item is assigned an inventory code to facilitate documentation, monitoring, and supervision. Inventory activities are conducted regularly at the end of each semester to identify the condition of each asset, determine maintenance requirements, and identify facilities that require replacement.

## **4. Utilization of Facilities and Infrastructure**

Observations showed that teachers utilize various educational facilities effectively throughout the learning process. Learning media are selected according to the daily learning themes, enabling children to participate actively in play-based learning activities. At PAUD Saung, the surrounding natural environment is extensively utilized as a learning resource, including the school garden, playground, plants, sand, stones, water, and other natural materials. The use of these resources enables children to gain direct learning experiences, making it easier for them to understand learning concepts in meaningful and concrete ways.

## **5. Facilities and Infrastructure Maintenance**

Facility maintenance is conducted routinely through weekly inspections of all educational resources. Teachers encourage children to develop the habit of cleaning and organizing educational play equipment after use. According to the principal, minor damages are repaired immediately by the school, while major repairs or replacements are proposed in the subsequent procurement program. Furthermore, a culture of caring for educational facilities is instilled in children by encouraging them to return learning materials and play equipment to their designated places after use.

## **6. Supervision and Evaluation**

Supervision is carried out directly by the principal through continuous monitoring of classroom activities and regular inspections of educational facilities. Evaluations are conducted at the end of each semester to assess the effectiveness of facility utilization, identify the need for additional educational resources, and discuss challenges encountered by teachers during the learning process. Based on interview findings, teachers reported that these evaluation activities assist the school in determining priorities for facility development in the following academic year.

## **7. The Impact of Facilities and Infrastructure Management on Children's Learning Outcomes**

The implementation of effective facilities and infrastructure management has had a positive impact on children's learning outcomes. Observational findings indicate that children demonstrate greater curiosity by asking more questions, collaborate more effectively with their peers during group activities, exhibit higher

*levels of curiosity, and understand learning materials more easily through direct experiences. Teachers also reported that the use of diverse instructional media enhances children's concentration, creativity, motor development, language skills, and social-emotional competencies.*

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*The findings demonstrate that the implementation of facilities and infrastructure management at PAUD Saung fulfills the fundamental functions of educational management, including planning, organizing, implementation, supervision, and evaluation. The planning stage involves identifying institutional needs through collaboration between the principal and teachers. This practice reflects the application of participatory management principles in early childhood education, where decisions are based on actual needs identified in the field. These findings are consistent with (Argilia et al., 2025), who argue that the management of early childhood education institutions should be implemented systematically through comprehensive planning to ensure the effective implementation of educational programs.*

*Regarding procurement, PAUD Saung utilizes multiple funding sources, enabling educational facilities to be acquired gradually according to institutional priorities. This strategy reflects the institution's ability to manage available resources efficiently. Such management practices are consistent with the findings of (Harapan et al., 2025), who emphasize that the procurement of educational facilities should be aligned with learning needs and supported by the participation of multiple stakeholders to ensure the sustainability of educational programs. Furthermore, periodic inventory management facilitates effective monitoring of institutional assets while also supporting the planning of future facility requirements. Consequently, educational resources can be utilized optimally while minimizing the risk of asset loss or deterioration.*

*Observation findings further indicate that the utilization of facilities and infrastructure effectively supports child-centered learning. Teachers not only employ instructional media within the classroom but also integrate the natural environment into the learning process. This practice aligns closely with the characteristics of PAUD Saung as a nature-based early childhood education institution, where direct experiential learning is emphasized. Utilizing the surrounding environment as a learning medium enhances children's curiosity, critical thinking skills, and problem-solving abilities. These findings reinforce the study conducted by Ramdhiani, which concluded that effective facilities and infrastructure management contributes significantly to improving the effectiveness of the teaching and learning process, ultimately leading to better student learning outcomes.*

*With regard to maintenance, the school has successfully established a culture of preserving educational facilities among both teachers and children. Routine maintenance ensures that facilities remain safe, functional, and suitable for learning activities, thereby supporting children's safety and comfort. The principal's supervision also demonstrates effective managerial leadership. In addition to monitoring the condition of educational facilities, the principal actively provides solutions whenever challenges arise during the learning process. These findings are consistent with (Ayibab & Andari, 2022), who state that school principals play a crucial role in supervising, coordinating, and evaluating the management of educational facilities and infrastructure.*

*The positive impact of this management implementation is reflected in the improved quality of the learning process. Children become more active and enthusiastic in participating in classroom activities, interact more effectively with their peers, and demonstrate noticeable progress in cognitive, language, motor, social-emotional, and creative development. These findings indicate that successful learning in early childhood education is influenced not only by teachers' professional competence but also by systematic, sustainable, and developmentally appropriate management of educational facilities and infrastructure.*

*Overall, the implementation of facilities and infrastructure management at PAUD Saung has successfully supported the creation of a learning environment that is safe, comfortable, enjoyable, and conducive to children's development. Well-planned and systematic management has contributed significantly to improving the quality of educational services while simultaneously enhancing children's learning outcomes.*

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## D. Conclusion

*Based on the findings of this study, it can be concluded that the implementation of Early Childhood Education (ECE) management in the governance of facilities and infrastructure at PAUD Saung has been systematically carried out through the stages of planning, procurement, inventory management, utilization, maintenance, supervision, and evaluation. Each of these stages involves the active participation of the principal, teachers, educational staff, and parents, resulting in an effective and sustainable system of facility and infrastructure management.*

*Effective management of educational facilities and infrastructure has made a significant contribution to improving the quality of the learning process. The availability of facilities that are appropriate to children's developmental needs has created a learning environment that is safe, comfortable, engaging, and enjoyable, enabling children to become more active, creative, and capable of understanding learning materials through direct experiences. Furthermore, the school's culture of maintaining educational facilities has helped ensure that these resources remain in optimal condition and continue to support the learning process effectively.*

*Overall, the implementation of facilities and infrastructure management at PAUD Saung plays a vital role in enhancing the quality of educational services while simultaneously improving children's learning outcomes. Therefore, the institution should continue to strengthen its facility and infrastructure management system through regular evaluation, continuous professional development of human resources, and stronger collaboration with parents and the wider community. These efforts are expected to further improve the quality of early childhood education services and provide an increasingly supportive learning environment for children's holistic development.*

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