

MANAGEMENT OF EDUCATIONAL FACILITIES AND INFRASTRUCTURE: LITERATURE REVIEW ON EDUCATIONAL MANAGEMENT

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Abstract. The research aimed to examine facilities and infrastructure management. Next, it applied qualitative writing methods and literature study or library research. The results of this study showed that the management of educational facilities and infrastructure in its application consisted of planning educational facilities and infrastructure, procurement of educational facilities and infrastructure, inventory of educational facilities and infrastructure, maintenance of educational facilities and infrastructure, elimination of educational facilities and infrastructure. In the process of teaching and learning activities, one of the factors that determined the success or failure of learning was the availability of learning facilities and infrastructure which were tools that could help and facilitate teaching and learning activities. Infrastructure and facilities were supports in the learning aspect.

INTRODUCTION

Education is greatly influenced by several factors, one of which supports the success of educational programs is facilities and infrastructure (Widana et al., 2023). Some of the facilities and infrastructure in schools have not been managed well, both in terms of recording, maintenance and storage, which have not been managed by the school as assets to support learning at school. Management of facilities and infrastructure is very important for the world of education, with the existence of facilities and infrastructure, school education will create effective and efficient schools and for the future needs of the nation in channeling its talents. To improve facilities and infrastructure, planning, procurement, distribution, use, inventory, maintenance and disposal are needed (Sofiah, 2017).

One of the conditions for successful learning is the availability of sufficient educational facilities and infrastructure (Ellong, 2018). Learning facilities that support student learning activities come in various forms, good management of educational facilities and infrastructure will make it easier for students to carry out learning activities, students will be more enthusiastic about learning (Fathurrochman et al., 2021). On the other hand, a lack of learning facilities will result in students being less enthusiastic and motivated about learning, this will of course affect student learning achievement.

In carrying out good facilities and infrastructure management activities, it must start from planning, procuring facilities and infrastructure by looking at existing needs, both office needs and teaching and learning needs. Maintenance of facilities and infrastructure is carried out by all school members, including special officers, school principals, teachers and students who have the same responsibility for maintenance and are also obliged to maintain the facilities and infrastructure in the school (Purnadewi et al., 2023). Inventory activities are carried out every new school year, for recording and purchasing facilities and infrastructure always involving the head of facilities and infrastructure and the school principal. Removal of facilities and infrastructure goes through stages by selecting items that are damaged/unfit for use and before they are removed, repairs are made if they can still be repaired, they will be repaired, otherwise if they cannot be repaired, they are placed in the warehouse and removed from the inventory list. Implementation of facilities and infrastructure management includes planning, procurement, maintenance, inventory and write-off (Isnaini et al., 2021).

Based on the National Government Regulation of the Republic of Indonesia article 1 Number 19 of 2005 concerning infrastructure standards, it states that facilities and infrastructure standards are national educational standards relating to minimum criteria regarding study rooms, places to exercise, places of worship, libraries, laboratories, work workshops, play areas, a place for creativity and recreation as well as other learning resources, which are needed to support the learning process, including the use of information and communication technology (Satyani, 2020). Facilities and infrastructure are important factors that will determine whether a learning process can be effective or vice versa. To realise a good learning process, tools and media are needed to be used as support (Sumandya et al., 2022). For example, the educational process cannot run effectively if the classrooms used as learning spaces are not maintained or are even unfit for use. Therefore, management of facilities and infrastructure in an educational institution must be carried out professionally.

Facilities and infrastructure are one part of the management in educational institutions, facilities and infrastructure have a very important role in an organisation, institution or educational institution. Without supporting facilities and infrastructure, the educational process will not run as it should (Tingkat, 2020). Educational facilities and infrastructure are also one of the elements of educational management which have an important role in the teaching and learning process. Educational facilities and infrastructure are also used to facilitate students' understanding of the material presented using appropriate educational facilities and infrastructure in the process of teaching and learning activities so that they become more effective and efficient. With the existence of educational facilities and infrastructure, teaching and learning activities will be more memorable and meaningful as well as quality and enjoyable (Megasari, 2020).

METHOD

The research used a qualitative descriptive method. The data collection technique used in this research was library research or literature review, namely a search for literature from various reference sources on the same topic to produce a particular topic. Researchers limited the time span for article publication from 2018 to 2023. The articles used in this research were obtained from sources such as Google Scholar, Research Gate, SINTA, and DOAJ. Studies. The technique used in collecting articles used the PoP (Publish or Perish) application with the PRISMA technique which had stages of identification, screening, eligibility, and inclusion. At the identification stage, the researchers found 432 articles using the keyword "management of educational facilities and infrastructure". After passing the screening stage by checking variables that were in accordance with the RQ and eligibility which validated the

suitability of the article for analysis, there were eight articles that were included in the included category for this research. Then, the researchers carried out an analysis of several articles related to the disbursement keyword "management of educational facilities and infrastructure", then drew conclusions and evaluated previous research on the management of educational facilities and infrastructure on learning outcomes.

