



## Assessing the Management of Facilities and Infrastructure in Madrasah: A Comprehensive Study

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### ABSTRACT

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The research focuses on managing facilities and infrastructure in a State Madrasah Aliyah. It can be centered around evaluating the physical condition of facilities, the effectiveness of management practices, the impact of infrastructure on learning, and stakeholder involvement. This research aims to provide a comprehensive overview of the facility conditions, management efficiency, the influence of infrastructure on learning, and the engagement of relevant stakeholders in educational facility management. Identifying a facility and infrastructure management can be seen from the planning, implementation, supporting, and inhibiting factors. This study uses a qualitative approach with a descriptive analysis method. Data collection techniques in this study were done through interviews, observation, and documentation. The data analysis is done through data reduction, display, and conclusion. The results of this study indicate that Management Planning for Facilities and Infrastructure for MAN 2 Bandung City is carried out by involving the community of MAN 2 Bandung City. The madrasah implements a process of five stages: procurement, Inventory, use, maintenance, and disposal. Supporting factors are human resources committees, while inhibiting factors are limited costs, especially in adding areas and buildings.

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## INTRODUCTION

Madrasah is an educational institution that acts as a place where educational or teaching and learning activities occur or are carried out (Wahyu & W, 2020). One component crucial for the educational process is the teacher as a facilitator in the learning process (Tartavulea et al., 2020). Facilities and infrastructure are needed to organize education to produce an effective and efficient teaching and learning process (Rahman et al., 2022).

Facilities and infrastructure in schools are critical in supporting learning activities; if the facilities and infrastructure are complete or sufficient, it can hamper the learning process (Neti Herawati et al., 2020). Equipment in the form of buildings, libraries and tools used when studying in class is closely related to the quality of the school (Kassab et al., 2020). Especially when using teaching aids such as physics, biology, anatomy, or geography (Arslan et al., 2020).

Referring to Government Regulation Number 19 of 2005 concerning national education standards commonly known as SNP, every school is required to have facilities and infrastructure in the form of land, classrooms, education unit leadership rooms, educators' rooms, administrative rooms, classrooms, libraries, rooms laboratory, canteen and several other spaces that are useful in supporting the learning process (Sriwahyuni & Kristiawan, 2019). Infrastructure is an indirect tool that functions to achieve educational goals, including location, place, and school building. At the same time, facilities are direct tools that achieve educational goals, including rooms, books, and library (Ilmi et al., 2023).

Every device owned and will be owned by a school requires good management, starting with planning what is needed, procurement of goods or land, Inventory, storage, maintenance, use, deletion, arrangement of land, buildings, equipment and school furniture (Obinna et al., 2021). A facilities and infrastructure management system is needed to manage this (Haque et al., 2022).

Infrastructure management is the management of all tools, materials and other facilities used in a teaching and learning process so that the learning process can run effectively (Zaini et al., 2022). Means and educational infrastructure are also among the educational factors essential to the educational process. Educational facilities and infrastructure administration activities include: "planning, prequalification, procurement, storage, maintenance, deletion and control" (Diana et al., 2023).

The management of this infrastructure means nothing other than achieving the goals and targets of educational infrastructure for productive subjects in each department at MAN 2 Bandung City. Therefore, educational facilities and infrastructure management must be carried out well. Management of educational facilities and infrastructure includes procurement, maintenance and removal. Therefore, researchers are interested in describing the facilities and infrastructure management process carried out by MAN 2 Bandung City, which includes knowing the planning process, implementation and supporting and inhibiting factors in managing Facilities and Infrastructure Management at MAN 2 Bandung City.

## **RESEARCH METHODS**

This research employs a qualitative case study technique to examine educational facilities and infrastructure management in a state, Madrasah Aliyah. Using a case study approach can aid in examining unique and highly contextual phenomena such as managing educational facilities and infrastructure in a state, Madrasah Aliyah. This helps researchers learn how to manage educational facilities and infrastructure in a state Madrasah Aliyah (Wijaya et al., 2022).

Data collection in this research covers information acquired from interviews and observations regarding the educational facilities and infrastructure management in a state, Madrasah Aliyah. Interviews were conducted with different sources, including Madrasah Aliyah IT administrators, Madrasah Aliyah guardians and the community, to find general information relating to the research theme. Meanwhile, the data-gathering approach used in this research was the purposive sampling. The research method that involves purposive sampling is a sample selection approach used to obtain data from specified populations with certain traits or criteria relevant to the research objectives (Hennink & Kaiser, 2022).

Data analysis approaches are done through data reduction, data display, and conclusion. Data reduction was done by sifting out relevant information linked to public impressions of managing educational facilities and infrastructure in a state, Madrasah Aliyah. The data validity technique involves source triangulation, mainly by asking the same questions regarding the communication carried out by managing educational facilities and infrastructure in a state, Madrasah Aliyah.

