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Educational Facilities and Infrastructure Management in Supporting Student Achievement at SMP Annur Boarding School, Bandar Lampung

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ABSTRACT (10 PT)

This study examines the management of educational facilities and infrastructure and its contribution to student achievement at SMP Annur Boarding School, Bandar Lampung, Indonesia. Using a qualitative descriptive approach, the study collected data through interviews, observation, and documentation involving the principal, vice principal for facilities and infrastructure, teachers, and educational staff. Data were analyzed through data reduction, data display, and conclusion drawing, while source and methodological triangulation were employed to strengthen credibility. The findings indicate that facilities management encompasses needs-based planning, prioritized procurement, utilization, maintenance, inventory management, and supervision. These practices are intended to align educational resources with instructional requirements and available budgets. Interview findings suggest that appropriately managed facilities support a conducive learning environment, facilitate teachers' use of instructional media, and encourage student participation. School records also indicate an increase in average learning scores from 76 in the 2022/2023 academic year to 84 in 2024/2025, alongside an increase in the proportion of students achieving the learning mastery threshold from 68% to 87%. However, these trends do not establish a direct causal relationship between facilities management and academic achievement. Budget constraints, maintenance capacity, and limitations in certain learning resources remain challenges. The study highlights the importance of systematic, needs-based facilities management in supporting effective teaching and learning.

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Introduction

Educational quality is influenced not only by curriculum, teachers, and instructional strategies but also by the physical environment in which learning takes place. Classrooms, libraries, laboratories, learning media, furniture, and other educational resources provide the material conditions through which teaching and learning activities are organized. When these facilities are accessible, functional, safe, and appropriately managed, they can help teachers implement instructional plans and enable students to participate more actively in learning. Conversely, inadequate facilities, poorly maintained equipment, and inefficient resource allocation may constrain instructional activities and reduce the effectiveness of educational services. The World Bank's synthesis of research on school infrastructure emphasizes that the physical learning environment can influence educational processes and learning outcomes, although its effects depend on the quality, suitability, and use of the facilities provided (Barrett et al., 2018). Therefore, educational facilities should not be understood merely as physical assets but as resources that require systematic management to support educational objectives.

The importance of school infrastructure is also reflected in Indonesia's education policy. Government Regulation No. 57 of 2021 concerning National Education Standards establishes facilities

and infrastructure as one of the essential standards for educational provision. More specifically, Minister of Education, Culture, Research, and Technology Regulation No. 22 of 2023 regulates infrastructure standards for early childhood, primary, and secondary education. These regulations provide a framework for ensuring that educational facilities correspond to institutional needs and support safe, effective, and inclusive learning environments (Government of Indonesia, 2021; Ministry of Education, Culture, Research, and Technology, 2023). Nevertheless, the fulfillment of infrastructure standards does not automatically guarantee that facilities will contribute optimally to student learning. Schools must also determine priorities, allocate budgets, organize procurement, regulate utilization, maintain equipment, and monitor the condition of their assets. Consequently, the managerial processes surrounding educational facilities are as important as the availability of the facilities themselves.

Educational facilities management involves a series of interrelated activities, including needs assessment, planning, procurement, inventory, utilization, maintenance, supervision, and, when necessary, disposal. These activities require coordination among school leaders, teachers, administrative personnel, and other relevant stakeholders. Yahya et al. (2023), in their literature review, identify planning, procurement, inventory, maintenance, and disposal as important components of educational facilities management. Similarly, research on facilities management in Indonesian schools emphasizes the importance of needs-based planning and coordinated implementation in supporting effective educational services (Baraz et al., 2024). From this perspective, effective management is not simply a matter of purchasing equipment; it also involves ensuring that resources are relevant to instructional requirements, distributed according to priorities, used appropriately, and maintained throughout their service life.

Previous empirical research provides evidence that the physical learning environment is associated with students' learning experiences and academic progress. Barrett et al. (2013) examined classroom design across seven primary schools in the United Kingdom and found that several environmental characteristics were associated with differences in pupils' learning progress. In a subsequent study involving 3,766 pupils in 27 schools, Barrett et al. (2015) reported that classroom design was associated with variation in learning rates. Uline and Tschannen-Moran (2008) also examined the relationship between school facility quality, school climate, and student achievement, highlighting the importance of considering the broader organizational environment in understanding how facilities relate to educational outcomes. These studies suggest that the relevance of school infrastructure extends beyond its physical presence: its condition and suitability may shape the learning environment in which students and teachers interact.

