



## Implementation of Facilities and Infrastructure Management to Improve Education Quality at Madrasah Aliyah Islamic Centre Cirebon

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DOI:		
Received: June 2025	Accepted: July 2025	Published: July 2025

**ABSTRACT :** *Quality issues are closely related to the educational process. To create a quality educational process, support from various educational components is needed, including learning facilities and infrastructure. However, in reality, many madrasahs still have limited facilities, so proper management of learning infrastructure is needed to ensure optimal use. This research aims to describe the implementation of learning facilities and infrastructure management and its impact on the improvement of education quality at Madrasah Aliyah Islamic Centre (MAIC) Cirebon. The main issue raised is the limited facilities and the suboptimal utilization of resources by educators and students. This research uses a descriptive qualitative approach with data collection techniques through observation, interviews, and documentation. The main informants consist of the head of the madrasa, teachers, administrative staff, and students. The research results show: (1) perseverance of learning facilities at MAIC is generally adequate but not optimally utilized, such as the library and laboratory; (2) The quality of education is influenced by the professionalism of teachers and the completeness elevated screened supporting facilities; (3) Good management of facilities helpless facilities plays Thus, effective management of facilities and infrastructure significantly contributes to the improvement of the quality of education in madrasahs.*

**Keywords:** *Educational Management, Infrastructure, Quality of Education*

### INTRODUCTION

Education plays a crucial role in the progress of a nation. The quality of education is highly dependent on the availability of adequate facilities and infrastructure, which should be a continuous concern and responsibility of the government to improve. The primary goal of education is to shape individuals who possess knowledge, skills, as well as positive values and attitudes. Several key factors must be fulfilled to ensure that the educational process runs smoothly and produces high-quality graduates. To achieve expected learning outcomes, the teaching and learning process must be optimized. Learning activities should be systematically designed, with clear stages and careful consideration of various aspects to ensure effectiveness and efficiency (Aimah & Rohmah, 2020).

The improvement of educational service quality heavily relies on the availability of proper facilities and infrastructure. To support the quality of education, the management of facilities and infrastructure must be well-planned and organized. This management includes the arrangement and utilization of educational institution resources to support teaching and learning processes, as

well as other related activities that contribute to improving educational outcomes. With proper management, the overall quality of education will also improve (Hasanah et al., 2023).

Through policies issued by the Ministry of Education, the government established Regulation No. 24 of 2007 concerning Standards for Educational Facilities and Infrastructure for elementary (SD/MI), junior high (SMP/MTs), and senior high schools (SMA/MA). This regulation serves as a guideline for schools to provide standardized and equitable facilities. The regulation stipulates that schools must have sufficient land and basic facilities for students, such as classrooms, libraries, science laboratories, administrative offices, teacher rooms, staff rooms, places of worship, counseling rooms, school health units (UKS), student organization rooms, toilets, storage, and sports facilities (Rakista, 2023).

Education in Indonesia has undergone development in various aspects, and the government has implemented numerous programs aimed at improving educational standards. These programs, both short-term and long-term, are designed to continuously enhance the quality of education in a sustainable manner. Quality, in this context, refers to the best possible effort made, as it is crucial to stakeholders. Quality is also the key target of any educational product, ensuring it meets predetermined standards. Education service is considered high-quality when it is simple, meaningful, and meets applicable standards. Therefore, educational quality can be defined as the characteristics or performance demonstrated by an institution in achieving its established objectives (Marpaung et al., 2023).

There are various ways to assess the quality of education. Fundamentally, education can be measured by analyzing the relationship between input and output. Inputs are part of a process, while outputs are essential components that are interrelated and influence educational quality. Inputs include all resources needed to carry out educational processes, such as teaching, training, and scientific activities within educational institutions. Meanwhile, outputs refer to the results of these processes (Marpaung et al., 2023).

Issues related to educational facilities and infrastructure are closely tied to budget allocation. The amount and distribution of funding are major factors in ensuring adequate educational facilities. Significant shortages or damage to infrastructure can hinder the smooth implementation of education. If many facilities are damaged, the learning process will be disrupted and may not run effectively (Lestari M, Mandasari N, 2021).

First, Soro et al. (2023), in the *Journal for Islamic Studies* Vol. 6 No. 2, share similarities in discussing the importance of infrastructure management in improving education quality using a qualitative approach. However, they focused on higher education institutions and emphasized accreditation and ISO standards, while the present study focuses on madrasah aliyah and the implementation of facility management amid resource limitations.

Second, Umar et al. (2024), in *Jurnal Iryaduna* Vol. 4 No. 1, also used a qualitative approach and highlighted the strategic role of infrastructure in education quality. The key difference is that Umar et al. emphasized infrastructure development led by school principals, while this study focuses more on how facilities are managed and utilized directly by teachers and students.

