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Needs-Based Infrastructure Management Strategies for Accelerating Learning Effectiveness in Islamic Secondary Schools

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Abstract

Adequate and well-maintained school facilities are key to ensuring a comfortable and successful teaching and learning process. This study aims to analyze the management of classroom facilities and infrastructure planning at MTsN 8 Kediri, the obstacles encountered in the field, and the strategies implemented by the school to address these issues. The method used in this study is a descriptive qualitative approach. Data collection was conducted through in-depth interviews, direct field observations and analysis of internal school reports. The results show that MTsN 8 Kediri manages its facilities through neat, bottom-up stages. Given budget constraints, funds are mainly allocated to urgent classroom facilities, such as repairing student chairs and procuring digital learning media (LCD projectors). Asset maintenance is carried out consistently through two systems which are daily routine maintenance based on the K3 (Cleanliness, Security, and Order) movement involving students, and periodic physical maintenance during semester breaks. The school has also established clear damage reporting procedures from homeroom teachers to the infrastructure team for immediate follow-up. The main obstacles faced include limited operational funds, limited building space, a lack of specialized staff with technical expertise, and extreme weather factors that accelerate physical damage to facilities. To overcome these obstacles, MTsN 8 Kediri applies the principle of functional efficiency by prioritizing independent repairs using remaining usable materials, and designing a long-term plan for digitizing inventory data to create a sustainable, high-quality learning environment.

Keywords: Facility Planning; Classroom Facilities and Infrastructure; Learning Effectiveness; LCD Projector; Madrasah

Introduction

According to Matin & Fuad N. (2016), and supported by (Hermawan, 2021) and (Bararah, I. (2020), educational facilities and infrastructure are one of the most important and fundamental resources in supporting the success of the learning process in educational institutions. The success of educational programs in madrasas is greatly influenced by the condition of the facilities and infrastructure owned and how the management and utilization are optimized by the management (Matin & Fuad N., 2016; Nurana Dwina Bintang et al., 2024). educational facilities and infrastructure are one of the most important and fundamental resources in supporting the success of the learning process in educational institutions. The success of educational programs in madrasas is greatly influenced by the condition of the facilities and infrastructure owned and how the management and utilization are optimized by the management (Fitri et al., 2022). On the other hand, according to research presented by Nurstalis dkk. (2021), limited or inadequate facilities are often real obstacles that reduce the quality of academic interactions in the classroom. Therefore, the availability and suitability of educational assets must be managed professionally to meet minimum education service standards (Nasrudin & Maryadi, 2019).

In the implementation of educational management, facility management often faces greater complexity than managing other educational components (Matin & Fuad N., 2016). In the implementation of educational management, facility management often faces greater complexity than managing other educational components (Hasnadi, 2021; Kusnan & Ilam, 2021). Classic problems such as prematurely damaged facilities, the accumulation of useless items, and speculative procurement without real needs analysis are phenomena that often hamper budget efficiency (Matin & Fuad N., 2016; Sutisna & Effane, 2022). To address these challenges, a thorough, systematic, sustainable, and participatory planning process is required, involving all madrasah stakeholders (Kusnan & Ilam, 2021; Rohmansyah & Firdaos, 2022; Wahyuni, 2021).

MTsN 8 Kediri, as a continuously developing Islamic educational institution, is committed to creating a clean, comfortable, and harmonious school environment that is oriented towards academic achievement and student character. As a manifestation of this commitment, the Facilities and Infrastructure division at this madrasah plays a crucial role in ensuring the availability of classrooms, learning media, and adequate sanitation facilities. Based on this context, this study specifically aims to analyze the management process for planning infrastructure needs, evaluate the effectiveness of its implementation in the field, and identify obstacles and follow-up strategies implemented at MTsN 8 Kediri to support effective learning (Nurstalis et al., 2021).

Methods

This study employed a qualitative approach with descriptive qualitative methods to accurately describe the actual situation of facility planning management in the field (Fitri et al., 2022; Kusnan & Ilam, 2021; Nurana Dwina Bintang et al., 2024). This approach was chosen to allow researchers to conduct in-depth, contextual discussions regarding policies and the implementation of infrastructure work programs within the madrasah (Hasnadi, 2021). The collected data were classified based on type, nature, and condition to examine real-world problems at the time of the study (Matin & Fuad N., 2016). Through this descriptive analysis method, researchers presented an objective picture of the actual conditions, processes, characteristics, and quality of facility and infrastructure management at the research site (Kusnan & Ilam, 2021).

