

Facilities and Infrastructure Management in Supporting the Learning Process at Islamic State Junior High School

Yuli Ayu Suwandari¹, Septuri², Devin Cumbuan Putri³

^{1, 2, 3} Islamic Education Management, Universitas Islam Negeri Raden Intan Lampung, Indonesia

Article Info

Article history:

Received February 05, 2026

Accepted April 07, 2026

Published April 12, 2026

Keywords:

Educational Management;
Educational Quality;
Facilities and Infrastructure Management;
Islamic Education;
Learning Process.

ABSTRACT

This study examined the management of educational facilities and infrastructure in supporting the learning process at MTsN 1 Bandar Lampung. Facilities and infrastructure played a crucial role in ensuring the effectiveness and efficiency of teaching and learning activities, yet their impact largely depended on how well they were managed. The objective of this research was to analyze the implementation of facilities and infrastructure management functions planning, procurement, arrangement, use, and disposal in supporting the learning process. This study employed a qualitative approach with data collected through participatory observation, structured interviews, and documentation. Data were analyzed using data reduction, data display, and conclusion drawing, with triangulation techniques applied to ensure validity. The findings indicated that the management of facilities and infrastructure was implemented systematically and supported effective learning activities, as reflected in adequate classroom conditions, functional laboratories, library services, and the integration of information and communication technology in instruction. The study concluded that comprehensive and cyclical management of facilities and infrastructure significantly contributed to the quality of the learning process. Practically, the findings provided insights for school administrators to sustain and enhance facility management, while socially reinforced the importance of organized educational resource management in improving educational quality.

Copyright © 2026 ETDCI.
All rights reserved.

Corresponding Author:

Yuli Ayu Suwandari,
Islamic Education Management, Universitas Islam Negeri Raden Intan Lampung, Indonesia
Email: yuliyusuwandari@gmail.com

1. INTRODUCTION

Education is essentially a systematic process designed to develop the full potential of students through planned interactions between educators, the curriculum, and the learning environment (Rohmah, 2017; Rusman, 2017). In educational governance, there is a fundamental assumption that the quality of the learning process is not solely driven by teacher competence and the curriculum (Mincu, 2022; Prasetyowati et al., 2025). Success is highly dependent on the availability and adequate management of facilities

and infrastructure as the primary support for educational operations (Chusna et al., 2026; Handayani & Hidayat, 2025; Saripah & Tejawiani, 2026).

Structured facility management is believed to create a conducive, effective, and efficient learning ecosystem for the comprehensive achievement of national education goals (Ebom-Jebose, 2025; Muhtaram et al., 2025). Theoretically, facility and infrastructure management encompasses a broad managerial cycle, from planning and procurement to organization and utilization to disposal (Astuti et al., 2023; Handayani & Hidayat, 2025). All stages must be carried out systematically and continuously to ensure that each educational asset provides maximum added value to the academic process.

The urgency of this structured management is based on the high risk of suboptimal facility use if managed haphazardly, ultimately leading to waste of organizational resources (Khairullah et al., 2025; Raheef, 2024; Syfaruddin, 2022). Referring to previous studies, learning effectiveness is strongly correlated with the availability and management of adequate educational facilities (Okocha & Odinko, 2021). However, the managerial aspects in the context of state Islamic educational institutions still require more in-depth study to understand the specific dynamics occurring in the field.

To date, the existing literature has been dominated by discussions on the physical availability of facilities, leaving an empirical gap regarding how the managerial cycle is comprehensively implemented in madrasah environments. Previous research tends to focus on physical quantities and does not provide a holistic picture of governance practices in the field. Educational research needs to fill this gap through a methodological approach that can describe real conditions in depth, going beyond simply presenting surface statistics.

In the madrasah context, facility and infrastructure management has unique characteristics because it must support academic aspects while integrating Islamic values (Juhaeni et al., 2021; Nasution, 2021). MTsN 1 Bandar Lampung, as one of the leading state educational institutions in Lampung Province, has infrastructure ranging from classrooms and laboratories to libraries that require specific governance. The novelty of this study lies in its in-depth analysis of the implementation of facility and infrastructure management to support integrated learning processes, going beyond the assessment of physical availability that has dominated similar research.