## RESULTS AND DISCUSSION

One effort that can improve the quality of education is optimizing the management performance of facilities and infrastructure in education (Komalasari et al., 2020). As part of the overall learning activities in the Education unit, facilities and infrastructure have a function and role in achieving learning by the Education curriculum unit. In order to achieve the fulfilment of facilities and infrastructure effectively and efficiently, appropriate analysis is needed in planning to achieve fulfilment (Hidayah et al., 2022).

Based on the information obtained, MAN 2 Bandung City applies the POAC (planning, organization, actuating, controlling) management method system to the facilities and infrastructure planning activities carried out by MAN 2 Bandung City, starting with analyzing the needs for facilities and infrastructure. In analyzing these needs, consideration is given to whether the goods to be purchased can support the smooth teaching and learning process, namely through several programs:

**Table 1. Teaching and Learning Process**

No	Programs	Description
1	Short-term programs	The facilities and infrastructure section proposes extracurricular money to the head of the madrasah
2	Medium-term program	The facilities and infrastructure section carries out painting every year to welcome new student admissions
3	In the long-term program	The facilities and infrastructure section plans to move the field not to disturb students' learning and build an extracurricular hall.

Apart from that, planning also pays attention to the quality, quantity and effectiveness of the goods to be purchased (Witek et al., 2020). Facilities and infrastructure planning activities involve the head of the madrasah, deputy head of the madrasah for facilities and infrastructure, TU, teachers, committees, students, OSIS organizations and related parties to analyze the needs of the madrasah. The steps include accommodating proposals, formulating, combining, and determining plans for facility and infrastructure needs (Dewi et al., 2021).

Throughout the entirety of executing facilities and infrastructure implementation at MAN 2 Bandung City, a meticulously structured and harmonized series of procedures is conscientiously followed. This methodical approach encompasses several interconnected stages, each meticulously crafted to ensure the successful establishment and the seamless management of the acquired assets. This process begins with the crucial phase of procurement, wherein a thorough selection of essential resources is meticulously undertaken. This initial stage involves careful deliberation, considering quality, suitability, and adherence to specific requirements to secure the materials and resources for the intended purpose. A sophisticated and detailed inventory management system is methodically established after the procurement phase. This system is designed to diligently catalogue and organize the procured assets efficiently. It operates as a comprehensive repository, systematically documenting and tracking the acquired resources, ensuring accessibility and streamlining their allocation and usage within the educational infrastructure. This well-structured and detailed inventory management system facilitates the efficient organization of assets and enables accurate and prompt retrieval of resources when needed. By establishing such meticulous procedures from the outset, MAN 2 Bandung City ensures a structured and organized approach to managing facilities and infrastructure, facilitating an optimal learning environment within the institution.

The subsequent phase involves the practical utilization of these facilities, ensuring their optimal usage in the educational environment. Additionally, a proactive approach to regular maintenance is employed, aiming to preserve the functionality and quality of the facilities over time. Finally, at the end of their service life, a structured disposal process is meticulously carried out, encompassing environmentally responsible practices for the retirement or replacement of these assets (Johnson et al., 2021).

Inventorying facilities and infrastructure at MAN 2 Bandung City already use online technology connected to the Ministry of Finance; the application is called BMN (State Property). In the Minister of Finance's regulations relating to the Inventory of State Property, Madrasah Aliyah Negeri 2 Bandung City must also use this application to inventory madrasah assets from consumables to non-

consumable items as well as the space facilities in Madrasah Aliyah Negeri 2 Bandung City. Using this application, besides making things easier, Inventory can also prevent unwanted things (Liu et al., 2021).

The findings from comprehensive observations conducted at MAN 2 Bandung City manifest an exemplary utilization pattern of their facilities and infrastructure, showcasing a meticulous adherence to their intended purposes. A structured and premeditated approach is in place, ensuring a seamless integration between the facilities' functionality and their actual use within the educational framework. The discernible pattern indicates a conscientious pre-planning initiative that meticulously outlines the intended functions of each facility and infrastructure component. This strategic forethought effectively guides and governs the subsequent utilization, ensuring a cohesive alignment between the designated purpose and the practical use of these assets. Moreover, the observed utilization manifests a deliberate intent, suggesting that prior assessments and considerations have meticulously outlined and defined how each resource should be employed. Such foresight validates the efficient and fitting use of these facilities and underscores the prudence in planning and strategizing for their optimal functionality. Therefore, the prevailing observation emphasizes the strategic planning and thoughtful consideration invested in utilizing facilities and infrastructure at MAN 2 Bandung City. This deliberate approach ensures a seamless synchronization between the purpose of each resource and its effective deployment within the educational framework.