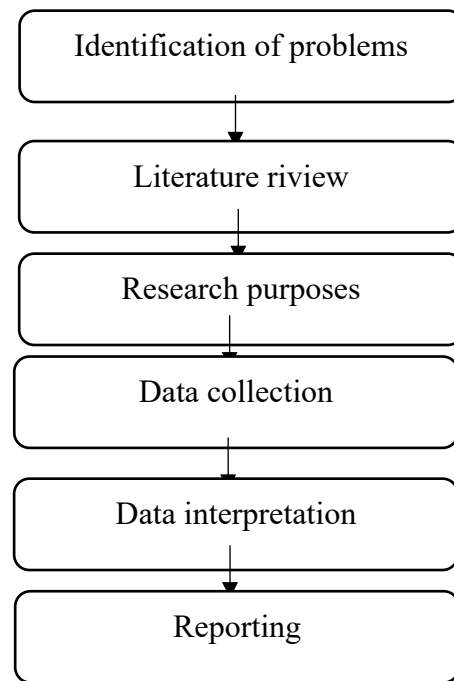


Figure 1. Stages of Qualitative Research

The data collection process was conducted through three main techniques: in-depth interviews, direct observation, and document study (Matin & Fuad N., 2016; Rohmansyah & Firdaos, 2022; Wahyuni, 2021). The interviews were conducted directly with Mr. Muhammad Muhari, S.Pd., Deputy Principal for Facilities and Infrastructure at MTsN 8 Kediri, as the resource person. Observations were conducted to assess the physical feasibility of the school building and facilities, while document study was conducted by analyzing the document "Procurement and Maintenance of Facilities and Infrastructure" for the 2025/2026 academic year as supporting data.

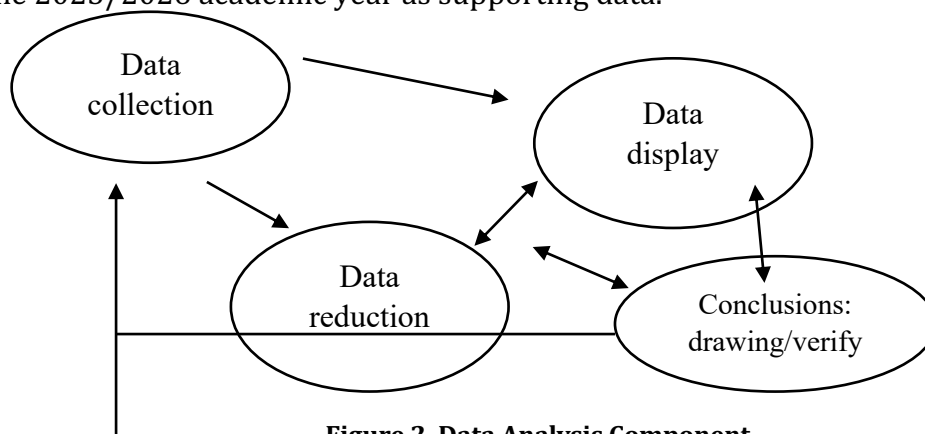


Figure 2. Data Analysis Component

After the data is collected, the analysis is carried out through several steps, namely filtering and grouping relevant information (data reduction), arranging the data into a narrative form of orderly sentences (data presentation), and finally drawing logical conclusions regarding the management of facilities and infrastructure at the school (Fitri et al., 2022, 2022; Hasnadi, 2021; Nurana Dwina Bintang et al., 2024).

Results and Discussion

Results

4.1. Planning of Classroom Facilities and Infrastructure

Based on the results of an interview with Mr. Muhammad Muhari, S.Pd., it was obtained that the planning process for classroom facilities and infrastructure at MTsN 8 Kediri was carried out systematically, structured, and continuously through a bottom-up data collection mechanism. This approach was implemented so that every need that arises in the field can be identified accurately based on the real conditions experienced by the school community. In its implementation, the Facilities and Infrastructure Team (Sarpras) has an important role in conducting an inventory of all assets owned by the school, especially the facilities in each classroom. This inventory activity is carried out periodically with the aim of determining the physical condition of each facility, identifying the level of suitability of use, and detecting early if there is damage or deficiencies in facilities that can hinder the learning process. In addition to collecting data on the condition of assets, the team also records various new needs that arise as a result of changes in the number of students and the development of learning activities at the school.

