



Management of Facilities and Infrastructure for Optimization of Play-Based Learning in Kindergarten

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ABSTRACT

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This research aims to analyze the optimization of facilities and infrastructure in supporting play-based learning in TK MBC (Masjid Besar Ciparay) Bandung Regency using a descriptive qualitative approach through observation, interviews, and documentation. The results show that the management of facilities is conducted through planning, procurement, inventory, maintenance, storage, disposal, and supervision involving the school principal, teachers, staff, and even children, as well as utilizing technology such as smartboards and surveillance cameras. The play method has proven effective in developing children's cognitive, social, emotional, and motor aspects. Supporting factors for optimization include the availability of complete facilities, curriculum support, the role of teachers, school principals, and parents, while inhibiting factors include budget constraints, limited space, equipment damage, and a lack of understanding among teachers. This research concludes that the optimization of facilities and infrastructure is very important in creating a varied, effective, and enjoyable learning experience for early childhood

INTRODUCTION

This research focuses on the importance of the role of Kindergarten (TK) in early childhood education, especially during the Golden Age (0-6 years), which is a period of rapid child intelligence development. Kindergartens not only serve as a learning medium but also as places for character formation and the development of basic skills in children. The standards for kindergarten facilities and infrastructure are regulated in the Minister of Education and Culture Regulation Number 22 of 2023, which emphasizes the importance of adequate facilities to support the optimal growth and development of children (Minister of Education and Culture Regulation, 2023).

The management of facilities and infrastructure in kindergartens is not limited to the provision of amenities, but also includes maintenance and the sustainability of their use. Common issues that arise include facilities that do not meet needs, the accumulation of unused equipment, and a lack of maintenance. This impacts the decline in comfort and quality of learning, as facilities that are supposed to support play-based methods instead become obstacles (Khoerunnisa, 2015).

In addition to physical facilities, human resources (HR) also play a significant role in the success of preschool management. School principals, teachers, and supporting staff are required to have managerial skills to organize resources that support the applied learning methods. The use of technology can also assist management, such as monitoring facilities in real-time, planning maintenance, and developing virtual learning media when in-person learning is limited (Permendikbudristek, 2023).

The optimization of the management of facilities and infrastructure in kindergartens becomes a benchmark for educational quality as well as an important requirement for school accreditation. With a holistic approach, good management can have a positive impact not only on students but also on educators and the school environment. This demands synergy between the use of technology, the enhancement of human resources capacity, and the sustainable management of facilities (Khoerunnisa, 2015).

This research aims to fill a gap that has not been extensively discussed in previous studies, namely how the management of facilities and infrastructure can enhance the effectiveness of learning. Its contribution is expected to strengthen the role of teachers in managing the classroom, improve children's skills through adequate facilities, and assist policymakers in developing the quality of early childhood education. Thus, this research has significant relevance to the creation of a more effective, efficient, and inclusive learning environment (Khoerunnisa, 2015; Permendikbudristek, 2023).

LITERATURE REVIEW

Optimization of Facilities and Infrastructure Management

Optimization means the process of making something better, more effective, and functional. In the context of education, optimization is related to efforts to improve the quality of facilities and infrastructure to support play-based learning in kindergarten. This concept emphasizes that the management

of facilities must be carried out systematically so that the results obtained are truly maximal (Siringoringo, 2005; Tim Prima Pena, 2015).

Management is the process of organizing and managing resources so that goals can be achieved effectively. In education, management includes organizing facilities such as tables, chairs, books, and educational play tools, as well as infrastructure in the form of playgrounds, classrooms, and other supporting infrastructure. All these facilities play an important role in supporting the success of the learning process (KBBI, 2016).

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Management of Facilities and Infrastructure

The management of educational facilities and infrastructure means the effort to manage all resources to create effective learning conditions. Teachers play a central role in organizing learning tools and media so that the learning process runs optimally. With good management, the learning process in the classroom can be more orderly and educational goals can be more easily achieved (Sinta, 2019).

The aims of facility and infrastructure management include improving efficiency, effectiveness, quality, and safety of educational facilities. In addition, good management also helps to reduce procurement and maintenance costs, thus making resource use more economical (Bafadal, 2017; Werang, 2017). Factors influencing the success of management include planning needs, procurement, inventory, maintenance, and the disposal of unused facilities. Success is also determined by technological support, a conducive environment, and the availability of funds. Without these factors, the management of facilities is difficult to run optimally (Yanandar, 2009).

Scope of Facility and Infrastructure Management

The scope of facility management includes planning needs, procurement, inventory, storage, maintenance, disposal, and supervision. All these stages need to be carried out systematically so that educational facilities can be used optimally. Good planning prevents waste and ensures that every school's needs are met (Kompri, 2015; Werang, 2015). Procurement of facilities can be done through purchasing, self-manufacturing, grants, loans, leasing, or recycling. After that, the facilities are recorded in the inventory, stored, maintained, and supervised to remain functional. Maintenance is carried out regularly and

periodically, while disposal is done for items that are damaged, unfit, or no longer needed (Werang, 2015).