Maintenance activities at MAN 2 Bandung City are carried out by checking facilities and infrastructure, prevention, light repairs and heavy repairs. The efforts made by MAN 2 Bandung City in checking are by estimating the damage to facilities and infrastructure within a specific period. This facility and infrastructure estimation activity is intended to be controlled (Marks et al., 2022). This checking effort is also intended to prevent facilities and infrastructure and prevent the deputy head of the madrasah for facilities and infrastructure from ordering all elements of the madrasah to maintain the cleanliness and facilities at MAN 2 Bandung City. The school also held a cleanliness program for the participants. Students to maintain and care for the classroom and its facilities. The following maintenance effort is to report to the Ministry of Religion of Bandung City and West Java Province for further follow-up if facilities and infrastructure are seriously damaged.

In contrast, minor damage is managed by madrasah. MAN 2 Bandung City has two special warehouses for Store items that will be used and not used. The first warehouse is used to store ATK (Office Stationery), and the second warehouse is used to store things. The condition of the goods is only adequate for storing electronic goods that are no longer functioning, but the warehouse

needs to be adequate to store furniture, such as wooden chairs that are old and damaged (De Vass et al., 2023).

Activities to remove facilities and infrastructure at MAN 2 Bandung City. The resource person revealed that eliminating facilities and infrastructure will make items unsuitable for crafts or reused. If facilities and infrastructure experience severe damage, they are removed from the inventory data to save operational costs maintenance (Farahani et al., 2020).

Professionally skilled human resources, including educational staff, are vital contributors to the effective management of facilities and infrastructure at MAN 2 Bandung City. Their expertise significantly influences the quality of maintenance and operational efficiency (Kebede Adem et al., 2021). The unwavering support from the madrasa committee and affiliated parties emerges as a critical factor in fostering the development and efficient management of facilities within MAN 2 Bandung City. This consistent support is instrumental in propelling improvements and upgrades to the institution's infrastructure. Additionally, the accessibility and inclusivity of facilities and infrastructure provided by the magnificent school building are pivotal in accommodating the diverse needs of students, teachers, and the wider community. This inclusive environment fosters a conducive and equitable learning environment for all involved parties.

Several factors hinder the effective management of MAN 2 Bandung City facilities and infrastructure. Firstly, the need for more budget to fulfil facilities and infrastructure requirements is a significant constraint. There is a pressing need for an augmented budgetary allocation to comprehensively meet the diverse needs and improvements required in the facilities. Secondly, the need for more technical personnel poses a notable challenge. The limited number of technicians available for maintaining the facilities and infrastructure results in a bottleneck, affecting prompt and efficient repairs in cases of damage or malfunction. This shortage impedes the swift response and repair of any faults that may occur within the facilities, potentially causing prolonged disruptions in their functionality. The combination of these factors underscores the critical need for an increased financial allocation to cater to the diverse needs of infrastructure enhancement and expansion. Moreover, addressing the scarcity of technical personnel by expanding the workforce would significantly contribute to the timely maintenance and repair of facilities, ensuring optimal functionality within the educational setting at MAN 2 Bandung City. (Blagojević et al., 2023). The article proficiently expounds upon the results derived from the data analysis, providing a detailed and nuanced explanation. Furthermore, the discussion section meticulously integrates these findings with a wide array of pertinent sources, thereby establishing a robust framework that logically connects the

research outcomes to existing scholarly perspectives and contributes to a comprehensive understanding of the subject matter.

## CONCLUSION

MAN 2 Bandung City demonstrates systematic infrastructure planning and implementation based on theoretical insights from Roger A. Kauffman, Ali Imron, Arifin, and Barnawi. Their approach integrates planning, procurement, utilization, maintenance, and disposal stages. Notably, they engage internal and external stakeholders for problem-solving. Challenges include financial limitations and a need for more technical expertise. Despite constraints, strategic planning and stakeholder involvement remain pivotal in optimizing infrastructure management at MAN 2 Bandung City.

In the empirical study aspect, this stage must be present in the management process of implementing or utilizing facilities and infrastructure in madrasas; however, in the process of eliminating damaged facilities and infrastructure, their existence does not always have to be removed. However, the purpose of this deletion is to limit losses/waste of maintenance costs. However, if these items can be recycled or used as crafts, it will generate skills income for students, as is done at MAN 2 Bandung City. From the implications study aspect, the resulting management will be cleared with a systematic utilization process with the cohesiveness principle.

The article proficiently expounds upon the results derived from the data analysis, providing a detailed and nuanced explanation. Furthermore, the discussion section meticulously integrates these findings with a wide array of pertinent sources, establishing a robust framework that logically connects the research outcomes to existing scholarly perspectives and contributes to a comprehensive understanding of the subject matter.

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