

Planning and Implementation Strategies of Educational Facilities Management: Case Study in State High School

Baraz Yoechva Alfaiz, Dadang Ahmad Sujatnika, Adang Sutarman

¹Universitas KH. Mukhtar Syafaat Blokagung Banyuwangi, Indonesia

²Sekolah Tinggi Agama Islam Nurul Hidayah Lebak, Banten, Indonesia

³SMP Negeri 1 Cikeusal Kabupaten Serang, Banten, Indonesia

e-mail: barazyova@gmail.com, dfbocil66@gmail.com, adangsutarman@gmail.com,


Submitted: 13-03-2024

Revised: 13-04-2024

Accepted: 17-05-2024

ABSTRACT. This study aims to investigate the planning, implementation and evaluation of the management of educational facilities and infrastructure at State Senior High School 1 Rogojampi Banyuwangi with a focus on its effectiveness in improving the quality of educational services. The research method used is a case study with a qualitative approach. Data was collected through observation, interviews and document analysis. The research results show that the planning of educational facilities and infrastructure was carried out comprehensively, involving all school members and following standard operating procedures. Implementation is carried out by paying attention to short-, medium-, and long-term planning, as well as through procurement, inventory, distribution and maintenance of facilities. Evaluations are carried out regularly, including monthly meetings, semester meetings, and school self-evaluation, to evaluate progress, achievements, and strategies that have been implemented. The implication of these findings is the need to continue to increase participation, maintenance, and internal and external evaluation to optimize the management of educational facilities and infrastructure.

Keywords: *Educational facilities management, implemetation, planning, state high school*

 <https://dx.doi.org/10.32678/tarbawi.v10i01.9912>

How to Cite Alfaiz, B.Y., Sujatnika, D.A., & Sutarman, A. (2024). Planning and Implementation Strategies of Educational Facilities Management: Case Study in State High School. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 10(01), 31–42. <https://doi.org/10.32678/tarbawi.v10i01.9912>

INTRODUCTION

A high school is a place of learning that participates in the formation of students' intellectual potential (Murodova, 2020; Vettori et al., 2020). High school is one of the educational institutions that plays a central role in the provision of education (Crosnoe et al., 2018). In this context, effective management of educational facilities and infrastructure is inevitable because it plays a crucial role in supporting the achievement of the learning process (Chatterton & Goddard, 2000; Akram et al., 2022). However, the reality on the ground often shows that there are significant obstacles in the management of educational facilities and infrastructure in high schools, including state high schools, such as suboptimal use of classrooms (Özbek et al., 2023), limited accessibility of facilities (Roos et al., 2018; Isrokaton & Yulifar, 2020; Manuturi et al., 2022), and lack of maintenance capacity for existing facilities and infrastructure (Sa'adah et al., 2022).

Effective learning in public high schools is a key element in ensuring the provision of quality education and providing students' potential (Stott & Hobden, 2016; Maulana et al., 2021; Endrawan & Aliriad, 2023). However, in reality, today, problems are often encountered that hinder the effective learning process at the high school level, especially at SMAN 1 Rogojampi Banyuwangi.

One of the crucial problems is the suboptimal management of educational facilities and infrastructure. Lack of attention to learning support infrastructure such as classrooms, laboratories, libraries and other facilities can hamper the school's ability to provide adequate learning experiences for students. Low learning efficiency can also affect students' overall motivation and academic achievement.

The study of the role of physical infrastructure in supporting effective learning has become an important topic in educational literature. The study by Sawitri et al. (2019) and Shirrell et al. (2019) shows that physical infrastructure plays a crucial role in influencing student learning achievement. This is supported by other research conducted by Setiawan et al. (2018), Shmis et al. (2019), and Nafis and Muchtar (2020). However, research that specifically focuses on planning, implementation and evaluation of the management of educational facilities and infrastructure in public high schools is still limited. This research gap has given rise to debate regarding a deeper understanding of how the management of educational facilities and infrastructure can effectively support the learning process.

In this context, it is important to identify and face new challenges that arise in an effort to improve the quality of learning at SMAN 1 Rogojampi Banyuwangi. One aspect that is receiving increasing attention is how the management of educational facilities and infrastructure can be improved to ensure optimal learning effectiveness. Although there have been several studies investigating this topic, this research makes a significant contribution by emphasizing the planning, implementation and evaluation of management of educational facilities and infrastructure in public high schools. By focusing attention on this, this research aims to investigate the planning, implementation and evaluation of the management of educational facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi with a focus on its effectiveness in improving the quality of educational services.