Third, Torismayanti et al. (2023), in *Journal on Education* Vol. 6 No. 1, discussed all stages of infrastructure management from planning to disposal with the shared aim of improving educational quality. However, their study focused on public madrasahs with established systems, while this research investigates a private madrasah still facing budget constraints and lacking formal managerial systems.

Fourth, Nurstalis et al. (2021), in *Jurnal ISEMA* Vol. 6 No. 1, also examined infrastructure management to support quality education using a similar approach and topic. However, their research was conducted in well-equipped model schools with comprehensive managerial roles, while this study highlights the challenges of implementing management systems in madrasahs with limited resources and undocumented management.

Fifth, Muslimin & Kartiko (2020), in *Jurnal Munaddhomah* Vol. 1 No. 2, also explored the relationship between facilities and educational quality. Their study employed a quantitative

approach with statistical analysis and found that infrastructure played a dominant role. In contrast, this research uses a qualitative approach and emphasizes real-life management processes and facility utilization in the field.

Facilities and infrastructure are essential components in the teaching and learning process within educational institutions, serving as key indicators of educational quality that must be continuously improved alongside advancements in science and technology. The provision of appropriate facilities and infrastructure is critical in supporting students' skills and their readiness to compete amid the rapid development of science, technology, and information. Quality, or excellence, is what distinguishes a good product from a poor one. In education, quality encompasses three aspects: input, process, and output/outcome. Educational quality refers to the degree of excellence of an education system in helping students achieve learning goals. It can be measured using several indicators such as students' academic performance, teaching competence, the quality of facilities and infrastructure, and the curriculum used. High educational quality enables students to pursue higher education and contributes positively to national development across various sectors.

Educational facilities and infrastructure management includes: (1) planning for facility needs, (2) procurement of facilities and infrastructure, (3) distribution, (4) inventory, (5) maintenance, and (6) disposal. The goal is to support all activities, especially learning, to ensure the educational process runs optimally. Proper management of facilities and infrastructure ensures timely maintenance, enhances school performance, extends the lifespan of assets, reduces repair costs, and determines effective maintenance budgeting. Therefore, the availability of adequate facilities and infrastructure is a crucial component in supporting an effective education system. These elements serve to support and enhance overall school quality.

## **METHOD**

This study employed a descriptive qualitative approach. According to Saryono (2010), qualitative research is intended to investigate, discover, describe, and explain the quality or uniqueness of social influences that cannot be explained, measured, or illustrated through a quantitative approach (Abdul Fatah Nasution, 2023).

The research was conducted at Madrasah Aliyah Islamic Centre (MAIC) Cirebon. The research subjects included the Head of the Madrasah (Mrs. Masidah Dasari), the Vice Principal for Facilities and Infrastructure (Mr. H. Lili Jumali), an Administrative Staff member (Mr. Indra), a Geography Teacher (Mrs. Yuliatun Chasanah), an Islamic Cultural History Teacher (Mr. Bahrudin), as well as five students: Suci, Aini, Umama, Khubi, and Miftah.

Data were collected using three primary techniques: observation, in-depth interviews, and documentation. The data analysis followed the qualitative analysis model, which involves three key stages: data reduction, data display, and drawing conclusions.

## **RESULT AND DISCUSSION**

### **Result**

#### **1. Condition and Utilization of Learning Facilities and Infrastructure at Madrasah Aliyah Islamic Centre (MAIC) Cirebon**

Based on observations and interviews, the facilities and infrastructure condition at Madrasah Aliyah Islamic Centre (MAIC) Cirebon is considered adequate to support the learning process. The madrasah has ten classrooms, science and computer laboratories, a library, and skills rooms. The principal stated that main facilities such as classrooms and environmental cleanliness are in good condition, although some supporting facilities, like the laboratory and health unit, still require improvement. Teachers and administrative staff also assessed that the learning environment is fairly comfortable, despite some areas needing enhancement. Meanwhile, students expressed that clean classrooms and a quiet environment

provide comfort during learning, although facilities like the library are not yet optimally utilized.

The types of facilities and infrastructure at MAIC Cirebon are categorized into direct facilities and supporting infrastructure. Facilities such as classrooms, laboratories, and computer rooms are considered by teachers as essential elements supporting interactive and practical-based learning. Meanwhile, infrastructure such as prayer rooms, sports fields, and the library function to support character development and a balanced range of student activities outside the classroom. Some students mentioned that the presence of laboratories and internet networks greatly aids technology-based learning, while sports facilities and the canteen also contribute to comfort during school hours. This indicates that each type of facility has a distinct role in fostering an active and comprehensive learning atmosphere.