However, the relationship between facilities and student achievement should not be interpreted as exclusively causal or deterministic. Student outcomes are also influenced by instructional quality, motivation, prior knowledge, family support, school leadership, and the wider learning environment. The World Bank (2018) accordingly presents school infrastructure as one element within a broader educational system rather than an independent solution to learning challenges. Recent evidence from Indonesia likewise indicates that the relationship between learning resources and student outcomes

may vary according to educational context and the way resources are used (UNICEF Indonesia, 2026). Accordingly, examining facilities management requires attention not only to the presence of infrastructure but also to how school personnel plan, provide, use, and maintain it in everyday educational practice.

This issue is particularly relevant to SMP Annur Boarding School in Bandar Lampung, where educational facilities are expected to support the academic activities of students within a boarding-school environment. The thesis underlying this article identifies several interconnected management practices at the school, including annual needs planning, procurement according to priorities and budget capacity, utilization of learning facilities, routine maintenance, inventory, and supervision. The thesis also identifies practical constraints, including budget limitations, maintenance needs, and the need to develop particular facilities. These circumstances indicate that facilities management involves balancing educational demands with available resources. The central issue, therefore, is not merely whether facilities exist, but how the school organizes its resources to maintain their usefulness and support teaching and learning.

Although previous studies have discussed the relationship between physical learning environments and educational outcomes, further contextual investigation is valuable into how facilities management is implemented through the complete management cycle in a particular Indonesian boarding school. Research on classroom design and facility quality provides important evidence about learning environments, while studies of educational management describe the administrative processes needed to organize school resources (Barrett et al., 2015; Baraz et al., 2024; Uline & Tschannen-Moran, 2008). However, these strands of literature do not, by themselves, explain how planning, procurement, utilization, maintenance, inventory, and supervision are coordinated in the daily operations of SMP Annur Boarding School. This study addresses that contextual need through a qualitative examination of facilities management practices and their perceived contribution to student learning and achievement. It does not assume that facilities alone determine achievement; instead, it investigates the ways in which management practices support a more conducive learning process.

Accordingly, this study aims to analyze educational facilities and infrastructure management at SMP Annur Boarding School, Bandar Lampung, focusing on five dimensions: (1) planning facilities and infrastructure; (2) procuring educational resources; (3) utilizing and optimizing available facilities; (4) maintaining and managing the school's facilities; and (5) understanding how these management practices contribute to student learning and achievement. Using a qualitative descriptive approach, the study draws on observations, interviews, and documentation to examine management practices from the perspectives of school personnel and the available institutional evidence. The study is expected to contribute a context-specific account of how educational facilities management is implemented in a boarding-school setting and to offer practical insights for school leaders seeking to align resource management with instructional needs. By connecting management processes with the learning environment, the article emphasizes that educational facilities become meaningful resources when their provision, use, and maintenance are systematically aligned with the school's educational objectives.

Research Method

This study employed a qualitative descriptive approach to examine educational facilities and infrastructure management at SMP Annur Boarding School, Bandar Lampung, Indonesia. This approach was selected to provide an in-depth description of management practices and understand how school personnel perceived the contribution of educational facilities to teaching, learning, and student achievement. Qualitative descriptive research is appropriate for producing a detailed account of a phenomenon in its natural context (Colorafi & Evans, 2016). Accordingly, this study focused on describing the implementation of facilities management rather than experimentally testing a causal relationship between infrastructure and academic performance.

The research was conducted at SMP Annur Boarding School in Bandar Lampung. The research informants included the school principal, the vice principal responsible for facilities and infrastructure, teachers, and educational personnel. These participants were relevant because they were involved in, or had knowledge of, school administration, facility management, and instructional activities. Their perspectives enabled the researcher to examine facilities management from different institutional roles. The research documentation records an interview with the vice principal for facilities and infrastructure on May 11, 2026. However, the available documentation does not specify the complete number of informants; therefore, no numerical sample size is reported in this article.

Data were collected through interviews, direct observation, and documentation. Interviews were conducted to obtain information about management procedures, institutional priorities, resource constraints, facility utilization, maintenance practices, and the perceived implications of facilities management for student learning. The interview topics followed the research focus, covering planning, procurement, utilization, maintenance and disposal, and the contribution of facilities management to student achievement. Observation was used to examine the physical condition of educational facilities and their utilization in school activities. Documentation provided supplementary information concerning institutional arrangements and facilities management. Combining interviews, observations, and documentary evidence enabled the researcher to compare participants' accounts with information obtained through other sources. This approach is consistent with qualitative inquiry, in which multiple forms of evidence can provide a more comprehensive understanding of the phenomenon under investigation (Bowen, 2009; Creswell & Poth, 2018).