The planning process not only relies on the results of the Infrastructure Team's observations, but also involves various parties who directly use classroom facilities in teaching and learning activities. Subject teachers, homeroom teachers, and students are given the opportunity to submit suggestions, input, and complaints regarding the condition of the facilities and infrastructure they use every day. The information obtained from these various parties serves as an important basis for determining priority needs that must be met immediately. Thus, the data collection process is not only administrative but also reflects real conditions on the ground, so that decisions are more targeted and aligned with learning needs (Sutisna & Effane, 2022).

In response to changes in the number of study groups (*rombel*), which can increase or decrease each academic year, MTsN 8 Kediri consistently adjusts its planning for classroom facilities and infrastructure. These adjustments are made by considering the number of active students using each classroom, ensuring adequate facilities, such as desks, chairs, whiteboards, and other supporting equipment. This step is a precautionary measure by the school to prevent a shortage of facilities that could disrupt student comfort during learning activities. Furthermore, planning tailored to the conditions of the study groups also aims to optimize the use of school assets, preventing waste or the accumulation of underutilized facilities.

All needs data collected through the inventory process and the selection of proposals from various parties are then discussed collectively in an official coordination meeting held by the school. The meeting involves the Principal, the Vice Principals, the school committee, the Facilities and Infrastructure Team, and administrative staff responsible for managing school assets. Through this forum, each proposal is analyzed and considered based on its level of urgency, available budget, and the priority scale of the school's needs. This collective discussion aims to produce objective and accountable decisions so that each procurement of facilities and infrastructure truly aligns with the school's actual needs. (Nurana Dwina Bintang et al., 2024; Wahyuni, 2021).

The involvement of various stakeholders in the planning process demonstrates that the management of facilities and infrastructure at MTsN 8 Kediri adheres to participatory, transparent, and accountable principles. Every decision is made not solely based on the considerations of one party, but rather through a deliberation process that considers various perspectives to achieve more comprehensive results. With this mechanism, each proposed item or facility can be ensured to have clear benefits, meet

learning needs, and make a real contribution to improving the quality of the learning environment. In addition to supporting the effectiveness of the teaching and learning process, thorough planning also contributes to the school's efforts to realize efficient, targeted management of facilities and infrastructure, oriented towards improving the comfort and quality of educational services for all students (Fitri et al., 2022).

Considering the limited budget that the school has, the planning process for facilities and infrastructure at MTsN 8 Kediri does not only focus on fulfilling all facility needs, but also considers the effectiveness of the use of available funds. Therefore, one of the important stages in facility and infrastructure management is to determine the priority scale carefully and measurably so that the available budget can be utilized optimally (Matin & Fuad N., 2016). Priority determination is carried out by considering the level of urgency of each need, the condition of existing facilities, and their impact on the smooth running of the learning process. Through this process, the school strives to ensure that every budget expenditure provides maximum benefits for educational activities and is not used for less urgent needs.

In its implementation, schools prioritize the fulfillment of core facilities that directly support teaching and learning activities in the classroom. Facilities included in this category, such as student desks and chairs, whiteboards, LCD projectors, and other learning equipment, are the primary focus in budget allocation because their presence significantly determines the comfort and effectiveness of the learning process. Conversely, complementary needs or those with a less urgent level of urgency will be postponed until the next budget period if the school's financial situation does not yet permit. This policy represents a form of budget management that considers both efficiency and sustainability in the provision of educational facilities so that all school needs can be met gradually in accordance with its financial capabilities (Fitri et al., 2022; Kusnan & Ilam, 2021).

In line with technological developments in education, MTsN 8 Kediri also pays special attention to planning the procurement, maintenance, and development of information technology-based learning facilities. Facilities such as LCD projectors, Wi-Fi networks, and digital learning support devices are seen as increasingly important tools to support the implementation of innovative and modern learning. Therefore, the school not only plans the procurement of these facilities but also pays attention to maintenance aspects so that the devices already owned continue to function properly and can be used for a longer period.