The need for a facility management model that is not merely administrative-bureaucratic, but strategic and quality-oriented, is the primary foundation of this research. By evaluating the effectiveness of implementation in the field, this study seeks to provide concrete recommendations for improving the quality of educational facility management. The focus is on how infrastructure can adapt to dynamic curriculum needs and support the maximum achievement of student competencies in the madrasah environment.

Methodologically, this study's original contribution lies in its use of a qualitative approach that examines managerial practices while simultaneously considering theoretical, empirical, and factual aspects. This is expected to provide both conceptual and practical contributions to the development of Islamic education management in

Indonesia. Thus, the results of this study serve not only as administrative records but also as strategic guidance in optimizing educational resources to produce a generation that excels intellectually and spiritually.

2. METHOD

This research employs a descriptive qualitative method as the primary analytical framework to examine the phenomenon in depth. This approach was chosen based on the characteristics of the research focus, which requires a comprehensive understanding of the facility and infrastructure management process in supporting effective learning. Unlike quantitative methods, which focus on hypothesis testing or statistical measurement, this research explores the phenomenon in a naturalistic manner to produce a contextual, detailed, and comprehensive picture of managerial practices in the field.

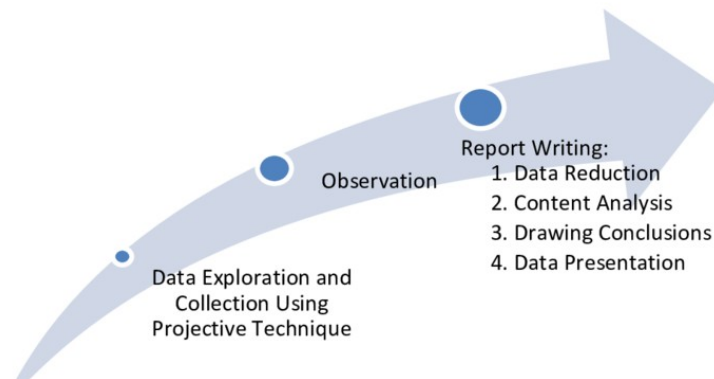


Figure 1. Descriptive Qualitative Method

The research location was MTsN 1 Bandar Lampung, an institution considered highly relevant to the study of educational facility management. To obtain credible data, this study involved various parties as primary data sources, including the Madrasah Principal, the Deputy Principal for Facilities and Infrastructure, teachers, and students. Furthermore, secondary data was collected through intermediary sources to strengthen the validity of the information and provide socio-political and administrative background that supported the research findings.

The data collection process was conducted comprehensively through three main techniques: participant observation, in-depth interviews with key informants, and relevant documentation studies. Observation enabled researchers to capture the dynamics of actual facility use, while interviews were used to explore the perspectives and managerial policies of stakeholders. Documentation studies play a crucial role in verifying administrative records related to planning and procurement of facilities to ensure continuity between theory and practice.

Data analysis was conducted systematically following an interactive model encompassing three main stages: data reduction, data presentation, and conclusion drawing. In the reduction stage, researchers selected and organized core information to separate relevant data from peripheral information. Next, the data was presented in a structured manner to clearly identify management patterns. This process concluded with

a verification process to formulate final conclusions that accurately and objectively address the research questions.

To ensure the validity and credibility of the findings, this study employed a data validation technique through a triangulation strategy. Researchers used source triangulation to compare information obtained from different informants and technical triangulation to verify the consistency of data collected through observation, interviews, and documentation. This multi-layered approach ensured that the research findings possessed a high degree of objectivity and could be scientifically justified in the field of educational management.