Facility and infrastructure management at MAIC Cirebon aims to create a conducive learning environment and ensure the sustainability of facilities in the long term. The Islamic Cultural History teacher emphasized that complete and comfortable facilities not only boost student enthusiasm but also motivate teachers in their teaching. The Head of Administration stated that well-organized management facilitates smooth activities and eases facility utilization without technical obstacles. From the students' perspective, most reported that the madrasah's facilities influence their motivation to learn, especially when classrooms are clean and practical tools are available. This shows that good facility management supports not only academic processes but also fosters a productive and sustainable learning environment.

## **2. Educational Quality Reflected at Madrasah Aliyah Islamic Centre (MAIC) Cirebon**

The quality of education at MAIC Cirebon is considered quite good and continuously improving. According to interviews with the principal, quality is measured by eight national education standards, including graduate competencies, content, processes, educators, facilities, and assessments. MAIC emphasizes mastery of attitudes, knowledge, and skills as part of graduate competency standards. Although not all students continue to higher education, the madrasah is committed to improving quality through qualified teachers and continuously enhancing facilities and infrastructure.

Teachers assess educational quality not only by academic achievement but also through the learning process and character building of students. Learning is adapted to classroom conditions, and student achievements include both academic and non-academic aspects. To improve quality, the madrasah actively involves teachers in training and MGMP forums, as well as creating a healthy and supportive learning environment. Beyond academics, MAIC also develops vocational programs such as Culinary Arts and Computer Technology, encourages daily worship, and offers internship programs as work skills preparation. This commitment is reflected in their A accreditation status and ongoing efforts to develop learning facilities.

## **3. Implications of Facilities and Infrastructure Management Implementation on the Improvement of Education Quality at Madrasah Aliyah Islamic Centre (MAIC) Cirebon**

Facilities and infrastructure planning at MAIC Cirebon is conducted systematically and involves multiple stakeholders. Each plan is prepared with consideration of the madrasah's vision and mission and aligned with actual needs identified through regular discussions between the principal, managers, and teachers. Priority scales are determined based on the current condition of facilities and budget availability to ensure plans address evolving learning requirements.

Following planning, the procurement process is structured, starting with identifying needed items, budgeting, vendor selection, and choosing the most appropriate offers. Despite budget constraints, the madrasah strives to accommodate urgent and relevant proposals. Thus, procurement focuses not only on meeting needs but also on efficiency and quality.

Acquired facilities are then distributed to the necessary units through an orderly and coordinated system. Distribution is based on evaluations and input from teachers and students as primary users. The madrasah also responds promptly to urgent needs via interdepartmental coordination to prevent delays or disparities in facility utilization.

To ensure optimal use, the madrasah regularly conducts inventory at least twice a year, aiming to record all items in detail and detect damages or losses. Records are maintained in both books and digital files and serve as a basis for reporting and future procurement planning, ensuring orderly and controlled asset management.

Maintenance and upkeep are critical post-acquisition steps. The madrasah performs routine checks involving teachers and students in cleaning or daily responsibility activities. Maintenance is not only technical but also a school culture fostering ownership and collective responsibility for the learning environment.

When items become unusable or severely damaged, the madrasah carries out official disposal procedures. Each disposed item undergoes inspection and management approval. Proper disposal prevents the accumulation of damaged goods and frees space for new, more suitable facilities.

The overall implication of this management process is the creation of a more orderly, comfortable, and efficient learning environment. Each stage—from planning to disposal—contributes to smooth learning processes and sustainable educational quality. Effective management reflects the shared awareness and commitment of the madrasah community to support an educational, safe, and enjoyable learning atmosphere.

## **Discussion**

### **1. Condition and Utilization of Learning Facilities and Infrastructure at Madrasah Aliyah Islamic Centre (MAIC) Cirebon**

Facilities and infrastructure play a crucial role in supporting the smooth running of the learning process. According to Donumo & Indah (2024), adequate facilities not only support teaching and learning activities but also significantly contribute to achieving educational quality. Based on research findings at Madrasah Aliyah Islamic Centre (MAIC) Cirebon, the general condition of facilities and supporting infrastructure such as toilets and prayer rooms is adequate to support the learning process. One of the available facilities is the library, which houses various collections of textbooks and supplementary readings; however, its utilization by students and teachers remains limited and has not yet become a routine part of the learning process. This finding indicates that although facilities exist, underutilization remains an important concern to ensure that available resources effectively support comprehensive educational quality achievement.

This condition aligns with the perspective of Bararah (2020), citing Soetjipto (2009), that educational facilities and infrastructure are essential to support learning activities. At MAIC Cirebon, facilities refer to those that directly support the learning process, such as classrooms, laboratories, and computer rooms. Meanwhile, infrastructure includes supporting facilities like sports fields and libraries, which contribute to holistic student development. The availability of adequate facilities and infrastructure significantly impacts the smoothness of teaching and learning processes.