Based on the results of an interview with Mr. Muhammad Muhari, S.Pd., it was discovered that LCD projectors are one of the facilities that have a very high priority level in planning classroom facilities and infrastructure. According to him, the presence of LCD projectors greatly assists teachers in delivering learning materials in a more engaging manner through the use of visual media, interactive presentations, learning videos, and various other digital learning resources. The use of these media is considered capable of increasing students' attention and concentration during the learning process, resulting in a more active, interactive, and less monotonous classroom atmosphere. In addition to making it easier for teachers to explain abstract material, the use of LCD projectors also supports the implementation of various student-centered learning models in accordance with the demands of the Independent Curriculum.

4.2. Maintenance of Classroom Facilities and Infrastructure

Based on these considerations, the procurement of LCD projectors along with efforts to maintain the adequacy of basic facilities such as student desks and chairs became the main focus in the allocation of the facilities and infrastructure budget at MTsN

8 Kediri. Both types of facilities are considered to have enormous benefits for the continuity of the learning process because they are used daily by teachers and students. By prioritizing facilities that truly support teaching and learning activities, the school is able to optimize the use of a limited budget so that fund management becomes more efficient, on target, and has a real impact on improving the quality of educational services at the madrasah (Matin & Fuad N., 2016; Sari, 2023).

In addition to focusing on procuring new facilities, MTsN 8 Kediri also pays significant attention to facility and infrastructure maintenance activities to maintain the quality, function, and lifespan of each asset owned by the school. The school recognizes that the existence of learning facilities is determined not only by the procurement process, but also by how these facilities are maintained and managed sustainably. Therefore, maintenance activities are an integral part of the overall facility and infrastructure management process. Through consistent maintenance, the school strives to ensure that all facilities remain in a usable condition so they can optimally support teaching and learning activities and minimize the risk of damage that could disrupt the learning process (Matin & Fuad N., 2016; Nurana Dwina Bintang et al., 2024).

In practice, the maintenance system for facilities and infrastructure at MTsN 8 Kediri is divided into two forms: daily routine maintenance and periodic maintenance. This division is carried out so that all school assets receive treatment appropriate to their level of maintenance needs. Routine maintenance functions to maintain the cleanliness and suitability of facilities used every day, while periodic maintenance focuses on a thorough inspection of the condition of buildings and facilities that require further attention. With this division of the maintenance system, the school can monitor the condition of facilities and infrastructure more systematically so that potential damage can be detected early before it develops into more serious damage.

Routine maintenance is carried out daily through the implementation of a school culture that integrates the principles of K3, namely Cleanliness, Safety, and Order. These principles are not only the responsibility of teachers and educational staff, but also involve students as the main users of learning facilities. Each class has a daily duty team tasked with maintaining classroom cleanliness, tidying tables and chairs, cleaning the blackboard, and ensuring comfortable learning conditions before and after learning activities take place. All these activities are carried out under the supervision and guidance of the homeroom teacher so that students not only maintain the cleanliness of the learning environment, but also are accustomed to having a sense of responsibility for the school facilities they share. Through these habits, MTsN 8 Kediri strives to instill a character of discipline and concern for school assets from an early age so that a culture of maintaining facilities can grow sustainably.

In addition to daily maintenance, the madrasah also carries out scheduled periodic maintenance carried out by the Facilities and Infrastructure (Sarpras) Team. These periodic inspections are generally carried out before the start of the new school year or during semester breaks, when learning activities are not taking place so that the repair process can be carried out more freely. During these activities, the Sarpras Team conducts a thorough inspection of various building components and school facilities, such as the condition of the roof, electrical installations, ventilation, classroom lighting, wall painting, and the suitability of desks, chairs, whiteboards, and other supporting facilities. The periodic inspections aim to identify minor damage or damage that could potentially endanger the safety of the school community so that repairs can be carried out immediately before the facilities are used again for learning activities. (Hasnadi, 2021; Kusnan & Ilam, 2021)

In addition to scheduled maintenance activities, MTsN 8 Kediri also has a mechanism for handling damage that occurs suddenly during the teaching and learning process. Based on the results of an interview with Mr. Muhammad Muhari, S.Pd., if damaged classroom facilities are found, such as a non-functioning LCD projector, damaged tables or chairs, or other supporting facilities, the teacher or homeroom teacher will immediately report the condition to the Sarpras Team through the reporting procedure established by the school. The report is documented in the form of a damage record as a basis for determining the type of treatment required.