3. RESULTS AND DISCUSSION

Results

The results of the study indicate that the management of facilities and infrastructure at MTsN 1 Bandar Lampung has been implemented through a comprehensive and integrated managerial cycle, including needs planning aligned with the institution's vision, transparent procurement, and the disposal of assets that are no longer suitable. The success of this systematic governance is a crucial foundation in creating a conducive and adaptive educational environment to the demands of the curriculum, thereby minimizing technical obstacles and optimizing resources to support students' academic and non-academic achievements. Overall, this structured management pattern reflects the institution's commitment to maintaining quality standards of educational services through the provision of relevant, safe, and functional infrastructure on a sustainable basis.

Planning

The planning of facilities and infrastructure at MTsN 1 Bandar Lampung is carried out through a needs analysis that is tailored to the madrasah's work program and curriculum requirements. Planning activities are usually carried out at the beginning of the school year through madrasah work meetings involving the head of the madrasah, the deputy head of facilities and infrastructure, and teachers. During these meetings, learning facility needs such as classrooms, learning media, practical tools, and administrative equipment are discussed. The result of this process is the compilation of a list of needs and priorities based on urgency and budget availability.

Researcher: "Thank you for your time, Sir/Madam. Regarding my research on facility and infrastructure management at MTsN 1 Bandar Lampung, could you explain the initial procedures for planning facility procurement at this madrasah?"

Informant (Deputy Head of Facilities and Infrastructure): "Of course. Our planning process here is not done on a whim, but rather through a very in-depth needs analysis. We always align each procurement with the madrasah's work program and the demands of the current curriculum. Therefore, what we purchase, or build must truly support the achievement of curriculum targets."

Researcher: "When is formal coordination for this planning usually carried out, and who are the parties involved?"

Informant (Deputy Head of Facilities and Infrastructure): "This planning activity officially takes place at the beginning of the school year. We implement it through the Madrasah Working Meeting (Raker). The Madrasah Principal leads this meeting, accompanied by me as the Deputy Head of Facilities and Infrastructure, and involves all teachers. Teacher involvement is crucial because they are the ones who best understand the needs on the ground."

Researcher: "What are the main points typically discussed in these work meetings?"

Informant (Deputy Head of Facilities and Infrastructure): "We examine learning facility needs in detail, from classroom conditions, the availability of digital learning media, laboratory equipment, and office administration. Teachers will provide suggestions on what equipment will support the teaching and learning process to make it more effective."

Researcher: "Given limited resources, how does the madrasah determine which proposals will be prioritized?"

Informant (Deputy Head of Facilities and Infrastructure): "That's the most important part. The output of the meeting is a list of needs and priorities. We filter them based on urgency and, of course, adjust them to the madrasah's budget. If it's urgent to support teaching and learning activities, it will be prioritized for immediate implementation."

Procurement

The procurement stage is carried out after the facility requirements have been determined in the planning stage. The procurement of facilities and infrastructure in madrasahs is carried out through several mechanisms, such as purchases using madrasah funds, government assistance, and procurement through specific programs from the ministry. The procurement process considers the suitability of the learning requirements and the availability of the madrasah's budget. Thus, the facilities.

Researcher: "After the planning stage is complete and the priority list has been established, what concrete steps does the madrasah take to realize the procurement of these facilities?"

Informant: "This procurement stage is the direct execution of the list of needs we agreed upon at the beginning-of-year work meeting. We don't act alone but rather follow formally established mechanisms. Procurement of facilities and infrastructure at MTsN 1 Bandar Lampung is carried out through several funding channels."

Researcher: "Could you explain in more detail the funding channels or mechanisms in question?"

Informant: "Of course. First, there is procurement that uses independent funds or the madrasah's allocated budget. Second, we also often receive assistance from the government, both central and regional. In addition, there is special procurement through specific programs from relevant ministries. So, the sources vary depending on the type of facility needed."

Researcher: "What are the main considerations of the madrasah before finally deciding to carry out a transaction or handover of goods?"

Informant: "There are two main pillars we adhere to: suitability to learning needs and budget availability. We must ensure that the items we purchase truly meet the specifications required by teachers and students in the classroom. We can't just

buy anything; everything must be accountable and appropriate for its intended purpose, within the available budget."

Researcher: "So every unit entering the madrasah must go through a validation process against the curriculum requirements?"

