

## Understanding and Scope of Management of Educational Facilities and Infrastructure

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### Abstract

Managing the buildings and equipment that schools employ to provide high-quality education is known as educational facility and infrastructure management. Planning, acquiring, inventorying, distributing, using, maintaining, eliminating, and accounting for educational infrastructure and facilities are all part of this process. Managing educational facilities and infrastructure should aim to do the following: satisfy demands, boost performance, increase service life, decrease repair costs, and calculate the effective cost of maintenance. The essay delves into the definition, purpose, scope, and management method of educational facilities and infrastructure by drawing from a number of pertinent literary sources. Planning, purchasing, regulating, using, and eliminating are the five recognised primary aspects of educational infrastructure and facility management. Because of their interdependence, these five scopes are essential for efficient infrastructure management.

**Keywords:** *Scope, Management, Educational Facilities and Infrastructure*

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### Introduction

In order for schools and other educational institutions to facilitate learning, necessary infrastructure and facilities must be in place (Assumpta Wikantari et al., 2022; Suranto et al., 2022). The efficacy of a school's instructional or learning activity process is heavily impacted by the state of the school's own educational facilities and infrastructure and the administration of these assets (Fitriah & Wahyudin, 2022; Hazimah et al., 2022; Pujiati, 2019). Facilities, infrastructure, and teaching staff are decisive in the field of Education (Mona, 2017; Suranto et al., 2022). Without adequate facilities and infrastructure, education cannot function effectively. However, without supervision from relevant agencies, facilities, and infrastructure will not be able to be used optimally (Rajagukguk et al., 2023).

According to Permendiknas Number 24 of 2007 about School Facilities and Infrastructure Standards, infrastructure refers to the fundamental facilities needed to carry out the tasks of a school or madrasah, while facilities are movable learning equipment (Awaludin & Saputra, 2016). Elementary schools and MIs are required to have certain infrastructure, such as classrooms, libraries, principals' offices, teachers' offices, houses of worship, UKS rooms, warehouses, restrooms, and so on, in addition to certain learning resources, such as books, educational media, and furniture (Rahmiga, 2019). Meanwhile, educational facilities are defined by Mulyasa as buildings, classrooms, tables, seats, teaching tools and media, and any other equipment directly utilised or supporting the educational process, particularly learning and teaching (Nasrudin & Maryadi, 2019). According to Arikunto, educational facilities include both mobile and stationary elements necessary for instruction and learning. This ensures that educational pursuits are organised, conducted consistently, and optimised to meet educational objectives (Sopian, 2019).

In order to make the school a pleasant place to learn and work, it is necessary to have competent people in charge of the building's infrastructure and services. In order to help teachers do their jobs better and make the most of the resources already available to them, school districts should prioritise infrastructure management. Effective and efficient management of all educational equipment may be summed up as facilities and infrastructure management. The responsibility for making sure these resources are ready to be utilised in a meaningful way during instruction lies with the administrators of educational buildings and infrastructure. Educational institutions engage in infrastructure management to maximise the use of their physical assets in service of predetermined pedagogical objectives (Rika Megasari, 2018).

## Method

The literature review research method systematically analyzes literature relevant to the research topic or problem being investigated (Sari & Asmendri, 2018). This method investigates various sources of written information, such as books, scientific journals, articles, reports, and other documents. The following are the steps of the literature review research method by researchers: 1) Determine research questions that are specific, clear, and focused on managing educational facilities and infrastructure. This research question will guide finding and selecting appropriate literature; 2) Conduct a literature search using keywords related to the research question. Literature search can be done through various sources, such as libraries, online databases, search engines, and trusted websites. Literature search must be carried out widely and systematically to obtain relevant, up-to-date, and quality literature; 3) Selecting literature using predetermined inclusion and exclusion criteria. Inclusion and exclusion criteria can be based on aspects such as year of publication, language, type of publication, quality, and linkage to the research topic. Literature that meets the inclusion criteria will be included in the literature review, while those that do not meet the exclusion criteria will be excluded. 4) Evaluate literature using critical and analytical methods. Literature evaluation includes aspects such as each literature's objectives, methodologies, results, conclusions, and implications. Literature evaluation also aims to identify strengths, weaknesses, gaps, and contradictions between the literature under study; 5) Synthesize literature using descriptive, comparative, or integrative methods. Literature synthesis is the process of combining, compiling, and presenting the results of literature evaluation logically, coherently, and comprehensively. Literature synthesis can be done by grouping literature based on different themes, subthemes, or perspectives. The literature synthesis should also answer pre-established research questions, and 6) Compile a literature review report using a format and writing style based on scientific principles.

## Results and Discussion

### Understanding and Nature of Facilities and Infrastructure Management

A term with a long history in the field, "management" originally meant "the art of carrying out and organising" in ancient French. The English term management is derived from the verb "to manage," which means to lead, oversee, or control. It means controlling in Italian, where it comes from the term *meneggiare*. Management, on the other hand, has its roots in the Latin words *manus* (meaning "hand") and *agere* (meaning "to do") (Nuraeni, 2019). Management can be defined as an implementation or process that involves planning, organizing, directing, and supervising to achieve an organization's goals.