METHOD

The research method used is a qualitative approach with a case study type. This research focuses on Facilities and Infrastructure Management at SMAN 1 Rogojampi Banyuwangi. The research location was chosen because of its significant achievements and uniqueness as the main choice of the people of Banyuwangi. The research object focuses on the facilities and infrastructure units in the school. Primary data was obtained through interviews with the school principal, deputy head of facilities and infrastructure, and related staff. Meanwhile, secondary data comes from books, journal articles and other sources. Research subjects included the school principal, deputy principal for facilities and infrastructure, teacher council, and related staff.

Data collection techniques involve observation, with a focus on the school's physical condition, interviews with sources related to facilities and infrastructure management, and documentation by taking photos to support the data from observations and interviews. Data analysis was carried out through the stages of collection, reduction, presentation, and conclusion. Data validity is tested through triangulation, while data reliability is considered by efforts to reduce research deviations. Research procedures include problem identification, literature search, objective determination, data collection, analysis and interpretation of data, and reporting research results.

RESULT AND DISCUSSION

Result

Planning

Planning for educational facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi is carried out with the aim that all aspects of management can be managed in an orderly and effective manner. By following standard operating procedures, it is hoped that the results achieved will be

satisfactory. Therefore, active participation from all school members in managing educational facilities and infrastructure is very important to improve school operational efficiency and the quality of learning media. The observation results show that the educational facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi are adequate and provide satisfactory services and comfort for students in the learning process. These adequate facilities also play a significant role in improving school operational efficiency and student learning media. Students seem to enjoy these conditions, which is due to the availability of adequate facilities that suit their needs.

Planning for educational facilities and infrastructure is carried out a year in advance, with appropriate procurement of goods. For example, when educational facilities and infrastructure are needed in 2024, planning has started or been prepared since 2023. The formation of a team consisting of leaders and all school residents serves as the main motor in managing educational facilities. SMAN 1 Rogojampi Banyuwangi implements short term, medium term and long term planning. Short-term planning takes place over a period of one year, medium-term planning over two years, and long-term planning over four years. An analysis of educational facility needs is carried out at the beginning of the year involving the entire teacher council. The next step is to compile a list of educational facility needs whose priorities are submitted to the school committee and central government for support. In this context, Mrs. Hidayanti as Adminsitation staff explained that: *"a needs analysis is carried out to determine priority facilities in meeting planned needs. This process involves all homeroom teachers, administrative staff, and those responsible in each field. Next, it is carried out needs analysis to determine the priority scale in an effort to meet planned needs."*

In summary, the planning of facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi can be shown in Table 1 below.

Table 1. Planning for facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi	
Category	Findings
Steps for Management Planning for Educational Facilities and Infrastructure	Form a work team
	Overall needs analysis
	Working meeting involving the principal and deputy principal
	Implementation of planned programs
Arranging Programs Through Work Meetings	Short term
	Medium-term
	Long term

Based on the results presented, the layout of facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi looks quite good, including the arrangement of teacher offices, tables or chairs in classrooms, laboratories, prayer rooms and other facilities. The quality of this arrangement reflects effective management, providing positive encouragement for students to remain enthusiastic about learning and achieving achievements to achieve their goals.

The steps for planning comprehensive management of educational facilities and infrastructure first start with the formation of a work team consisting of teaching staff, administrative staff and technical experts if necessary. This team is responsible for planning, organizing and supervising the implementation of facilities and infrastructure management. In the second step, the team carried out a comprehensive analysis to identify the educational facilities and infrastructure needed by the institution, including classrooms, equipment, sports facilities, laboratories, libraries, and others. In the third step, the team holds regular work meetings with the principal and deputy principal to present the results of the needs analysis, discuss planning strategies, and obtain approval for program implementation. In the fourth step, after obtaining approval, the team carries out the planned program, including procurement, installation and maintenance of educational facilities and infrastructure according to the predetermined schedule. In work meetings, the team formulates facilities and infrastructure management programs in the short term (weekly or monthly), medium term (semesterly or annually), and long term (the next

few years). It allows for continuous planning and adaptation to changing educational needs as well as the development of the educational institution itself.