After receiving the report, the Infrastructure Team will conduct a direct inspection of the damaged facilities to determine the extent of the damage and determine the most appropriate repair steps. If the damage is still relatively minor and can be repaired by internal school personnel, the repair process will be carried out immediately so that the facility can be used again in the shortest possible time. However, if the inspection results indicate that the damage requires special handling or involves technical aspects that cannot be handled by the school, the madrasah will collaborate with technicians or third-party service providers who have competence in that field. This clear and structured handling mechanism shows that MTsN 8 Kediri not only strives to maintain the continuity of the function of facilities and infrastructure, but also ensures that every facility used in the learning process remains in a safe, comfortable, and usable condition so as to support the creation of a conducive learning environment for all school members.

In general, based on the results of interviews with Mr. Muhammad Muhari, S.Pd., it is known that the condition of classroom facilities and infrastructure at MTsN 8 Kediri is currently in relatively good condition, suitable for use, and able to support the implementation of daily learning activities. Most of the available facilities, such as tables, chairs, whiteboards, and other supporting equipment, are still in good working condition so that they can be optimally utilized by teachers and students. According to him, the number of tables and chairs available is basically sufficient for the needs of all students who actively participate in learning in each class. This shows that the planning and procurement process of facilities carried out by the madrasah has been able to meet basic learning needs so that no problems were found related to the lack of main facilities used during teaching and learning activities.

4.3. Condition and Utilization of Classroom Facilities

However, the school still faces several challenges in managing classroom facilities and infrastructure. One of the most obvious challenges is the limited classroom capacity compared to the number of prospective students who register each year. According to Mr. Muhammad Muhari, S.Pd., community interest in sending their children to MTsN 8 Kediri continues to increase from year to year. This condition has an impact on the increasing number of study groups that must be served by the school, while the availability of classrooms cannot always be increased quickly. As a result, the school needs to make various adjustments so that classroom capacity can still accommodate the number of students without reducing comfort during the learning process.

As a solution to the limited classroom capacity, the madrasah optimized the classroom layout so that all facilities could be utilized more effectively. The rearrangement of desks, chairs, and movement space within the classroom was carried out with consideration for student comfort, teacher ease in delivering material, and the smooth running of teaching and learning activities. In addition to the spatial arrangement, the school also utilized furniture with more efficient designs and sizes to save space without compromising the function or comfort of the facilities. This strategy

is considered one of the steps that is effective in optimizing the available classroom capacity without having to build new classrooms in the near future.

According to Mr. Muhammad Muhari, S.Pd., the spatial optimization efforts are not only aimed at increasing class capacity, but also at creating a more comfortable, organized, and conducive learning environment. A well-organized classroom allows students to move more freely, makes it easier for teachers to interact with all students, and supports the implementation of various learning models that require group activities and discussions. Thus, spatial management is an important aspect in supporting the effective utilization of the facilities and infrastructure that schools already have.

Observations conducted during the study also showed that the suitability of classroom facilities and infrastructure is closely related to the quality of the learning process. A clean, well-organized learning environment with adequate lighting and well-functioning facilities can create a more comfortable learning environment for students. Conversely, if the facilities are damaged or the classroom conditions are less than ideal, both student concentration and teacher comfort in teaching can be disrupted. Therefore, the presence of adequate facilities and infrastructure is a key factor in creating an effective learning process.

Based on field observations, the classroom conditions at MTsN 8 Kediri generally meet the criteria for a supportive learning environment. Sturdy tables and chairs provide comfort for students during lessons, maintaining classroom cleanliness creates a conducive learning atmosphere, while the use of LCD projectors helps teachers deliver material more engagingly through visual media that can be clearly seen by all students. The combination of adequate physical facilities and good classroom management has a positive influence on the effectiveness of teaching and learning activities. Students find it easier to understand the material presented, are more focused on learning, and are more active in participating during the learning process. Furthermore, teachers also feel more comfortable and motivated in carrying out learning activities because they are supported by an adequate learning environment. These findings align with the opinion of Sari (2023) which states that the suitability of facilities and infrastructure has a positive correlation with increasing the effectiveness of the learning process, both in terms of student learning comfort and optimizing teacher performance in implementing learning.