Informant: "That's right. This way, the facilities we provide truly support academic productivity and don't become wasted assets. Synchronizing the funds spent with the benefits received by students is our priority in this procurement stage."

Arrangements

Facilities and infrastructure are managed through inventory, recording, and arrangement of items according to their function and location of use. Every facility owned by the madrasah is recorded in an inventory book or infrastructure administration system. Arrangements are made so that facilities are easily accessible to teachers and students and remain in good condition. In addition, the madrasah also appoints a person in charge of each room or facility to maintain orderly use.

Researcher: "Once the items or facilities are available at the madrasah, what system is implemented to ensure all these assets are well-organized?"

Informant: "We implement a strict asset management system through three main steps: inventory, recording, and organization. Every item that comes in, whether from independent funds or government assistance, is immediately coded and recorded in our inventory book or digital infrastructure administration system. This is important to accurately monitor the ownership status and existence of the assets."

Researcher: "How are these items placed or arranged so they don't disrupt activities at the madrasah?"

Informant: "We organize them based on their function and location. We don't just leave things there; the principle is efficiency. We organize them so that the facilities are easily accessible to teachers and students when needed, while still maintaining a neat condition and preventing damage due to misplacement."

Researcher: "Who is responsible for monitoring the condition of these items daily in each room?"

Informant: "To maintain order, madrasahs appoint a person in charge (PJ) for each room or specific facility. For example, there's a lab head for laboratories, and there's a homeroom teacher or class representative for classes. Their job is to ensure the orderly use of the facilities and report any damage, so that oversight functions aren't concentrated solely at the leadership level but are well-distributed."

Researcher: "So this system aims to ensure a longer lifespan for the facilities, right?"

Informant: "That's right. With neat record-keeping and a clear person in charge, every madrasah asset can be maintained in good condition and always ready to support teaching and learning activities."

Use

The available facilities and infrastructure are used directly in learning activities. Teachers use various facilities such as classrooms, learning media, and other supporting equipment to support the teaching and learning process. The use of these facilities is optimized to improve the effectiveness of learning. In addition to being used in

classroom learning activities, some facilities are also used for extracurricular activities and other madrasah activities.

Researcher: "After all the facilities have been well planned and arranged, how are they utilized in daily learning activities at MTsN 1 Bandar Lampung?"

Informant: "We direct all the facilities available here to be used directly in teaching and learning activities. As teachers, we utilize the existing classrooms, various learning media, and other supporting equipment to ensure the material is optimally conveyed to students."

Researcher: "Are there any specific strategies to ensure the use of these facilities is truly effective and not just for display in the classroom?"

Informant: "Of course. We strive to optimize them. This means that every available media or tool must be fully integrated into the Lesson Implementation Plan (RPP). Teachers are encouraged to be as creative as possible in using available resources to increase learning effectiveness, so that the classroom atmosphere becomes more interactive and engaging."

Researcher: "Besides formal teaching and learning activities, can these facilities also be used for other purposes?"

Informant: "Absolutely. Their use isn't limited to classrooms during class hours. Some supporting facilities are also actively used for extracurricular activities and various other madrasah agendas. Our principle is that as long as these activities are educational and support student self-development, madrasah facilities must be able to accommodate these needs."

Researcher: "How do you see the impact of optimal utilization of these facilities on student enthusiasm?"

Informant: "The impact is very noticeable. With the support of adequate facilities and complete teaching aids, students become more enthusiastic. Learning is no longer boring because we can combine theory with direct practice using the facilities provided by the madrasah."

Disposal

Facilities and infrastructure are disposed of if they are severely damaged, no longer usable, or no longer support learning activities. The disposal process is carried out through applicable administrative procedures, such as recording the items to be disposed of and obtaining approval from the relevant parties. The purpose of this disposal is to maintain order in inventory administration and to make room for the procurement of new facilities.

Researcher: "In managing facilities and infrastructure, there certainly comes a time when an item is no longer usable. What is MTsN 1 Bandar Lampung's policy for handling items that have reached the end of their useful life?"