Implementation

The interview with the deputy head of facilities and infrastructure revealed that *"the procurement of goods is the result of planning that has been prepared previously. This effort aims to fulfil all school needs with the aim of increasing the smoothness of the student teaching and learning process in order to increase the effectiveness of learning. Procurement of educational facilities at SMAN 1 Rogojampi Banyuwangi was assessed as good based on the results of the researcher's observations, referring to the plan that had been prepared and approved by the leadership, thereby ensuring its implementation was in accordance with the plan."* It is important to note that provisions tailored to the needs of teachers and students can improve the smoothness of the learning process. After the procurement is carried out, all school residents have a role in maintaining all facilities and infrastructure. With proper management, this can have a positive impact on school development, provide benefits felt by the school community, and increase the effectiveness of learning.

The results of an interview with Mrs. Hidayanti, Administration staff, revealed that: *"the school has a list of records of goods via the Microsoft Excel application in each room. This process is part of the inventory, which is the act of continuously recording all educational facilities and infrastructure owned by the school. When new facilities are purchased, the information is immediately entered into the school inventory record. Each item in the inventory record is given a code to make it easier to group items when they are damaged or updated, carry out maintenance, and check the facilities in each room. It ensures that the maintenance and maintenance of facilities and infrastructure can be carried out more efficiently and organized."* The results of interviews with Mrs. Hidayanti, Administration staff, show that the distribution and utilization of educational facilities at SMAN 1 Rogojampi Banyuwangi has run according to the stated objectives. This process has been analyzed first to create effective and efficient conditions for the management of educational facilities.

Educational facilities that have been recorded in the inventory book are distributed according to the needs of their users and utilized according to their function. In utilizing facilities, efficiency and effectiveness must always be prioritized. The use of educational facilities must also comply with established standard operating procedures so that the distribution and use of facilities occur in accordance with applicable regulations. It aims to ensure that the distribution process and use of educational facilities run smoothly without any obstacles. SMAN 1 Rogojampi Banyuwangi is an example of proper implementation in the distribution and utilization of facilities, where distribution is carried out appropriately, and utilization is adjusted to existing needs. Thus, the distribution and utilization of educational facilities at SMAN 1 Rogojampi Banyuwangi can be an inspiration for other schools to create effective and efficient conditions in managing educational facilities.

Mr. Edi Purwanto explained that: *"maintenance of educational facilities at SMAN 1 Rogojampi Banyuwangi has gone quite well in increasing the effectiveness of learning. The entire school community participates in maintaining existing educational facilities. However, the deputy principal is given large responsibility for maintenance and supervises the entire condition of educational facilities. The aim is to evaluate each educational facility and make repairs if there is minor damage."* In carrying out maintenance, coordinators are formed in each field with the aim of ensuring that all activities run as expected. Effective management also contributes to satisfactory service to school operations. When school operational activities satisfy the school community and parents, the reputation of the educational institution increases significantly. Thus, the involvement of all school members in maintaining educational facilities is an important factor in creating a conducive and quality learning environment.

Mr. Edi Purwanto explained that: *"the removal of school facilities and infrastructure is carried out depending on the condition of the facilities and infrastructure. If the facilities experience minor damage, they will be repaired themselves. However, if they are seriously damaged, it is reported to the deputy head of facilities and*

infrastructure. In the final stage, if the facilities are badly damaged, they will be removed. The process of deleting school facilities is carried out by categorizing them according to the level of damage. Facilities that can still be repaired will be stored and placed in storage. Facilities that are damaged but can still be repaired, such as chairs and tables with minor damage, are repaired as best as possible. If a facility is missing, the person responsible may be subject to sanctions or asked to replace items that are seriously damaged. If the warehouse is full, the facility will be removed from the inventory list together, where facilities that are still suitable can be repaired. In contrast, those that are seriously damaged will be removed from the school inventory list. This elimination activity can help save budget expenses."

In summary, Table 2 below shows the implementation of facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi.

Table 2. Implementation of facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi

Category	Findings
Implementation of Management of Educational Facilities and Infrastructure	Procurement
	Inventory
	Distribution and utilization
	Maintenance or maintenance
	Removal

Implementation of comprehensive management of educational facilities and infrastructure involves a series of well-planned steps. The first step is to procure the necessary facilities and infrastructure according to the needs of the educational institution. It involves market research, submitting bids, selecting vendors, and procuring educational equipment or facilities. After procurement, the second step is to carry out an inventory, which includes recording and documenting all facilities and infrastructure that have been obtained, including specifications, condition and location of use. The facilities and infrastructure that have been inventoried are then distributed to the right locations in educational institutions.