4.4. Challenges in Facilities and Infrastructure Management

Although the overall management of facilities and infrastructure at MTsN 8 Kediri has been well-run, systematic, and in accordance with established procedures, the Facilities and Infrastructure Team (Sarpras) acknowledges that several obstacles remain in the field during implementation. These obstacles arise as part of the unavoidable dynamics of managing educational facilities, particularly in efforts to maintain all school assets in a usable condition. These obstacles are not only related to the technical aspects of maintenance, but are also influenced by the limited resources available to the school. Therefore, the madrasah continues to strive to find appropriate solutions so that the maintenance process can continue to run optimally without disrupting the smooth running of teaching and learning activities.

Based on an interview with Mr. Muhammad Muhari, S.Pd., one of the most significant internal constraints is the limited operational funds allocated for facility and infrastructure maintenance. The available budget must be divided to meet various school needs, so not all facilities requiring repairs can be addressed simultaneously. This situation requires the school to prioritize maintenance, prioritizing facilities with a high level of urgency or those that directly support the learning process. As a result, some non-urgent repairs sometimes have to be postponed until budget allocations are available in the following period. This policy is implemented as a form of financial management that

maintains the principles of efficiency and effectiveness in the use of school funds (Bararah, I., 2020; Matin & Fuad N., 2016; Nurana Dwina Bintang et al., 2024)

In addition to budget constraints, another obstacle faced is the limited land and circulation space in the school building. The limited physical condition of the school environment requires careful planning for the development and arrangement of facilities. Each new facility addition requires consideration of space availability, accessibility for students, and the comfort of the learning process to avoid compromising the functionality of existing spaces. Therefore, schools are optimizing the use of existing facilities by rearranging classrooms and using more efficiently designed furniture rather than directly adding to the building.

The next obstacle relates to human resources responsible for maintaining facilities and infrastructure. Based on interviews, MTsN 8 Kediri still has limited internal personnel with specialized competencies or certifications in technical fields, such as carpentry, modern electrical installation, or repairing learning technology devices. This condition means that not all types of damage can be handled independently by the Facilities and Infrastructure Team. For minor damage, repairs can still be carried out by internal school personnel. However, if the damage requires more specific technical expertise or is high-risk, the madrasah must collaborate with external technicians to ensure the repair process can be carried out safely and according to standards.

Despite facing these challenges, MTsN 8 Kediri remains committed to maintaining the quality of its facilities and infrastructure through various adjustments. Prioritizing, optimizing facility utilization, and collaborating with professional staff are strategies implemented to ensure all learning facilities remain optimally utilized. These efforts demonstrate that the school's limitations do not hinder the provision of quality educational services, but rather serve as a foundation for the school to manage its facilities and infrastructure more effectively, efficiently, and responsibly, in accordance with learning needs.

In addition to facing various obstacles originating from internal factors, MTsN 8 Kediri is also faced with challenges originating from external factors, especially unpredictable natural conditions. Based on the results of an interview with Mr. Muhammad Muhari, S.Pd., extreme weather changes, such as high rainfall, strong winds, and unpredictable temperature changes, have an impact on the physical condition of the building and various school facilities. Exposure to this weather can accelerate the decline in building quality, such as roof leaks, ceiling damage, weathering of certain building parts, and disruption to other supporting installations. These conditions require the school to conduct more intensive monitoring of facilities that are vulnerable to damage so that repairs can be taken immediately before the damage becomes more serious (Hasnadi, 2021).

The presence of natural factors as a cause of damage presents a challenge that cannot be directly controlled by the school. Therefore, managing facilities and infrastructure not only focuses on routine maintenance activities but also requires the ability to anticipate the impacts of environmental conditions. The Facilities and Infrastructure (Sarpras) Team regularly inspects parts of the building that are potentially damaged by weather changes, such as the condition of the roof, drains, ceilings, walls, and the exterior of the building. These anticipatory measures are taken to minimize the risk of damage that could disrupt the comfort and safety of the school community during the learning process.