Informant: "We have a systematic asset write-off procedure. We will remove an item or facility from the inventory list if it is severely damaged, beyond repair, or its function is no longer relevant to supporting current learning activities."

Researcher: "Is there a formal process that must be followed before these items are actually removed from the madrasah premises?"

Informant: "Of course, we can't just throw away items because they relate to state assets. The process is carried out through applicable administrative procedures. First,

we collect and record the items proposed for disposal. After that, we must obtain approval from the relevant parties, both internal madrasah leadership and higher-level agencies, if necessary."

Researcher: "What is the main purpose of this periodic asset write-off?"

Informant: "There are two main goals. First, to maintain orderly inventory administration; we want the data in the inventory book to match the physical facts on the ground. Second, to optimize space. By eliminating items that are no longer useful, we can free up space for the procurement of new, more modern facilities that are more needed by students."

Researcher: "So this process is also part of the effort to efficiently manage buildings and rooms at the madrasah, right, Sir/Madam?"

Informant: "That's right. Without regular disposal, warehouses and rooms will be filled with damaged items, which can hinder the circulation of new facilities. So, this disposal is a crucial step to maintain a healthy infrastructure management cycle."

The implementation of facility and infrastructure management at MTsN 1 Bandar Lampung demonstrates that educational facilities are no longer viewed as mere administrative complements. Instead, all infrastructure elements are strategically and integratedly managed to become a key support for improving the effectiveness and quality of the learning process within the madrasah.

This transformation in facility function reflects the institution's commitment to optimizing physical resources to create a more productive and functional academic ecosystem. With a focus on efficient utilization, facility and infrastructure management plays a crucial role in facilitating curriculum requirements and ensuring that each available resource significantly contributes to student competency achievement.

Discussion

The research findings indicate that facility and infrastructure planning at MTsN 1 Bandar Lampung is systematically implemented through a needs analysis aligned with the school's work program and curriculum requirements. This planning process is initiated at the beginning of the school year through a participatory work meeting involving the principal, the deputy principal for facilities and infrastructure, and teachers. This synergy among stakeholders results in a priority scale structured based on the urgency of learning needs, ensuring that each asset procurement has direct relevance to improving the quality of classroom instruction.

This finding aligns with the theory of facility and infrastructure management, which positions planning as a fundamental function in determining the effectiveness of subsequent managerial stages (Sholihah, 2019; Tucker & Masuri, 2018). The practice of needs-based planning at the research site reflects a bottom-up, participatory approach, where aspirations from the grassroots become the basis for policy. Compared with the study by Chotimah et al. (2025) and Spillane (2017), which found that school facility planning is often confined to purely administrative aspects, the results of this study demonstrate a more strategic practice that is fully integrated with the school's long-term

vision. During the procurement stage, madrasahs implement a mechanism based on priorities and budget availability in stages.

Theoretically, the procurement process should consider aspects of effectiveness, efficiency, and sustainability (Le et al., 2021; Tregear et al., 2022). Although administrative procedures have been followed properly to support smooth learning, budget constraints remain a determining factor affecting the speed of needs realization. This aligns with the findings of research, who confirmed that funding constraints remain a classic challenge in efforts to optimize educational facilities across various institutions (Altassan, 2023; Asamoah & Ansong, 2025).

The research results show that the arrangement of facilities and infrastructure at MTsN 1 Bandar Lampung is implemented through an inventory process, recording, and grouping facilities based on their type and function. Each asset is assigned a unique inventory code that is recorded in duplicate, both in the manual master book and the madrasah's digital administration system. This practice aligns with the organizing function in management theory, which emphasizes the importance of organizing resources for effective use (Nderi, 2024; Nurhikmah, 2024). Compared with Azaya and Putra's (2025) findings regarding the weakness of the inventory system in many schools, management at this madrasah is significantly more orderly and systematic, although periodic monitoring of physical conditions still requires improvement to maintain long-term quality.