The collected data were analyzed through data reduction, data presentation, and conclusion drawing. During data reduction, interview records, observation notes, and relevant documents were examined and organized according to their relevance to the research questions. The information was then presented descriptively and grouped around the principal analytical dimensions: planning, procurement, utilization, maintenance and disposal, and the perceived contribution of facilities management to learning and achievement. Finally, conclusions were developed by identifying recurring patterns, comparing information across sources, and interpreting the findings in relation to the research objectives. This analytical procedure reflects the qualitative data analysis process described by Miles et

al. (2014), which emphasizes the systematic organization, presentation, and interpretation of qualitative evidence.

The credibility of the findings was addressed through source triangulation and technique triangulation, as reported in the original study. Source triangulation involved comparing information obtained from different categories of school personnel, while technique triangulation involved examining the relationship between interview accounts, observations, and documentary evidence. These procedures helped the researcher identify similarities and differences across the available data rather than relying on a single account. Triangulation is an established strategy for strengthening the credibility of qualitative interpretations when different sources of evidence are examined systematically (Lincoln & Guba, 1985). The findings were therefore interpreted in relation to the available evidence and the specific institutional context. Given the qualitative descriptive design, the study explains management practices and their perceived contributions to student learning; it does not establish that facilities management independently caused improvements in academic achievement.

Research Finding

Management of Educational Facilities and Infrastructure at SMP Annur Boarding School

The findings reveal that educational facilities and infrastructure management at SMP Annur Boarding School, Bandar Lampung, is organized through a series of interrelated managerial processes encompassing needs assessment, planning, procurement, utilization, maintenance, inventory management, and supervision. Rather than treating facilities provision as an isolated administrative function, the school's practices indicate an effort to connect resource allocation with instructional priorities and institutional development. Nevertheless, the implementation of these processes must be understood in the context of competing needs and financial constraints. This finding is consistent with the broader argument that school infrastructure contributes to educational provision most meaningfully when its availability is accompanied by appropriate planning, use, and maintenance (Barrett et al., 2015, 2019). The central managerial issue is therefore not simply whether facilities exist, but how institutional procedures translate available resources into functional support for teaching and learning.

Planning emerges as the organizing mechanism through which the school identifies needs and determines priorities. The research documentation indicates that planning is conducted at the beginning of the academic year through school meetings involving personnel responsible for different operational units. According to the interview transcript, the principal, Hendrawan Prihantoro, M.Pd., explained that facility planning involves the participation of the vice principal, teachers, administrative personnel, and the foundation. In the translated interview, he stated:

"In planning facilities and infrastructure, we involve the vice principal responsible for facilities, teachers, administrative staff, and the foundation so that school needs can be discussed collectively and aligned with students' learning needs." (Translated from the interview transcript with the principal, May 11, 2026.)

This account illustrates the participatory character of the school's planning process. The involvement of teachers and administrative personnel is particularly relevant because different units

experience different facility requirements. Teachers can identify instructional equipment needed in classrooms, while laboratory and library personnel can communicate requirements specific to their areas of responsibility. The principal's account further indicates that proposed needs are discussed collectively before decisions are made. Such coordination can reduce the risk of purchasing facilities without a clearly identified educational purpose. It also provides a mechanism for connecting operational requirements with broader institutional priorities.

The vice principal for facilities and infrastructure, Nanang Fitrianto, similarly explained that annual planning begins with an inventory of requirements across school units. The translated interview transcript records his statement: *"Planning is carried out at the beginning of each academic year by inventorying the needs of each work unit, such as classrooms, laboratories, libraries, and offices. All proposals are then discussed in a meeting with the principal before being included in the RKAS." (Translated from the interview transcript with the vice principal for facilities and infrastructure, May 11, 2026.)*

These statements indicate that planning involves both needs identification and administrative prioritization. The incorporation of approved requirements into the School Activity and Budget Plan (*Rencana Kegiatan dan Anggaran Sekolah*, or RKAS) links proposed facilities to the school's budgeting process. Importantly, the interview material identifies several considerations used to determine priorities: instructional needs, student enrollment, the condition of existing facilities, and school development plans. This approach is consistent with the view that effective educational resource management requires the alignment of infrastructure decisions with the institution's educational objectives rather than expenditure based solely on immediate requests (Barrett et al., 2015; World Bank, 2018). The evidence nevertheless establishes the reported planning procedure, not the independent effectiveness of every decision made through it.