RESULTS AND DISCUSSION

Based on article search results using the publish or perish (PoP) application with the keywords management of educational facilities and infrastructure accredited by Sinta, there were 8 articles that were very relevant for describing the study of management of educational facilities and infrastructure as an important aspect of learning as described in table 1.

Table 1. Analysis Related to Management of Educational Facilities and Infrastructure as an Important Aspect in Learning

No	Researcher	Method	Results
1	Sudiby & Nugroho, 2020	Qualitative Descriptive	The condition of the facilities and infrastructure in Pringsewu Regency schools has criteria that are quite ideal and are well maintained to support physical education, sports and health learning. A school must have good facilities and complete physical and health education facilities and infrastructure in order to achieve a good teaching and learning process so that the provision of material is not disturbed so that the teaching and learning process will run effectively and efficiently. These findings indicate that the management of junior high school facilities and infrastructure in Pringsewu Regency has produced satisfactory results and has made a positive contribution in improving the quality of school education, especially in the field of physical education and sports studies.
2	Darmansyah & Rahayu, 2022	Qualitative Descriptive	Management of the procurement of sports facilities and infrastructure in Berau Regency has been carried out in accordance with each stage starting from planning, organising, implementing and monitoring which is good according to existing conditions and determining quality standards. The results of these findings show that the existence of adequate facilities and infrastructure fosters enthusiasm, motivation and innovation from all levels, both schools and society, with structured management, teamwork and stakeholder involvement.
3	Isnaniah, 2022	Qualitative Descriptive	The existence of facilities and infrastructure at MTs South Barito comes from assistance from the government which is channeled through the Department of Religion, from community assistance and BAZNAS as a tool to support the success of the process carried out by the school in an effort to provide services to the public. This can be seen from several subjects which directly put into practice

No	Researcher	Method	Results
			several material using available media and facilities. These results indicate that without facilities and infrastructure in schools, the teaching and learning process of teachers and students cannot run well and the expected results will not be achieved.
4	Natal & Bate, 2020	Qualitative Descriptive	The management process of PJOK facilities and infrastructure at Citra Bakti Elementary and Middle School as one school unit under the umbrella of the same foundation in its implementation consists of planning, procurement, storage and maintenance that is good and in accordance with technical instructions, but the maintenance section is not yet complete. optimal because there are several obstacles in terms of storage space or special rooms, this also has an impact on procurement because if the facilities and infrastructure are not properly maintained then next year we will again procure the same goods using existing funding sources. These findings show that the stages in facilities and infrastructure management are a very important unit and must be paid attention to.
5	Manurung, Harahap, Tahrun & Suharyadi, 2020	Qualitative Descriptive	Infrastructure management, which includes planning, procurement, use, maintenance and removal of infrastructure at the Prabumulih 1 State Elementary School (SD), has been running well. The obstacles faced are the lack of funds needed for the procurement process and the lack of administrative staff in the process of managing facilities and infrastructure. These findings show that the role of each stakeholder determines the quality of education in terms of infrastructure at SD Negeri 1 Prabumulih and professional involvement of all elements can realise total quality education management at SD Negeri 1 Prabumulih.
6	Sinta, 2019	Qualitative Descriptive	The planning of facilities and infrastructure for MAS Ar-Rosyidiyah Bandung has gone very well, including in terms of planning, procurement, always prioritise supporting facilities for madrasas to help students learn. These findings provide the view that the management of facilities and infrastructure has been running very well, effectively and efficiently. The facilities are assessed as good, this is felt by students, in which the existing facilities can help student learning thereby improving learning outcomes and student motivation in learning.
7	Supiana & Hermawan, 2018	Qualitative Descriptive	Planning for the facilities and infrastructure of Diniyah Takmiliyah Awaliyah Miftahussalam Tasikmalaya is carried out through meetings or deliberations by the Head of Diniyah Takmiliyah with

No	Researcher	Method	Results
			the teacher council and involving related parties. Procurement of facilities and infrastructure cannot be separated from planning, maintenance and inventory of facilities and infrastructure by appointing a responsible officer, and elimination of Diniyah Takmiliyah Awaliyah facilities and infrastructure by throwing away, selling and exchanging items that are seriously damaged and cannot be repaired in throw away. This shows that the strategy for improving the quality of education is effective and has made a positive contribution to improving the quality of school education.
8	Nasrudin & Maryadi, 2018	Qualitative Descriptive	Planning educational facilities and infrastructure in elementary schools (SD) in the learning process through needs analysis (school self-evaluation), financing, and priority analysis. Procurement of infrastructure and infrastructure in the learning process comes from repairs, government funds, community donations, borrowing goods; and by paying attention to the quality and function of the learning process. Inventorying infrastructure in the learning process such as recording codes, quantities, prices of goods and so on, maintaining infrastructure in the learning process through daily maintenance involving teachers and students and eliminating infrastructure in the learning process has been carried out well through deletion procedures and paying attention to the workload of teaching staff. Taking these findings into consideration, actions can be taken to address these issues and improve the quality of current educational facilities.