In terms of utilization, various facilities such as classrooms, laboratories, libraries, and information technology-based learning media have been optimized to support teaching and learning activities. Teachers utilize these facilities according to the demands of the subjects and the learning methods applied. Theoretically, optimal facility utilization will increase instructional effectiveness by creating a conducive learning environment (Ibrahim, 2023; Jannah & Yaumi, 2023; Nursaid et al., 2023). These findings demonstrate a strong consistency between theory and practice, demonstrating that facilities and infrastructure directly contribute to the smooth running of the educational process.

The integration of information technology into the use of facilities at this madrasah is also an important indicator of adaptation to modern educational developments (Haddade et al., 2024; Maskin et al., 2025). This demonstrates that facility management goes beyond physical maintenance, but also transforms toward digitalization to enrich students' learning experiences. The alignment between the availability of IT-based media and teachers' teaching methods strengthens the madrasah's position as an institution responsive to changing times, while ensuring that infrastructure investments have a significant educational impact.

In the final stage of the management cycle, the madrasah implements asset disposal procedures based on applicable regulations, particularly for facilities that have suffered severe damage or no longer have any use value. This process involves a thorough evaluation of the physical condition of the items before submitting them to a disposal report. From a management theory perspective, disposal is an integral part of the control function to maintain efficient and accountable resource management (Subair et al.,

2025). Although the frequency of disposal is not high, adherence to these procedures indicates that the management cycle at this institution is fully functioning.

Overall, the implementation of facilities and infrastructure management at MTsN 1 Bandar Lampung has been systematic and supports the effectiveness of the learning process comprehensively. These findings reinforce educational management theory, which emphasizes the importance of sustainable facility management, from planning to final evaluation (Connolly et al., 2019). Practically, the results of this study provide valuable empirical contributions in the context of Islamic education management, while also serving as a reference for other educational institutions in optimizing infrastructure resources to achieve academic and managerial excellence.

4. CONCLUSION

This study concludes that the management of facilities and infrastructure at MTsN 1 Bandar Lampung has been implemented through a systematic and integrated managerial cycle—from planning to asset disposal—which significantly supports the effectiveness of learning activities through the provision of adequate classrooms, laboratory optimization, and information technology integration. The success of this organized and sustainable management of educational resources has been proven to contribute significantly to improving the quality of instruction at the madrasah, while providing practical implications for administrators in maintaining a strategic management model to achieve superior educational quality standards.

As a recommendation, madrasah administrators are advised to maintain the consistency of the existing management cycle, particularly in terms of preventive maintenance of laboratory facilities and information technology to ensure the continued quality of digital learning. Furthermore, for education policymakers, it is important to develop a more digitalized and data-driven facility monitoring system so that future asset planning and procurement processes can be more accurate, responsive to curriculum dynamics, and able to support the achievement of student competencies more broadly across both academic and non-academic aspects.

REFERENCES

- Altassan, A. (2023). Sustainable integration of solar energy, behavior change, and recycling practices in educational institutions: a holistic framework for environmental conservation and quality education. *Sustainability*, *15*(20), 15157. <https://doi.org/10.3390/su152015157>
- Asamoah, M. K., & Ansong, J. D. (2025). Building resilience in higher education by addressing infrastructure and financial resource challenges in Ghana. *SN Social Sciences*, *5*(7), 78. <https://doi.org/10.1007/s43545-025-01110-z>
- Astuti, M., Suryana, I., Yuke, D. P., Dara, D. S. A., Masitho, M., Hartanti, A., & Pratiwi, A. (2023). Understanding and Scope of Management of Educational Facilities and Infrastructure. *Jurnal Sustainable*, *6*(2), 549-555. <https://doi.org/10.32923/kj.mp.v6i2.4055>
- Azaya, A. F., & Putra, S. H. (2025). Perancangan Sistem Pendataan dan Pengelolaan Inventaris Berbasis Web pada SMK Negeri 1 Percut Sei Tuan dengan Metode