4.5. Evaluation and Future Development

In facing various limitations, both caused by natural conditions and limited school budget, MTsN 8 Kediri applies the principle of functional efficiency in the management of facilities and infrastructure. Based on the explanation of Mr. Muhammad Muhari, S.Pd., before deciding to procure new materials, the Sarpras Team first inventoried various remaining materials that were still in usable condition and stored in the school warehouse. These materials were then reused to support the process of repairing facilities that had suffered minor damage. This strategy was carried out as a form of optimization of the resources that the school already had while also reducing maintenance costs without reducing the quality of the repair results.

Reusing materials that are still suitable for use also reflects the application of the principles of effectiveness and efficiency in school asset management. In addition to reducing operational costs, this step also reduces material waste and extends the useful life of assets that are still functional. Thus, the available budget can be allocated to meet other needs that have a higher level of priority, especially facilities that directly support the learning process. This strategy demonstrates that the management of facilities and infrastructure at MTsN 8 Kediri is not only oriented towards meeting facility needs, but also prioritizes wise, economical, and sustainable resource management in accordance with the principles of educational facilities and infrastructure management (Fitri et al., 2022; Kusnan & Ilam, 2021).

As part of its efforts to improve the quality of facility and infrastructure management, MTsN 8 Kediri consistently conducts evaluations at the end of each academic year. These evaluations are a crucial step in the facility and infrastructure management cycle, serving to assess the effectiveness of implemented programs, identify any remaining obstacles, and develop corrective measures for implementation in the following period. Through these regular evaluations, the school can obtain a picture of the actual condition of all educational facilities, the success rate of maintenance programs, and development needs that need to be prioritized in the future. The results of these evaluations are then used as a basis for developing short-term and long-term plans, ensuring that policies are more targeted and aligned with the school's actual needs (Fitri et al., 2022; Nurana Dwina Bintang et al., 2024).

Based on the results of an interview with Mr. Muhammad Muhari, S.Pd., one of the main focuses in the future infrastructure development plan is to add new classrooms through submitting development assistance requests to the central government and related agencies. This plan emerged in response to the increasing number of students enrolling each year, while the capacity of available classrooms remains limited. The addition of classrooms is expected to reduce the density of study groups, improve the comfort of the learning process, and provide a more representative learning space for students. With the support of more adequate facilities, the quality of educational services at MTsN 8 Kediri is expected to continue to improve along with the increasing number of students.

In addition to developing physical facilities, the madrasah also plans to modernize its facility and infrastructure management system by digitizing school asset inventory data. While the inventory process has been structured to date, it is hoped that it will be supported by a digital-based system that will streamline recording, data storage, asset condition monitoring (Ahmad, 2021), and damage reporting more quickly and accurately. Inventory digitization not only helps improve administrative efficiency but also simplifies decision-making because asset condition data can be accessed more systematically and well-documented. This allows for more accurate and up-to-date data to be used in planning for facility procurement and maintenance (Jauhari & Khoirul Anam, 2024).

Efforts to improve the quality of facility and infrastructure management are also directed at strengthening the role of all school members, especially homeroom teachers, in maintaining the condition of the facilities used daily. Based on the results of the evaluation, the madrasah is striving to optimize the role of homeroom teachers as the primary supervisors of facilities in their respective classrooms (Rohmadiyah et al., 2024). Homeroom teachers are expected to be responsible not only for overseeing classroom cleanliness and order, but also for monitoring the condition of desks, chairs, whiteboards, LCD projectors, and other supporting facilities. If damage is found, homeroom teachers can immediately coordinate with the Facilities and Infrastructure Team so that repairs can be carried out more quickly before the damage becomes more severe (Astuti et al., 2023). The active involvement of homeroom teachers is expected to increase the effectiveness of the monitoring system and foster a culture of caring for school facilities among students (Ahmad, 2021).