The management of facilities and infrastructure at MAIC Cirebon aligns with the theory of Setiawan & Abrianto (2019) as cited in Islam (2021), stating that the primary goal of managing educational facilities and infrastructure is to create and maintain optimal school conditions. The study shows that good management aims to ensure that facilities optimally

support the learning process, foster a conducive learning environment, and extend the lifespan of facilities for long-term benefits for the entire school community.

## **2. Educational Quality Reflected at Madrasah Aliyah Islamic Centre (MAIC) Cirebon**

According to Kholifah (2020), education is considered quality when all parties involved—principals, teachers, and staff—can develop both physically and psychologically. Physical development includes financial rewards, while psychological development encompasses opportunities for learning and creativity enhancement. Thus, educational quality is not solely measured by academic outcomes but also by the welfare and development of all elements within the educational institution. Research at MAIC Cirebon indicates that educational quality is assessed through indicators such as academic achievement, learning processes, student character development, and the quality of facilities and infrastructure. The institution is committed to setting graduate competency standards encompassing attitudes, knowledge, and skills, while providing a supportive learning environment. This reflects Kholifah's theory that the development of all stakeholders is key to improving educational quality.

Similarly, Fiandi (2023) emphasizes that improving educational quality depends on school leadership, active teacher involvement, student attention, relevant curricula, and extensive collaboration networks. MAIC Cirebon has implemented planned quality improvement strategies, including curriculum development and teacher training, to enhance engaging and relevant teaching methods. A positive learning atmosphere is continuously fostered to boost student motivation. The achievement of an A accreditation demonstrates the school's commitment to maintaining educational quality, supported by skill programs and spiritual activities that aid students' skill and character development.

## **2. Implications of Facilities and Infrastructure Management Implementation on the Improvement of Education Quality at Madrasah Aliyah Islamic Centre (MAIC) Cirebon**

Saputra & Sriyanto (2021) state that the management of educational facilities and infrastructure involves six main stages: planning, procurement, distribution, inventory, maintenance, and disposal. These stages constitute a systematic and integrated process aimed at optimally supporting learning activities.

Field findings at MAIC Cirebon reveal that the planning process is conducted participatively through deliberations between the principal and teachers. Each unit communicates its facility needs, although most are still conveyed orally and lack official documentation. Teacher involvement fosters a sense of ownership and improves alignment between actual needs and procurement plans, although the absence of a written system risks the exclusion of critical needs from the annual budget.

Procurement is carried out gradually, adjusting to needs and budget availability. The school selects vendors and chooses items based on quality and cost considerations. Despite budget constraints, procurement efforts have positively impacted comfort by improving facilities such as classrooms and practical equipment. Facility distribution involves teachers and staff informally to ensure that purchased items are promptly used by the units in need. Although the process is simple, distribution is adequately targeted; however, more organized record-keeping is necessary to monitor the status of assets.

Inventory is conducted twice yearly with manual recording, leading to occasional data delays and difficulty in rapid asset tracking. Digitalizing inventory management is recommended to enhance efficiency.

Maintenance involves communal work activities, routine checks, and the responsibility of teachers and students in maintaining cleanliness and orderliness. Student

participation fosters responsibility, while teachers perform minor inspections and report damages.

Disposal processes are applied to severely damaged items following inspection and recording, yet there is no replacement plan for discarded items, resulting in unreplaced damaged facilities.

Overall, the management of facilities and infrastructure at MAIC Cirebon demonstrates commendable efforts to support learning. The involvement of all school components creates a collaborative work environment, although shortcomings remain, particularly in documentation, information systems, and replacement planning. Improvements in these areas are crucial to enhancing management effectiveness and significantly impacting sustainable educational quality improvement.

## CONCLUSION

1. The condition of learning facilities and infrastructure at MAIC Cirebon is generally adequate and capable of supporting teaching and learning activities. Essential facilities such as classrooms, laboratories, computer rooms, and the library are available, although their utilization can still be improved. Teachers, education staff, and students agree that the current condition supports the learning process, although it is not yet ideal. Therefore, the facilities and infrastructure at MAIC Cirebon are in good condition but still require gradual improvement to further optimize the quality of education.
2. The quality of education at MAIC Cirebon is reflected in the continuous development of student competencies, the professionalism of teachers, and responsive school management. A well-organized learning environment and adequate facilities also play a significant role in supporting the enhancement of educational quality. The better the management and availability of facilities and infrastructure, the greater the opportunity for students to grow holistically in terms of knowledge, skills, and character development.
3. The implementation of effective facilities and infrastructure management at MAIC Cirebon has a direct impact on improving the quality of education. When all stages of management—planning, procurement, distribution, inventory, maintenance, and disposal—are executed optimally, the learning process becomes more structured and comfortable. This creates a conducive learning environment, increases student motivation, and supports teachers in delivering learning materials effectively. Thus, well-managed educational facilities and infrastructure make a significant contribution to improving educational quality at MAIC Cirebon.

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