Procurement constitutes the next stage in translating planned needs into available resources. The study indicates that procurement is undertaken after requirements have been identified and priorities discussed. The principal explained that facilities acquisition requires school and foundation approval and that purchases should correspond to previously identified needs. The translated interview transcript states: *"Every facility procurement must receive approval from the school and the foundation. This is intended to ensure that school funds are used effectively and according to the school's main priorities. Facilities are procured based on previously planned needs. We do not purchase items immediately; we first consider which facilities students and teachers need most for learning."(Translated from the interview transcript with the principal, May 11, 2026.)*

This statement highlights two aspects of procurement governance: institutional authorization and prioritization. Approval procedures can help connect spending decisions with school plans, while the emphasis on the most urgent instructional needs provides a basis for allocating limited resources. The documentation also identifies foundation funding and BOSP funds as sources used to meet facility requirements. However, the findings indicate that procurement remains constrained by the volume of unmet needs and the school's budget capacity. Consequently, procurement is conducted incrementally rather than through the simultaneous fulfillment of all requirements.

The vice principal's account further identifies laboratories, instructional media, computers, desks, and chairs among the types of facilities requiring provision or improvement. The study also describes the consideration of product specifications and price surveys before purchases are made. These procedures suggest that procurement decisions involve more than the availability of funds: the school must also consider whether an item is appropriate for its intended educational use. From a managerial perspective, this distinction is important because the acquisition of equipment does not necessarily produce educational value if the equipment is unsuitable, difficult to maintain, or poorly integrated into instruction. The World Bank (2018) similarly situates infrastructure within the broader conditions required for effective learning, rather than treating physical provision as a sufficient intervention by itself. At the same time, the present study does not independently evaluate procurement efficiency, comparative prices, or the long-term cost-effectiveness of individual purchases.

The utilization of available facilities provides a further indication of how planning and procurement are translated into educational practice. According to the interview documentation, the school uses LCD projectors, smart televisions, laboratories, library facilities, and other instructional resources to support classroom activities. The translated interview response from the school's facilities management documentation states: *"The facilities and infrastructure are used according to their respective functions. Teachers use LCD projectors, smart televisions, laboratories, libraries, and other facilities as learning media to make the teaching and learning process more effective." (Translated from the school's interview transcript on facilities utilization.)*

The significance of this account lies in the relationship between resource availability and instructional application. Facilities become educationally relevant when teachers can use them for appropriate learning activities, rather than when they are merely recorded in an inventory. The interview documentation also indicates that facility use is organized through schedules and supervised by the vice principal responsible for facilities and the teachers assigned to particular rooms. Such arrangements are intended to distribute access and maintain the condition of school assets. However, the study also identifies circumstances in which facilities must be shared because availability is limited. This suggests that utilization involves a continuing managerial challenge: ensuring fair access while accommodating different instructional requirements. The findings therefore support an interpretation of utilization as an organizational process involving scheduling, responsibility, and coordination, rather than as a simple consequence of procurement.

Maintenance, inventory management, and supervision are equally important because the instructional usefulness of facilities depends on their continued condition and availability. The research documentation describes routine inspections, reporting procedures for damaged equipment, and different responses to minor and major repairs. Minor damage may be handled by school personnel, whereas more substantial damage may require external assistance or replacement. Inventory and supervision are intended to maintain administrative order and minimize damage or loss. These practices are consistent with a life-cycle perspective on infrastructure management, in which the value of an asset

depends not only on its initial acquisition but also on its continued usability (Barrett et al., 2019; World Bank, 2018).

Nevertheless, the findings identify persistent constraints, including limited budgets, the need for more dedicated technical maintenance support, and the further development of facilities such as library collections and the school health unit. These limitations are important because they reveal the difference between having management procedures and having sufficient capacity to implement them consistently. Routine inspections, for example, can identify problems, but resolving those problems still requires personnel, funding, and appropriate replacement resources. Similarly, inventory records can improve accountability without necessarily resolving shortages. The findings thus suggest that facilities management at SMP Annur Boarding School combines established administrative practices with continuing resource challenges. Its principal managerial task is to sustain existing facilities while progressively addressing unmet needs.