Supervision becomes the final stage to ensure that facilities are used as intended. The school principal, supervisors, and related parties play a role in monitoring, evaluating, and improving administration and the use of facilities. With good supervision, educational facilities will be better maintained and function optimally (Werang, 2015).

Play Method Playing

According to Piaget, is how children understand the world and develop their cognitive and sensorimotor skills. Vygotsky adds that play helps children exercise self-control, explore experiences, and become familiar with their surroundings. Through play, children learn while naturally developing their potential (Piaget & Vygotsky in Khadijah & Armanila, 2017).

Play is not only a means of entertainment but also a medium for learning that contributes to the emotional, social, communication, cognitive, and motor skills aspects of children. Playing helps children express emotions while also learning to interact, collaborate, and understand their environment (Khadijah & Armanila, 2017). The function of play also includes the development of problem-solving abilities, building cooperation, and overcoming conflicts and social trauma. Children who are accustomed to playing will have better social skills and be more prepared to face the challenges of everyday life (Khadijah & Armanila, 2017).

Preliminary Research

Research by Khoerunnisa (2015) emphasizes the use of educational play equipment in enhancing the self-confidence of young children. The results of her study indicate that role-play with the right tools can help children feel more confident. However, this research only highlights the function of the tools as media for play, and has not discussed how the management of these facilities is conducted comprehensively (Khoerunnisa, 2015). Research by Werang (2015) places more emphasis on the management of educational facilities, particularly in the aspects of planning, procurement, maintenance, and disposal. The results show that good management of facilities directly impacts the effectiveness of the learning process. Nevertheless, this research has not specifically linked the management of facilities with play-based learning methods in Kindergarten (Werang, 2015).

Furthermore, the research by Kompri (2014) examined educational management in general, including the management of facilities and infrastructure. The main focus of this research is the importance of the availability of educational facilities as a supporting factor for school quality. However, this study does not specifically discuss how facilities and infrastructure are optimized to support play-based methods as the primary approach to early childhood education (Kompri, 2014).

This research has differences as well as advantages compared to the studies by Khoerunnisa (2015), Werang (2015), and Kompri (2014). While Khoerunnisa's study only emphasizes the function of educational play tools, this research links the availability of facilities with comprehensive management. Unlike Werang, who focuses on the management of facilities in general, this

study directly connects it to the effectiveness of play methods in kindergarten. Meanwhile, Kompri's research places more emphasis on the importance of educational facilities from a macro perspective, whereas this study emphasizes the optimization of facilities and infrastructure at the practical level in kindergartens, supported by the role of human resources and the utilization of technology. Thus, this research contributes a new integration of facility management, play methods, and technology within the context of early childhood education.

METHODOLOGY

This study uses a qualitative approach with descriptive analysis methods. This approach was chosen to explore meaning, concepts, and phenomena in depth within a natural context. The research focus is directed towards optimizing facilities and infrastructure to support play-based learning methods in MBC Kindergarten (Masjid Besar Ciparay) in Bandung Regency, with research subjects consisting of the school principal, teachers, and kindergarten staff (Yusuf, 2014).

Data collection techniques were carried out through observation, interviews, and documentation. Observations were conducted in a participatory manner, both openly and discreetly, as well as unstructured to obtain more complete and meaningful data. Interviews were conducted in structured, semi-structured, and unstructured forms to allow the researcher to delve deeper into the information. Meanwhile, documentation was used as a supplement by collecting written notes, photos, and school documents such as profiles, vision and mission statements, and plans. (Sugiyono, 2017; Sidiq & Choiri, 2019).

The research subjects were selected using purposive sampling technique, which is based on certain considerations so that the chosen informants truly understand the issues at hand. The research respondents consisted of the school principal, four teachers with at least a bachelor's degree or who had previously attended kindergarten training, and two customer service staff. This selection aims to obtain valid and reliable information as the primary data source (Sugiyono, 2017).

The research phases were carried out in a circular manner, including preparation study, general exploratory study, and focused exploratory study. The preparation study involved proposal drafting, object selection, and discussions with supervising lecturers. The general exploratory study was conducted through consultations, permissions, initial observations, and literature reviews. Meanwhile, the focused exploratory study included detailed data collection activities, analysis of findings, and the preparation of research reports. The entire research was conducted from December 2024 to July 2025 at MBC Kindergarten Bandung. (Astuti, 2018).