Infrastructure and facilities are supports that must be had in the learning aspect. Even though its function is only limited to a supporting element, if there is no good infrastructure, the learning process will not run optimally. School education providers need good school facilities that meet adequate criteria and are therefore called ideal (Sudiby, & Nugroho, 2020).

In the process of teaching and learning activities, one of the factors that determines the success or failure of learning is the availability of learning facilities and infrastructure, which are tools that can help and facilitate teaching and learning activities, so that when implemented, they can be in accordance with the curriculum used (Asalnaije, 2018). Educational infrastructure management is a process of activities to be able to manage infrastructure in a systematic and structured manner and create high-quality education. Therefore, good and appropriate management of educational infrastructure is needed through planning, procurement, maintenance and supervision processes (Isnaniah, 2022). Facilities can be assessed as good if they are felt by students and can help students' learning (Sinta, 2019).

The education process should require facilities and equipment. However, all facilities and equipment must be provided according to needs. If all the tools and equipment are available, they must be utilized and managed properly and correctly. Management activities include planning, procurement, supervision, storage, inventory and deletion, and arrangement. Good facilities and infrastructure can create a pleasant atmosphere, both for teachers and students (Kartika, Husni, & Millah, 2019). Apart from teaching staff, facilities and infrastructure are very important supporting factors in the world of education. Education will never run well without adequate facilities and infrastructure. Facilities and infrastructure will not be fulfilled without ongoing management within the relevant educational institution and the management of educational facilities and infrastructure will have an impact on the learning process (Nasrudin & Maryadi, 2019).

The scope of management of educational facilities and infrastructure is (1) Planning of Educational Facilities and Infrastructure, (2) Procurement of Educational Facilities and Infrastructure, (3) Inventory of Educational Facilities and Infrastructure, (4) Maintenance of Educational Facilities and Infrastructure, (5) Removal of Facilities and Educational Infrastructure. In the scope of planning educational facilities and infrastructure, planning is a process of careful thought to determine the activities that will be carried out in the future. When preparing a needs plan, one should pay attention to the elements involved in the planning such as the principal/madrasah, deputy principal, head of administration, teachers' council and school/madrasah committee. The requirements for preparing a plan are (1) Following guidelines (standards) for the type, quality and quantity of facilities and infrastructure in accordance with the priority scale; (2) Procuring the necessary equipment within a budget; (3) Providing and using operational facilities and infrastructure; (4) Saving and maintaining facilities and infrastructure; (5) Following management procedures; (6) Planning for the procurement of movable goods; (7) Planning for the procurement of consumable movable goods; (8) Planning for the procurement of consumable immovable goods; (9) Planning for the procurement of immovable goods; (10) Calculation of needs study room.

In the context of procurement of educational facilities and infrastructure, procurement is a series of activities to provide various types of educational facilities and infrastructure according to needs to achieve educational goals. Procurement is all activities carried out by providing all necessary goods or services based on planning results with the aim of supporting learning activities so that they run effectively and efficiently in accordance with the desired goals. Thus, the procurement of educational facilities and infrastructure is carried out by school leaders based on mutual agreement and by looking at the needs required by the school. In the case of inventorying educational facilities and infrastructure, the first inventory is for controlling facilities and infrastructure through providing item codes, item names, source of goods/publisher (books), volume/number of goods, date of acquisition/purchase of goods, mutation/change, source of funds and item description.

The second inventory of educational facilities and infrastructure is to supervise facilities and infrastructure. Supervision is carried out by checking the educational facilities and infrastructure inventory book, which contains items that have been provided. Supervision of facilities and infrastructure is the responsibility of the school where not all items in the school belong to the school but rather belong to the government. With good supervision, the risk of undesirable things happening in the future can be minimised by the school.

In the context of maintaining educational facilities and infrastructure, maintenance must be carried out by all school members to prepare learning facilities and infrastructure that can be used at any time in good condition and ready for use by teachers and students. Facilities and infrastructure that are well organised will be able to support the learning process well. Maintenance must also be carried out periodically so that infrastructure remains in good condition and ready for use. Periodic maintenance is one of the steps taken to minimise new purchases that may require more funds. Thus, regular maintenance must be carried out to maintain school infrastructure so that school infrastructure can be well controlled.

In activities to eliminate facilities and infrastructure, the deletion must go through the deletion procedures that have been determined by the government and by paying attention to the steps to eliminate educational facilities and infrastructure with the aim of saving budget and freeing up educational space. Removal of facilities and infrastructure is carried out for facilities that can no longer be used optimally. Apart from saving budget and freeing up educational space, abolition also has another aim, namely easing the workload of teaching and education staff in schools.

CONCLUSION

From the research results and the discussion above, it can be concluded that the management of educational facilities and infrastructure in its application consists of planning educational facilities and infrastructure, procurement of educational facilities and infrastructure, inventory of educational facilities and infrastructure, maintenance of educational facilities and infrastructure, elimination of educational facilities and infrastructure. In the process of teaching and learning activities, one of the factors that determines the success or failure of learning is the availability of learning facilities and infrastructure which are tools that can help and facilitate teaching and learning activities. Infrastructure and facilities are supports that must be had in the learning aspect.

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