Utilization of facilities and infrastructure is carried out in accordance with educational needs to support teaching and learning activities and other school activities. Furthermore, routine maintenance or upkeep of these facilities and infrastructure is required, including cleaning, repairing and caring for them so that they remain in good condition and can be used optimally. When facilities and infrastructure are no longer needed or are no longer suitable for use, the final step is to delete them. Removal is carried out in a manner that complies with applicable regulations and standards to ensure safe and environmentally friendly waste handling and management of remaining items. Overall, the process has gone well and in accordance with the plans previously prepared. Thus, in the management of facilities and infrastructure, services to teachers and students can be improved with the convenience created. It reflects that all steps taken in planning and implementation have run smoothly and successfully.

Evaluation

Three types of evaluation are carried out in the management of educational facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi. The *first* is the monthly evaluation, which is carried out every month to evaluate the progress and performance of a project or infrastructure management program. Monthly evaluations make it possible to catch changes or problems that occur quickly so they can be addressed immediately. The *second* is the work meeting every semester, which is held twice a year at the end of the semester. This meeting aims to carry out a more in-depth evaluation of the entire infrastructure management process that has been carried out during one semester. It makes it possible to review achievements, evaluate strategies that have been implemented, and make plans for the next semester. *Third* is the School Self-Evaluation, which is carried out once a year. The school itself carries out this evaluation and aims to comprehensively evaluate the school's performance in managing infrastructure.

The internal evaluation at SMAN 1 Rogojampi Banyuwangi, which the relevant parties carry out, is carried out once every year at the end of the school year. This evaluation involved meetings attended by school leaders such as the principal, deputy head of infrastructure, head of administration, and coordinators from various activity fields at SMAN 1 Rogojampi Banyuwangi. Meanwhile, an external evaluation of the infrastructure at SMAN 1 Rogojampi Banyuwangi was carried out through the use of the Microsoft Excel application. This application functions as a supervisory or monitoring tool for all infrastructure inventory activities. This evaluation is usually carried out every semester, so there are two reports in one year. At the end of the school year evaluation stage, a school work meeting is held, and school leaders attend it. In this school work meeting, all aspects related to educational facilities and infrastructure were discussed thoroughly. The aim is to develop a work program that will ensure that all processes related to educational facilities and infrastructure can run well.

In summary, the evaluation of facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi can be shown in Table 3 below.

Table 3. Evaluation of facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi

Category	Findings
Forms in Evaluation of Management of Educational Facilities and Infrastructure	Preparation of work programs
	Written report
	Verbal report
	See field conditions
Implementation in Evaluation of Management of Educational Facilities and Infrastructure	Monthly meeting
	Meetings twice a year
	School Work Meeting, which involves the principal, deputy head of facilities and infrastructure, head of Administration and coordinators in each field. With the intention of prioritizing what is prioritized.
	School Self-Evaluation is carried out every year

Based on the information above, evaluation is an important thing for schools to consider actions carefully and review all steps that have been taken to ensure that all processes go according to plan and provide the expected results. In the evaluation process, decisions about the next actions must be considered carefully so that optimal results can be achieved. It shows the importance of evaluation as a tool to increase efficiency and effectiveness in education management at SMAN 1 Rogojampi Banyuwangi.

Discussion

Infrastructure planning in the context of education management in State High Schools plays an important role in increasing learning effectiveness. As explained by Hill and McShane (2008), the initial stages in the management process emphasize the importance of planning, which includes steps such as planning, organizing, activating, and controlling. It is reinforced by the views of Sholihah (2019) and Ilmi et al. (2023), which emphasize that planning is the initial stage in identifying all organizational needs. However, in the context of practice, there is debate about the extent to which planning details should be drawn up. Some researchers, as expressed by Kenny (2002), argue that planning that is too detailed can limit flexibility and innovation in the management of educational infrastructure. Meanwhile, an opposing view was also expressed by Saborio and Hertzberg (2020), who argued that planning that is too general can cause uncertainty in resource allocation and management efficiency.