In the Indonesian Great Dictionary, it is said that everything is used to achieve a purpose or end. At the same time, infrastructure supports the implementation of a process (Rosnaeni, 2019). E. Mulyasa defines educational facilities as "any physical place, with the express purpose of facilitating learning and instruction," including but not limited to buildings, classrooms, furniture, and instructional media and instruments (Sopian, 2019). Teachers use many types of equipment in educational institutions to facilitate the presentation of teaching materials. From a student's point of

view, educational facilities are different tools that students use to simplify learning a topic. The abundance of tools, materials, and items used by instructors and students to support teaching delivery is referred to as educational infrastructure. Infrastructure is a facility that indirectly supports the running of a learning process, such as yards, gardens or school yards, roads to schools, locations or areas, school buildings, sports fields and so on (Effane & Anne, 2016).

It follows that the term "educational facilities" encompasses both mobile and immobile elements that facilitate learning and instruction in order to guarantee the regular, effective, and efficient attainment of educational objectives. At the same time, please explain what "educational infrastructure" means (Educational Infrastructure) "is a building that directly supports the teaching and learning process as well as functions as indirect support, such as yards, gardens, school parks, and access roads. Examples are a school garden used to teach biology, a schoolyard that also serves as an athletic field, and many more.

### **Understanding Facilities and Infrastructure Management**

Infrastructure is etymologically defined as an indirect method of achieving goals. Location or venue, school, sports facilities, money, and other factors play a role in education. Facilities such as rooms, books, libraries, laboratories, and other direct instruments to achieve educational goals are also available (Istikharoh, 2019). According to Bafadal, educational infrastructure is defined as all fundamental tools that indirectly help implement the teaching process in educational institutions. The school manager or principal's main responsibility is managing facilities and infrastructure, which is essentially the field of study of school management or education administration (Hakim, 2016).

All of the above-mentioned viewpoints point to the fact that managing educational facilities and infrastructure entails working together to make the most efficient and effective use of these resources. The duty of overseeing the preparation of all resources needed to conduct instruction at a school falls within the purview of facilities and infrastructure management. Effective management of facilities and infrastructure is critical to the smooth operation of the educational process. Needs planning, buying, storage, distribution, use, maintenance, inventory, and removal are all part of facilities and infrastructure management. Accurate and timely arrangement of land, buildings, equipment, and school furniture is also part of it (Elong, 2018). Specialists have come up with the following explanations of "facilities and infrastructure management":

1. In Bafadal's view, the administration of school buildings and grounds is best accomplished via a collaborative process that makes full use of all available educational resources.
2. In order to successfully and efficiently fulfil education objectives in schools, Rohiat states that the management of educational facilities and infrastructure includes the complete process of planning, procurement, utilisation, and oversight of these resources.
3. In order to properly organise land, equipment, buildings, and school furniture, as well as to plan needs, purchase, store, distribute, use, maintain, inventory, and remove them, Sutikno argues that educational facility and infrastructure management is an organising activity.
4. Daryanto argues that managing facilities and infrastructure entails a comprehensive set of actions that are carefully planned and executed. It also involves providing ongoing advice on educational objects to ensure they are always prepared for use in learning.
5. The utilisation of all educational institutions' resources and infrastructure is to be maximised via a collaborative process known as facilities and infrastructure management, according to Mutohar. They are used and controlled in a way that helps students learn in classrooms.
6. In order to organise various things, including school furniture, learning tools, and other immovable or mobile items, facilities and infrastructure management begins with planning, then moves on to inventory, distribution, utilisation, maintenance, destruction, and accountability (Bulhayat, 2022).

The following are some of the references provided by the government about the management of educational facilities and infrastructure:

1. The school has documented programme policies for managing infrastructure and facilities. All infrastructure and facility design, evaluation, and completion, as well as priority scale arrangement, and maintenance, fall under this category.
2. The educational personnel, students, and educators are all informed about the programmes for managing educational facilities and infrastructure.
3. Management of school facilities includes systematic planning by referring to infrastructure standards. And make a master plan covering buildings and laboratories and their development.
4. Managing the library includes operational implementation guidelines for borrowing books and other library materials.
5. Manage the laboratory by completing facilities that are adapted to the development of technology.
6. The management of physical facilities for extracurricular activities is adjusted to extracurricular developments and refers to shutter and infrastructure standards (Fauzi, 2021).

### **Purpose of Facilities and Infrastructure Management**

The Directorate of Education Personnel of the Ministry of National Education states that schools should receive assistance with facility needs planning, procurement, maintenance, inventory, and removal from facilities from the management of facilities and infrastructure. With proper administration of our educational infrastructure, we will be able to make full use of all of our facilities. Imron asserts that the role of facilities and infrastructure management is to ensure the efficient and effective operation of educational institutions by providing specialised services in these areas (Sambodo, 2019). The goals of educational facility and infrastructure management are:

1. They are making schools or madrasahs clean, organized, and attractive so that they can be enjoyed by the community present.
2. Accessibility of adequate facilities and infrastructure in quality and quantity and by the needs and interests of education.