Taken together, the evidence portrays facilities management at SMP Annur Boarding School as a coordinated but resource-constrained process. Participatory planning and approval procedures provide a basis for identifying priorities; procurement translates selected priorities into available resources; utilization connects facilities with classroom practice; and maintenance and supervision seek to preserve their operational value. The contribution of these processes lies in the organizational coordination of educational resources, although the evidence does not establish that all needs have been fulfilled or that management practices alone determine student achievement. This distinction is essential for interpreting the school's experience accurately. The findings provide a foundation for the next section, which examines how school personnel perceive the relationship between facilities management, students' learning experiences, and academic achievement.

The Contribution of Educational Facilities Management to Student Learning and Achievement

Educational facilities management contributes to student achievement through a set of interconnected conditions rather than through the mere provision of physical resources. The findings at SMP Annur Boarding School, Bandar Lampung, indicate that appropriately managed facilities can support instructional delivery, facilitate student participation, and help establish a conducive learning environment. Interviews with school personnel suggest that classrooms, instructional media, laboratories, and library resources are perceived as important supports for teaching and learning. The principal explained that effective management creates a comfortable environment in which students can concentrate, become motivated, and understand instructional material more easily. This perception is consistent with Barrett et al. (2015), who found associations between classroom design and pupils' learning progress, and Uline and Tschannen-Moran (2008), who examined the relationship between facility quality, school climate, and student achievement. These studies provide a useful interpretive framework, although they do not establish that the same effects occur automatically in every institutional setting.

The potential contribution of facilities management can be understood through three related mechanisms: improving the conditions for learning, expanding opportunities for instructional

engagement, and sustaining the availability of educational resources. First, the physical learning environment can influence how students experience instruction. Functional classrooms, appropriate furniture, accessible learning media, and well-maintained facilities can help reduce practical barriers to participation. Schneider (2002) argues that school facilities should be considered in relation to educational outcomes, while Higgins et al. (2005) emphasize that the learning environment interacts with teaching and learning processes. In the present study, school personnel perceived that well-managed facilities made learning more comfortable and helped students focus on instructional activities. This finding suggests that the contribution of infrastructure is partly indirect: facilities establish conditions that allow instruction to proceed more effectively, but students' learning still depends on how those conditions are used.

Second, the availability and use of instructional media may create opportunities for more active learning. The research documentation identifies LCD projectors, smart televisions, laboratories, and library facilities as resources used in classroom activities. The principal reported that these resources help teachers present material and encourage students to participate. This perception can be interpreted through the student engagement literature. Fredricks et al. (2004) conceptualize engagement as behavioral, emotional, and cognitive involvement, while Wang and Eccles (2013) demonstrate the importance of school context in understanding engagement over time. From this perspective, instructional facilities may support engagement when they enable students to observe demonstrations, access learning materials, participate in practical activities, or interact with content in varied ways. However, the presence of technology alone is insufficient. As Hattie (2009) emphasizes in his synthesis of research on achievement, the educational value of an intervention depends on how it influences teaching and learning. Accordingly, the findings support the interpretation that facilities can enable instructional practices, rather than the stronger claim that technology independently improves achievement.

The academic records reported in the thesis provide additional context for examining this perceived contribution. Table 1 summarizes the reported trend in average learning scores and learning mastery over three academic years.

Table 1. Reported Student Learning Outcomes at SMP Annur Boarding School

Academic year	Average learning score	Students achieving mastery	Change in average score	Change in mastery
2022/2023	76	68%	—	—
2023/2024	80	78%	+4 points	+10 percentage points
2024/2025	84	87%	+4 points	+9 percentage points
Overall change	+8 points	+19 percentage points	—	—

Source: Academic outcome figures reported in the thesis of Muhammad Rayhan Habib (2026). Changes are calculated from the reported values.

The figures show a consistent upward trend in both reported indicators. The average score increased by eight points over the three academic years, while the proportion of students achieving the

mastery threshold increased by 19 percentage points. These changes are descriptively meaningful because they indicate improvement across two distinct measures: the overall average and the proportion of students meeting the stated criterion. Nevertheless, the figures should be interpreted cautiously. The available documentation does not establish whether the same students were followed over time, whether assessment instruments and mastery thresholds remained comparable, or whether changes in student composition influenced the results. Nor does it isolate facilities management from other educational developments. The table therefore documents a positive academic trend, but it does not establish that facilities management caused that trend.