Planning educational facilities and infrastructure in State High Schools is a very important programmed process. It is tailored to the needs of the school, involving the participation of all related parties, as highlighted by Isnaini et al. (2021). The team, which consists of the principal, deputy principal, and the school community, plays an active role in designing office and learning

needs. However, there is debate regarding the extent to which the participation of all parties should be expanded. Some groups, as stated by Triwardhani et al. (2020), argue that it is also necessary to involve students and parents in the planning process because they have direct experience with the daily needs in the school environment. However, this view is not always universally accepted. Several researchers, as stated by Saputra (2023), argue that involving too many parties can slow down the decision-making process and make planning inefficient.

Good maintenance of facilities and infrastructure in the educational environment has a significant impact on reducing the risk of student learning failure, as highlighted by Hasanah (2020). In the context of maintenance management, needs analysis is the key, and the school principal, deputy head of facilities and infrastructure, homeroom teachers, teachers, and staff are actively involved in this process. However, there is debate regarding how effective the involvement of all parties is in needs analysis. Some researchers, as stated by Langoday et al. (2023), argue that too many parties involved can hamper the decision-making process and result in inaccurate funding projections. On the other hand, Anastasi (2018) expressed a different view, emphasizing that involving various stakeholders can provide more comprehensive insight into the needs of facilities and infrastructure.

Efforts to overcome obstacles in planning facilities and infrastructure in public high schools can be made by making needs analysis calculations that are more detailed and in accordance with needs, as suggested by Muhamad et al. (2021). Public high schools implement various types of planning, ranging from short-term to long-term, which includes purchasing cleaning equipment, repairing learning equipment, building physical infrastructure such as gazebos or halls, and adding new classrooms. This planning is carried out in a structured manner, where short-term planning takes place in one year, medium-term in two years, and long-term in four years. Continuous evaluation and routine maintenance are also important steps, in line with the principles of the Koran, which emphasize the importance of paying attention to work results.

Efforts to overcome obstacles in planning facilities and infrastructure in public high schools can be made by making needs analysis calculations that are more detailed and in accordance with needs, as suggested by Muhamad et al. (2021). However, there is debate regarding how detailed such planning should be. Several researchers, as expressed by Setiawan et al. (2018), argue that too many details in planning can lead to a waste of time and resources, while the focus should be more on flexibility and adaptation to changing needs that may occur in the future. On the other hand, a different opinion was expressed by Karim (2023), who emphasized that more detailed details in planning can provide clarity and ensure that all needs are met efficiently.

The existence of educational facilities and infrastructure in public high schools goes through a long and complex process, as highlighted by Hartoni (2018). Implementation of educational facilities and infrastructure management includes a series of stages, from planning to implementation, as explained by Fauzi (2020). It is important for all parties involved in preparing facilities and infrastructure planning to understand the objectives of each program and establish cooperation between stakeholders to achieve maximum results. The implementation stage is carried out through the formation of a work team that works together to carry out the planning well. Procurement of facilities and infrastructure is carried out by making a list of needs, as mentioned by Ellong (2018). This procurement process is the school's responsibility, with funds coming from the government budget and school operational assistance funds, as explained by Herawati et al. (2020). In this process, permission from the government to procure goods that require high costs is important, showing the involvement of the authorities and compliance with applicable regulations.

Inventory of facilities and infrastructure is key to effective management and supervision of state assets (Ismail et al., 2021). This process makes an important contribution to increasing efficiency in the management of facilities and infrastructure, as explained by Nasrudin and Maryadi

(2019). Through careful and detailed recording, using the Microsoft Excel application as a tool, inventory allows for better management and maintenance as well as efficient tracking of goods. Prioritized distribution of facilities and infrastructure according to the needs of each division in the school helps minimize damage. It ensures efficient use, along with the use of Standard Operating Procedures that the school has prepared. Maintenance of facilities and infrastructure, as explained by Nurstalis et al. (2021), is an important activity to keep goods in good condition and ready for use. If facilities and infrastructure are well maintained, the risk of student learning failure can be reduced, according to the findings of Kushendar and Lesmana (2023). Rahmayani (2020) emphasized the importance of routine inspections and organized storage of school equipment in maintaining the condition of facilities and infrastructure. All school members carry out this maintenance process on an ongoing basis, including routine maintenance activities such as cleaning classrooms, tidying tables and chairs, and ensuring use as needed.