Data analysis is carried out through reduction, presentation, and conclusion drawing. Data from observations, interviews, and documentation are reduced to focus on key issues, then presented in a brief description for easier understanding. Next, conclusions are drawn to answer the research problems. The interpretation process is carried out by providing meaning to the analysis results, comparing them with theories, and compiling the researcher's reflections

so that the research findings have validity and scientific contributions (Sugiyono, 2017; Moleong, 2021).

RESULTS AND DISCUSSION

Research discussions show that the optimization of facilities and infrastructure at MBC Kindergarten is carried out through planning, procurement, inventory, maintenance, storage, disposal, and integrated supervision. Teachers, along with the principal and staff, actively ensure the availability of learning facilities such as motor skills tools, art media, and technology like smartboards. This aligns with Werang's view that well-maintained facilities will support effective learning, and it is also supported by the theological foundation that children need play media that not only fosters physical development but also moral and religious development (Werang, 2015).

The maintenance process of facilities and infrastructure is carried out collaboratively by teachers, staff, and students involved in keeping the classroom facilities. Storage is systematically done using containers and labels to ensure that the resources are easily accessible and monitored. Meanwhile, the removal of damaged resources is done procedurally with a reporting hierarchy up to the foundation, as a form of transparency. The supervision of resources utilizes technology such as surveillance cameras and information systems to monitor the condition of the resources and the learning process, in accordance with John Dewey's progressive view that emphasizes the integration of science and technology in education (Dewey in Werang, 2015).

Playing as a learning method has been shown to have a significant function for early childhood, including developing social, emotional, cognitive, and motor skills. Through play activities such as puzzles, legos, and role-playing, children learn to solve problems, experiment, and engage in social interactions. Piaget's theory emphasizes that children learn through direct experiences that involve physical and social activities. Therefore, adequate facilities and infrastructure are essential factors to support play-based methods so that learning is varied and enjoyable (Piaget in Khadijah & Armanila, 2017).

The supporting factors for the optimization of facilities at TK MBC include the availability of complete tools, teachers' mastery of play methods, as well as support from the curriculum, the principal, and parents. Meanwhile, the inhibiting factors are budget limitations, teachers' knowledge about facility management, equipment damage, and space limitations. According to Qomar, the low understanding of teachers in managing facilities leads to ineffective use. Therefore, efforts to enhance teachers' capacity in facility management become an important step to ensure more optimal learning (Qomar, 2014).

The recommended optimization steps are to conduct thorough facility planning, utilize technology for interactive learning, involve children in maintaining facilities, and perform regular evaluations on every implemented plan. Furthermore, the role of human resources and technology has proven to be very crucial, such as the use of smart TVs, educational videos, and CCTV to support learning and monitoring of facilities. This aligns with QS. An-Nahl verse 68 which emphasizes the utilization of Allah's creations for innovation, as well as

the philosophy of progressivism which highlights education based on student needs and the use of modern technology to enhance learning quality (Moleong, 2021).

CONCLUSIONS AND RECOMMENDATIONS

This research concludes that the optimization of facilities and infrastructure at TK MBC (Ciparay Grand Mosque) has been quite effective through planning, procurement, inventory, maintenance, storage, disposal, and supervision steps. This entire process is carried out collaboratively by the principal, teachers, staff, and even involves children to properly maintain and utilize the facilities. The use of technology such as smartboards, smart TVs, and surveillance cameras also aids in enhancing the effectiveness of learning and facility management (Werang, 2015).

The play method has proven effective in developing the potential of early childhood, in terms of cognitive, motor, social, and emotional aspects. Playing with educational media like puzzles, legos, and role-playing games allows children to learn through direct experience, in accordance with Piaget's theory which emphasizes the importance of physical and social interaction in the learning process (Piaget in Khadijah & Armanila, 2017).

Supporting factors for the optimization of facilities include the availability of complete tools, teachers' mastery in applying play methods, curriculum support, as well as the role of parents and school principals. Meanwhile, the hindering factors are budget limitations, space constraints, equipment damage, and a lack of teachers' understanding of facilities and infrastructure management. This necessitates an increase in teachers' capacity as well as more efficient budget management (Qomar, 2014).

Steps that need to be taken to maintain the sustainability of facility optimization include thorough planning, regular evaluations, the use of technology in learning, and training for teachers on facilities and infrastructure management. By implementing these strategies, facilities and infrastructure can function optimally to support a varied and enjoyable play method (Moleong, 2021).

Overall, the optimization of facilities and infrastructure at TK MBC contributes significantly to enhancing the quality of play-based learning. Collaboration among human resources, technological support, and parental involvement are key factors for success. Thus, the school can create a safe, comfortable learning environment that meets the developmental needs of early childhood.

FURTHER STUDY

This research still has limitations, so it is necessary to conduct further research related to the topic of Management of Facilities and Infrastructure for Optimization of Play-Based Learning in Kindergarten in order to perfect this research and increase insight for readers.

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