This distinction is central to a rigorous interpretation of the findings. Academic achievement is influenced by multiple factors, including instructional quality, student motivation, prior learning, family support, school leadership, and the wider school climate. Eccles and Roeser (2011) conceptualize schools as developmental contexts in which environmental and social processes interact, while Hattie (2009) demonstrates the need to consider a broad range of influences on achievement. Similarly, Uline and Tschannen-Moran (2008) locate school facilities within the wider relationship between organizational climate and student outcomes. The present study consequently supports a contribution-based interpretation: facilities management may help create the conditions under which learning improves, but the observed academic trend cannot be attributed to infrastructure alone.

The qualitative evidence also identifies constraints that qualify the contribution of facilities management. The thesis reports limitations in budget capacity, the availability of dedicated technical maintenance personnel, library collections, and the condition of the school health unit. These limitations reveal an important distinction between formal management procedures and the actual adequacy of educational resources. A school may conduct annual planning, prioritize procurement, and implement routine maintenance while still facing unmet needs. Woolner et al. (2007) emphasize that the relationship between the physical environment and learning is complex, while Barrett et al. (2015) show that classroom characteristics are associated with learning progress in ways that depend on the environment's overall configuration. Thus, the existence of management procedures should not be treated as evidence that every facility is adequate or that all students benefit equally.

From a managerial perspective, the findings suggest that the school's next priority should be to strengthen the connection between facilities planning and evidence of instructional need. Resource decisions could be informed by regular assessments of facility condition, patterns of use, teacher feedback, maintenance requirements, and the learning activities that particular resources are expected to support. This would help the school distinguish between resources that are merely available and those that are accessible, functional, and educationally useful. The World Bank (2018) similarly emphasizes that school infrastructure should be considered as part of a wider system of educational provision. The OECD (2013) also highlights the importance of aligning educational resources with institutional objectives. For SMP Annur Boarding School, such alignment is particularly relevant where budget limitations require gradual procurement and where some facilities must serve multiple classes.

Overall, the findings indicate that educational facilities management at SMP Annur Boarding School is perceived to support learning by improving the conditions for instruction, facilitating teachers' use of learning media, and encouraging student participation. The reported academic outcomes show an upward trend that is consistent with these perceptions, but they do not establish a direct causal relationship. The study's contribution lies in showing how management practices and instructional conditions are connected in a specific boarding-school context. Further research could strengthen this account by combining systematic facility assessments, longitudinal achievement data, classroom observations, and student perspectives. Such evidence would help clarify not only whether learning outcomes improve, but also which dimensions of facilities management are most closely associated with those improvements.

Conclusion

This study examined the management of educational facilities and infrastructure and its contribution to student learning and achievement at SMP Annur Boarding School, Bandar Lampung. The findings indicate that facilities management is implemented through a series of interconnected activities, including needs-based planning, prioritized procurement, utilization, maintenance, inventory management, and supervision. These activities are undertaken to ensure that educational resources are aligned with instructional needs and the school's budgetary capacity. The involvement of the principal, the vice principal for facilities and infrastructure, teachers, and other school personnel also indicates that facilities management is treated as a shared institutional responsibility rather than an exclusively administrative task.

The findings further suggest that effective facilities management supports the learning process by creating a more conducive learning environment, facilitating teachers' use of instructional media, and providing opportunities for greater student participation. The academic records reported in the study show that the average learning score increased from 76 in the 2022/2023 academic year to 84 in 2024/2025, while the proportion of students achieving the stated mastery threshold rose from 68% to 87%. These trends are consistent with the qualitative accounts of school personnel concerning improvements in the learning environment and instructional effectiveness. However, because the study employed a qualitative descriptive design and did not isolate the effects of facilities management from other educational factors, the figures should not be interpreted as proof of a direct causal relationship. Rather, they provide contextual evidence of improving academic outcomes alongside the school's facilities management practices.

Despite these positive indications, several challenges remain, particularly budget constraints, maintenance capacity, limited library resources, and the need to improve certain facilities. These challenges demonstrate that the effectiveness of facilities management depends not only on the existence of planning and administrative procedures but also on the continuous availability, condition, accessibility, and educational relevance of the resources provided. Accordingly, the school should strengthen evidence-based prioritization, conduct regular assessments of facility conditions and

utilization, and connect procurement and maintenance decisions more closely to teachers' instructional needs.

This study contributes to the understanding of facilities management in a boarding-school context by illustrating how administrative practices can support the conditions necessary for effective teaching and learning. Future research could incorporate longitudinal achievement data, systematic assessments of facility quality, and perspectives from students and teachers to examine more precisely how particular dimensions of facilities management relate to academic outcomes. Such research would provide a stronger empirical basis for determining which investments and management practices offer the greatest educational value.

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