The elimination of facilities and infrastructure in the context of education management is carried out with clear objectives, as highlighted by Hasnadi (2021). This process aims to minimize institutional losses related to the maintenance of goods or equipment, increase the efficiency of budget use, free the institution from responsibility for the maintenance and security of goods, and reduce the burden of inventory. Removal is carried out when goods are seriously damaged and unfit for use, as explained by Sinta (2019). This deletion process also takes into account certain conditions, such as unsuitability for use, old age of the item, or prohibition on use. Through appropriate and planned write-offs, schools can prevent wasting funds and free themselves from unnecessary responsibilities.

Evaluation is a crucial activity in monitoring the condition and performance of school facilities and infrastructure, as highlighted by Manurung et al. (2020). Evaluation aims to ensure that the implementation of activities is in accordance with the plans that have been made to achieve organizational goals. In the context of management of educational facilities and infrastructure in state high schools, evaluations are carried out at three levels, namely monthly evaluations, semester work meetings, and early school evaluations, which are carried out once a year. Monthly evaluations provide an understanding of progress and problems that arise periodically, while semester work meetings provide a forum for more comprehensive discussions.

CONCLUSION

Planning, implementation, and evaluation of the management of educational facilities and infrastructure at SMAN 1 Rogojampi Banyuwangi have been carried out well, resulting in a conducive and efficient learning environment. Active participation from all school members, routine maintenance programs, and regular evaluations are the keys to success in facilities and infrastructure management. Recommendations from these findings are to continue to increase participation and maintenance, strengthen internal and external evaluations, and conduct further research to develop new strategies in facilities and infrastructure management that can improve operational efficiency and quality of educational services.

BIBLIOGRAPHY

- Akram, H., Abdelrady, A. H., Al-Adwan, A. S., & Ramzan, M. (2022). Teachers' perceptions of technology integration in teaching-learning practices: A systematic review. *Frontiers in psychology*, 13, 920317. <https://www.doi.org/10.3389/fpsyg.2022.920317>
- Anastasi, C. (2018). *Strategic stakeholder engagement*. Routledge.
- Chatterton, P., & Goddard, J. (2000). The response of higher education institutions to regional needs. *European Journal of Education*, 35(4), 475-496. <https://www.jstor.org/stable/1503633>