In more detail, the Management Expert Team of the State University of Malang identified several things regarding the purpose of educational facilities and infrastructure, namely:

1. Strive to provide high-quality buildings and infrastructure for schools or madrasahs by the needs of effective financing through rigorous and complete planning and procurement procedures.
2. To strive for the proper and efficient use of facilities and infrastructure.
3. Strive for careful and appropriate maintenance of educational infrastructure and facilities so that they are always in a state that can be used when used or needed.
4. As well as making the best contribution to the educational process to achieve the goals set.
5. Provide work systematics in managing education in the form of learning facilities so that educational operational tasks can be carried out effectively and efficiently towards the goals or objectives set (Elfrianto, 2017).

### **Scope of Facilities and Infrastructure Management**

Barnawi and Arifin state that the breadth of facilities and infrastructure management encompasses the following activities: planning and need determination; procurement; ventilation; storage; structuring; maintenance; usage; and elimination.

#### **1. Planning and Analysis of Facilities and Infrastructure Needs**

To attain a goal, one must first identify what that objective is and then plan how to reach it in the future. School committee members, the head of administration, the teacher council, the principal and deputy, and the head of administration are all important individuals who should be included in the planning process for educational facilities and infrastructure. To raise the plan's degree of maturity and solicit input from different stakeholders, this is done. The acquisition of facilities and infrastructure may be made more effective and efficient with less room for mistake if proper planning is done in advance. Production, distribution, leasing, and rehabilitation strategies,

as well as a plan for purchase, will be developed as a result of planning and requirement assessment.

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

Procuring facilities and infrastructure follows planning. Managing the buildings and infrastructure for education includes this purchase as an operational role. The provision of educational infrastructure and facilities is the focus of this function's many operations. Procurement is the process of making something new in order to fulfil a requirement for products and services in accordance with existing regulations. Buying, leasing, borrowing, donating, trading, making, and fixing are all ways to acquire goods and services.

## **3. Ventilation of Facilities and Infrastructure**

Properly documenting and registering school property into an inventory list of items in accordance with relevant laws and procedures is an essential part of ventilating educational buildings and infrastructure. All objects in the school's inventory are considered state property and are under the jurisdiction of the school. This includes both those bought with funding from the government or DPP and those that were acquired via exchanges, donations, grants, or self-made initiatives to enhance teaching and learning. The purpose of this inventory is to enhance the management and effective monitoring of state (private) property by collecting all relevant data about owned facilities and infrastructure. The efficiency of infrastructure and facility management may be enhanced with the use of inventory data.

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

Keeping inventory in the storage room organised and in good repair is what storage is all about. Room preparation, administration, security, and safety precautions are all part of storage's functionalities.

## **5. Arrangement of Facilities and Infrastructure**

The term "arrangement" refers to the process of making the necessary preparations for the efficient and successful use of a school's infrastructure, which includes spaces, buildings, and furnishings.

## **6. Maintenance of Facilities and Infrastructure**

Performing maintenance entails making the necessary preparations and managing the facilities to ensure they are always in excellent shape and ready to be utilised to achieve educational objectives. The purpose of maintenance is to keep products safe from harm and in excellent working order so that they may be used as intended. All endeavours to maintain the equipment in excellent condition are included in this maintenance. Use the things carefully; that is, that is where maintenance begins. Specialised maintenance on the products type is required by officers with knowledge.

## **7. Use of Facilities and Infrastructure**

To ensure that facilities and infrastructure can accomplish their intended purposes, their usage must be subject to appropriate regulations. For instance, it is essential that the quantity of accessible amenities and infrastructure is directly correlated with the volume of customers. As a result, these facilities and infrastructure need to be used correctly. Carefully follow the operating instructions as stated in the handbook while using other educational infrastructure, often in electronic devices. Motivating these users may make this infrastructure even more effective; for instance, understanding the amount of usage, the parties who use it, and data about it can help with this. Either keeping track of who uses the equipment or keeping an attendance book may do this. We may learn about the equipment's density, its list of uses, its duration and frequency of use, the brands and kinds of equipment that are more dependable, and the brands and types of equipment that are less reliable using this. Thus, the educational infrastructure and facilities that are given are necessary, and the quantity and diversity of these are determined by the learning activities that students engage in.

## 8. Elimination of Facilities and Infrastructure

The last step in managing educational facilities and infrastructure in schools is to eliminate or liberate the facilities and infrastructure. This is done for valid reasons, such as reducing and preventing losses, preventing waste of funds so that goods do not accumulate, and making room for the procurement of more new goods to meet the needs of business or school.

## Conclusion

In light of the above, it is reasonable to assume that educational infrastructure and facilities are all parts that contribute to the success of students and teachers alike. In order to accomplish educational objectives, educational infrastructure is an auxiliary instrument. Needs analysis and planning, inventory, storage, organisation, upkeep, use, and disposal are all within the purview of facilities and infrastructure management. In order to ensure that the educational process runs smoothly, efficiently, and effectively, facilities and infrastructure management seeks to appropriately manage preexisting facilities and infrastructure.

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