Furthermore, Mr. Muhammad Muhari, S.Pd. expressed his hope that in the future the facility and infrastructure management system at MTsN 8 Kediri can develop to be more modern, professional, and adaptive to technological developments. According to him, the management of educational facilities will run more optimally if supported by a stable and sustainable budget allocation so that the needs for procurement and maintenance of facilities can be met in a timely manner. In addition to financial support, he also hopes for a growing awareness of all school residents, from teachers, education staff, to students, to work together to maintain, care for, and utilize school facilities responsibly. This collective awareness is seen as an important factor in extending the useful life of school assets, reducing the risk of damage due to user negligence, and creating a safe, comfortable, and conducive learning environment. With the synergy between a good management system, adequate budget support, and the active participation of all school residents, it is hoped that the quality of facility and infrastructure management at MTsN 8 Kediri can continue to improve so that it can make a real contribution to improving the quality of educational services and the success of the learning process in the future.

Discussion

The findings reveal that the management of classroom facilities and infrastructure at MTsN 8 Kediri is carried out systematically through participatory planning, regular maintenance, and continuous evaluation (Fauziyah & Maunah, 2022). The implementation of a bottom-up planning approach involving teachers, homeroom teachers, students, and school management ensures that procurement decisions are based on actual needs in the learning environment. This finding is consistent with Sutisna & Effane (2022) and Wahyuni, (2021), who emphasize the importance of stakeholder involvement in achieving effective, transparent, and accountable educational facility management. In addition, the school's prioritization of essential facilities such as desks, chairs, and LCD projectors reflects the principles of efficiency and effectiveness in resource allocation, particularly under budget constraints (Matin & Fuad N., 2016).

The study also demonstrates that maintenance plays a crucial role in sustaining the functionality and quality of educational facilities. Through routine maintenance based on Cleanliness, Safety, and Order (K3) principles and periodic inspections conducted by the Sarpras Team, MTsN 8 Kediri seeks to prevent facility deterioration and ensure a conducive learning environment. The active involvement of students and teachers in maintaining classroom facilities further supports the development of responsibility and awareness of school assets. These findings support previous studies that highlight

maintenance as a key component of sustainable facilities and infrastructure management (Hasnadi, 2021; Nurana Dwina Bintang et al., 2024).

Furthermore, the availability of adequate classroom facilities contributes positively to the effectiveness of the teaching and learning process. Observation results indicate that clean classrooms, sufficient furniture, proper lighting, and the use of LCD projectors improve students' comfort, concentration, and participation during lessons. The integration of technology-based facilities also supports interactive and student-centered learning practices. This finding is in line with Sari (2023), who argues that adequate educational facilities significantly enhance both student learning experiences and teacher performance.

Despite these positive conditions, the school continues to face several challenges, including limited maintenance budgets, classroom capacity constraints, limited technical personnel, and environmental factors such as extreme weather conditions. Nevertheless, MTsN 8 Kediri has demonstrated adaptive management through prioritization strategies, classroom space optimization, material reuse, collaboration with external technicians, and annual evaluations. These efforts, together with future plans for classroom expansion and inventory digitization, indicate the school's commitment to developing a more effective, efficient, and sustainable facilities and infrastructure management system that supports the continuous improvement of educational quality.

Conclusion

Based on the research results and discussions that have been presented, it can be concluded that the overall management of facilities and infrastructure planning at MTsN 8 Kediri has been carried out in a very structured, mature manner, and based on real needs in the field. The process of preparing the classroom facilities work program has successfully implemented an open bottom-up approach, where input from the teachers, homeroom teachers, and students is used as the initial foundation in recording the feasibility of school assets. Although MTsN 8 Kediri is faced with the challenge of limited operational budget, the management is able to overcome this through the implementation of a strict priority scale by prioritizing the main needs that have a direct impact on the smooth running of the class (core facilities), such as the provision of adequate student chairs and the provision of information technology facilities in the form of LCD projectors to support a modern learning climate.

In addition to the procurement aspect, the successful management of infrastructure at MTsN 8 Kediri is also strongly supported by a continuous maintenance program. The implementation of daily routine maintenance packaged in the K3 (Cleanliness, Safety, and Order) movement has proven effective in fostering a sense of ownership and collective concern from all school residents, from administrative staff to students under the supervision of homeroom teachers. In addition, the infrastructure team also has a consistent commitment through the implementation of a periodic inspection schedule during semester breaks to address physical damage to buildings caused by the equipment's lifespan or natural factors such as unpredictable extreme weather changes.

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