- Research & Development (R&D). *Jurnal Minfo Polgan*, 14(2), 3007–3014. <https://doi.org/10.33395/jmp.v14i2.15563>
- Chotimah, C., Qudsy, S. Z., & Yusuf, M. (2025). Superficial implementation of religious moderation in Islamic educational management. *Cogent Education*, 12(1), 2442235. <https://doi.org/10.1080/2331186X.2024.2442235>
- Chusna, V. N., Faridah, I., & Kumala, S. A. (2026). Management of Educational Facilities and Infrastructure to Improve the Quality of Education. *Journal of English Language and Education*, 11(1), 172-181. <https://doi.org/10.31004/jele.v11i1.1761>
- Connolly, M., James, C., & Fertig, M. (2019). The difference between educational management and educational leadership and the importance of educational responsibility. *Educational Management Administration & Leadership*, 47(4), 504-519. <https://doi.org/10.1177/1741143217745880>
- Ebom-Jebose, A. (2025). Streamlining School Plant Management: A Transformative Approach for Educational Institutions. *Int'l Journal of Education Research and Scientific Development*, 7(1), 101-114. <https://ijresd.net/index.php/IJRESD/article/view/204>
- Haddade, H., Nur, A., Achruh, A., Rasyid, M. N. A., & Ibrahim, A. (2024). Madrasah management strategies through Madrasah Reform program: an evidence from Indonesia. *International Journal of Educational Management*, 38(5), 1289-1304. <https://doi.org/10.1108/IJEM-05-2023-0236>
- Handayani, R., & Hidayat, H. (2025). Facilities and Infrastructure Management in Improving the Quality of Student Learning. *Journal of Innovation and Research in Primary Education*, 4(4), 2334-2345. <https://doi.org/10.56916/jirpe.v4i4.2083>
- Ibrahim, Y. (2023). Relevance of school facilities and infrastructure towards implementing education policies. *Journal of Social Transformation and Regional Development*, 5(2), 61-67. <https://penerbit.uthm.edu.my/ojs/index.php/jstard/article/view/15242>
- Jannah, R., & Yaumi, M. (2023). Utilization of learning space as a learning resource center. *Al-Iftah: Journal of Islamic studies and society*, 4(1), 63-77. <https://doi.org/10.35905/aliftah.v4i1.9334>
- Juhaeni, A., Sanusi, A., Wasliman, I., & Hanafiah, H. (2021). Strategic management of quality improvement of madrasah Aliyah graduates in modern Islamic boarding schools. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 7(01), 33-46. <https://doi.org/10.32678/tarbawi.v7i01.4179>
- Khairullah, R., Fatayan, A., Syarif, M. S., & Ghani, A. R. A. (2025). Standards for Facilities and Infrastructure in Building Quality Education in Senior High Schools. *ETDC: Indonesian Journal of Research and Educational Review*, 4(4), 1604-1617. <https://doi.org/10.51574/ijrer.v4i4.3891>
- Le, A. T. H., Park, K. S., Domingo, N., Rasheed, E., & Mithraratne, N. (2021). Sustainable refurbishment for school buildings: a literature review. *International Journal of Building Pathology and Adaptation*, 39(1), 5-19. <https://doi.org/10.1108/IJBPA-01-2018-0009>
- Maskin, M., Riadi, B., Saidina, S., Marlina, L., & Febriyanti, F. (2025). Digital Transformation in Islamic Education Management: Strategies of Madrasah Principals in Improving the Quality of Technology-Based Learning. *International Journal of Education and Literature*, 4(3), 319-328. <https://doi.org/10.55606/ijel.v4i3.302>
- Mincu, M. (2022). Why is school leadership key to transforming education? Structural and cultural assumptions for quality education in diverse contexts. *Prospects*, 52(3), 231-242. <https://doi.org/10.1007/s11125-022-09625-6>