- Crosnoe, R., Pivnick, L., & Benner, A. D. (2018). The social contexts of high schools. *Handbook of the sociology of education in the 21st century*, 317-335. https://www.doi.org/10.1007/978-3-319-76694-2_14
- Ellong, T. A. (2018). Manajemen sarana dan prasarana di lembaga pendidikan Islam. *Jurnal Ilmiah Iqra'*, 11(1). <http://dx.doi.org/10.30984/jii.v11i1.574>
- Endrawan, I. B., & Aliriad, H. (2023). Contribution of the learning model as a provision for the introduction of the school field (plp) to optimize the learning process. *Kinestetik: Jurnal Ilmiah Pendidikan Jasmani*, 7(2), 334-342. <https://www.doi.org/10.33369/jk.v7i2.24714>
- Fauzi, M. I. F. (2020). Manajemen sarana dan prasarana pendidikan. *Al-Rabwah*, 14(02), 90-115. <https://doi.org/10.55799/jalr.v14i02.46>
- Hartoni, H. (2018). Impelementasi manajemen sarana dan prasarana di sekolah menengah kejuruan. *Al-Idarah: Jurnal Kependidikan Islam*, 8(1), 178-185. <http://dx.doi.org/10.24042/alidarah.v8i1.3088>
- Hasanah, R. (2020). Pengaruh manajemen sarana dan prasarana terhadap kegiatan belajar mengajar di TK Al-Fadlillah Maguwoharjo Yogyakarta. *Golden Age: Jurnal Ilmiah Tumbuh Kembang Anak Usia Dini*, 5(3), 115-122. <https://doi.org/10.14421/jga.2020.53-03>
- Hasnadi, H. (2021). Manajemen sarana dan prasarana pendidikan. *Bidayah: Studi Ilmu-Ilmu Keislaman*, 153-164. <https://doi.org/10.47498/bidayah.v12i2.728>
- Herawati, S., Arafat, Y., & Puspita, Y. (2020). Manajemen pemanfaatan sarana dan prasarana pembelajaran. *Attractive: Innovative Education Journal*, 2(3), 21-28.
- Hill, C. W., & McShane, S. L. (2008). *Principles of management* (pp. 404-20). New York: McGraw-Hill/Irwin.
- Ilmi, I., Erihadiana, M., & Wanayati, S. (2023). Facilities and infrastructure management. *Eduotec: Journal of Education and Technology*, 6(3), 626-642. <https://doi.org/10.29062/edu.v6i3.475>
- Ismail, F., Pawero, A. M. D., & Bempah, A. (2021). Probelmatica manajemen sarana dan prasarana di madrasah swasta. *Journal of Islamic Education Leadership*, 1(2), 108-124. <https://doi.org/10.30984/jmpi.v1i2.155>
- Isnaini, N., Yahya, F., & Sabri, M. (2021). Peran manajemen sarana dan prasarana dalam meningkatkan mutu pendidikan di MI NW 1 Kembang Kerang. *Jurnal Manajemen Dan Budaya*, 1(1), 1-10. <https://doi.org/10.51700/manajemen.v1i1.76>
- Isrokatun, I., & Yulifar, L. (2020). Education access coverage of state junior high schools as the impact of zoning policy in Indonesia. *Eduotec: Journal of Education and Technology*, 4(2), 246-264. <https://www.doi.org/10.29062/edu.v4i2.105>
- Karim, A. (2023). *Manajemen sumber daya manusia*. CV. Media Manifestasi Intelektual.
- Kenny, J. (2002). Managing innovation in educational institutions. *Australasian Journal of Educational Technology*, 18(3), 359-376. <https://www.doi.org/10.14742/ajet.1765>
- Kushendar, D. H., & Lesmana, D. (2023). Pengaruh manajemen sarana dan prasarana terhadap kegiatan belajar mengajar di Sekolah Menengah Pertama Negeri 56 Kota Bandung. *Jurnal Niara*, 16(2), 251-257. <https://doi.org/10.31849/niara.v16i2.15924>
- Langoday, T. O., Wahyuningrum, C., & Lay, A. S. Y. (2023). *Teori pengambilan keputusan bisnis: Pengantar untuk calon manajer hebat di era global*. PT. Sonpedia Publishing Indonesia.
- Manurung, R., Harahap, E., Tahrur, T., & Suharyadi, A. (2020). Manajemen sarana prasarana di Sekolah Dasar Negeri 1 Kota Prabumulih. *Jurnal Manajemen Pendidikan: Jurnal Ilmiah Administrasi, Manajemen dan Kepemimpinan Pendidikan*, 2(2), 168-177. <https://doi.org/10.21831/jump.v2i2.33747>
- Manuturi, V., Asterina, N., & Utama, F. G. (2022). What do the students want? Reflections from a participatory approach to creating safe and inclusive school zones in Banjarmasin, Indonesia. *The Journal of Public Space*, 7(2), 223-234. <https://doi.org/10.32891/jps.v7i2.1494>
- Maulana, R., André, S., Helms-Lorenz, M., Ko, J., Chun, S., Shahzad, A., ... & Fadhilah, N. (2021). Observed teaching behaviour in secondary education across six countries: Measurement

- invariance and indication of cross-national variations. *School Effectiveness and School Improvement*, 32(1), 64-95. <https://www.doi.org/10.1080/09243453.2020.1777170>
- Muhamad, D., Sujiarto, H., & Rosa, A. T. R. (2021). Manajemen revitalisasi sarana dan prasarana pendidikan dalam upaya meningkatkan efektivitas pembelajaran produktif di SMKN 13 Bandung. *JIIIP-Jurnal Ilmiah Ilmu Pendidikan*, 4(7), 668-672. <https://doi.org/10.54371/jiip.v4i7.330>
- Murodova, Z. R. (2020). The formation and definition of the intellectual potential in education. *Theoretical & Applied Science*, (2), 113-116. <https://www.doi.org/10.15863/tas.2020.02.82.20>
- Nafis, H., & Muchtar, B. (2020, March). The influence of parents' income, infrastructure and facilities, creativity of learning, and learning motivation toward learning achievement. In *4th Padang International Conference on Education, Economics, Business and Accounting (PICEBA-2 2019)* (pp. 455-459). Atlantis Press.
- Nasrudin, N., & Maryadi, M. (2019). Manajemen sarana dan prasarana pendidikan dalam pembelajaran di SD. *Manajemen Pendidikan*, 13(2), 15-23. <https://doi.org/10.23917/jmp.v13i2.6363>
- Nurstalis, N., Ibrahim, T., & Abdurrohman, N. (2021). Peran manajemen sarana dan prasarana dalam meningkatkan mutu pembelajaran di SMP Islam Cendekia Cianjur. *Jurnal Isema : Islamic Educational Management*, 6(1), 63-76. <https://doi.org/10.15575/isema.v6i1.6579>
- Özbek, T., Wekerle, C., & Kollar, I. (2023). Fostering pre-service teachers' technology acceptance—does the type of engagement with tool-related information matter?. *Education and Information Technologies*, 1-23. <https://doi.org/10.1007/s10639-023-12047-2>
- Rahmayani, R. (2020). Manajemen sarana dan prasarana dalam meningkatkan produktivitas di sekolah dasar. *Edukasi: Jurnal Pendidikan*, 18(2), 240-251. <https://doi.org/10.31571/edukasi.v18i2.1978>
- Roos Akbar, M. A. C., & Maula, F. K. (2018). Identification of the effectiveness of clustering (rayonisasi) system in an effort to evenly distribute accessibility towards high school education facilities in Bandung City. *Journal of Regional and City Planning*, 29(1), 32-44. <https://www.doi.org/10.5614/jrcp.2018.29.1.3>
- Sa'adah, T. U., Demina, D., Febrian, V. R., & Amra, A. (2022). Pengelolaan sarana dan prasarana dalam pembelajaran di SLB Negeri 1 Lima Kaum. *Jurnal Manajemen Pendidikan Islam*, 1(2), 59-68. <http://dx.doi.org/10.31958/manapi.v1i2.7868>
- Saborío, J. C., & Hertzberg, J. (2020, August). Efficient planning under uncertainty with incremental refinement. In *Uncertainty in Artificial Intelligence* (pp. 303-312). PMLR. <https://proceedings.mlr.press/v115/saborio20a.html>
- Saputra, A. L. G., & Sriyanto, A. (2021). Teori manajemen sarana prasarana. *Journal J-Mpi: Jurnal Manajemen Pendidikan, Penelitian Dan Kajian Keislaman*, 1(1), 1-8. <https://www.ejournal.stitmuhsngawi.ac.id/index.php/j-mpi/article/view/7>
- Sawitri, E., Astiti, M. S., & Fitriani, Y. (2019, July). Hambatan dan tantangan pembelajaran berbasis teknologi informasi dan komunikasi. In *Prosiding Seminar Nasional Program Pascasarjana Universitas PGRI Palembang*.
- Setiawan, A., Martono, T., & Gunarhadi, G. (2018). The analysis of learning infrastructure (li), learning motivation (lm) and economics learning achievement (ela). *Journal of Education and Learning (EduLearn)*, 12(2), 236-243. <https://doi.org/10.11591/edulearn.v12i2.8124>
- Shirrell, M., Hopkins, M., & Spillane, J. P. (2019). Educational infrastructure, professional learning, and changes in teachers' instructional practices and beliefs. *Professional development in education*, 45(4), 599-613. <https://doi.org/10.1080/19415257.2018.1452784>
- Shmis, T., Ustinova, M., & Chuginov, D. (2019). *Learning environments and learning achievement in the Russian Federation: How school infrastructure and climate affect student success*. World Bank Publications.

- Sholihah, N. K. (2019, December). 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>
- Sinta, I. M. (2019). Manajemen sarana dan prasarana. *Jurnal Isema: Islamic Educational Management*, 4(1), 77-92. <https://doi.org/10.15575/isema.v4i1.5645>
- Stott, A., & Hobden, P. A. (2016). Effective learning: A case study of the learning strategies used by a gifted high achiever in learning science. *Gifted Child Quarterly*, 60(1), 63-74. <https://www.doi.org/10.1177/0016986215611961>
- Triwardhani, I. J., Trigartanti, W., Rachmawati, I., & Putra, R. P. (2020). Strategi guru dalam membangun komunikasi dengan orang tua siswa di sekolah. *Jurnal Kajian Komunikasi*, 8(1), 99-113. <https://doi.org/10.24198/jkk.v8i1.23620>
- Vettori, G., Vezzani, C., Bigozzi, L., & Pinto, G. (2020). Upper secondary school students' conceptions of learning, learning strategies, and academic achievement. *The journal of educational research*, 113(6), 475-485. <https://www.doi.org/10.1080/00220671.2020.1861583>