- Muhtaram, S. A., Munawar, M., & Abdurrahman, A. (2025). Management of Learning Facilities and Infrastructure to Enhance Educational Quality in Elementary Schools of Aceh Tamiang Regency. *JURNAL HURRIAH: Jurnal Evaluasi Pendidikan dan Penelitian*, 6(4), 1381-1388. <https://doi.org/10.56806/jh.v6i4.373>
- Nasution, M. D. (2021). Planning of Facilities and Infrastructure in Islamic Education. *Journal of Islamic Education El Madani*, 1(1). <https://doi.org/10.55438/jiee.v1i1.14>
- Nderi, C. W. (2024). Organization Theory and Alignment of Organizations' Structure to Their Environment. *Journal of Human Resource & Leadership*, 8(2), 71-81. <https://doi.org/10.53819/81018102t30139>
- Nurhikmah, N. (2024). Educational management functions: Planning, organizing, actuating, controlling. *INTIHA: Islamic Education Journal*, 1(2), 82-91. <https://doi.org/10.58988/intiha.v1i2.293>
- Nursaid, N., Nuraini, S., & Novitasari, D. R. (2023). How" influence" do media, facilities, and learning interests influence students' economic learning outcomes?. *Assyfa Journal of Multidisciplinary Education*, 1(1), 41-49. <https://doi.org/10.61650/ajme.v1i1.350>
- Okocha, S. N., & Odinko, M. N. (2021). E-learning facilities availability, usability and adaptability as predictors of job effectiveness among academic staff of university of ibadan. *Journal of the International Society for Teacher Education*, 25(2), 93-109. <https://doi.org/10.26522/jiste.v25i2.3671>
- Prasetyowati, F., Saniya, U. M., Fauzia, S., & Susilawati, S. (2025). Transformative Leadership for Integrating Islamic Values and 21st Century Skills: A Conceptual Framework for Contemporary Islamic Education. *Journal of Islamic Education Management Research*, 3(1), 29-41. <https://doi.org/10.14421/jiemr.2025.31-03>
- Raheef, O. O. (2024). Facilities availability to support teaching and learning process and public reactions toward technical education. *ETDC: Indonesian Journal of Research and Educational Review*, 3(3), 71-83. <https://doi.org/10.51574/ijrer.v3i3.1528>
- Rohmah, A. N. (2017). Belajar dan pembelajaran (pendidikan dasar). *Jurnal Cendekia Media Komunikasi Penelitian dan Pengembangan Pendidikan Islam*, 9(02), 193-210.
- Rusman, M. P. (2017). *Belajar & pembelajaran: Berorientasi standar proses pendidikan*. Prenada Media.
- Saripah, A., & Tejawiani, I. (2026). Management Facilities and Infrastructure in Improving Quality Learning at Elementary School. *Journal of Innovation and Research in Primary Education*, 5(1), 207-217. <https://doi.org/10.56916/jirpe.v5i1.2760>
- Sholihah, N. K. (2019). Management of education facilities and infrastructure. In *3rd International Conference on Education Innovation (ICEI 2019)* (pp. 183-186). Atlantis Press. <https://doi.org/10.2991/icei-19.2019.24>
- Spillane, J. (2017). Leadership and learning: Conceptualizing relations between school administrative practice and instructional practice. In *How school leaders contribute to student success: The four paths framework* (pp. 49-67). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-50980-8_4
- Subair, S. T., Ibrahim, R. A., & Akinola, O. B. (2025). Principles and theories in educational management: Basis of institutional efficiency and effectiveness. *Journal of Philosophy, Policy and Strategic Studies*, 1(6), 227-242.
- Syafaruddin, B. (2022). A Quality Management Concept for Educational Facilities and Infrastructure was Developed in the Industrial Revolution 5.0. *ETDC: Indonesian Journal of Research and Educational Review*, 1(3), 336-345. <https://doi.org/10.51574/ijrer.v1i3.418>

- Tregear, A., Aničić, Z., Arfini, F., Biasini, B., Bituh, M., Bojović, R., ... & Tsakiridou, E. (2022). Routes to sustainability in public food procurement: An investigation of different models in primary school catering. *Journal of Cleaner Production*, 338, 130604. <https://doi.org/10.1016/j.jclepro.2022.130604>
- Tucker, M., & Masuri, M. R. A. (2018). The development of facilities management-development process (FM-DP) integration framework. *Journal of Building Engineering*, 18, 377-385. <https://doi.org/10.1016/j.job.2018.04.007>